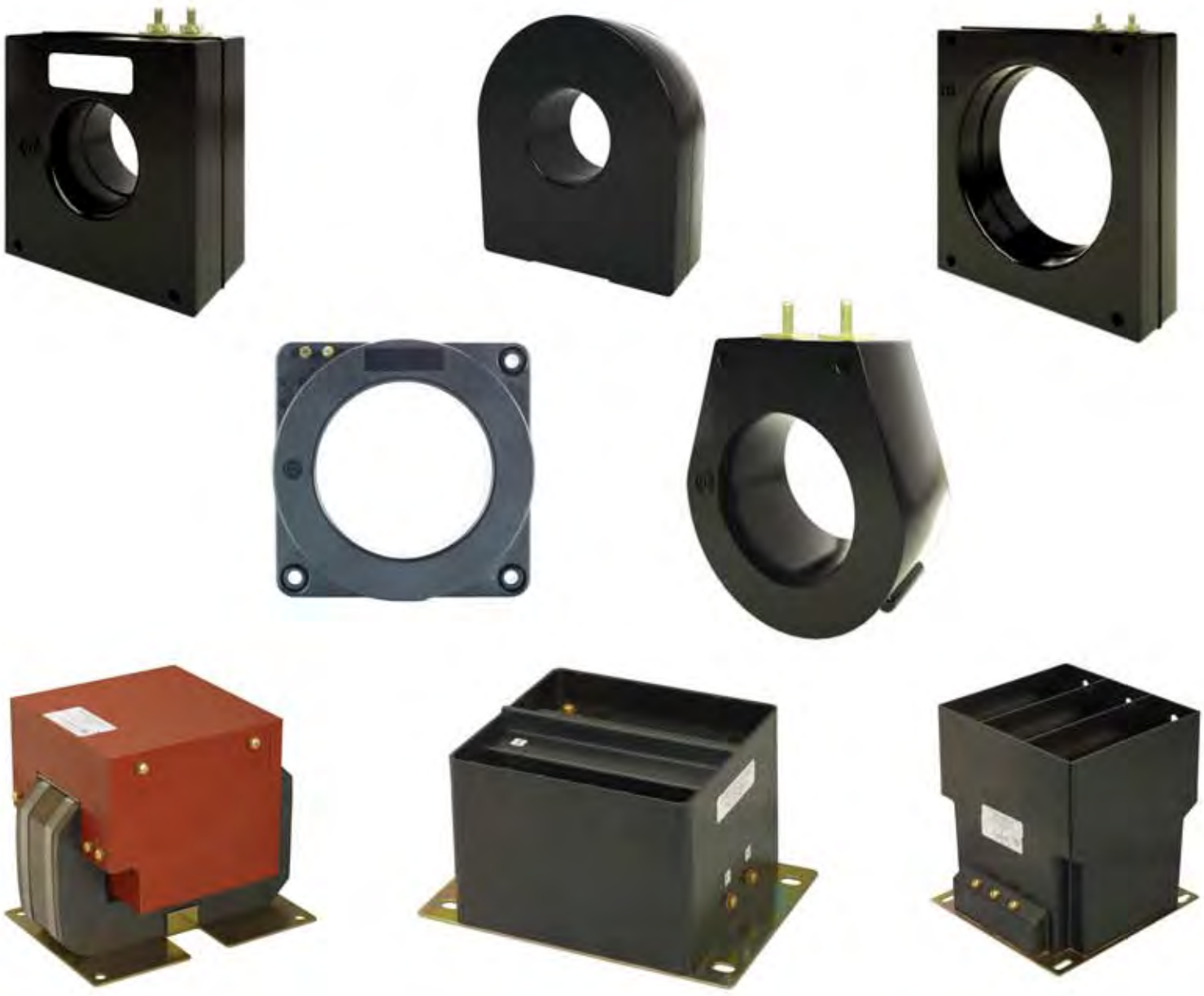
PHASETRONICS™

SCR Power Control Specialists

MAGNETICS CATALOG



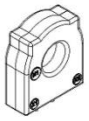
High Quality Current and Voltage Transformers

MODEL INDEX

CURRENT TRANSFORMERS

For Metering and Instrumentation

600V Current Transformers
Non-ANSI Rated Window Type

WINDOW SIZES 0.56” **MODEL 13**	 13	**Page 1-3**
WINDOW SIZES 0.64” **MODEL 1A**	 1A	**Page 1-4**
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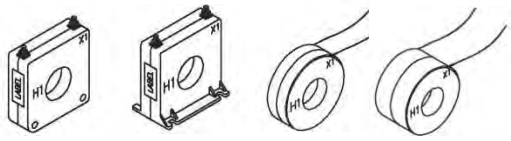
WINDOW SIZES 1.00”, 1.05”, 1.13” **MODEL 2**	 2SHT 2SFT 2RL 2DRL	**Page 1-6**
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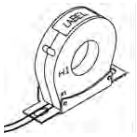
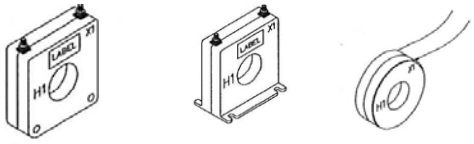
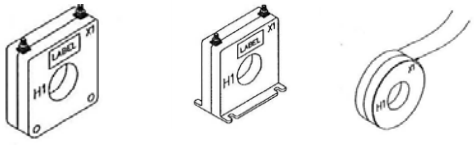
WINDOW SIZES 1.25” **MODEL 58RBL**	 58RBL	**Page 1-10**
WINDOW SIZES 1.56” **MODEL 5**	 5SHT 5SFT 5RL	**Page 1-11**
WINDOW SIZES 1.56” **MODEL 5A**	 5ASHT 5ASFT 5ARL	**Page 1-14**

CURRENT TRANSFORMERS

For Metering and Instrumentation

600V Current Transformers
Non-ANSI Rated Window Type

Current Transformer

Model 13
rev 03182021

APPLICATION:
For current to voltage conversion by use of a load resistor

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
0.56”

APPROXIMATE WEIGHT:
0.1 – 0.2 lbs.

CONTINUOUS THERMAL CURRENT RATING FACTOR:
200A at 30°c amb., 120A at 55°c amb.

CONNECTIONS:
This lightweight, miniature current transformer is suitable for direct mounting on printed circuit boards. Model 13 is provided with standard hexagon nuts to secure the transformer to the board, so that the assembly can withstand vibration and shock while maintaining electrical integrity. The graph below illustrates the voltage capacity and over the ranges shown, will maintain a +/-3% linearity.

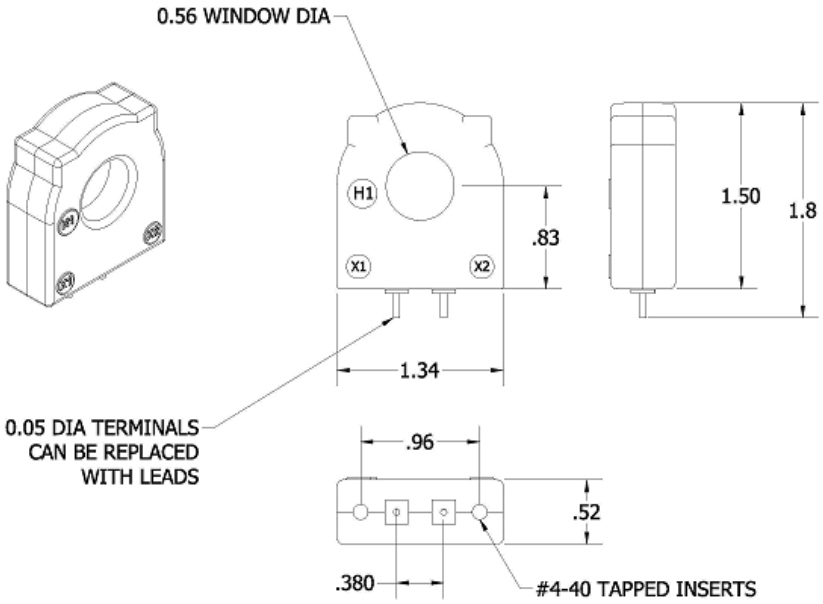
Model	13
Window Size	0.56
Width	1.34
Height	1.80
Depth	0.52

CERTIFICATIONS:

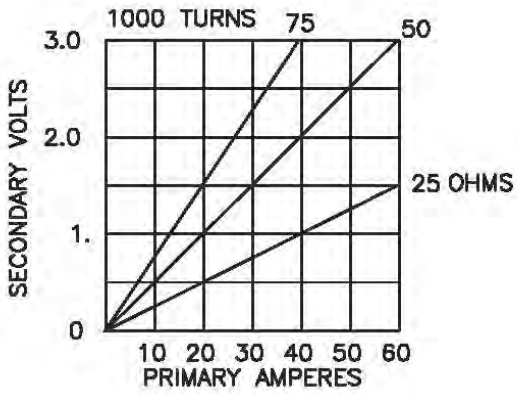
c UL us
E228202

CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT



TYPICAL PERFORMANCE CHARACTERISTICS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 1A

APPLICATION:
With ammeters, energy management systems and instrumentation

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
0.64”

APPROXIMATE WEIGHT:
0.42 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved #16AWG, 24” long
-Non-standard length to be specified
-1 Amp, and other secondary currents available upon request

Model	1A
Window Size	0.64
Width	1.99
Height	1.99
Depth	1.25

CERTIFICATIONS:

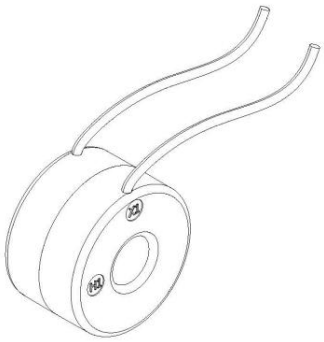
E228202

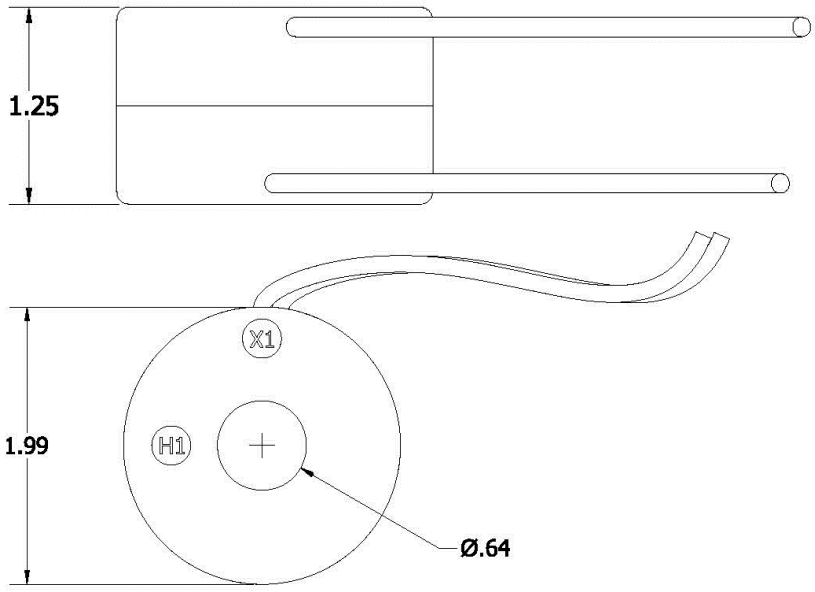
223647

ISO 9001 QUALITY MANAGEMENT

MODEL 1A
Window Diameter 0.64”
Approximate weight: 0.42 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
1A-500	50:5	± 2%	1
1A-600	60:5	± 1%	2
1A-750	75:5	± 1%	2
1A-800	80:5	± 1%	2
1A-101	100:5	± 1%	2.5
1A-121	120:5	± 1%	3
1A-1250	125:5	± 1%	3
1A-151	150:5	± 1%	4
1A-201	200:5	± 1%	5
1A-251	250:5	± 1%	7.5





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TTL Transformer Technologies Ltd.

Current Transformer

Model 15

APPLICATION:
With ammeters, energy management systems and instrumentation

FREQUENCY:
50-400 Hz..

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
0.94”

APPROXIMATE WEIGHT:
0.9 lbs.

CONNECTIONS:
-Non-standard lead length can be specified
-Flexible leads are UL 1015 105° C CSA approved, #16 AWG, 24" long
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut

CERTIFICATIONS:

c UL us
E228202

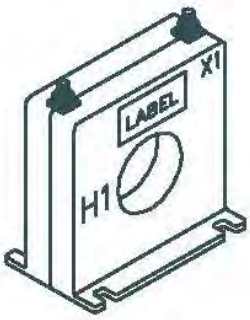
c SA us
223647

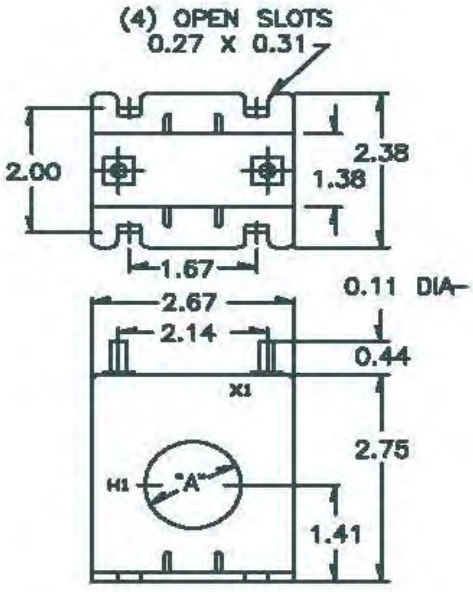
nqa.
ISO 9001
QUALITY MANAGEMENT

Model	15SFT
Window Size	0.94
Width	2.67
Height	2.75
Depth	1.38

MODEL 15
Window Diameter 0.94”
Approximate weight: 0.9 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
15SFT-500	50:5	± 1.5%	2
15SFT-600	60:5	± 1.5%	2
15SFT-750	75:5	± 1.5%	2.5
15SFT-800	80:5	± 1.0%	2
15SFT-101	100:5	± 1.0%	2
15SFT-121	120:5	± 1.0%	3
15SFT-1250	125:5	± 1.0%	4
15SFT-151	150:5	± 1.0%	5
15SFT-1750	175:5	± 1.0%	10
15SFT-201	200:5	± 1.0%	12.5





Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 2

2SHT

2SFT

2RL

2DRL

CERTIFICATIONS:

E228202

223647

ISO 9001 QUALITY MANAGEMENT

APPLICATION:
Generally for Ammeter use only

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW:
1:00", 1.05", 1.13"

APPROXIMATE WEIGHT:
0.5 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved #16 AWG, 24" long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-SHT and SFT case styles also available as SHL or SFL with Leads
-Mounting bracket for Model 2SHT part 59-0217

Model	2SHT	2SFT	2RL	2DRL
Window Size	1.13	1.13	1.05	1.00
Width	2.40	2.40	2.46	2.42
Height	2.71	2.68	2.46	2.42
Depth	0.95	2.00	1.05	1.75

MODEL 2
Window Diameter 1.00", 1.05", 1.13"
Approximate weight: 0.5 lbs.

CATALOG NUMBER	CURRENT RATIO	MODELS 2SFT, 2SHT, 2RL		MODEL 2DRL	
		ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
2-250**	25:5	-	-	± 5%	1
2-500**	50:5	± 4%	1	± 2%	1.5
2-600**	60:5	± 3%	2	± 2%	2
2-750**	75:5	± 3%	2	± 2%	3
2-800**	80:5	± 2%	2	± 2%	4
2-101**	100:5	± 1%	2	± 1%	5
2-121**	120:5	± 1%	2.5	± 1%	5
2-1250**	125:5	± 1%	2.5	± 1%	5
2-151**	150:5	± 1%	4	± 1%	8
2-181**	180:5	± 1%	4	± 1%	10
2-201**	200:5	± 1%	4	± 1%	10
2-251**	250:5	± 1%	6	± 1%	12.5
2301**	300:5	± 1%	8	± 1%	15
2-331**	330:5	± 1.2%	10	± 1%	17.5

NOTE: When ordering, Prefix Cat. No. With model designation required, i.e. 2SFT-301, 2RL-301, or 2SHT-301 or 2DRL-301

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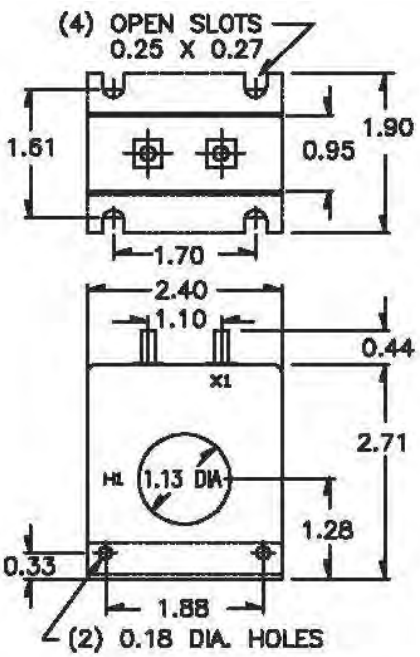
TTL Transformer Technologies Ltd.

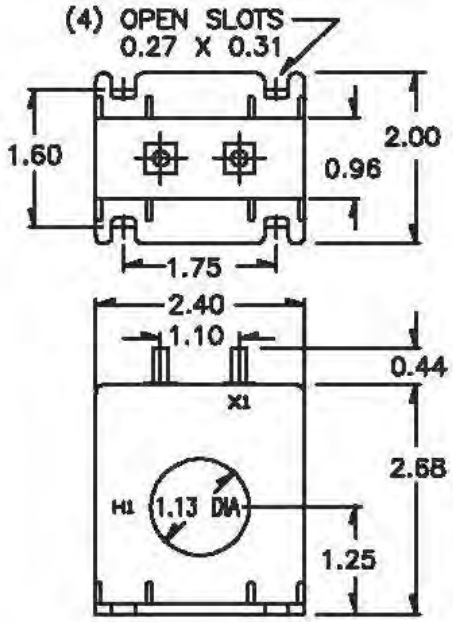
Current Transformer

Model 2

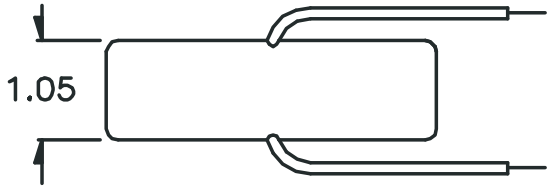
2SHT



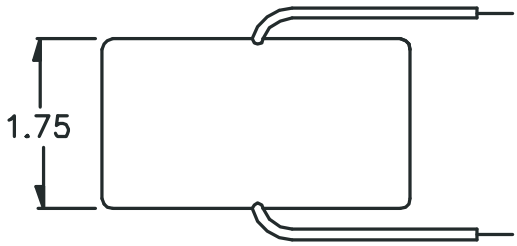
2SFT

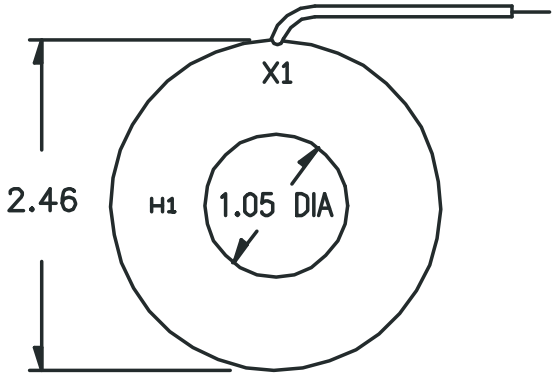


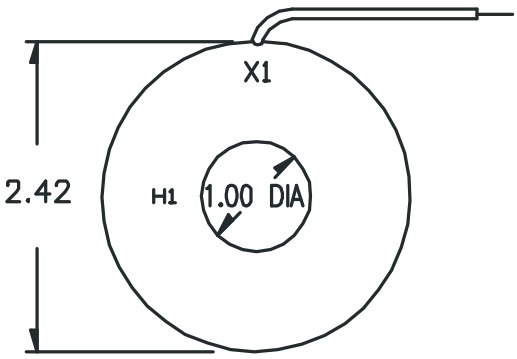
2RL



2DRL







Current Transformer

Model 3P2
Rev 101419

APPLICATION:
3 Phase metering and other switchboard applications and for current to voltage conversion by use of a loading resistor as illustrated in the graph below and having low primary current input.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
0.69”

APPROXIMATE WEIGHT:
1.5 lbs.

CONNECTIONS:
-Transformers can be ordered with secondary leads configured in various ways (consult factory)
-Terminals are brass studs No. 8-32 with one flat washer, lock washer, and regular nut
-Load resistors may be mounted directly on terminals thus providing a “space saver” feature.

CERTIFICATIONS:

E228202

223647

ISO 9001 QUALITY MANAGEMENT

Continuous Thermal Current Rating Factor

Models 3P2-500 – 3P2-201:
1.33 at 30°C. ambient.
1.0 at 55°C. ambient.

Models 3P2-1000T:
350A at 30°C amb.,
250A at 55° amb.

MODEL 3P2
Window Diameter 0.69”
Approximate weight: 1.5 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
3P2-500	50:5	± 2%	0.75
3P2-600	60:5	± 2%	0.75
3P2-750	75:5	± 2%	1.0
3P2-800	80:5	± 2%	1.0
3P2-101	100:5	± 1%	1.0
3P2-121	120:5	± 1%	1.0
3P2-1250	125:5	± 1%	1.0
3P2-151	150:5	± 1%	1.5
3P2-201	200:5	± 1%	2.0
3P2-1000T	See Performance Graph		

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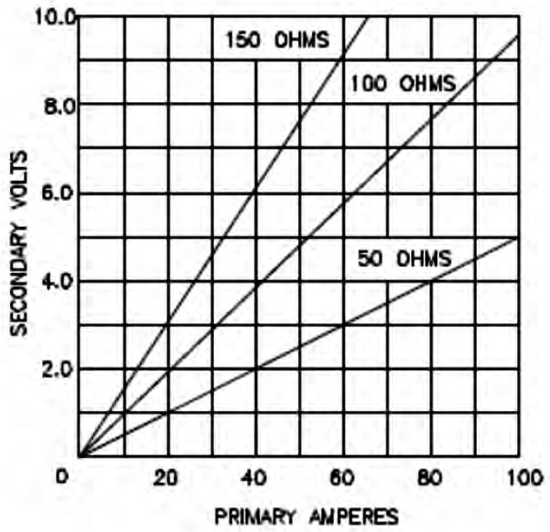
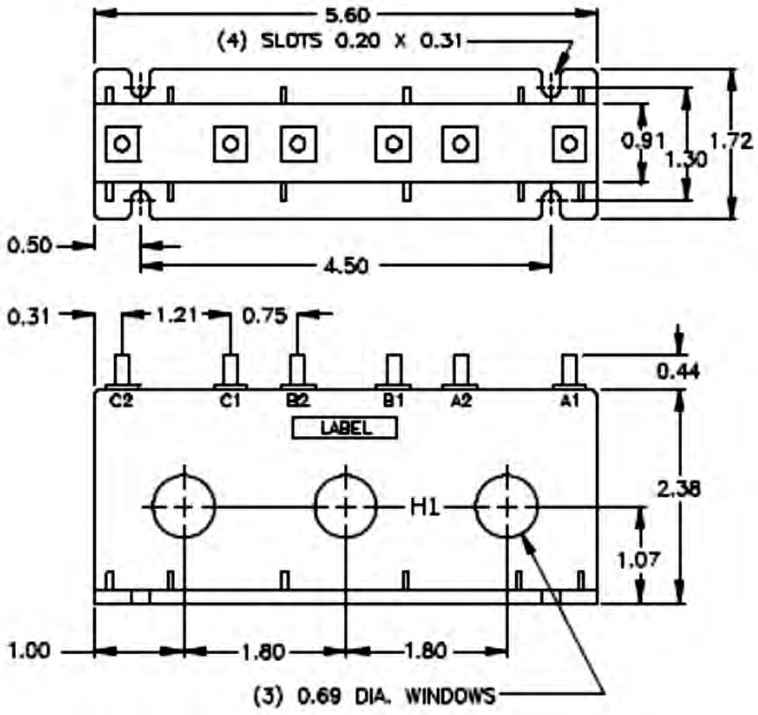


The graph illustrates voltage output capacity, and over the ranges shown, will maintain ± 3% linearity.



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TTL Transformer Technologies Ltd.

Current Transformer

Model 58RBL
rev 02222024

APPLICATION:
With ammeters, wattmeters and cross current compensation

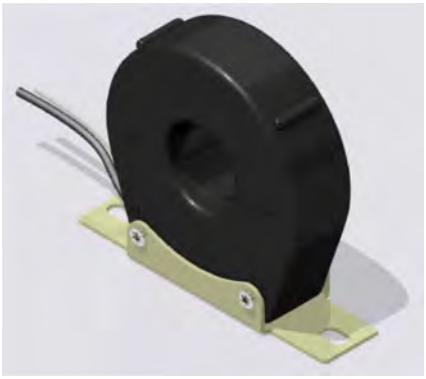
FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
1.25”

APPROXIMATE WEIGHT:
1.3 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, # 16AWG, 24” long
-Non-standard length to be specified



CERTIFICATIONS:

c UL us E228202

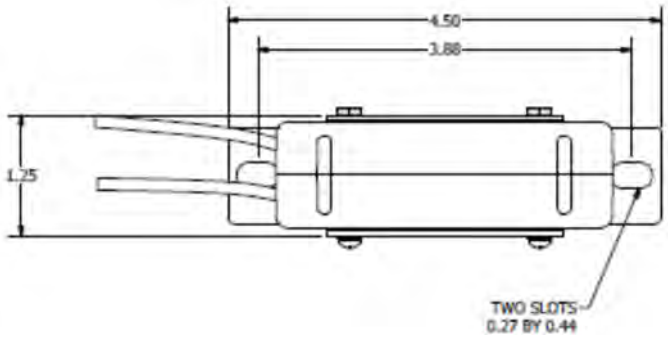
CSA C US 223647

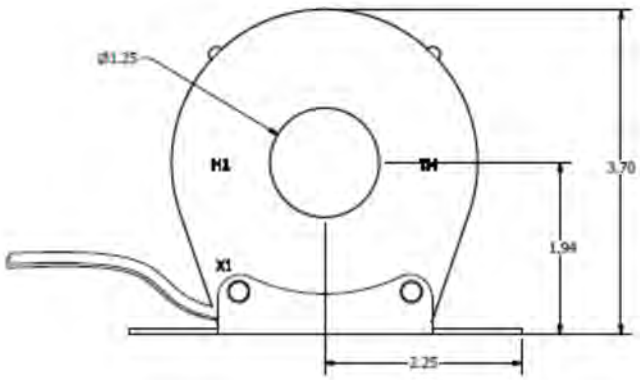
nqa. ISO 9001 QUALITY MANAGEMENT

Model	58RBL
Window Size	1.25
Width	4.50
Height	3.70
Depth	1.25

MODEL 58RBL
Window Diameter 1.25”
Approximate weight: 1.3 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
58RBL-500	50:5	± 3%	1.5
58RBL-600	60:5	± 2%	2.5
58RBL-750	75:5	± 1.5%	2.5
58RBL-800	80:5	± 1%	2.5
58RBL-101	100:5	± 1.5%	5
58RBL-121	120:5	± 1%	5
58RBL-1250	125:5	± 1%	6
58RBL-151	150:5	± 1%	7.5
58RBL-201	200:5	± 1%	12.5
58RBL-251	250:5	± 1%	12.5
58RBL-301	300:5	± 1%	15
58RBL-401	400:5	± 1%	25
58RBL-501	500:5	± 1%	25
58RBL-601	600:5	± 1%	25
58RBL-751	750:5	± 1%	25
58RBL-801	800:5	± 1%	25





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TTL Transformer Technologies Ltd.

Current Transformer

Model 5
rev 07062022

APPLICATION:
With ammeters, wattmeters and cross current compensation

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
1.56”

APPROXIMATE WEIGHT:
1.0 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved #16AWG, 24” long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lock washer, and regular nut
-SHT and SFT case style also available as SHL and SFL with leads
-Mounting bracket Part # 59-0218


5RL


5RBT


5SHT


5SFT

CERTIFICATIONS:

c UL us
E228202

CSA
C US
223647

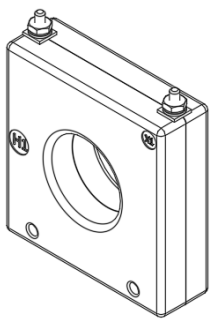
nqa.
ISO 9001
QUALITY MANAGEMENT

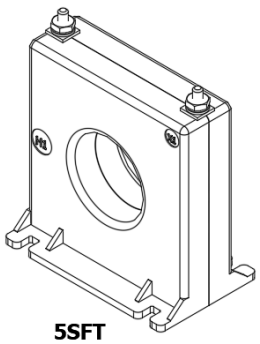
Model	5SHT	5SFT	5RL	5RBT
Window Size	1.56	1.56	1.56	1.56
Width	3.53	3.53	3.56	3.50
Height	3.65	3.78	4.37	3.56
Depth	1.09	1.09	1.10	1.25

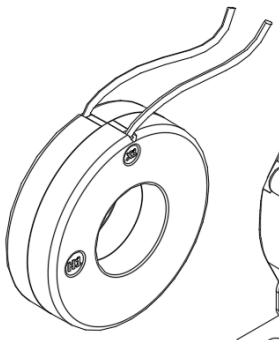
MODEL 5
Window Diameter 1.56”
Approximate weight: 1.0 lbs.

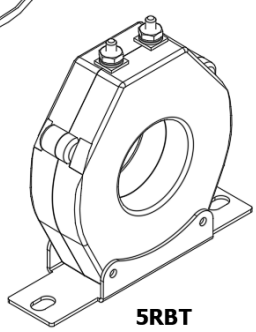
CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
5-500**	50:5	± 2%	1
5-750**	75:5	± 2%	1.5
5-101**	100:5	± 2%	2
5-151**	150:5	± 1%	5
5-201**	200:5	± 1%	5
5-251**	250:5	± 1%	10
5-301**	300:5	± 1%	12.5
5-401**	400:5	± 1%	12.5
5-501**	500:5	± 1%	20
5-601**	600:5	± 1%	25
5-751**	750:5	± 1%	25
5-801**	800:5	± 1%	25
5-102**	1000:5	± 1%	25
5-122**	1200:5	± 1%	30

NOTE: WHEN ORDERING, PREFIX CAT NO. WITH MODEL DESIGNATION REQUIRED, I.E. 5SFT-500, 5RL-500, ETC.


5SHT


5SFT


5RL


5RBT

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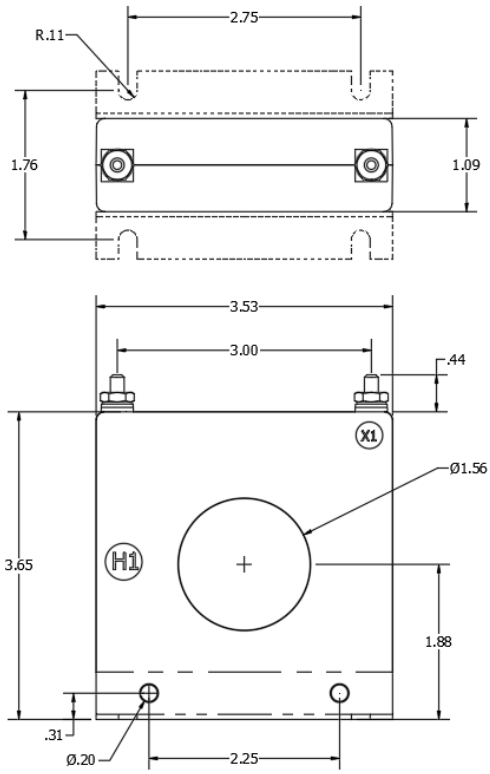
TTL Transformer Technologies Ltd.

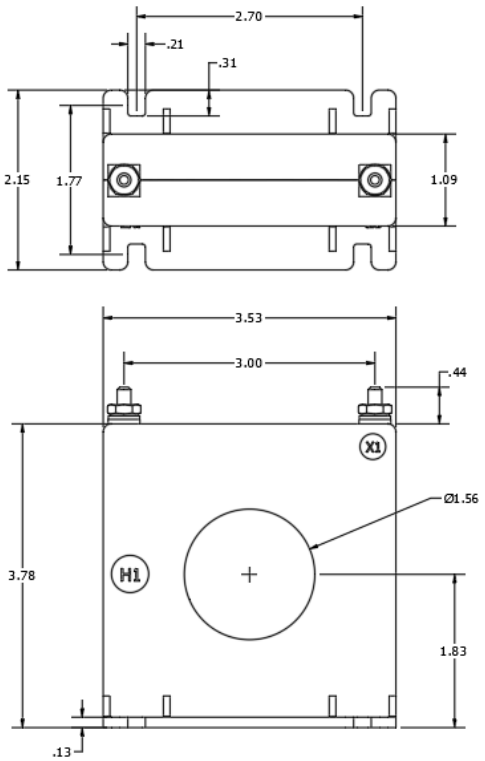
Current Transformer

Model 5
rev 07052022

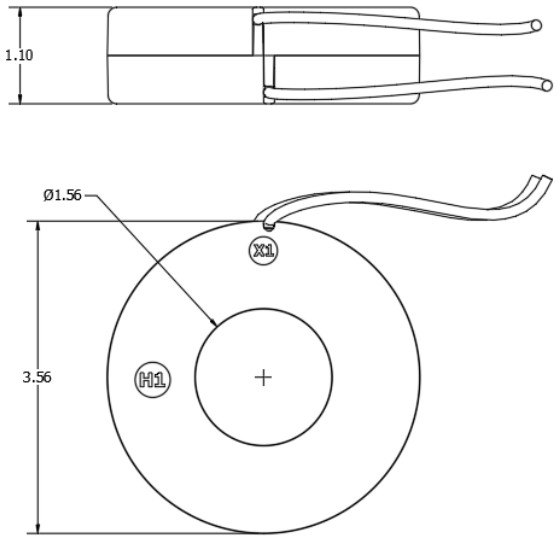
5SHT



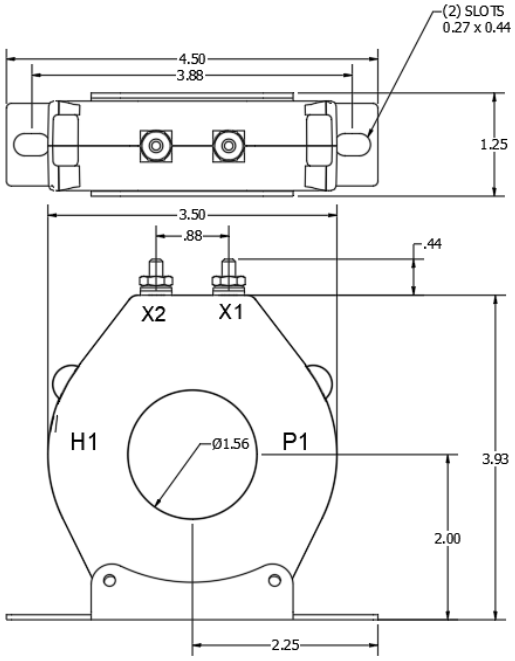
5SFT



5RL



5RBT



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 5SHT-0.333 / 5SFT-0.333 rev 031821

APPLICATION:
With ammeters, wattmeters and cross current compensation

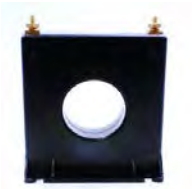
FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
1.56”

APPROXIMATE WEIGHT:
1.0 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved
#16AWG, 24” long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lock washer, and regular nut
-Mounting bracket Part #59-0218



CERTIFICATIONS:

E228202

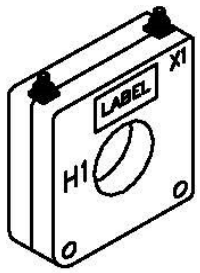
223647

ISO 9001 QUALITY MANAGEMENT

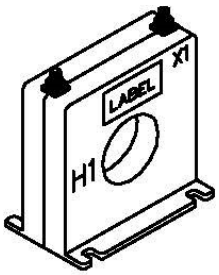
Model	5SHT	5SFT
Window Size	1.56	1.56
Width	3.53	3.53
Height	3.65	3.78
Depth	1.09	2.15

MODEL 5**
Window Diameter 1.56”
Approximate weight: 1.0 lbs.

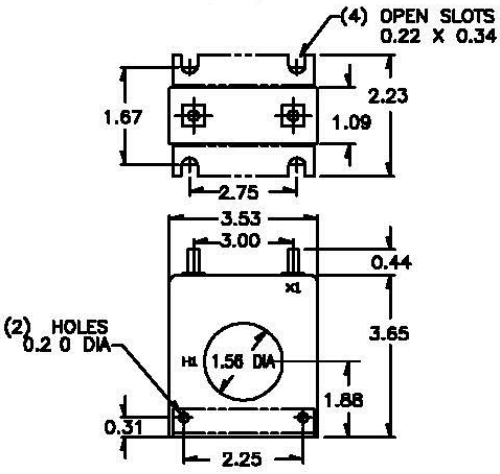
CATALOG NUMBER	CURRENT VOLTAGE RATIO
5**201-0.333	200:0.333
5**251-0.333	250:0.333
5**301-0.333	300:0.333
5**401-0.333	400:0.333
5**501-0.333	500:0.333
5**601-0.333	600:0.333
5**751-0.333	750:0.333
5**801-0.333	800:0.333
5**102-0.333	1000:0.333
5**122-0.333	1200:0.333

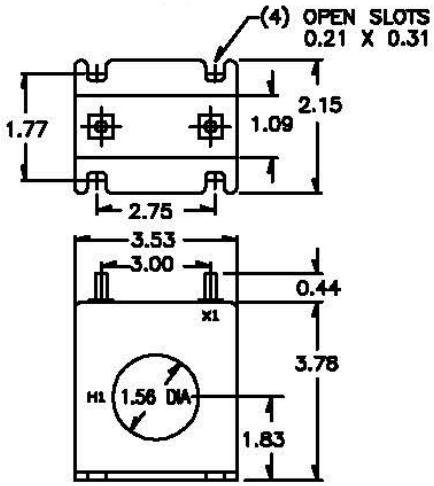


5SHT



5SFT





Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 5A
rev 120418

APPLICATION:
With ammeters and wattmeters.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
1.56”

APPROXIMATE WEIGHT:
1.0 lbs.

CONNECTIONS:
-Terminals are brass studs No. 8-32 UNC with one flatwasher.
-Flexible Leads are UL 1015 105°C, CSA approved #16AWG, 24” long
-Non-standard length to be specified

5ARL

5ASHT

5ASFT

Model	5ASHT	5ASFT	5ARL
Window Size	1.56	1.56	1.56
Width	3.53	3.53	3.56
Height	3.70	3.77	3.56
Depth	1.10	1.09	1.10

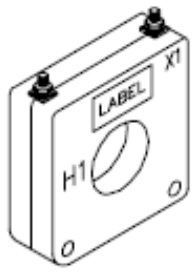
CERTIFICATIONS:

c UL us E228202

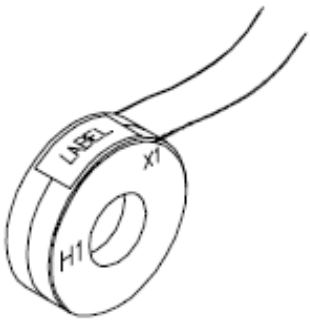
c SA us 223647

nqa. ISO 9001 QUALITY MANAGEMENT

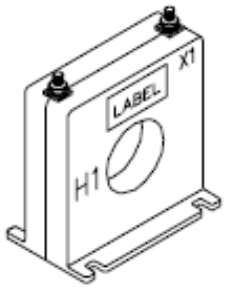
CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@30°C	@55°C
5A**-500	50:5	1.0	4.8	-	-	-	-	0.009	2.0	2.0
5A**-750	75:5	1.0	2.4	4.8	-	-	-	0.010	2.0	2.0
5A**-101	100:5	1.0	1.2	2.4	-	-	-	0.012	2.0	2.0
5A**-151	150:5	5.0	0.6	1.2	2.4	4.8	-	0.019	2.0	2.0
5A**-201	200:5	5.0	0.6	0.6	1.2	2.4	4.8	0.024	2.0	2.0
5A**-251	250:5	12.5	0.3	0.3	1.2	2.4	2.4	0.033	2.0	1.5
5A**-301	300:5	15.0	0.3	0.3	0.6	1.2	2.4	0.040	2.0	1.5
5A**-401	400:5	20.0	0.3	0.3	0.6	1.2	1.2	0.091	1.5	1.0
5A**-501	500:5	25.0	0.3	0.3	0.6	0.6	1.2	0.105	1.33	0.8
5A**-601	600:5	30.0	0.3	0.3	0.3	0.6	1.2	0.158	1.0	0.8
5A**-751	750:5	30.0	0.3	0.3	0.3	0.6	0.6	0.147	1.0	0.8
5A**-801	800:5	30.0	0.3	0.3	0.3	0.6	0.6	0.156	1.0	0.8
5A**-102	1000:5	35.0	0.3	0.3	0.3	0.3	0.6	0.196	1.0	0.8
5A**-122	1200:5	40.0	0.3	0.3	0.3	0.3	0.3	0.291	1.0	0.6



5ASHT



5ARL



5ASFT

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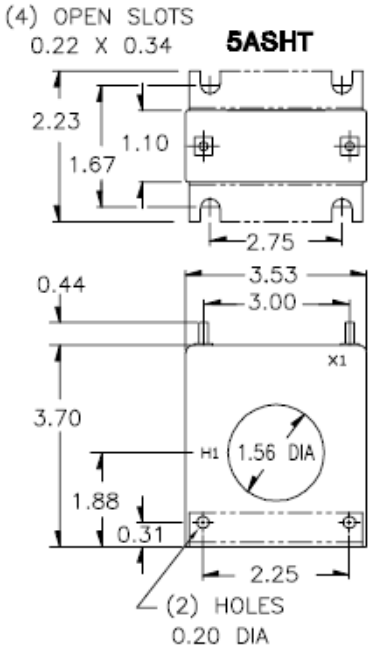
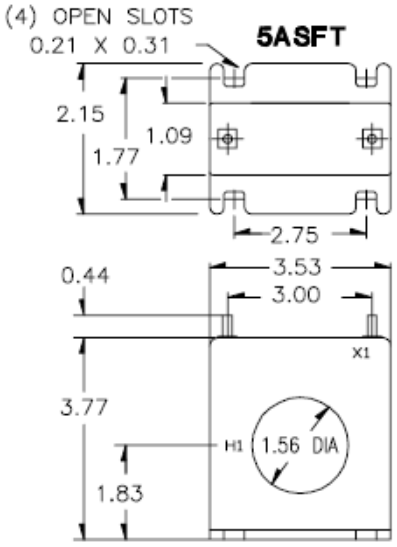
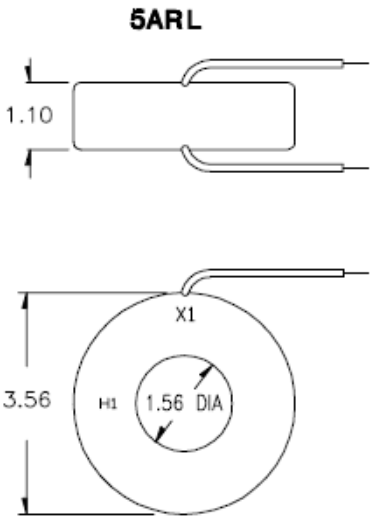

(4) OPEN SLOTS
0.22 X 0.34
5ASHT
2.23
1.10
1.67
2.75
0.44
3.53
3.00
X1
3.70
H1
1.56 DIA
1.88
0.31
2.25
(2) HOLES
0.20 DIA


(4) OPEN SLOTS
0.21 X 0.31
5ASFT
2.15
1.09
1.77
2.75
0.44
3.53
3.00
X1
3.77
H1
1.56 DIA
1.83


5ARL
1.10
X1
3.56
H1
1.56 DIA

Current Transformer

Model 5DRL

5DRL

APPLICATION:
With ammeters, wattmeters and cross current compensation

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
1.56”

APPROXIMATE WEIGHT:
2.0 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved #16AWG, 24” long
-Non-standard length to be specified

Model	5DRL
Window Size	1.56
Width	3.63
Height	3.63
Depth	2.06

CERTIFICATIONS:

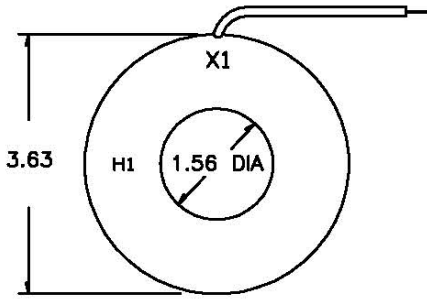
E228202

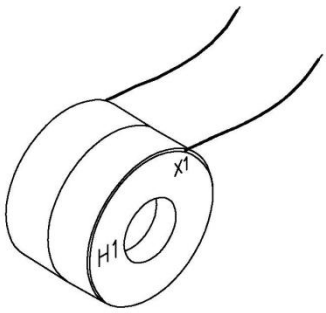
223647

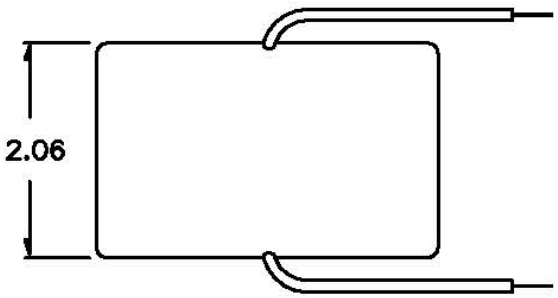
ISO 9001 QUALITY MANAGEMENT

MODEL 5DRL
Window Diameter 1.56”
Approximate weight: 2.0 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 Hz	BURDEN VA AT 60 Hz
5DRL-500	50:5	± 2%	2.5
5DRL-600	60:5	± 1%	2.5
5DRL-750	75:5	± 1%	3.5
5DRL-101	100:5	± 1%	5
5DRL-151	150:5	± 1%	10
5DRL-201	200:5	± 1%	12.5
5DRL-251	250:5	± 1%	20
5DRL-301	300:5	± 1%	20
5DRL-401	400:5	± 1%	40
5DRL-501	500:5	± 1%	50
5DRL-601	600:5	± 1%	60
5DRL-751	750:5	± 1%	60
5DRL-801	800:5	± 1%	60
5DRL-102	1000:5	± 1%	75
5DRL-122	1200:5	± 1%	90







Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 6A
rev 120418

APPLICATION:
With ammeters, wattmeters.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
2.06"

APPROXIMATE WEIGHT:
1.25 lbs.

CONNECTIONS:
-Flexible leads are UL 1015 105 C, CSA approved #16 AWG 24" long
-Non-standard length to be specified.
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-ASFT and ASHT case styles also available as ASFL and ASHL with leads
-Mounting kit – 59-0223 required for Model 6ASHT

6ARL

6ASHT

6ASFT

Model	6ASHT	6ASFT	6ARL
Window Size	2.06	2.06	2.06
Width	4.08	4.12	4.08
Height	4.22	4.21	4.08
Depth	1.10	1.10	1.10

CERTIFICATIONS:

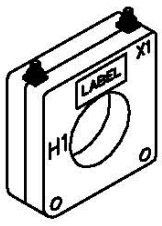
c UL us E228202

CSA C US 223647

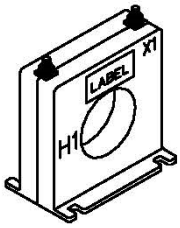
nqa. ISO 9001 QUALITY MANAGEMENT

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@30°C	@55°C
6A**-101	100:5	1.0	1.2	2.4	-	-	-	0.015	2.0	2.0
6A**-151	150:5	5.0	1.2	1.2	2.4	4.8	-	0.024	2.0	2.0
6A**-201	200:5	5.0	0.6	1.2	2.4	2.4	4.8	0.037	2.0	2.0
6A**-251	250:5	7.5	0.3	0.6	1.2	2.4	4.8	0.044	2.0	1.5
6A**-301	300:5	12.5	0.3	0.3	1.2	2.4	2.4	0.055	2.0	1.5
6A**-401	400:5	15.0	0.3	0.3	0.6	1.2	1.2	0.071	1.5	1.33
6A**-501	500:5	25.0	0.3	0.3	0.6	1.2	1.2	0.107	1.5	1.0
6A**-601	600:5	30.0	0.3	0.3	0.6	10.6	1.2	0.128	1.33	1.0
6A**-751	750:5	30.0	0.3	0.3	0.3	0.6	1.2	0.156	1.25	1.0
6A**-801	800:5	35.0	0.3	0.3	0.3	0.6	0.6	0.167	1.25	0.8
6A**-102	1000:5	35.0	0.3	0.3	0.3	0.3	0.6	0.208	1.0	0.8
6A**-122	1200:5	40.0	0.3	0.3	0.3	0.6	0.3	0.250	1.0	0.8
6A**-152	1500:5	50.0	0.3	0.3	0.3	0.3	0.3	0.388	1.0	0.8

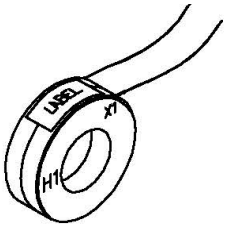
Note: When ordering, prefix Cat No. with model designation, i.e. 6ASHT-201, 6ARL-301 etc.



6ASHT



6ASFT



6ARL

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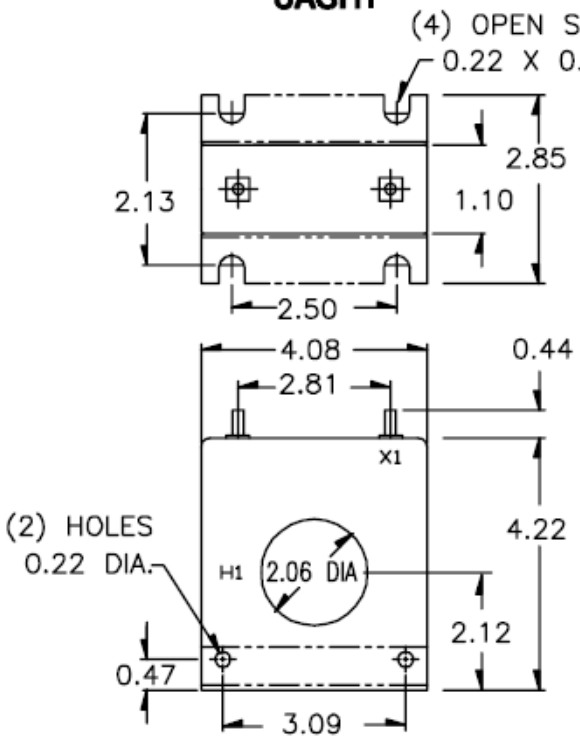
6ASHT



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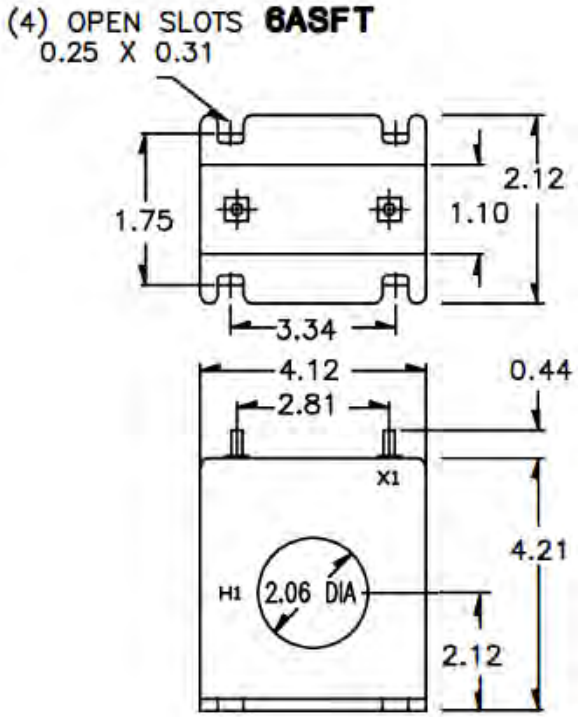
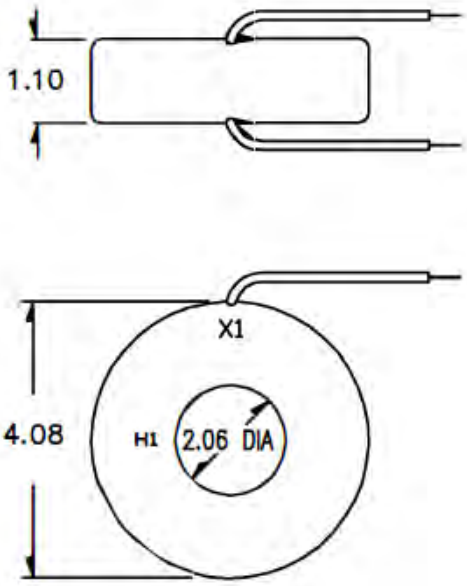


6ARL



TTL Transformer Technologies Ltd.

Current Transformer

Model 10

APPLICATION:
Metering
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
WINDOW DIAMETER:
1.56”
APPROXIMATE WEIGHT:
2.5 lbs.
CONNECTIONS:
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut

Model	10SFT
Window Size	1.56
Width	4.08
Height	4.59
Depth	2.10

CERTIFICATIONS:

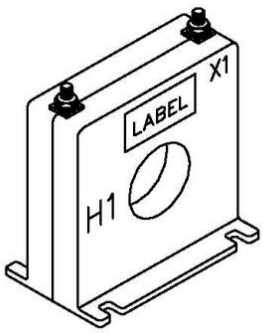
c UL us E228202

CSA C US 223647

nqa. ISO 9001 QUALITY MANAGEMENT

MODEL 10
Window Diameter 1.56”
Approximate weight: 2.5 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@30°C	@55°C
10SFT-500	50:5	2.0 ± 2%	4.8	-	-	-	-	0.007	2	2
10SFT-750	75:5	2.5	1.2	4.8	-	-	-	0.01	2	2
10SFT-101	100:5	3	1.2	2.4	4.8	-	-	0.018	2	2
10SFT-151	150:5	5	0.6	0.6	2.4	4.8	-	0.031	2	2
10SFT-201	200:5	7.5	0.3	0.6	1.2	2.4	4.8	0.043	2	1.5
10SFT-251	250:5	10	0.3	0.3	1.2	1.2	2.4	0.053	2	1.5
10SFT-301	300:5	15	0.3	0.3	0.6	1.2	2.4	0.07	2	1.5
10SFT-401	400:5	20	0.3	0.3	0.3	0.6	1.2	0.114	1.5	1
10SFT-501	500:5	30	0.3	0.3	0.3	0.6	1.2	0.128	1.33	1
10SFT-601	600:5	40	0.3	0.3	0.3	0.6	0.6	0.192	1.33	0.8



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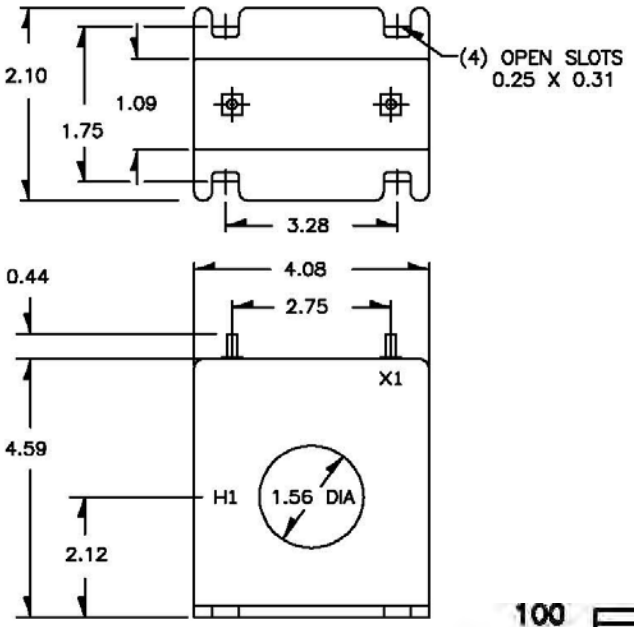
TTL Transformer Technologies Ltd.

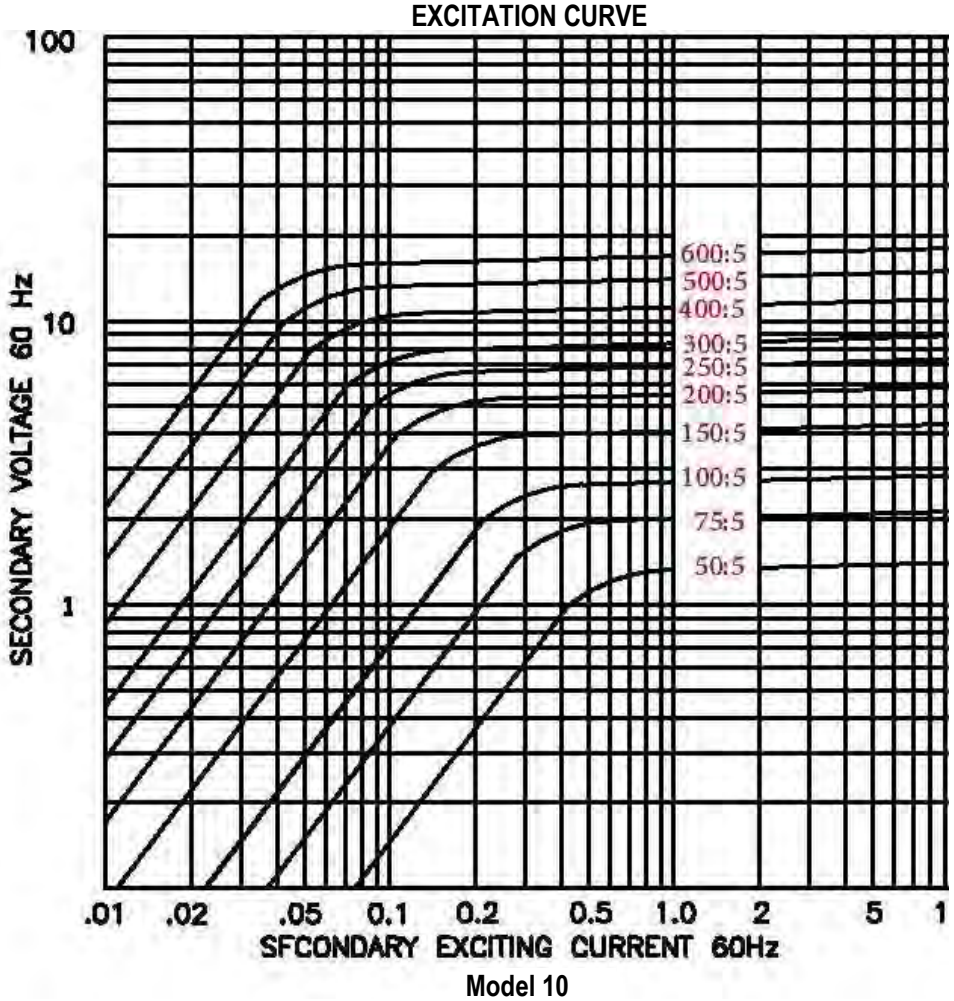
Current Transformer

Model 10

Model 10



EXCITATION CURVE



Model 10

Current Transformer

Model 56

APPLICATION:
With ammeters, wattmeters and cross current compensation

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

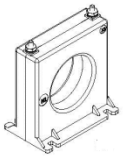
WINDOW DIAMETER:
2.06”

APPROXIMATE WEIGHT:
0.6 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved
#16AWG, 24” long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lock washer, and regular nut
-RBT and RT case styles also available and SHT and SFT as SHL and SFL with leads

56RL

56SHT



56SFT

CERTIFICATIONS:

E228202

223647

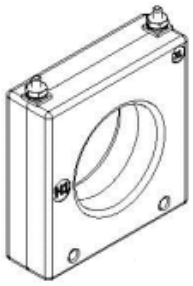
ISO 9001 QUALITY MANAGEMENT

Model	56SHT	56SFT	56RL
Window Size	2.06	2.06	2.06
Width	3.50	3.50	3.50
Height	3.63	3.63	3.50
Depth	1.10	1.10	1.09

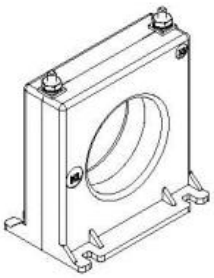
MODEL 56
Window Diameter 2.06”
Approximate weight: 0.6 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
56-500**	50:5	± 3%	0.5
56-750**	75:5	± 1%	0.5
56-101**	100:5	± 1%	1
56-151**	150:5	± 1%	2.5
56-201**	200:5	± 1%	4
56-251**	250:5	± 1%	6
56-301**	300:5	± 1%	7.5
56-401**	400:5	± 1%	10
56-501**	500:5	± 1%	12.5
56-601**	600:5	± 1%	15
56-751**	750:5	± 1%	7
56-801**	800:5	± 1%	8
56-102**	1000:5	± 1%	10
56-122**	1200:5	± 1%	12.5

NOTE: WHEN ORDERING, PREFIX CAT NO. WITH MODEL DESIGNATION REQUIRED, I.E. 56SFT-500, 56RL-500, ETC.



56SHT



56SFT

56RL

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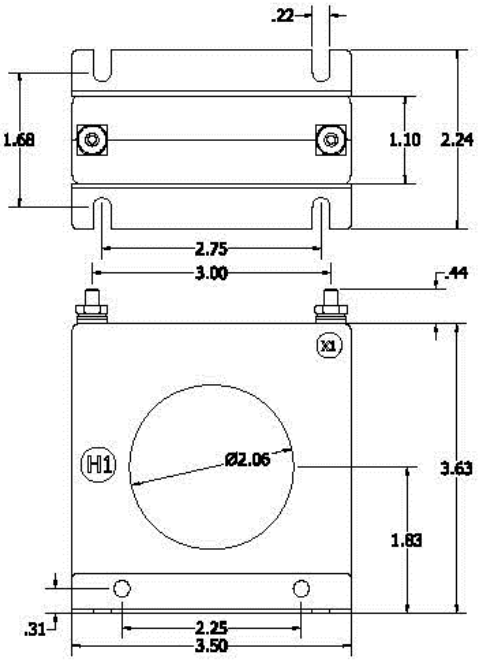
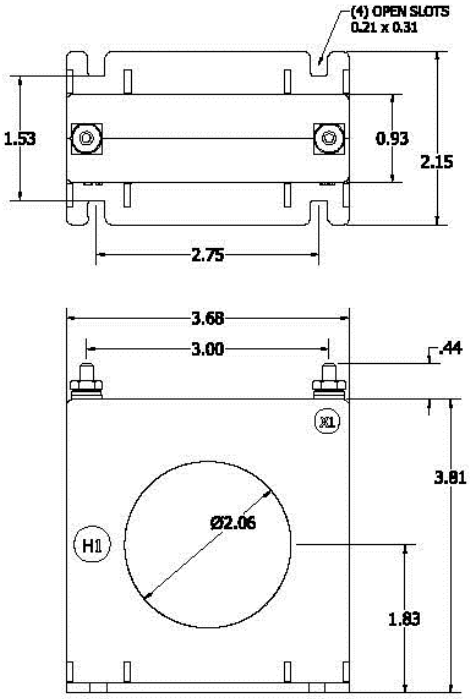
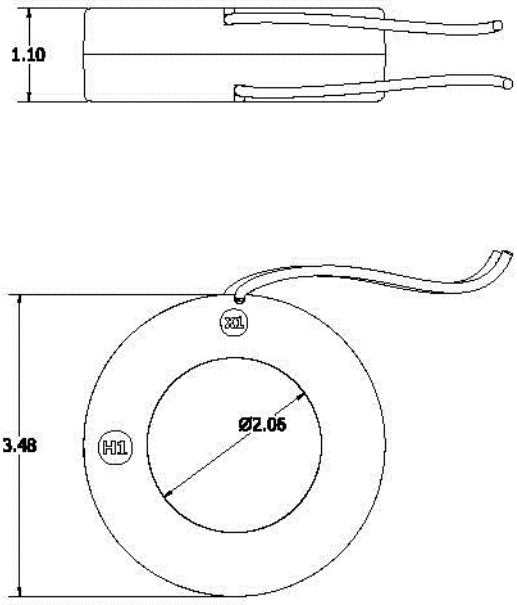
56SHT



56SFT



56RL



Current Transformer

Model 6

6RL

6SHT

6SFT

APPLICATION:
With ammeters, wattmeters and cross current compensation

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
2.06”

APPROXIMATE WEIGHT:
1.2 lbs.

CONNECTIONS:
-Flexible leads are UL 1015 105 C, CSA approved #16 AWG, 24” long
-Non-standard length to be specified.
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Mounting bracket 59-0223
-SFT and SHT case styles also available as SFL and SHL with leads
-Mounting kit – 59-0223

Model	6SHT	6SFT	6RL
Window Size	2.06	2.06	2.06
Width	4.08	4.12	4.08
Height	4.22	4.22	4.08
Depth	1.10	1.10	1.10

CERTIFICATIONS:

E228202

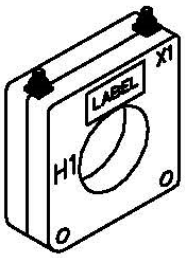
223647

ISO 9001 QUALITY MANAGEMENT

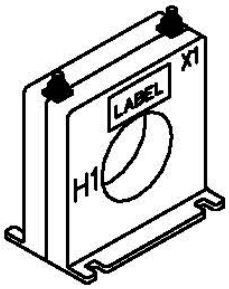
MODEL 6
Window Diameter 2.06”
Approximate weight: 1.2 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
6-101**	100:5	± 2%	2
6-151**	150:5	± 1%	5
6-201**	200:5	± 1%	5
6-251**	250:5	± 1%	7.5
6-301**	300:5	± 1%	12.5
6-401**	400:5	± 1%	15
6-501**	500:5	± 1%	25
6-601**	600:5	± 1%	30
6-751**	750:5	± 1%	25
6-801**	800:5	± 1%	25
6-102**	1000:5	± 1%	35
6-122**	1200:5	± 1%	40
6-152**	1500:5	± 1%	50

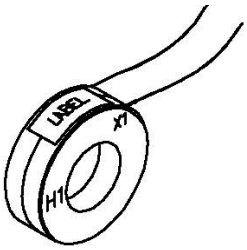
Note: When ordering, prefix Cat No. with model designation, i.e. 6SHT-201, 6RL-301 etc.



6SHT



6SFT



6RL

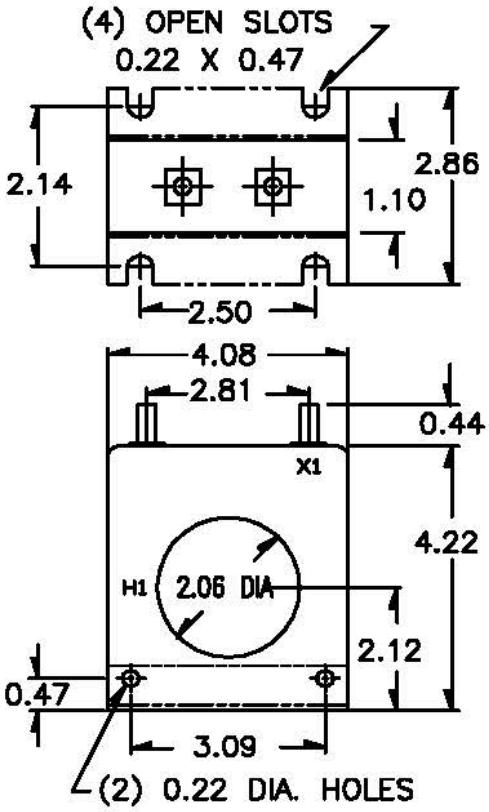
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

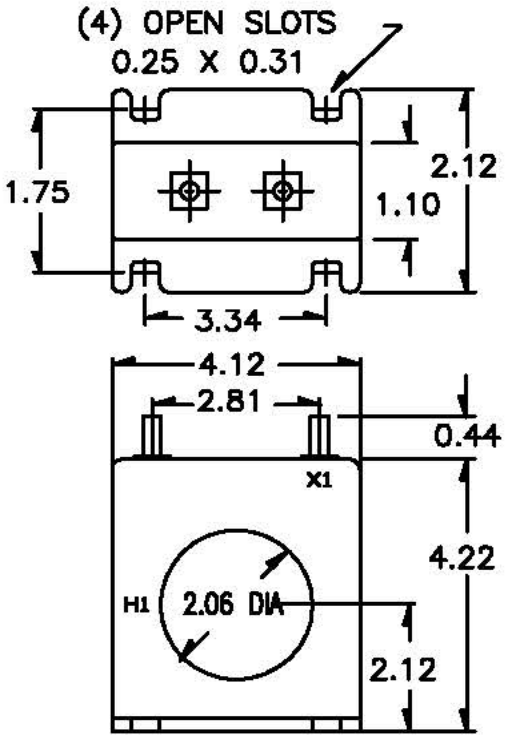
Current Transformer

Model 6

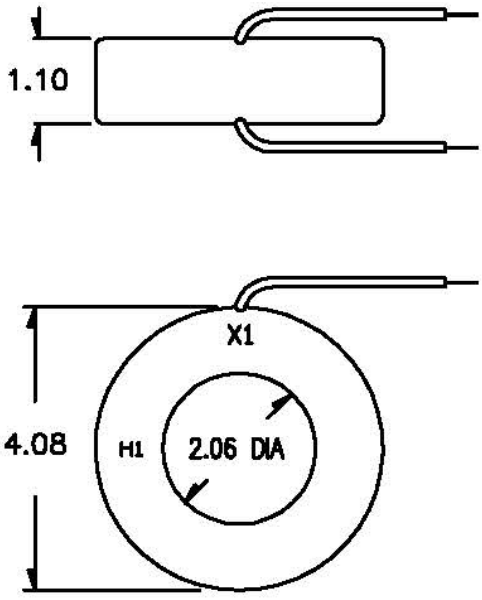
6SHT



6SFT



6RL



Current Transformer

Model 7

APPLICATION:
With ammeters, wattmeters and cross current compensation.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
2.50”

APPROXIMATE WEIGHT:
1.5 lbs.

CONNECTIONS:
-Flexible leads are UL 1015 105 C, CSA approved #16 AWG, 24” long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-SFT and SHT case styles also available as SFL and SHL with leads
-Mounting kit 59-0219


7SHT


7RL


7SFT

Model	7SHT	7SFT	7RL
Window Size	2.50	2.50	2.50
Width	4.56	4.56	4.58
Height	4.85	4.85	4.58
Depth	1.10	1.08	1.10

CERTIFICATIONS:

E228202

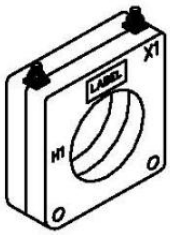
223647

ISO 9001 QUALITY MANAGEMENT

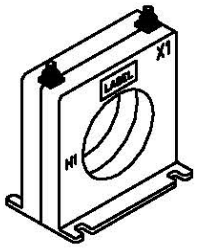
MODEL 7
Window Diameter 2.50”
Approximate weight: 1.5 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
7-101**	100:5	± 2%	2.5
7-151**	150:5	± 1%	5
7-201**	200:5	± 1%	5
7-251**	250:5	± 1%	5
7-301**	300:5	± 1%	12.5
7-401**	400:5	± 1%	15
7-501**	500:5	± 1%	25
7-601**	600:5	± 1%	30
7-751**	750:5	± 1%	30
7-801**	800:5	± 1%	35
7-102**	1000:5	± 1%	35
7-122**	1200:5	± 1%	35
7-152**	1500:5	± 1%	40
7-162**	1600:5	± 1%	45

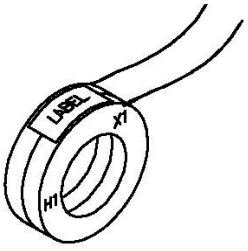
Note: When ordering, prefix Cat No. with model designation required, i.e. 7SFT-500, 7RL-500, etc.



7SHT



7SFT



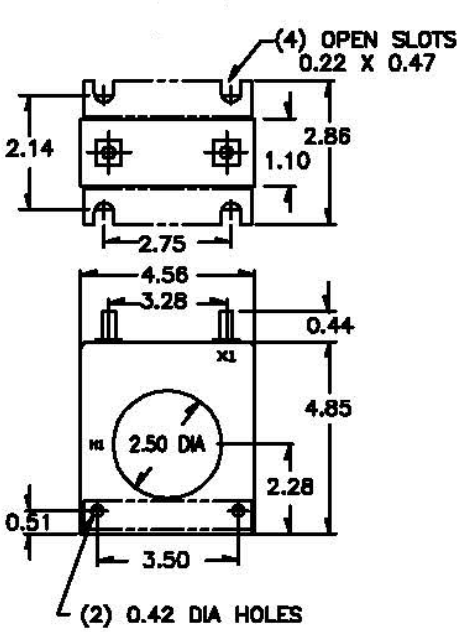
7RL

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

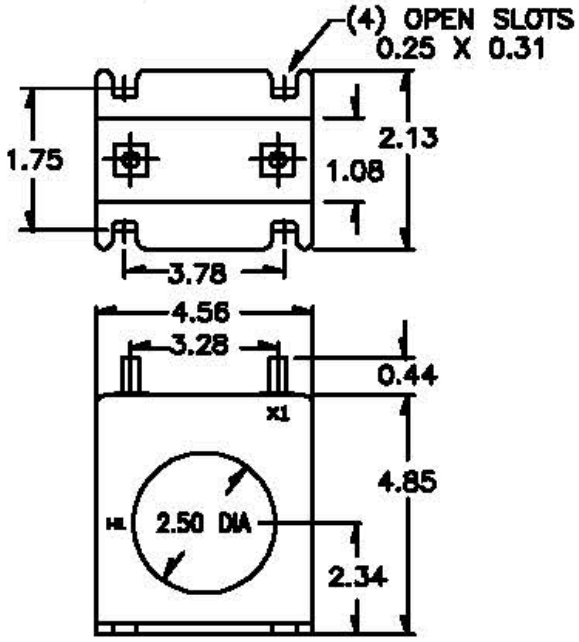
Current Transformer

Model 7

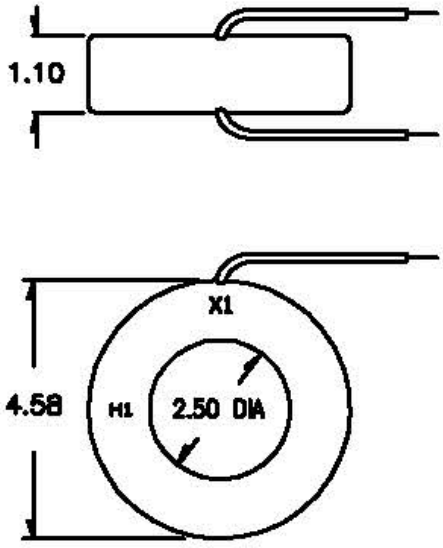
7SHT



7SFT



7RL



Current Transformer

Model 7SHT-0.333 / 7SFT-0.333

APPLICATION:
With ammeters, wattmeters and cross current compensation.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
2.50”

APPROXIMATE WEIGHT:
1.5 lbs.

CONNECTIONS:
-Flexible leads are UL 1015 105 C, CSA approved #16 AWG, 24” long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Mounting kit 59-0219

CERTIFICATIONS:

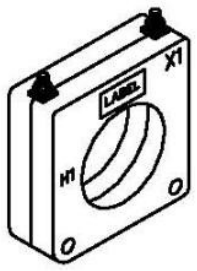
E228202

223647

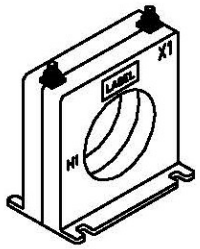
Model	7SHT	7SFT
Window Size	2.50	2.50
Width	4.56	4.56
Height	4.85	4.85
Depth	1.10	1.08

7**
Window Diameter 2.50”
Approximate weight: 1.5 lbs.

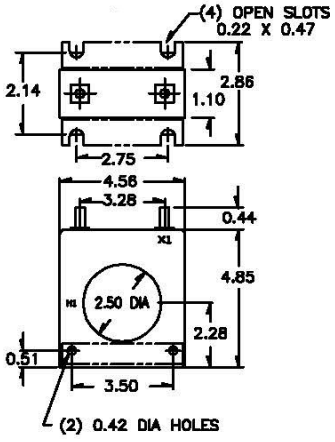
CATALOG NUMBER	CURRENT VOLTAGE RATIO
7**-201-0.333	200:0.333
7**-251-0.333	250:0.333
7**-301-0.333	300:0.333
7**-401-0.333	400:0.333
7**-501-0.333	500:0.333
7**-601-0.333	600:0.333
7**-751-0.333	750:0.333
7**-801-0.333	800:0.333
7**-102-0.333	1000:0.333
7**-122-0.333	1200:0.333
7**-152-0.333	1500:0.333
7**-162-0.333	1600:0.333

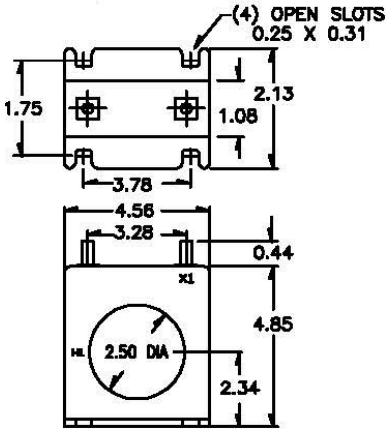


7SHT



7SFT





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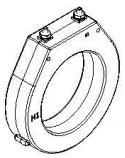
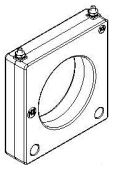
Current Transformer

Model 76

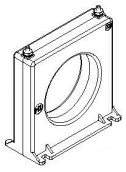
76RL



76RT



76SHT



76SFT

APPLICATION:
With ammeters, wattmeters and cross current compensation.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
3.00”

APPROXIMATE WEIGHT:
1.5 lbs.

CONNECTIONS:
-Flexible leads are UL 1015 105 C, CSA approved #16 AWG, 24” long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-RBT and RT case styles also available and SFT and SHT as SFL and SHL with leads

Model	76SHT	76SFT	76RL	76RT
Window Size	3.00	3.00	3.00	3.00
Width	4.54	4.54	4.50	4.50
Height	4.68	4.68	4.50	4.64
Depth	1.12	1.12	1.13	1.10

CERTIFICATIONS:

E228202

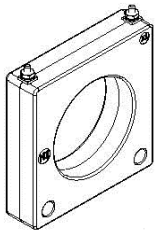
223647

ISO 9001 QUALITY MANAGEMENT

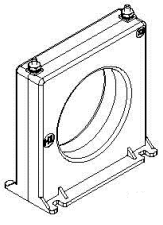
MODEL 76
Window Diameter 3.00”
Approximate weight: 1.5 lbs.

CATALOG NUMBER	CURRENT RATIO	ACCURACY AT 60 HZ	BURDEN VA AT 60 HZ
76-201**	200:5	± 1%	5
76-251**	250:5	± 1%	5
76-301**	300:5	± 1%	6
76-401**	400:5	± 1%	10
76-501**	500:5	± 1%	10
76-601**	600:5	± 1%	10
76-751**	750:5	± 1%	10
76-801**	800:5	± 1%	12.5
76-102**	1000:5	± 1%	10
76-122**	1200:5	± 1%	10
76-152**	1500:5	± 1%	12.5
76-162**	1600:5	± 1%	12.5
76-202**	2000:5	± 1%	15

Note: When ordering, prefix Cat No. with model designation required, i.e. 76SFT-201, 76RL-201, etc.

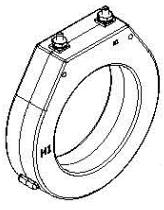


76SHT



76SFT

76RL



76RT

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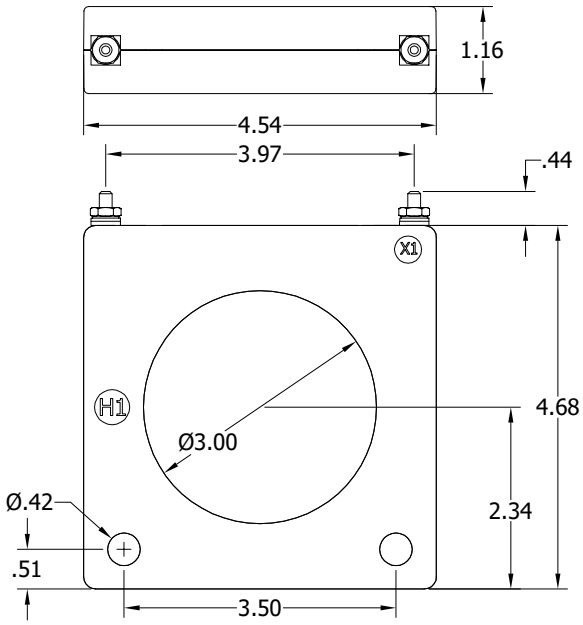
TTL Transformer Technologies Ltd.

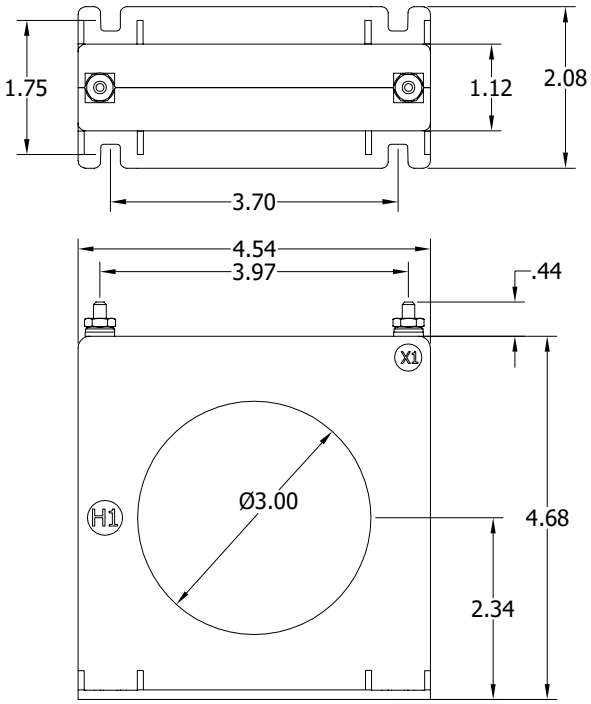
Current Transformer

Model 76
rev 04292024

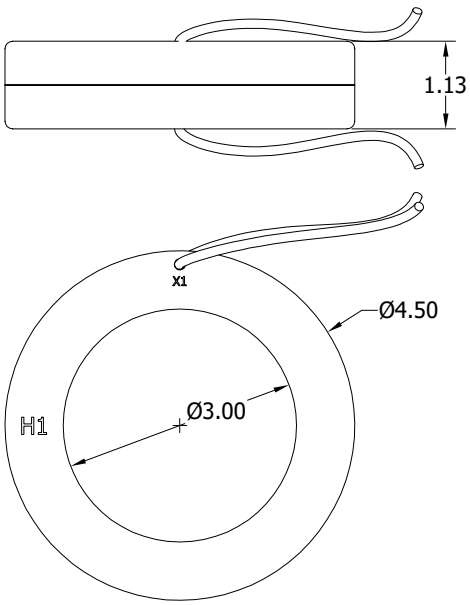
76SHT



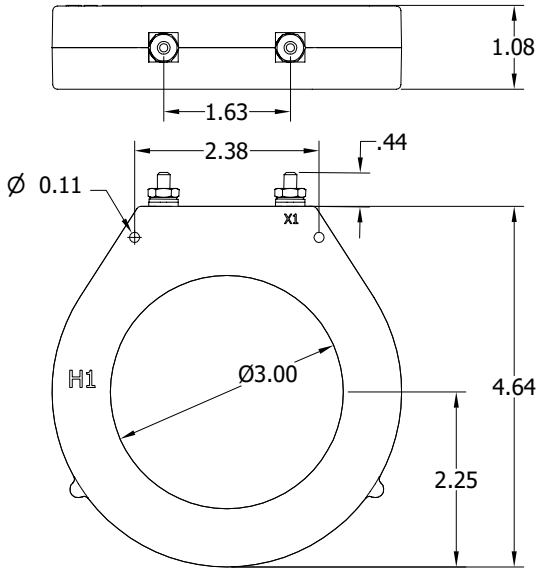
76SFT



76RL



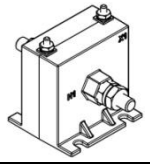
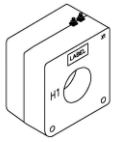
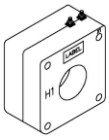
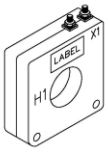
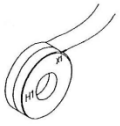
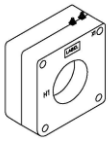
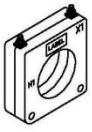
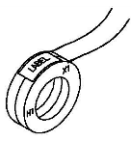
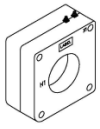
76RT



CURRENT TRANSFORMERS

For Metering and Instrumentation

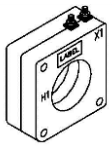
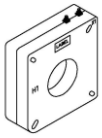
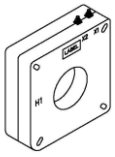
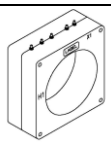
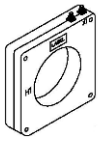
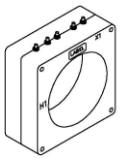
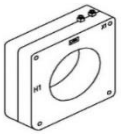
600V Current Transformers
ANSI Rated Window Type

WINDOW SIZES Wound Primary **MODEL 189**		**Page 2-6**
WINDOW SIZES 1.25”, 1.63”, 2.00”, 2.50”, 3.13” **MODELS 21, 22, 23, 24, 25**		**Page 2-7**
WINDOW SIZES 1.50”, 2.25”, 3.00”, 3.38”, 3.75” **MODEL 296, 297, 298, 299, 300**		**Page 2-13**
WINDOW SIZES 1.56”, 2.00”, 2.50” **MODEL 64, 65, 66**		**Page 2-19**
WINDOW SIZES 2.06” **MODEL 6A**	 **6A**SHT  6ASFT  6ARL	**Page 2-23**
WINDOW SIZES 2.25”, 2.75”, 3.25”, 4.00”, 4.62” **MODEL 112, 113, 114, 115, 117**		**Page 2-25**
WINDOW SIZES 2.50” **MODEL 7A**	 **7A**SHT  7ASFT  7ARL	**Page 2-31**
WINDOW SIZES 2.50” **MODEL 193, 194**		**Page 2-33**

CURRENT TRANSFORMERS

For Metering and Instrumentation

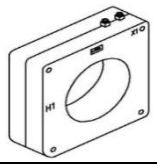
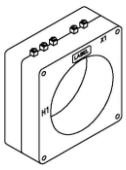
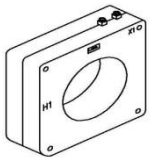
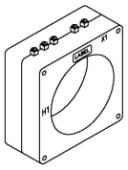
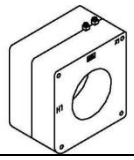
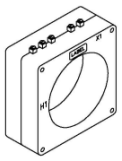
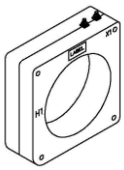
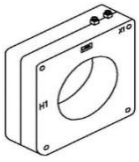
600V Current Transformers
ANSI Rated Window Type

WINDOW SIZES 2.50” **MODEL 180**	 180SHT	 180RL	**Page 2-35**
WINDOW SIZES 3.25” **MODEL 8**	 8SHT	 8RL	**Page 2-37**
WINDOW SIZES 4.00” **MODEL 100**			**Page 2-40**
WINDOW SIZES 4.00” **MODEL 110**			**Page 2-42**
WINDOW SIZES 4.00” **MODEL 115MR**			**Page 2-44**
WINDOW SIZES 4.25” **MODEL 19**	 19SHT	 19RL	**Page 2-46**
WINDOW SIZES 4.25” **MODEL 170**	 170SHT	 170RL	**Page 2-48**
WINDOW SIZES 4.62” **MODEL 117MR**			**Page 2-51**
WINDOW SIZES 5.75” **MODEL 120**			**Page 2-53**

CURRENT TRANSFORMERS

For Metering and Instrumentation

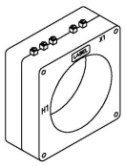
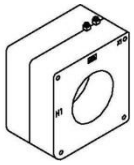
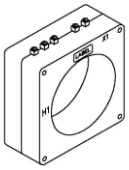
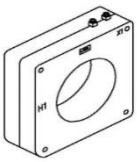
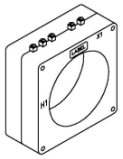
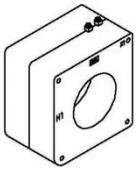
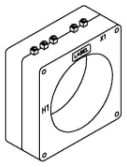
600V Current Transformers
ANSI Rated Window Type

WINDOW SIZES 5.75” **MODEL 135**		**Page 2-55**
WINDOW SIZES 5.75” **MODEL 135MR**		**Page 2-57**
WINDOW SIZES 6.00” **MODEL 144**		**Page 2-59**
WINDOW SIZES 6.00” **MODEL 144MR**		**Page 2-61**
WINDOW SIZES 6.00” **MODEL 145**		**Page 2-63**
WINDOW SIZES 6.00” **MODEL 145MR**		**Page 2-65**
WINDOW SIZES 6.31” **MODEL 125**		**Page 2-67**
WINDOW SIZES 7.25” **MODEL 142**		**Page 2-69**

CURRENT TRANSFORMERS

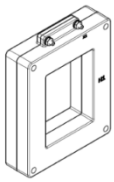
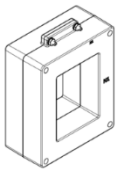
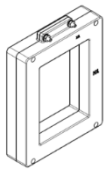
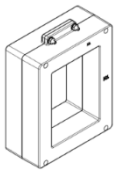
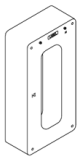
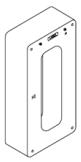
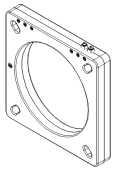
For Metering and Instrumentation

600V Current Transformers
ANSI Rated Window Type

WINDOW SIZES 7.**25”** **MODEL 142MR**		**Page 2-71**
WINDOW SIZES 7.**31”** **MODEL 143**		**Page 2-73**
WINDOW SIZES 7.**31”** **MODEL 143MR**		**Page 2-75**
WINDOW SIZES 8.13” **MODEL 140**		**Page 2-77**
WINDOW SIZES 8.13” **MODEL 140MR**		**Page 2-79**
WINDOW SIZES 8.13” **MODEL 141**		**Page 2-81**
WINDOW SIZES 8.13” **MODEL 141MR**		**Page 2-83**
WINDOW SIZES 8.13” **MODEL 190 & 190X**		**Page 2-85**

CURRENT TRANSFORMERS
For Metering and Instrumentation

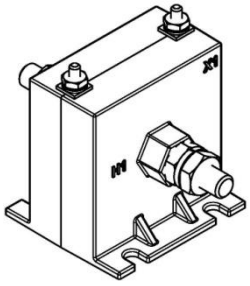
600V Current Transformers
ANSI Rated Window Type

WINDOW SIZES **25" x 4.25** **MODEL 560**		**Page 2-86**
WINDOW SIZES **3.25" x 4.25"** **MODEL 561**		**Page 2-88**
WINDOW SIZES **4.00" x 5.38"** **MODEL 562**		**Page 2-90**
WINDOW SIZES **4.00" x 5.38"** **MODEL 562-LONG LEAD**		**Page 2-92**
WINDOW SIZES **4.00" x 5.38"** **MODEL 563**		**Page 2-94**
WINDOW SIZES **5.00" x 14.00"** **MODEL 592**		**Page 2-96**
WINDOW SIZES **8.06" x 22.06"** **MODEL 593**		**Page 2-98**
WINDOW SIZES **8.25" DIA** **MODEL 126**		**Page 2-100**

Current Transformer

Model 189

APPLICATION:
Ammeters and wattmeters
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
WINDOW DIAMETER:
Wound Primary
APPROXIMATE WEIGHT:
0.75 lbs.
CONNECTIONS:
Primary terminals for the Model 189 for ratios of 30:5 and below are No. 10-32 brass screws with one lockwasher (Dimension A=3.28), for ratios 40:5 and above, 3/8-16 brass studs with one lockwasher and regular nut (Dimension A=4.10)



Model	189
Window Size	Wound Primary
Width	2.70
Height	2.75
Depth	2.40

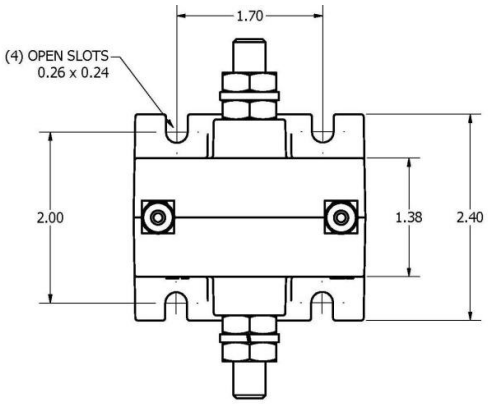
MODEL 189
Wound Primary
Approximate weight: 0.75 lbs.

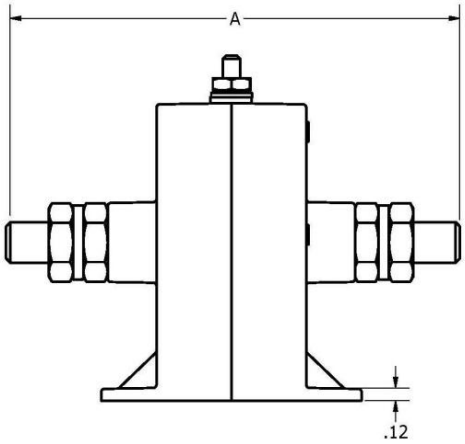
CERTIFICATIONS:

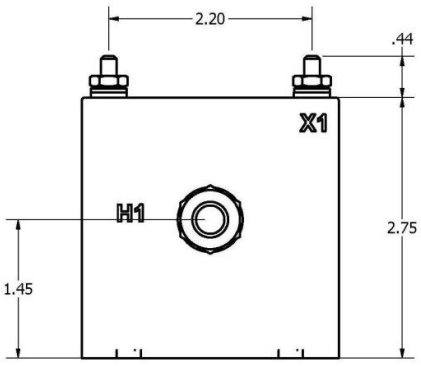
E228202

223647

CATALOG NUMBER	CURRENT RATIO	ANSI METERING CLASS AT 60 HZ	
		B0.1	B0.2
189-0025	2.5:5	0.6	0.6
189-005	5:5	0.6	0.6
189-0075	7.5:5	0.6	0.6
189-010	10:5	0.6	0.6
189-015	15:5	0.6	0.6
189-020	20:5	0.6	0.6
189-025	25:5	0.6	0.6
189-030	30:5	0.6	0.6
189-040	40:5	0.6	0.6
189-050	50:5	0.6	0.6
189-060	60:5	0.6	0.6
189-075	75:5	0.6	0.6
189-080	80:5	0.6	0.6
189-101	100:5	0.6	0.6







Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 21, 22, 23, 24, 25
rev 03182021

APPLICATION:
Relaying and Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
1.25", 1.63", 2.00", 2.50", 3.13"

APPROXIMATE WEIGHT:
21, 22, 23: 7 lbs. 24: 6 lbs. 25: 4 lbs.

CONNECTIONS:
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Order Mounting bracket kit separately 59-0224

Model	21	22	23	24	25
Window Size	1.25	1.63	2.00	2.50	3.13
Width	4.63	4.63	4.63	4.63	4.63
Height	5.10	5.10	5.10	5.10	5.10
Depth	3.00	3.00	3.00	3.00	3.00

CERTIFICATIONS:

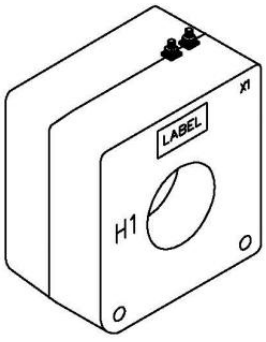
E228202

223647

ISO 9001 QUALITY MANAGEMENT

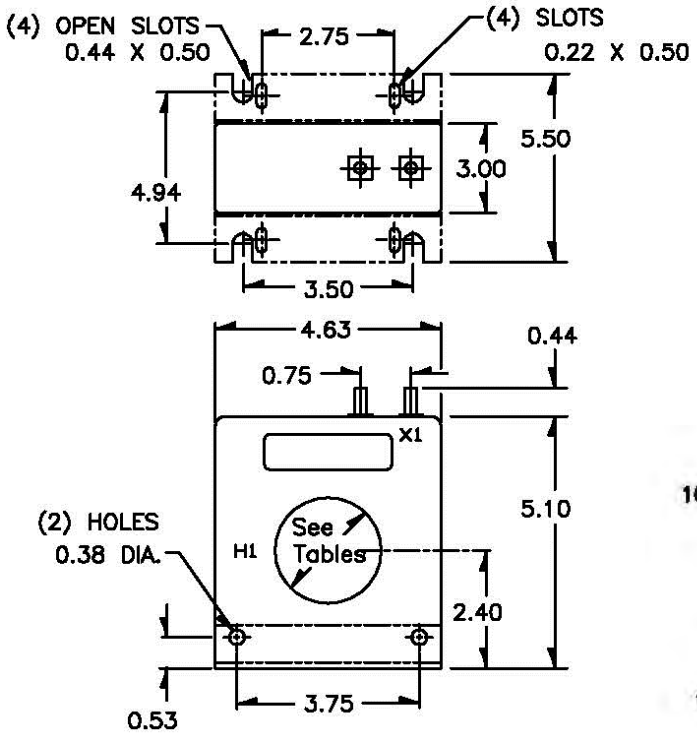
MODEL 21
Window Diameter 1.25"
Approximate weight: 7 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@ 30°C	@55°C
21 – 500	50:5	-	1.2	2.4	-	-	-	0.026	2.0	2.0
21 – 750	75:5	C10	0.6	1.2	2.4	4.8	-	0.042	2.0	2.0
21 – 101	100:5	C10	0.6	1.2	1.2	2.4	4.8	0.063	2.0	2.0
21 – 151	150:5	C20	0.3	0.6	0.6	1.2	2.4	0.098	2.0	1.5
21 – 201	200:5	C20	0.3	0.3	0.6	0.6	1.2	0.126	2.0	1.5
21 – 251	250:5	C20	0.3	0.3	0.3	0.6	1.2	0.158	1.5	1.5
21 – 301	300:5	C20	0.3	0.3	0.3	0.3	0.3	0.168	1.5	1.33
21 – 401	400:5	C50	0.3	0.3	0.3	0.3	0.3	0.253	1.5	1.0
21 – 501	500:5	C20	0.3	0.3	0.3	0.3	0.6	0.283	1.5	1.0
21 – 601	600:5	C50	0.3	0.3	0.3	0.3	0.3	0.339	1.33	1.0
21 – 751	750:0	C50	0.3	0.3	0.3	0.3	0.3	0.424	1.0	0.8
21 – 801	800:5	C50	0.3	0.3	0.3	0.3	0.3	0.452	1.0	0.8
21 - 102	1000:5	C100	0.3	0.3	0.3	0.3	0.3	0.565	1.0	0.8

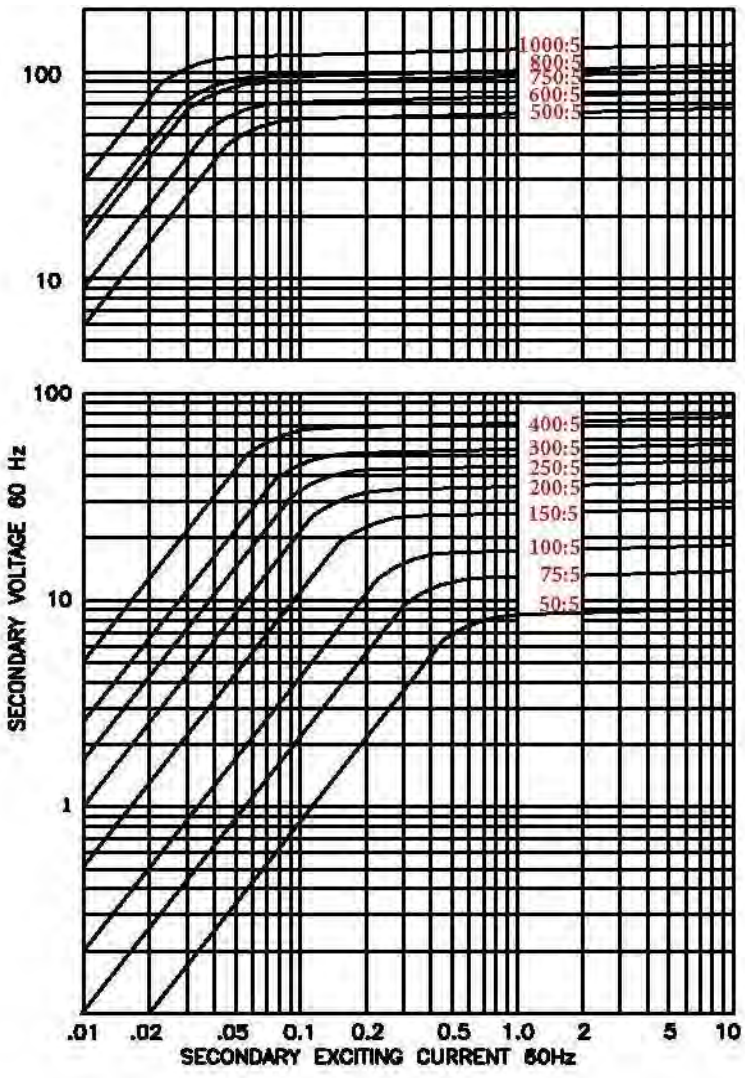


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Models 21, 22, 23, 24 & 25



EXCITATION CURVE



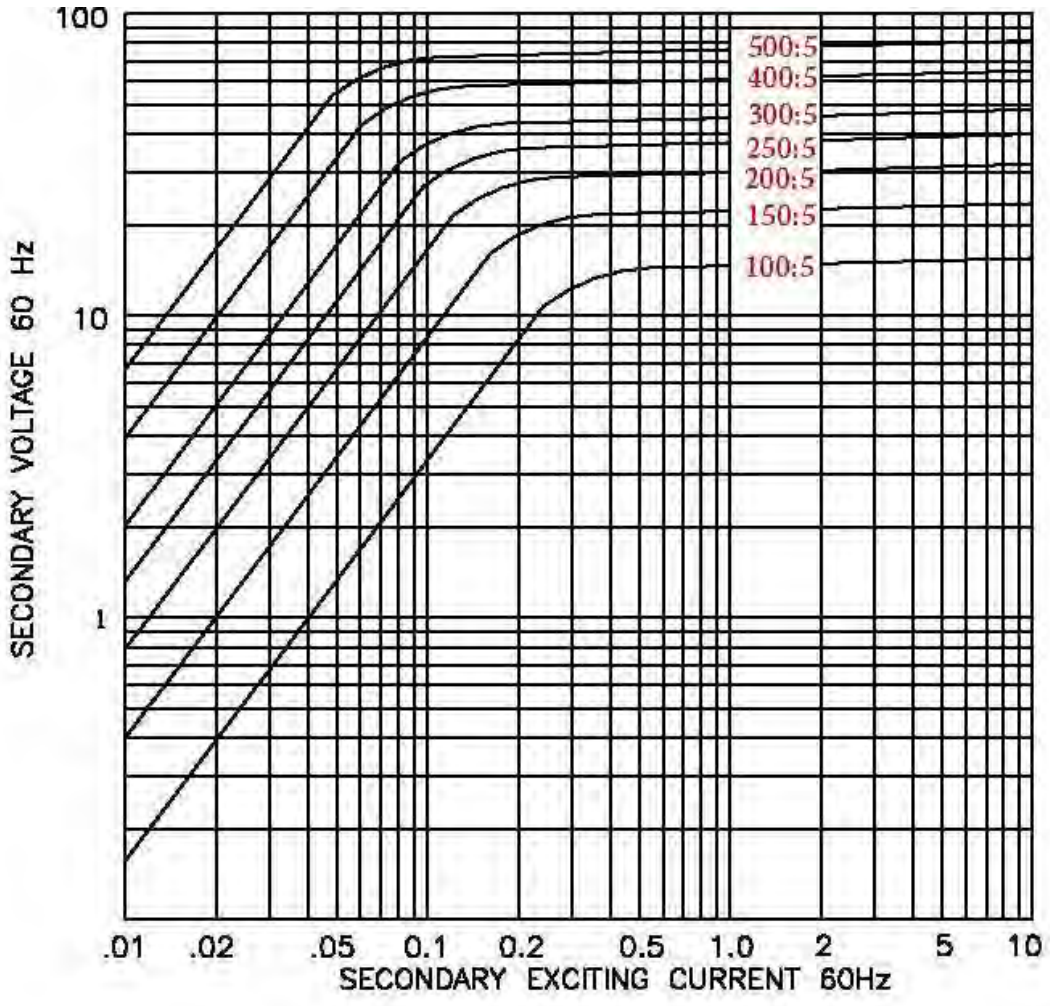
Model 21

MODEL 22

Window Diameter 1.63”
Approximate weight: 7 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.B	(OHMS @ 75° C)	@ 30° C	@55°C
22 – 101	100:5	C10	0.6	1.2	2.4	2.4	4.8	0.060	2.0	2.0
22 – 151	150:5	C10	0.3	0.6	1.2	1.2	2.4	0.090	2.0	2.0
22 – 201	200:5	C20	0.3	0.3	0.6	1.2	1.2	0.120	2.0	1.5
22 – 251	250:5	C20	0.3	0.3	0.6	0.6	1.2	0.150	1.5	1.5
22 – 301	300:5	C20	0.3	0.3	0.3	0.6	0.6	0.180	1.5	1.33
22 – 401	400:5	C20	0.3	0.3	0.3	0.3	0.6	0.241	1.5	1.0
22 - 501	500:5	C50	0.3	0.3	0.3	0.3	0.3	0.301	1.5	1.0

EXCITATION CURVE



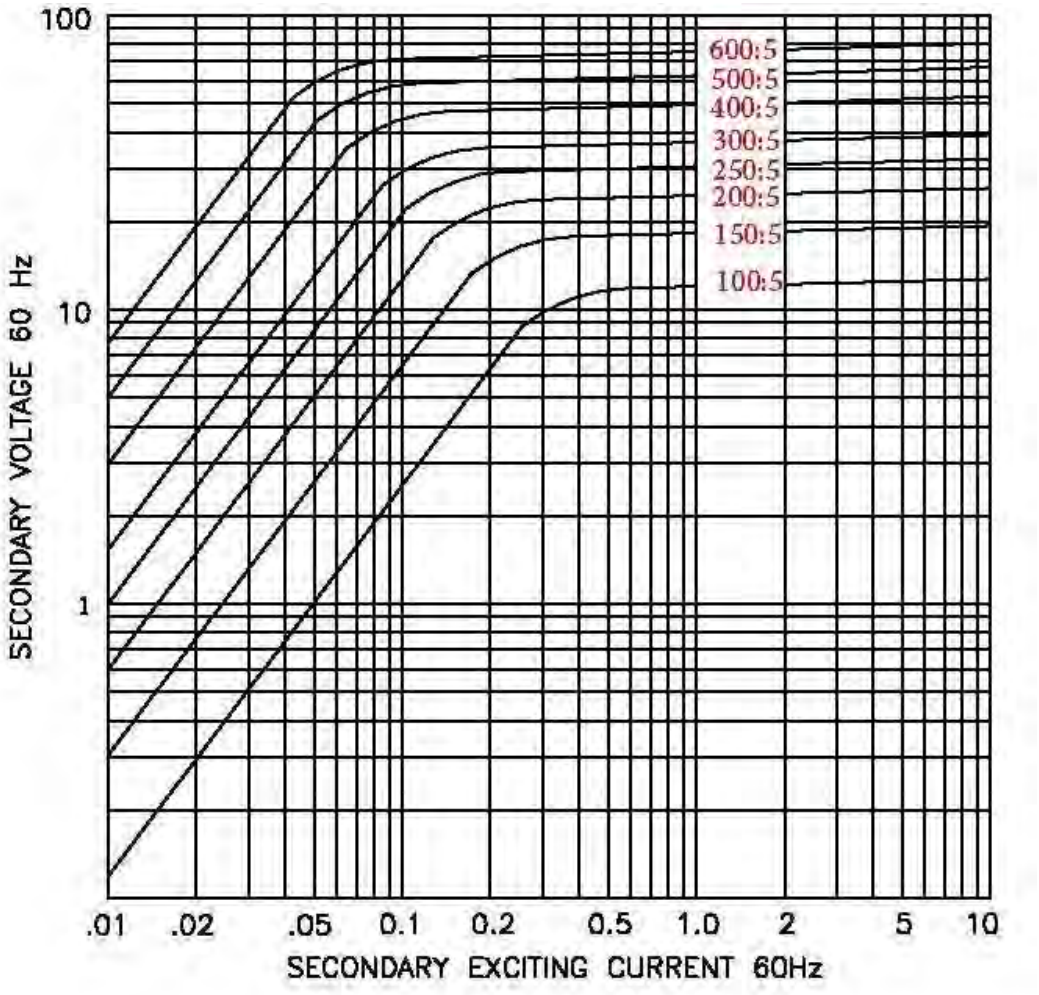
Model 22

MODEL 23

Window Diameter 2.00”
Approximate weight: 7 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.B		@ 30° C	@ 55° C
23 – 101	100:5	-	0.6	0.6	2.4	4.8	-	0.051	2.0	2.0
23 – 151	150:5	C10	0.6	0.6	0.6	1.2	2.4	0.076	2.0	2.0
23 – 201	200:5	C10	0.3	0.6	0.6	1.2	2.4	0.114	2.0	1.5
23 – 251	250:5	C20	0.3	0.3	0.6	0.6	1.2	0.143	2.0	1.5
23 – 301	300:5	C20	0.3	0.3	0.3	0.6	1.2	0.171	1.5	1.33
23 – 401	400:5	C20	0.3	0.3	0.3	0.3	0.8	0.228	1.5	1.0
23 – 501	500:5	C20	0.3	0.3	0.3	0.3	0.3	0.288	1.5	1.0
23 - 601	600:5	C50	0.3	0.3	0.3	0.3	0.3	0.343	1.33	1.0

EXCITATION CURVE



Model 23

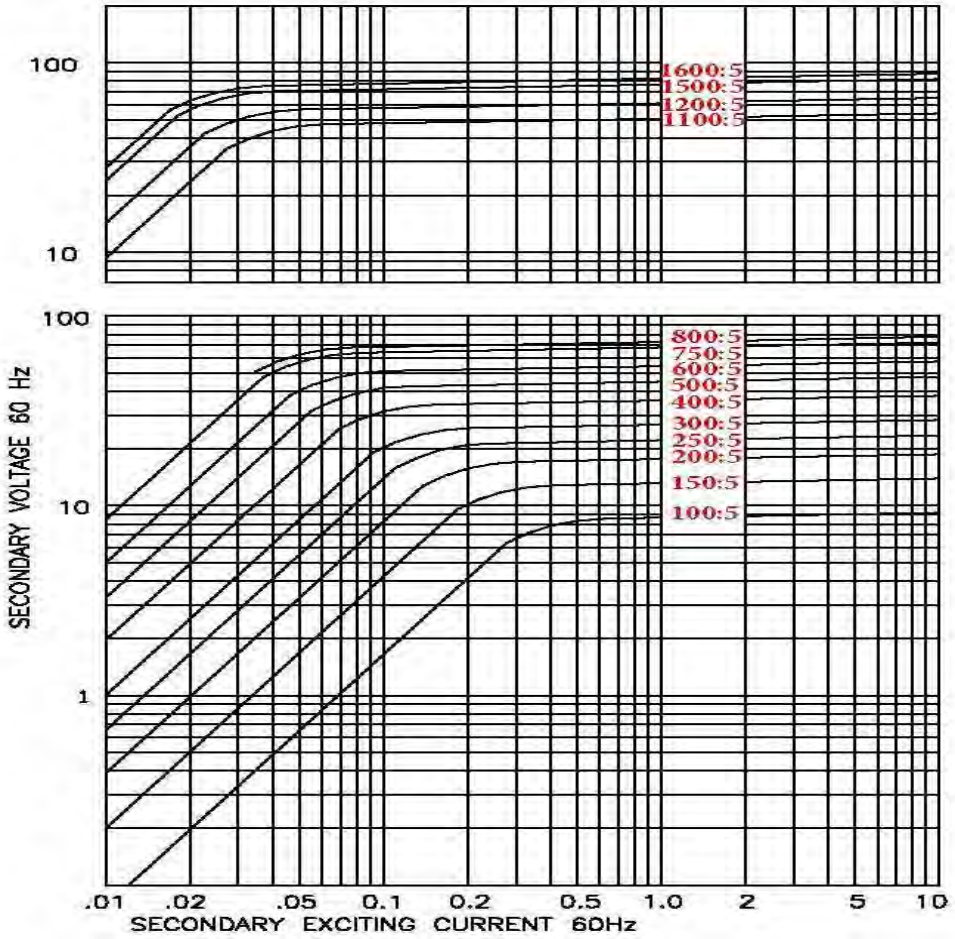
MODEL 24

Window Diameter 2.50”

Approximate weight: 6.5 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.B		@ 30°C	@ 55°C
24 – 101	100:5	-	0.6	1.2	2.4	4.8	-	0.046	2.0	2.0
24 – 151	150:5	-	0.6	0.6	1.2	2.4	4.8	0.069	2.0	2.0
24 – 201	200:5	C10	0.3	0.3	0.6	1.2	2.4	0.096	2.0	1.5
24 – 251	250:5	C10	0.3	0.3	0.3	0.6	1.2	0.118	2.0	1.5
24 – 301	300:5	C10	0.3	0.3	0.3	0.6	1.2	0.133	2.0	1.5
24 – 401	400:5	C20	0.3	0.3	0.3	0.6	0.6	0.212	1.5	1.0
24 – 501	500:5	C20	0.3	0.3	0.3	0.3	0.6	0.265	1.5	1.0
24 – 601	600:5	C20	0.3	0.3	0.3	0.3	0.3	0.317	1.33	1.0
24 – 751	750:5	C20	0.3	0.3	0.3	0.3	0.3	0.396	1.0	1.0
24 – 801	800:5	C20	0.3	0.3	0.3	0.3	0.3	0.423	1.0	0.8
24 – 102	1000:5	C10	0.3	0.3	0.3	0.3	0.3	0.446	1.0	0.8
24 – 122	1200:5	C10	0.3	0.3	0.3	0.3	0.3	0.535	1.0	0.8
24 – 152	1500:5	C10	0.3	0.3	0.3	0.3	0.3	0.669	1.0	0.8
24 – 162	1600:5	C10	0.3	0.3	0.3	0.3	0.3	0.713	0.8	0.8

EXCITATION CURVE



Model 24

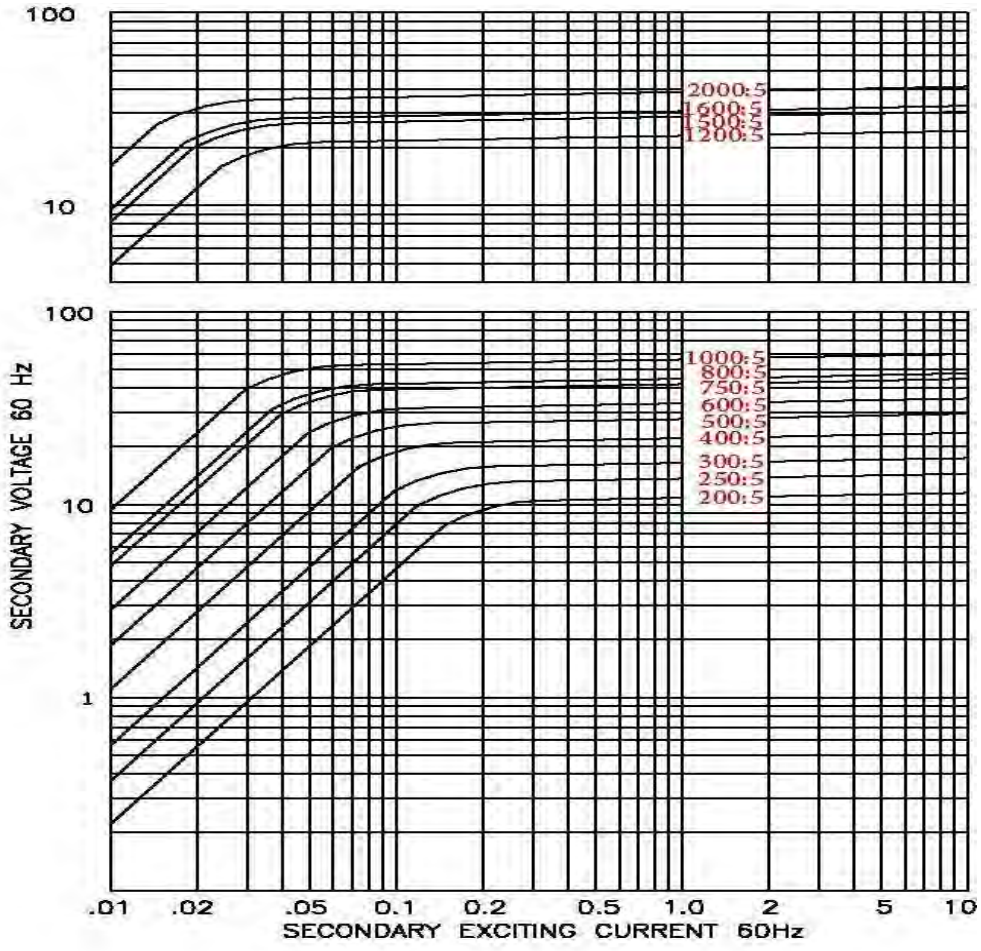
MODEL 25

Window Diameter 3.13”

Approximate weight: 4 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1 % CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.B		@ 30°C	@ 55°C
25 – 201	200:5	10	0.6	0.6	1.2	2.4	4.8	0.081	2.0	2.0
25 – 251	250:5	15	0.3	0.3	1.2	1.2	2.4	0.108	2.0	1.5
25 – 301	300:5	20	0.3	0.3	0.6	1.2	2.4	0.129	2.0	1.5
25 – 401	400:5	30	0.3	0.3	0.6	0.6	1.2	0.194	1.5	1.33
25 – 501	500:5	45	0.3	0.3	0.3	0.6	1.2	0.243	1.5	1.0
25 – 601	600:5	60	0.3	0.3	0.3	0.3	0.6	0.292	1.33	1.0
25 – 751	750:5	75	0.3	0.3	0.3	0.3	0.6	0.364	1.0	0.8
25 – 801	800:5	80	0.3	0.3	0.3	0.3	0.3	0.389	1.0	0.8
25 – 102	1000:5	100	0.3	0.3	0.3	0.3	0.3	0.486	1.0	0.8
25 – 122	1200:5	75	0.3	0.3	0.3	0.3	0.3	0.389	1.0	0.8
25 – 152	1500:5	90	0.3	0.3	0.3	0.3	0.3	0.617	1.0	0.8
25 – 162	1600:5	95	0.3	0.3	0.3	0.3	0.3	0.658	1.0	0.6
25 – 202	2000:5	100	0.3	0.3	0.3	0.3	0.3	0.822	0.8	0.6

EXCITATION CURVE



Model 25

TTL Transformer Technologies Ltd.

Current Transformer

Model 296-300
rev 011218

CERTIFICATIONS:

E228202

223647

ISO 9001

QUALITY MANAGEMENT

APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
1.50", 2.25", 3.0", 3.38", 3.75"

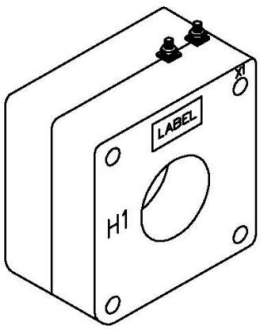
APPROXIMATE WEIGHT:
18, 15, 12, 10, 5 lbs.

CONNECTIONS:
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Multi-ratios available upon request

Model	296	297	298	299	300
Window Size	1.50	2.25	3.00	3.38	3.75
Width	5.96	5.96	5.96	5.96	5.96
Height	6.31	6.31	6.31	6.31	6.31
Depth	3.00	3.00	3.00	3.00	3.00

MODEL 296
Window Diameter 1.50"
Approximate weight: 18 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
296 - 500	50:5	C10	1.2	2.4	4.8	-	-	0.018	2.0	2.0
296 - 750	75:5	C10	0.6	1.2	2.4	4.8	-	0.027	2.0	2.0
296 - 101	100:5	C20	0.6	0.6	1.2	2.4	4.8	0.035	2.0	2.0
296 - 151	150:5	C20	0.3	0.3	0.6	1.2	2.4	0.053	2.0	2.0
296 - 201	200:5	C20	0.3	0.3	0.6	0.6	1.2	0.071	2.0	2.0
296 - 251	250:5	C50	0.3	0.3	0.3	0.3	0.6	0.121	2.0	2.0
296 - 301	300:5	C50	0.3	0.3	0.3	0.3	0.6	0.168	2.0	1.5
296 - 401	400:5	C100	0.3	0.3	0.3	0.3	0.3	0.224	2.0	1.5
296 - 501	500:5	C50	0.3	0.3	0.3	0.3	0.3	0.249	1.5	1.5
296 - 601	600:5	C100	0.3	0.3	0.3	0.3	0.3	0.298	1.5	1.33
296 - 751	750:5	C100	0.3	0.3	0.3	0.3	0.3	0.373	1.5	1.0
296 - 801	800:5	C100	0.3	0.3	0.3	0.3	0.3	0.398	1.5	1.0
296 - 102	1000:5	C100	0.3	0.3	0.3	0.3	0.3	0.447	1.33	1.0



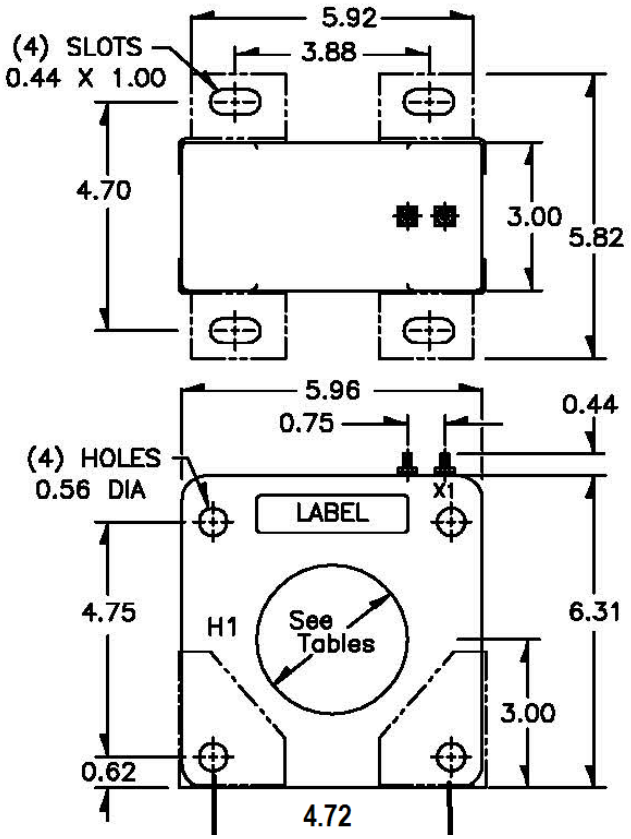
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

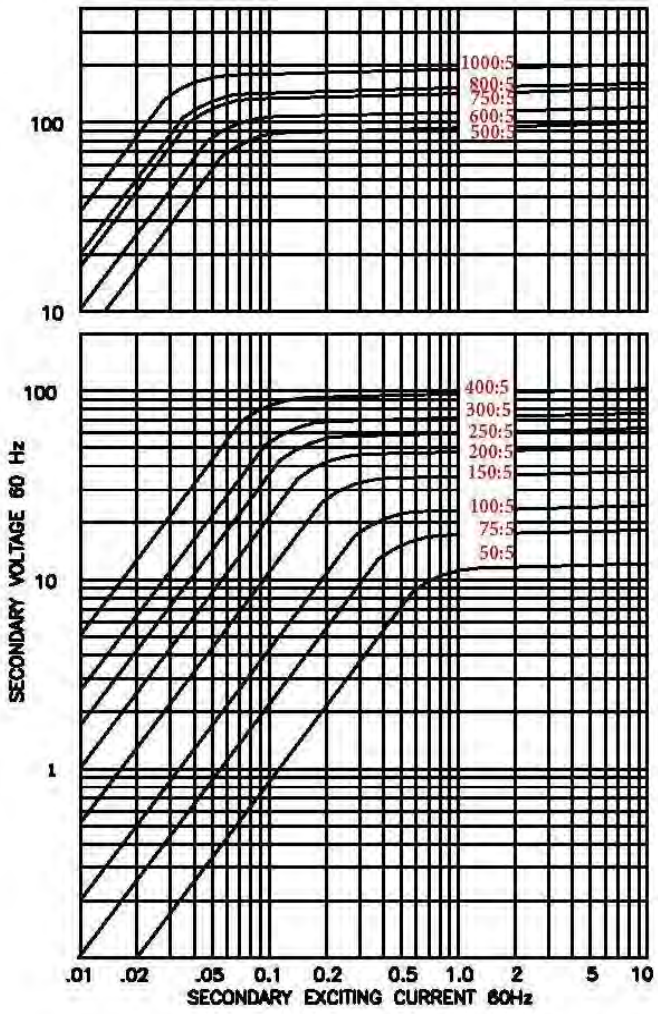
Current Transformer

Model 296-300
rev 011218

Model 296



EXCITATION CURVE



Model 296

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

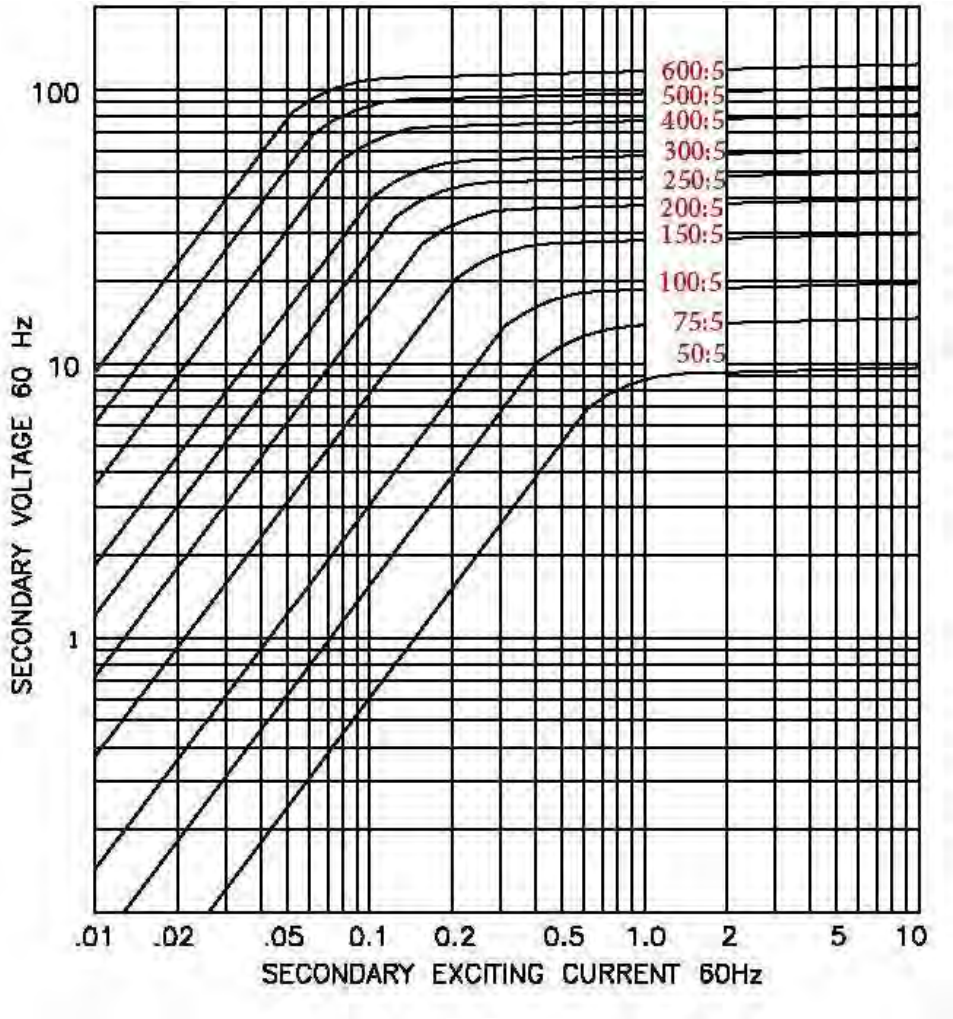
Current Transformer

Model 296-300
rev 011218

MODEL 297
Window Diameter 2.25”
Approximate weight: 15 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8	(OHMS @ 75°C)	@ 30°C	@ 55°C
297 - 500	50:5	-	2.4	4.8	-	-	-	0.015	2.0	2.0
297 - 750	75:5	C10	1.2	2.4	4.8	4.8	-	0.023	2.0	2.0
297 - 101	100:5	C10	0.6	1.2	2.4	4.8	4.8	0.051	2.0	2.0
297 - 151	150:5	C20	0.6	0.6	1.2	2.4	2.4	0.048	2.0	2.0
297 - 201	200:5	C20	0.3	0.6	0.6	1.2	2.4	0.103	2.0	2.0
297 - 251	250:5	C20	0.3	0.3	0.3	0.6	1.2	0.111	2.0	2.0
297 - 301	300:5	C50	0.3	0.3	0.3	0.6	1.2	0.154	2.0	1.5
297 - 401	400:5	C50	0.3	0.3	0.3	0.3	0.6	0.205	2.0	1.5
297 - 501	500:5	C50	0.3	0.3	0.3	0.3	0.3	0.233	2.0	1.5
297 - 601	600:5	C100	0.3	0.3	0.3	0.3	0.3	0.308	1.5	1.33

EXCITATION CURVE



Model 297

TTL Transformer Technologies Ltd.

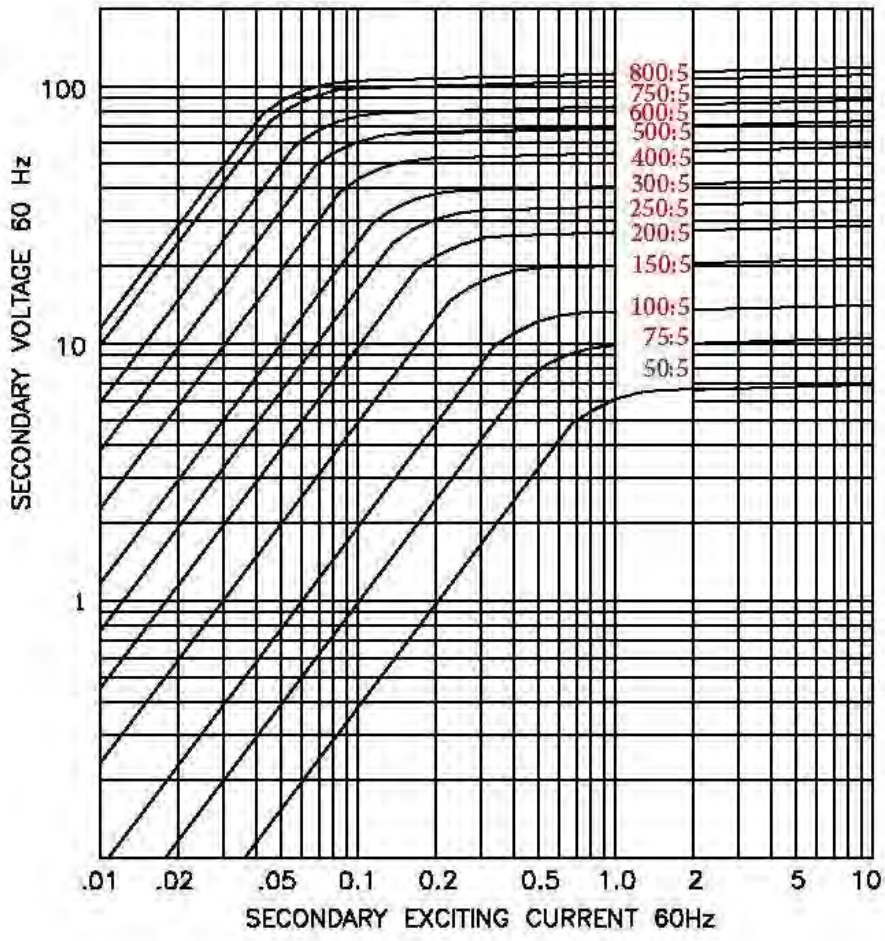
Current Transformer

Model 296-300
rev 011218

MODEL 298
Window Diameter 3.0”
Approximate weight: 12 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8	(OHMS @ 75°C)	@ 30°C	@ 55°C
298 - 500	50:5	-	2.4	4.8	-	-	-	0.023	2.0	2.0
298 - 750	75:5	-	1.2	1.2	4.8	-	-	0.028	2.0	2.0
298 - 101	100:5	C10	0.6	0.6	2.4	4.8	-	0.040	2.0	2.0
298 - 151	150:5	C10	0.6	0.6	1.2	2.4	4.8	0.060	2.0	2.0
298 - 201	200:5	C20	0.6	0.6	0.6	1.2	2.4	0.080	2.0	2.0
298 - 251	250:5	C20	0.3	0.3	0.6	1.2	2.4	0.073	2.0	2.0
298 - 301	300:5	C20	0.3	0.3	0.6	0.6	1.2	0.087	2.0	2.0
298 - 401	400:5	C20	0.3	0.3	0.3	0.3	0.6	0.186	2.0	1.5
298 - 501	500:5	C50	0.3	0.3	0.3	0.3	0.6	0.233	2.0	1.5
298 - 601	600:5	C50	0.3	0.3	0.3	0.3	0.3	0.279	1.5	1.33
298 - 751	750:5	C50	0.3	0.3	0.3	0.3	0.3	0.349	1.5	1.0
298 - 801	800:5	C50	0.3	0.3	0.3	0.3	0.3	0.372	1.5	1.0

EXCITATION CURVE



Model 298

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

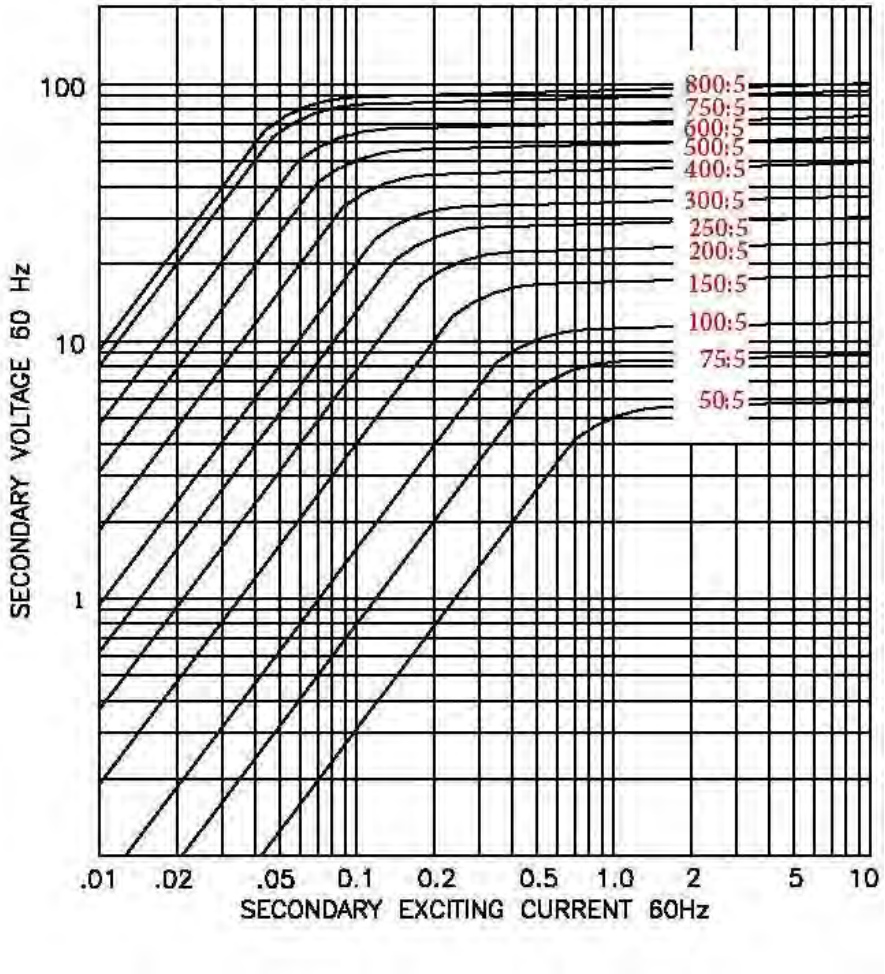
Current Transformer

Model 296-300
rev 011218

Model 299
Window Diameter 3.38”
Approximate weight: 10 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
299 - 500	50:5	-	4.8	4.8	-	-	-	0.022	2.0	2.0
299 - 750	75:5	-	1.2	2.4	4.8	-	-	0.028	2.0	2.0
299 - 101	100:5	C10	0.6	1.2	2.4	4.8	-	0.038	2.0	2.0
299 - 151	150:5	C10	0.6	0.6	1.2	2.4	4.8	0.057	2.0	2.0
299 - 201	200:5	C10	0.6	0.6	1.2	1.2	2.4	0.088	2.0	2.0
299 - 251	250:5	C20	0.3	0.3	0.6	1.2	2.4	0.098	2.0	2.0
299 - 301	300:5	C20	0.3	0.3	0.3	0.6	1.2	0.118	2.0	2.0
299 - 401	400:5	C20	0.3	0.3	0.3	0.6	0.6	0.177	2.0	1.5
299 - 501	500:5	C20	0.3	0.3	0.3	0.3	0.6	0.221	2.0	1.5
299 - 601	600:5	C50	0.3	0.3	0.3	0.3	0.3	0.265	1.5	1.33
299 - 751	750:5	C50	0.3	0.3	0.3	0.3	0.3	0.331	1.5	1.0
299 - 801	800:5	C50	0.3	0.3	0.3	0.3	0.3	0.353	1.5	1.0

EXCITATION CURVE



Model 299

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

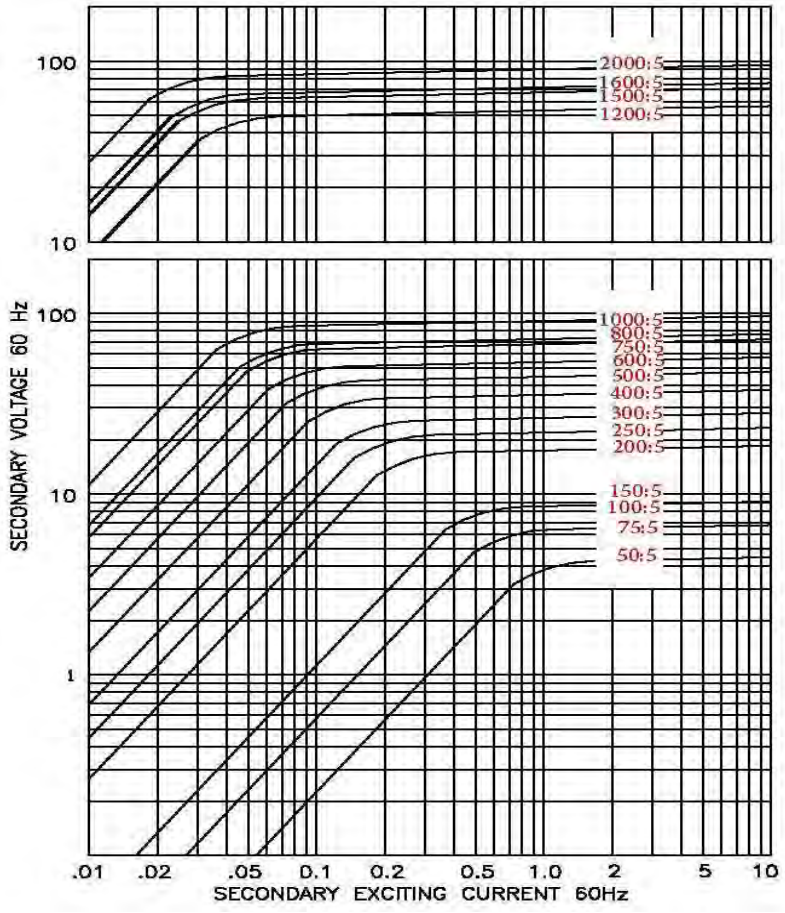
Current Transformer

Model 296-300
rev 011218

Window Diameter 3.75”
Approximate weight: 9 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
300 - 500	50:5	-	2.4	4.8	-	-	-	0.012	2.0	2.0
300 - 750	75:5	-	2.4	2.4	-	-	-	0.019	2.0	2.0
300 - 101	100:5	-	2.4	2.4	2.4	-	-	0.026	2.0	2.0
300 - 151	150:5	-	0.6	0.6	2.4	2.4	4.8	0.054	2.0	2.0
300 - 201	200:5	C10	0.6	0.6	1.2	2.4	4.8	0.072	2.0	2.0
300 - 251	250:5	C10	0.3	0.6	1.2	1.2	2.4	0.104	2.0	2.0
300 - 301	300:5	C10	0.3	0.3	0.3	0.6	1.2	0.108	2.0	2.0
300 - 401	400:5	C20	0.3	0.3	0.3	0.6	1.2	0.144	2.0	1.5
300 - 501	500:5	C20	0.3	0.3	0.3	0.6	0.6	0.209	2.0	1.5
300 - 601	600:5	C20	0.3	0.3	0.3	0.3	0.6	0.251	1.5	1.33
300 - 751	750:5	C20	0.3	0.3	0.3	0.3	0.3	0.329	1.5	1.0
300 - 801	800:5	C50	0.3	0.3	0.3	0.3	0.3	0.334	1.5	1.0
300 - 102	1000:5	C50	0.3	0.3	0.3	0.3	0.3	0.418	1.33	1.0
300 - 122	1200:5	C10	0.3	0.3	0.3	0.3	0.3	0.425	1.33	1.0
300 - 152	1500:5	C10	0.3	0.3	0.3	0.3	0.3	0.531	1.0	1.0
300 - 162	1600:5	C10	0.3	0.3	0.3	0.3	0.3	0.567	1.0	0.8
300 - 202	2000:5	C20	0.3	0.3	0.3	0.3	0.3	0.708	1.0	0.8

EXCITATION CURVE



Model 300

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 64, 65, 66

APPLICATION:
Metering
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
WINDOW DIAMETER:
1.56", 2.0", 2.5"
APPROXIMATE WEIGHT:
3.75, 3.25 and 2.5 lbs.
CONNECTIONS:
-Terminals are brass studs No, 8 – 32 with one flat washer, lockwasher, and regular nut

CERTIFICATIONS:

c UL us E228202

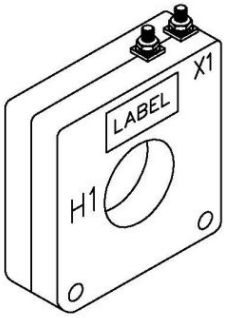
CSA C US 223647

nqa. ISO 9001 QUALITY MANAGEMENT

Model	64	65	66
Window Size	1.56	2.00	2.50
Width	4.00	4.00	4.00
Height	4.00	4.00	4.00
Depth	1.75	1.75	1.75

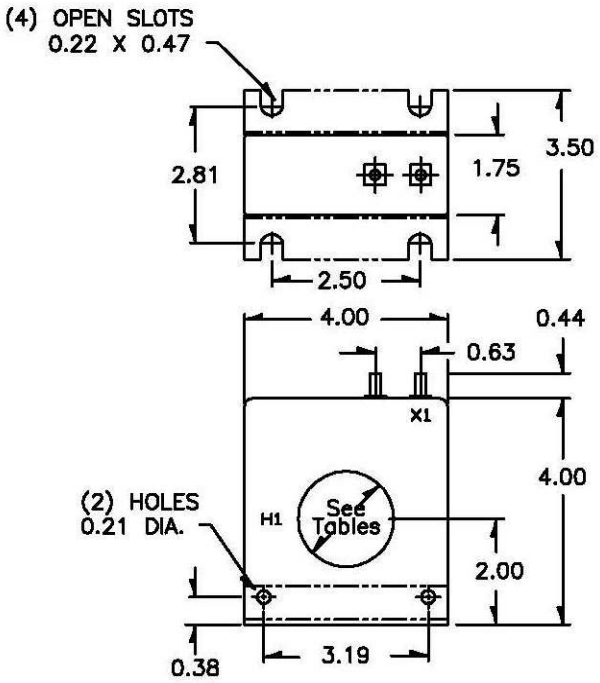
MODEL 64
Window Diameter 1.56"
Approximate weight: 3.75 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO. 1	BO.2	BO.5	BO.9	B1.B		@ 30° C	@ 55° C
64 – 500	50:5	2.5 ± 2%	2.4	-	-	-	-	0.011	2.0	2.0
64 – 750	75:5	4.0	1.2	2.4	-	-	-	0.020	2.0	2.0
64 – 101	100:5	5.0	1.2	1.2	4.8	4.8	-	0.026	2.0	2.0
64 – 151	150:5	7.5	0.6	0.6	1.2	2.4	4.8	0.043	2.0	2.0
64 – 201	200:5	12.5	0.3	0.3	1.2	1.2	2.4	0.063	2.0	1.5
64 – 251	250:5	20.0	0.3	0.3	0.6	1.2	2.4	0.074	2.0	1.5
64 – 301	300:5	35.0	0.3	0.3	0.3	0.6	1.2	0.086	2.0	1.5
64 – 401	400:5	50.0	0.3	0.3	0.3	0.6	1.2	0.110	1.5	1.33
64 – 501	500:5	50.0	0.3	0.3	0.3	0.3	0.6	0.173	1.5	1.0

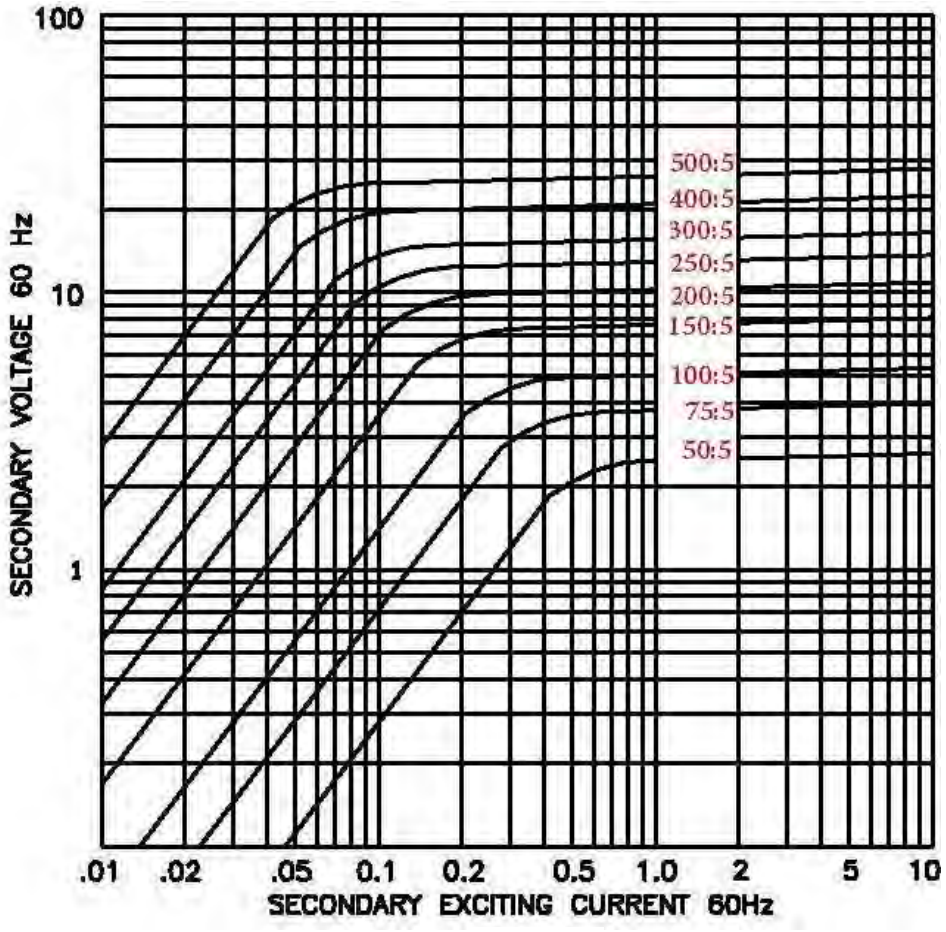


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Models 64, 65 & 66



EXCITATION CURVE



Model 64

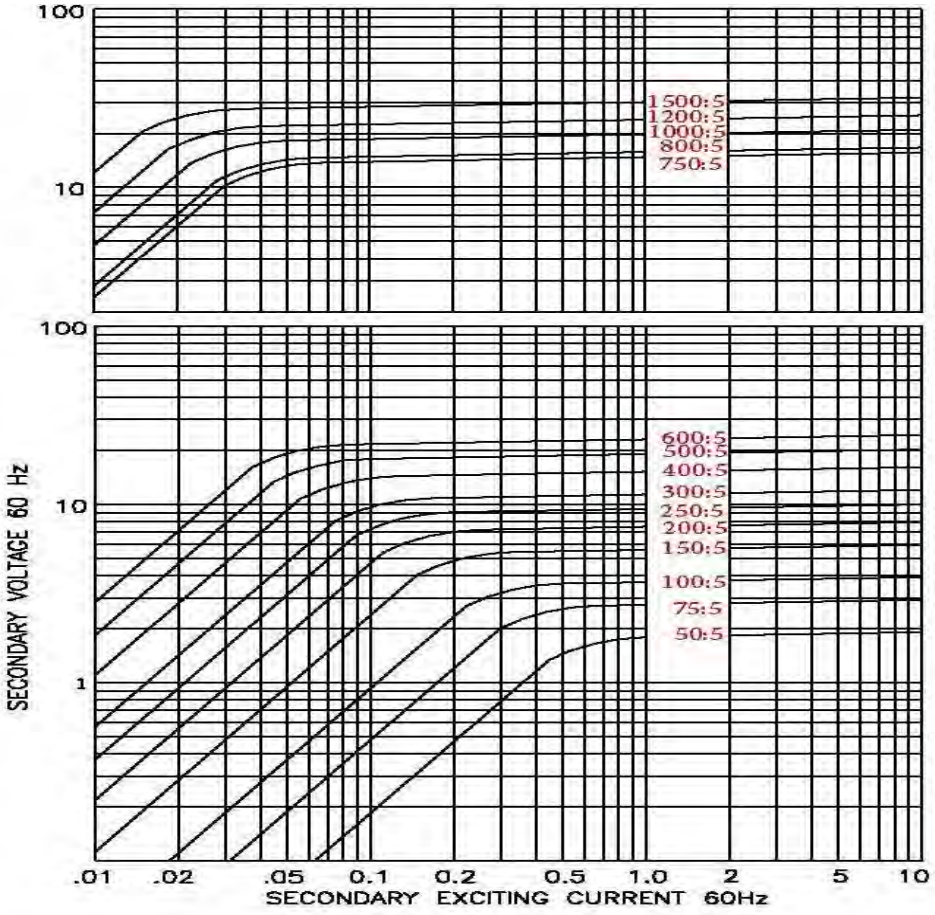
MODEL 65

Window Diameter 2.0”

Approximate weight: 3.25 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 50 Hz					SECONDARY WINDING RESISTANCE	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8	(OHMS @ 75° C)	@ 30° C	@ 55° C
65 – 500	50:5	2.0	2.4	-	-	-	-	0.007	2.0	2.0
65 – 750	75:5	4.0	2.4	2.4	-	-	-	0.013	2.0	2.0
65 – 101	100:5	4.0	1.2	1.2	4.8	-	-	0.022	2.0	2.0
65 – 151	150:5	6.0	0.6	0.6	2.4	4.8	4.8	0.039	2.0	2.0
65 – 201	200:5	12.5	0.6	0.6	1.2	2.4	2.4	0.047	2.0	2.0
65 – 251	250:5	15.0	0.3	0.3	0.6	1.2	2.4	0.067	2.0	1.5
65 – 301	300:5	20.0	0.3	0.3	0.6	1.2	2.4	0.077	2.0	1.5
65 – 401	400:5	35.0	0.3	0.3	0.3	0.6	1.2	0.110	1.5	1.25
65 – 501	500:5	50.0	0.3	0.3	0.3	0.6	1.2	0.155	1.33	1.0
65 – 601	600:5	60.0	0.3	0.3	0.3	0.3	0.6	0.186	1.25	1.0
65 – 751	750:5	75.0	0.3	0.3	0.3	0.6	0.6	0.197	1.0	0.8
65 – 801	800:5	80.0	0.3	0.3	0.3	0.3	0.6	0.210	1.0	0.8
65 – 102	1000:5	100.0	0.3	0.3	0.3	0.3	0.6	0.253	1.0	0.8
65 – 122	1200:5	105.0	0.3	0.3	0.3	0.3	0.3	0.316	1.0	0.8
65 – 152	1500:5	140.0	0.3	0.3	0.3	0.3	0.3	0.491	1.0	0.8

EXCITATION CURVE



Model 65

TTL Transformer Technologies Ltd.

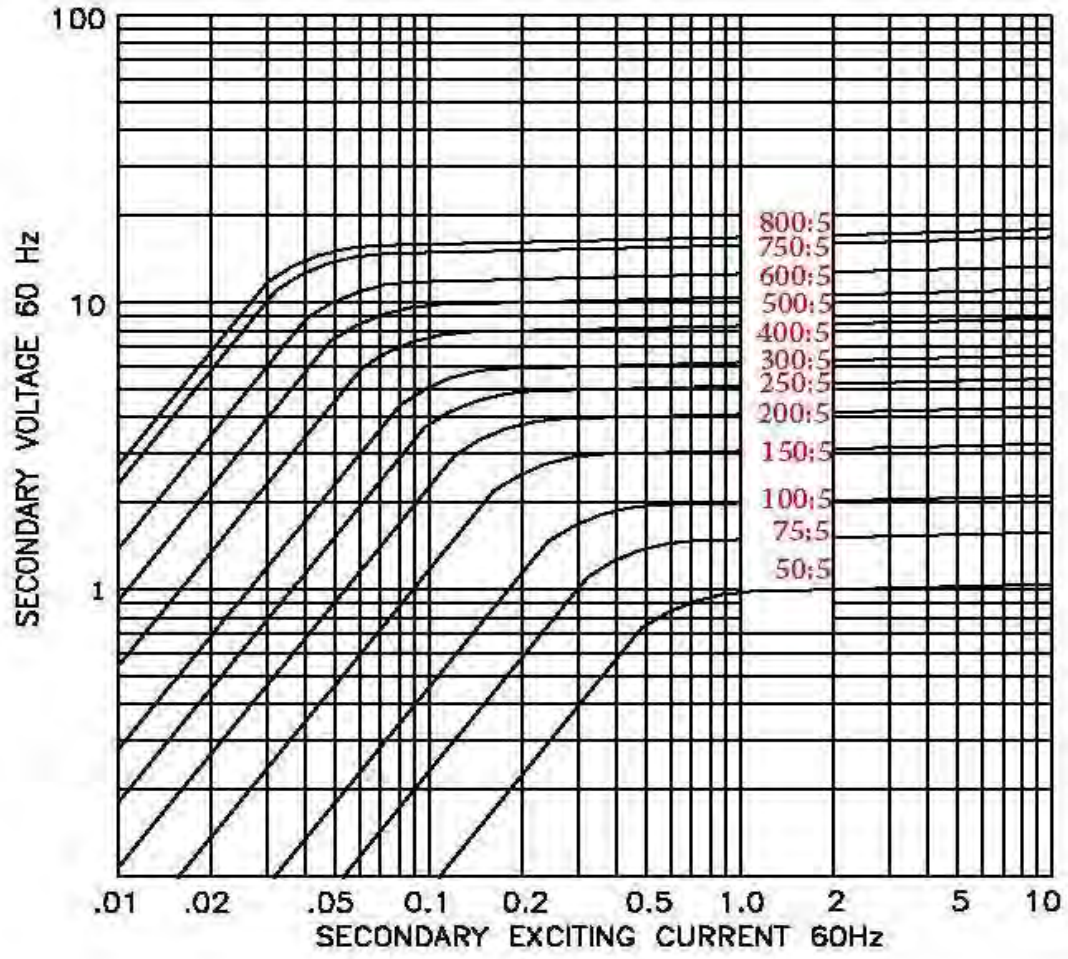
Current Transformer

Model 64, 65, 66

Model 66
Window Diameter 2.5”
Approximate weight: 2.5 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1.5% CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@ 30° C	@ 55° C
66 – 500	50:5	1.5±2%	-	-	-	-	-	0.006	2.0	2.0
66 – 750	75:5	2.5±2%	2.4	-	-	-	-	0.008	2.0	2.0
66 – 101	100:5	2.5	1.2	2.4	-	-	-	0.013	2.0	2.0
66 – 151	150:5	4.0	1.2	1.2	2.4	4.8	-	0.020	2.0	2.0
66 – 201	200:5	5.0	0.6	0.6	2.4	2.4	4.8	0.038	2.0	2.0
66 – 251	250:5	10.0	0.6	0.6	1.2	2.4	4.8	0.045	2.0	2.0
66 – 301	300:5	12.5	0.3	0.3	1.2	2.4	2.4	0.065	2.0	1.5
66 – 401	400:5	20.0	0.3	0.3	0.6	1.2	1.2	0.082	1.5	1.33
66 – 501	500:5	30.0	0.3	0.3	0.6	1.2	1.2	0.107	1.5	1.25
66 – 601	600:5	40.0	0.3	0.3	0.6	0.6	1.2	0.162	1.33	1.0
66 – 751	750:5	50.0	0.3	0.3	0.3	0.6	0.6	0.202	1.0	0.8
66 – 801	800:5	60.0	0.3	0.3	0.3	0.6	0.6	0.216	1.0	0.8

EXCITATION CURVE



Model 66

TTL Transformer Technologies Ltd.

Current Transformer

Model 6A

APPLICATION:
Ammeters, wattmeters.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL.full wave

WINDOW DIAMETER:
2.06”

APPROXIMATE WEIGHT:
1.25 lbs.

CONNECTIONS:
-Terminal and brass studs No. 8-32 with one flat washer, lockwasher, and regular nut
-Flexible leads are UL 1015 105°C, CSA approved, #16 AWG, 24” long.
- Non-standard, lead length can be specified.
-Mounting bracket 59-0223
-Model 6ASHT and model 6ASFT also available as 6ASHL and 6ASFL with leads

Model	6ASHT	6ASFT	6ARL
Window Size	2.06	2.06	2.06
Width	4.08	4.12	4.08
Height	4.22	4.22	4.08
Depth	1.10	1.10	1.10

CERTIFICATIONS:

c UL us E228202

c SA us 223647

nqa. ISO 9001 QUALITY MANAGEMENT

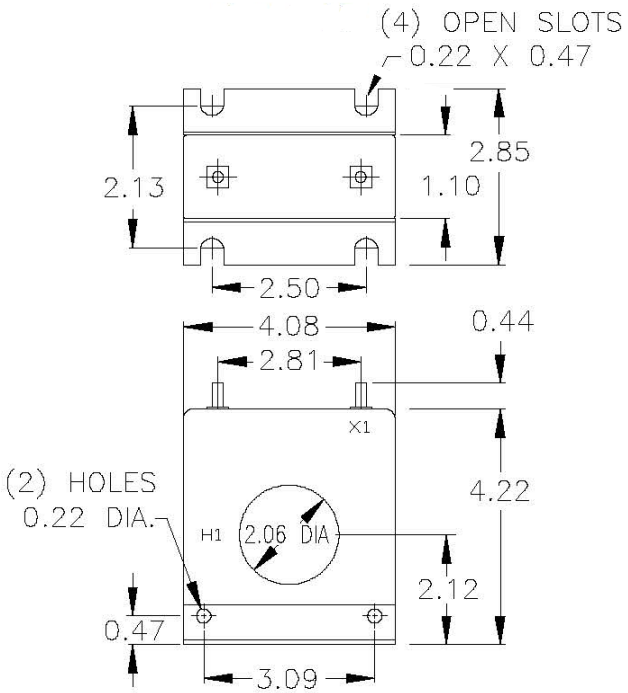
MODEL 6A
Window Diameter 2.06”
Approximate weight: 1.25 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. ± 1% CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
6A**--101	100:5	1.0	1.2	2.4	-	-	-	0.015	2.0	2.0
6A**--151	150:5	5.0	1.2	1.2	4.8	4.8	-	0.024	2.0	2.0
6A**--201	200:5	5.0	0.6	1.2	2.4	4.8	-	0.037	2.0	2.0
6A**--251	250:5	7.5	0.3	0.6	2.4	2.4	4.8	0.044	2.0	1.5
6A**--301	300:5	12.5	0.3	0.6	1.2	2.4	2.4	0.055	2.0	1.5
6A**--401	400:5	15.0	0.3	0.3	0.6	1.2	2.4	0.071	1.5	1.33
6A**--501	500:5	25.0	0.3	0.3	0.6	1.2	2.4	0.107	1.5	1.0
6A**--601	600:5	30.0	0.3	0.3	0.6	0.6	1.2	0.128	1.33	1.0
6A**--751	750:5	30.0	0.3	0.3	0.6	0.6	1.2	0.156	1.25	1.0
6A**--801	800:5	35.0	0.3	0.3	0.6	0.6	0.6	0.167	1.25	0.8
6A**--102	1000:5	35.0	0.3	0.3	0.3	0.6	0.6	0.208	1.0	0.8
6A**--122	1200:5	40.0	0.3	0.3	0.3	0.3	0.6	0.250	1.0	0.8
6A**--152	1500:5	50.0	0.3	0.3	0.3	0.3	0.6	0.388	1.0	0.8

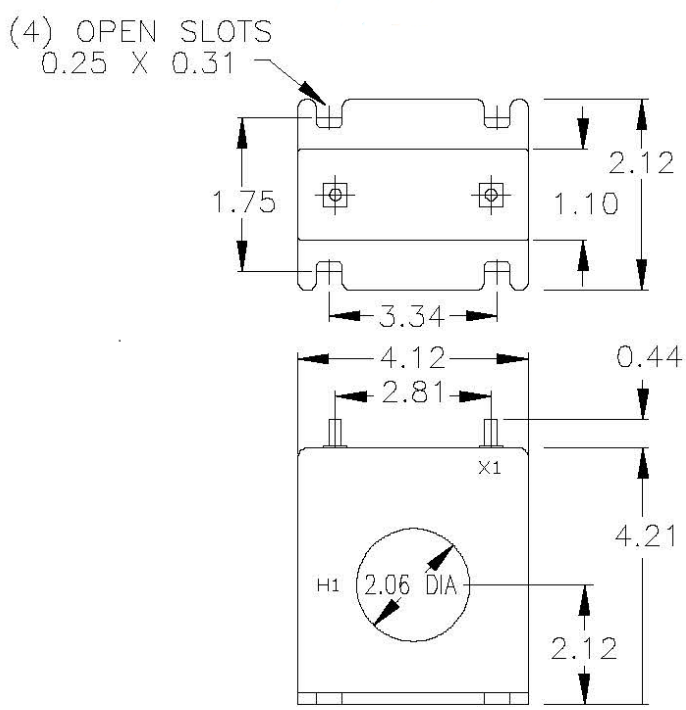
***Note: When ordering, prefix Cat No. with model designation, i.e. 6SHT-201, 6RL-301 etc.**

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

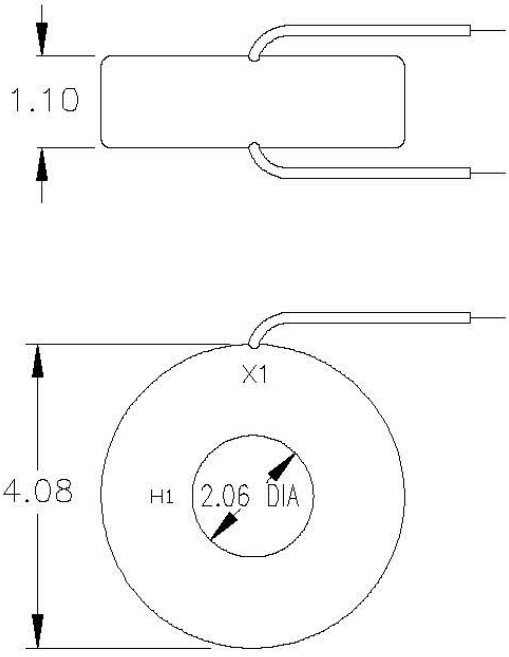
Model 6ASHT



Model 6ASFT



Model 6ARL



TTL Transformer Technologies Ltd.

Current Transformer

Model 112, 113, 114, 115, 117

rev 03182021

APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 k V BIL. full wave

WINDOW DIAMETER: 2.25", 2.75", 3.25", 4.00", 4.62"

APPROXIMATE WEIGHT:
25, 22, 22, 17, 11.5 lbs.

CONNECTIONS:

-Terminals are brass studs No. 8–32 UNC with one flat washer, lockwasher, and regular nut
-Mounting kits 59-0215 (CR) and 59-0216 (CL)
-Multi-ratios available upon request

CERTIFICATIONS:

c UL us
E228202

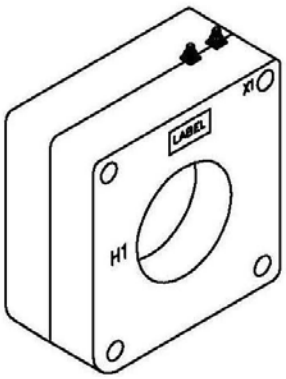
CSA
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

Model	112	113	114	115	117
Window Size	2.25	2.75	3.25	4.00	4.62
Width	7.00	7.00	7.00	7.00	7.00
Height	7.12	7.12	7.12	7.12	7.12
Depth	4.00	4.00	4.00	4.00	4.00

MODEL 112
Window Diameter 2.25"
Approximate weight: 25 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
112-500	50:5	C10	1.2	2.4	-	-	-	0.029	2.0	2.0
112-750	75:5	C10	0.6	1.2	2.4	4.8	-	0.046	2.0	2.0
112-101	100:5	C20	0.6	0.6	2.4	2.4	4.8	0.062	2.0	2.0
112-151	150:5	C20	0.3	0.6	1.2	1.2	2.4	0.093	2.0	2.0
112-201	200:5	C50	0.3	0.3	0.3	0.6	1.2	0.124	2.0	2.0
112-251	250:5	C50	0.3	0.3	0.3	0.3	0.6	0.155	2.0	2.0
112-301	300:5	C50	0.3	0.3	0.3	0.3	0.6	0.186	2.0	2.0
112-401	400:5	C100	0.3	0.3	0.3	0.3	0.3	0.248	2.0	1.5
112-501	500:5	C100	0.3	0.3	0.3	0.3	0.3	0.341	2.0	1.5
112-601	600:5	C100	0.3	0.3	0.3	0.3	0.3	0.409	1.5	1.33
112-751	750:5	C200	0.3	0.3	0.3	0.3	0.3	0.495	1.5	1.0
112-801	800:5	C200	0.3	0.3	0.3	0.3	0.3	0.529	1.5	1.0
112-102	1000:5	C200	0.3	0.3	0.3	0.3	0.3	0.661	1.33	1.0
112-122	1200:5	C200	0.3	0.3	0.3	0.3	0.3	0.793	1.33	1.0



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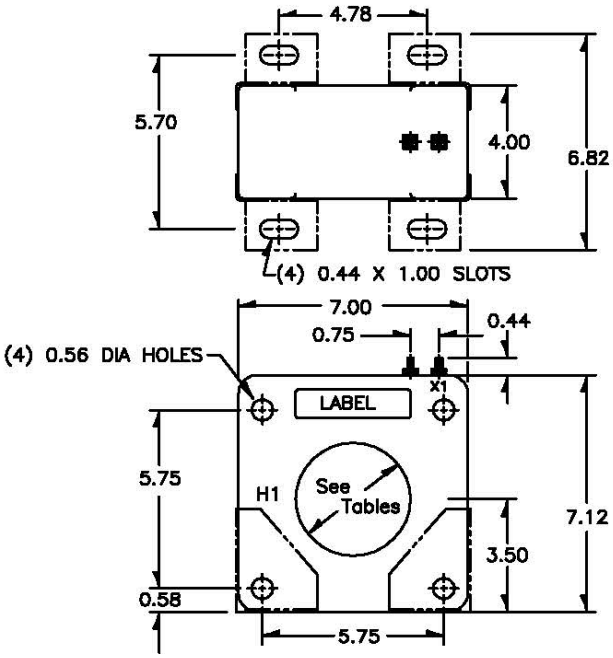
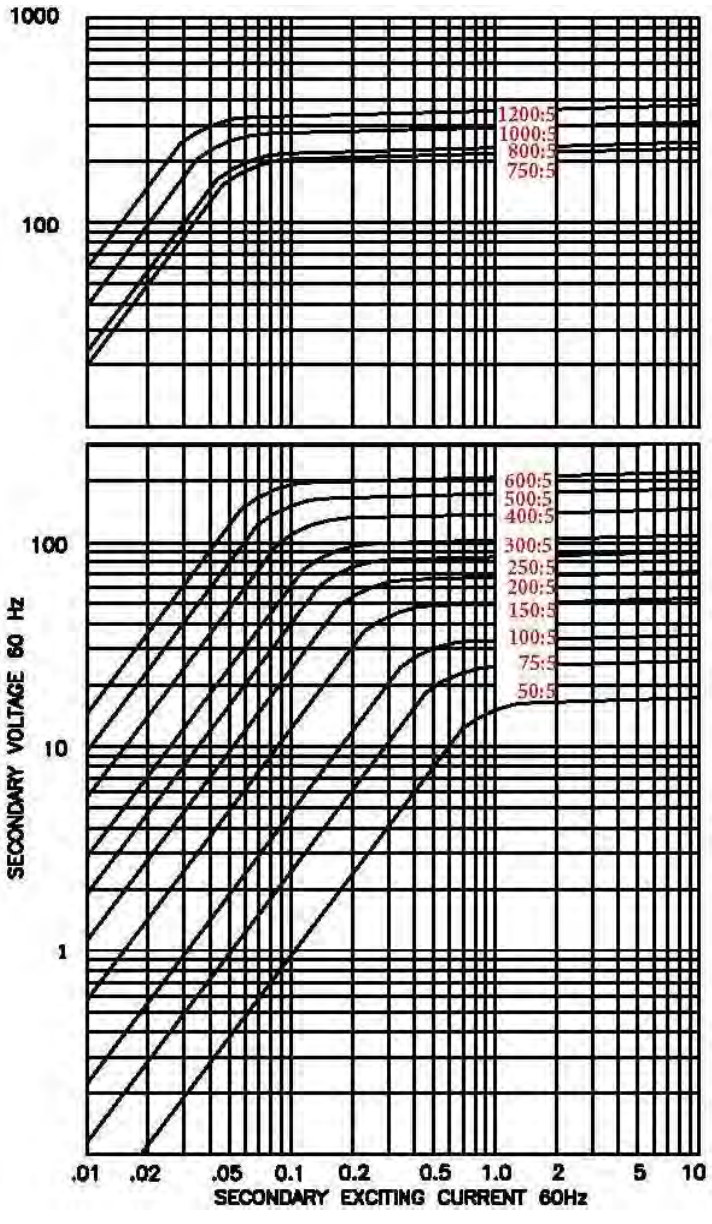
Models 112, 113, 144, 115 & 117



EXCITATION CURVE



Model 112

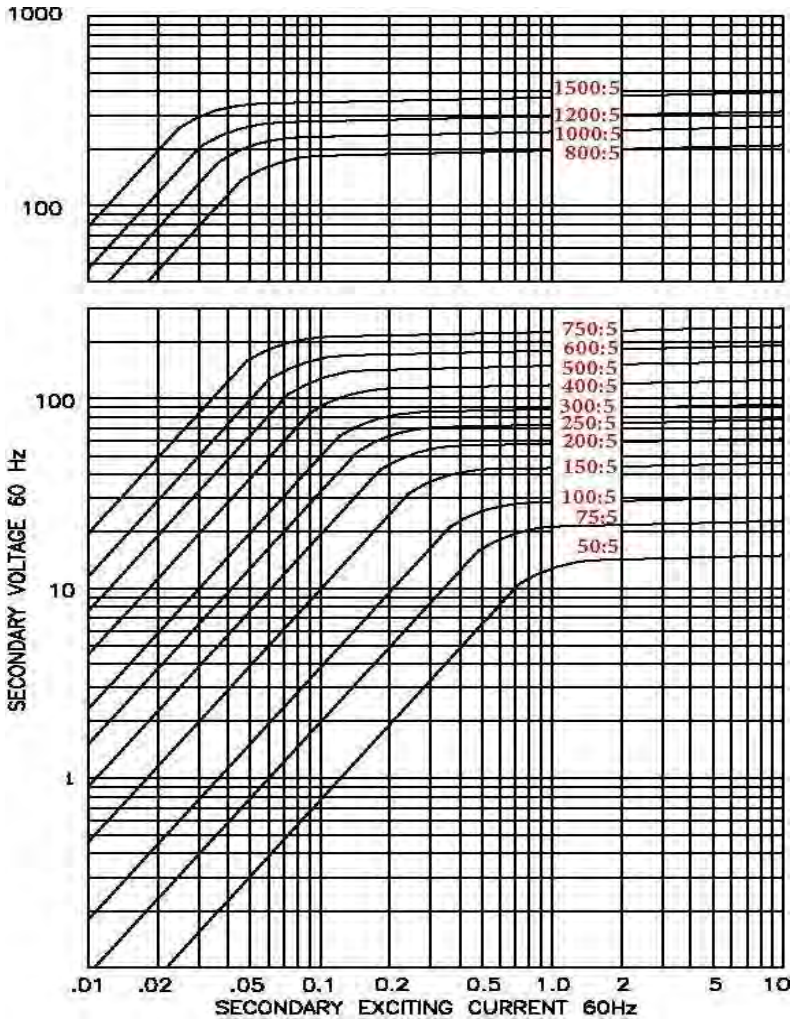
MODEL 113

Window Diameter 2.75”

Approximate weight: 23 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 50 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@ 30° C	@ 55° C
113 – 500	50:5	C10	2.4	4.8	-	-	-	0.033	2	2
113 – 750	75:5	C10	0.6	1.2	4.8	4.8	-	0.043	2	2
113 – 101	100:5	C20	0.6	0.6	2.4	2.4	4.8	0.059	2	2
113 – 151	150:5	C20	0.3	0.3	0.6	1.2	2.4	0.089	2	2
113 – 201	200:5	C20	0.3	0.3	0.6	0.6	1.2	0.118	2	2
113 – 251	250:5	C50	0.3	0.3	0.6	0.6	1.2	0.163	2	2
113 – 301	300:5	C50	0.3	0.3	0.3	0.6	1.2	0.195	2	2
113 – 401	400:5	C100	0.3	0.3	0.3	0.3	0.6	0.260	2	1.5
113 – 501	500:5	C100	0.3	0.3	0.3	0.3	0.3	0.325	2	1.5
113 – 601	600:5	C100	0.3	0.3	0.3	0.3	0.3	0.390	1.5	1.33
113 – 751	750:5	C200	0.3	0.3	0.3	0.3	0.3	0.488	1.5	1.0
113 – 801	800:5	C200	0.3	0.3	0.3	0.3	0.3	0.503	1.5	1.0
113 – 102	1000:5	C200	0.3	0.3	0.3	0.3	0.3	0.629	1.33	1.0
113 – 122	1200:5	C200	0.3	0.3	0.3	0.3	0.3	0.755	1.33	1.0
113 – 152	1500:5	C200	0.3	0.3	0.3	0.3	0.3	0.943	1.0	0.8

EXCITATION CURVE



Model 113

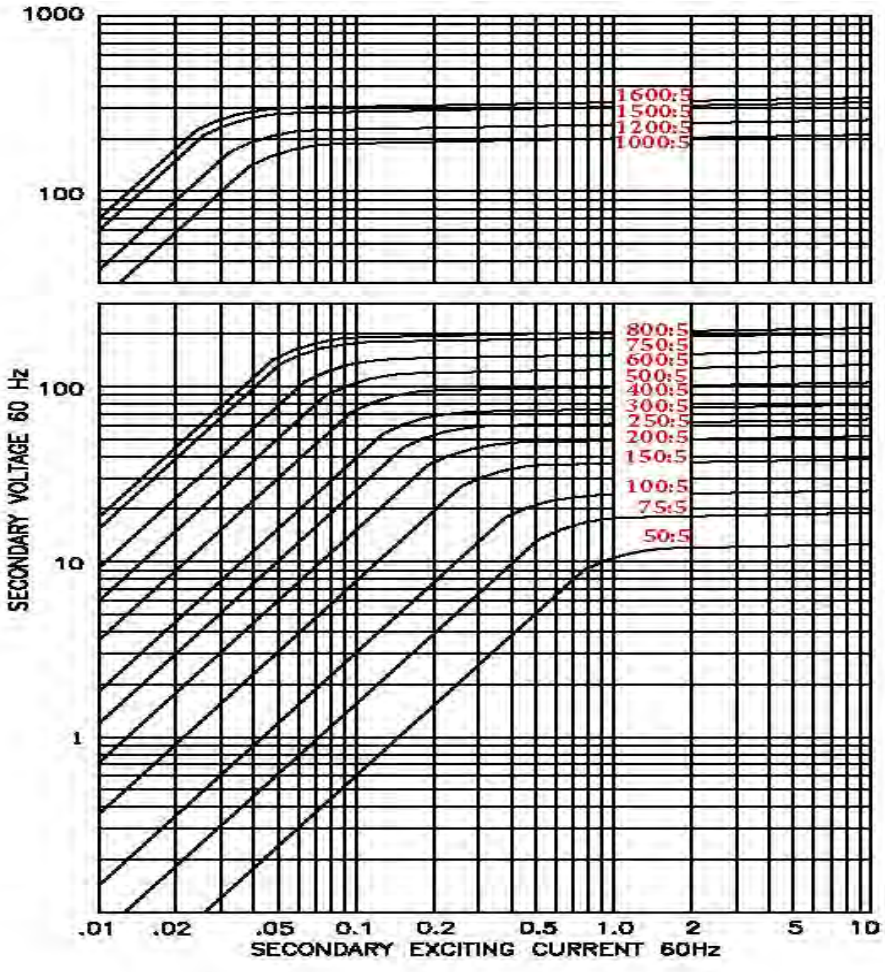
MODEL 114

Window Diameter 3.25”

Approximate weight: 22 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@ 30° C	@ 55° C
114 – 500	50:5	-	1.2	4.8	-	-	-	0.024	2.0	2.0
114 – 750	75:5	C10	1.2	2.4	4.8	-	-	0.040	2.0	2.0
114 – 101	100:5	C10	1.2	1.2	2.4	4.8	-	0.055	2.0	2.0
114 – 151	150:5	C20	0.6	0.6	1.2	2.4	4.8	0.082	2.0	2.0
114 – 201	200:5	C20	0.3	0.3	0.6	1.2	2.4	0.112	2.0	2.0
114 – 251	250:5	C50	0.3	0.3	0.6	1.2	1.2	0.141	2.0	2.0
114 – 301	300:5	C50	0.3	0.3	0.6	0.6	1.2	0.165	2.0	2.0
114 – 401	400:5	C100	0.3	0.3	0.3	0.3	0.6	0.220	2.0	1.5
114 – 501	500:5	C100	0.3	0.3	0.3	0.3	0.6	0.267	2.0	1.5
114 – 601	600:5	C100	0.3	0.3	0.3	0.3	0.3	0.371	1.5	1.33
114 – 751	750:5	C100	0.3	0.3	0.3	0.3	0.3	0.464	1.5	1.0
114 – 801	800:5	C200	0.3	0.3	0.3	0.3	0.3	0.495	1.5	1.0
114 – 102	1000:5	C100	0.3	0.3	0.3	0.3	0.3	0.597	1.5	1.0
114 – 122	1200:5	C200	0.3	0.3	0.3	0.3	0.3	0.716	1.33	1.0
114 – 152	1500:5	C200	0.3	0.3	0.3	0.3	0.3	0.896	1.0	0.8
114 – 162	1600:5	C200	0.3	0.3	0.3	0.3	0.3	0.955	1.0	0.8

EXCITATION CURVE



Model 114

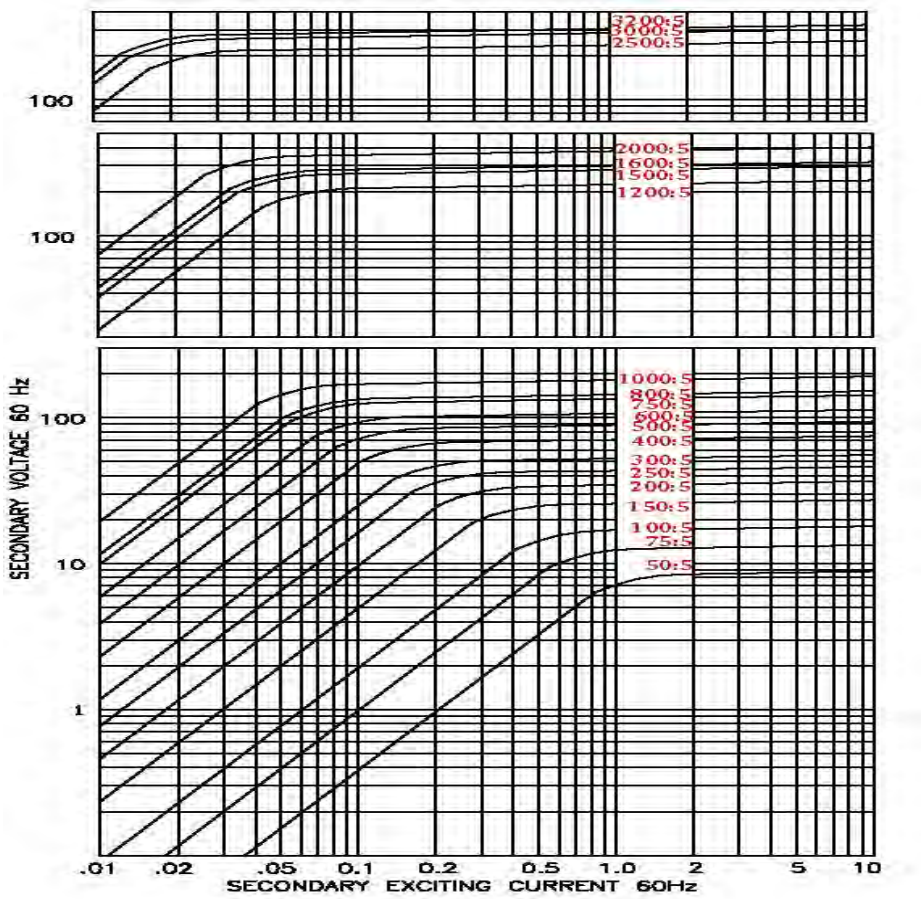
MODEL 115

Window Diameter 4.0”

Approximate weight: 19 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@ 30° C	@ 55° C
115 – 500	50:5	-	2.4	4.8	-	-	-	0.025	2.0	2.0
115 – 750	75:5	-	1.2	2.4	4.8	-	-	0.037	2.0	2.0
115 – 101	100:5	C10	1.2	1.2	2.4	4.8	-	0.046	2.0	2.0
115 – 151	150:5	C10	0.6	0.6	1.2	2.4	4.8	0.074	2.0	2.0
115 – 201	200:5	C20	0.3	0.3	0.6	1.2	2.4	0.099	2.0	2.0
115 – 251	250:5	C20	0.3	0.3	0.6	1.2	2.4	0.127	2.0	2.0
115 – 301	300:5	C20	0.3	0.3	0.3	0.6	1.2	0.148	2.0	2.0
115 – 401	400:5	C50	0.3	0.3	0.3	0.3	0.6	0.208	2.0	2.0
115 – 501	500:5	C50	0.3	0.3	0.3	0.3	0.3	0.247	2.0	1.5
115 – 601	600:5	C50	0.3	0.3	0.3	0.3	0.3	0.305	2.0	1.5
115 – 751	750:5	C100	0.3	0.3	0.3	0.3	0.3	0.428	1.5	1.33
115 – 801	800:5	C100	0.3	0.3	0.3	0.3	0.3	0.457	1.5	1.0
115 – 102	1000:5	C100	0.3	0.3	0.3	0.3	0.3	0.571	1.5	1.0
115 – 122	1200:5	C100	0.3	0.3	0.3	0.3	0.3	0.660	1.33	1.0
115 – 152	1500:5	C100	0.3	0.3	0.3	0.3	0.3	0.825	1.0	0.8
115 – 162	1600:5	C100	0.3	0.3	0.3	0.3	0.3	0.880	1.0	0.8
115 – 202	2000:5	C200	0.3	0.3	0.3	0.3	0.3	1.100	1.0	0.8
115 – 252	2500:5	C100	0.3	0.3	0.3	0.3	0.3	1.292	1.0	0.8
115 – 302	3000:5	C200	0.3	0.3	0.3	0.3	0.3	1.550	0.8	0.6
115 – 322	3200:5	C200	0.3	0.3	0.3	0.3	0.3	1.653	0.8	0.6

EXCITATION CURVE



MODEL 115

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

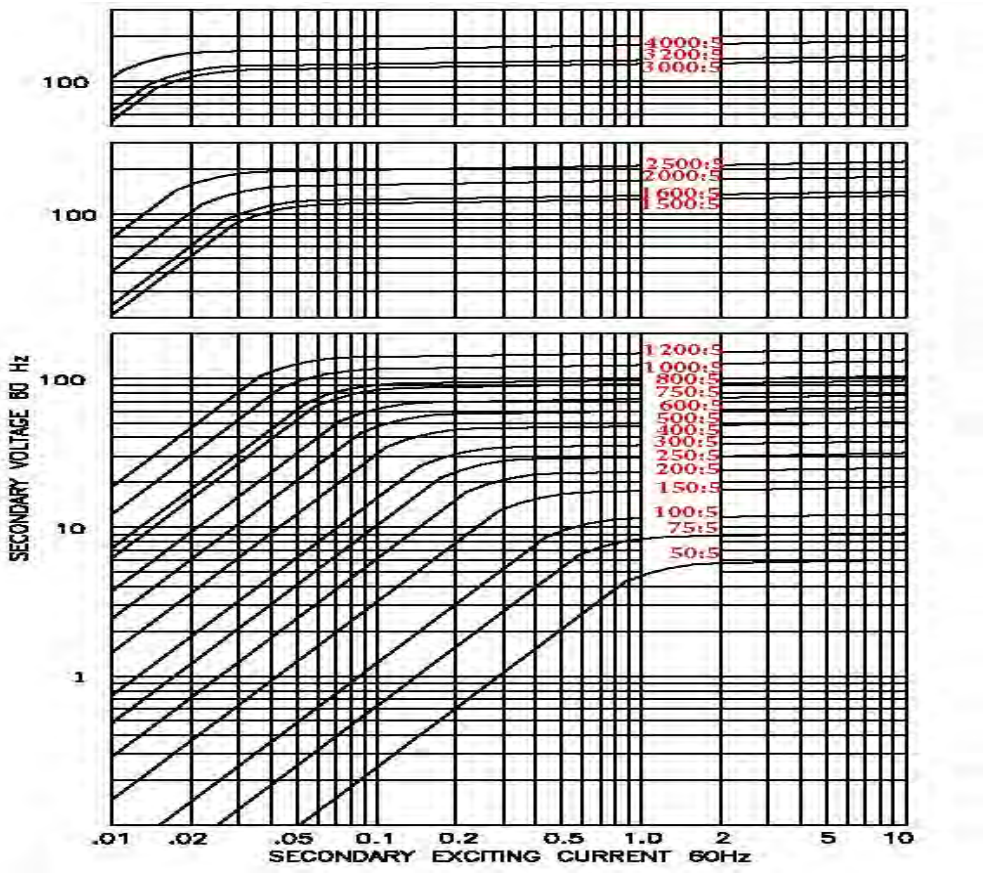
MODEL 117

Window Diameter 4.62”

Approximate weight: 13 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 Hz					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@ 30° C	@ 55° C
117 – 500	50:5	-	2.4	-	-	-	-	0.015	2.0	2.0
117 – 750	75:5	-	2.4	2.4	-	-	-	0.024	2.0	2.0
117 – 101	100:5	-	1.2	2.4	4.8	-	-	0.043	2.0	2.0
117 – 151	150:5	C10	0.6	0.6	2.4	4.8	4.8	0.069	2.0	2.0
117 – 201	200:5	C10	0.6	0.6	1.2	2.4	4.8	0.085	2.0	2.0
117 – 251	250:5	C20	0.6	0.6	0.6	1.2	2.4	0.106	2.0	2.0
117 – 301	300:5	C20	0.3	0.3	0.6	1.2	2.4	0.145	2.0	2.0
117 – 401	400:5	C20	0.3	0.3	0.3	0.6	1.2	0.184	2.0	2.0
117 – 501	500:5	C20	0.3	0.3	0.3	0.3	0.6	0.236	2.0	1.5
117 – 601	600:5	C20	0.3	0.3	0.3	0.3	0.6	0.283	2.0	1.5
117 – 751	750:5	C50	0.3	0.3	0.3	0.3	0.3	0.354	1.5	1.33
117 – 801	800:5	C50	0.3	0.3	0.3	0.3	0.3	0.425	1.5	1.33
117 – 102	1000:5	C50	0.3	0.3	0.3	0.3	0.3	0.531	1.5	1.0
117 – 122	1200:5	C100	0.3	0.3	0.3	0.3	0.3	0.637	1.33	1.0
117 – 152	1500:5	C50	0.3	0.3	0.3	0.3	0.3	0.768	1.33	1.0
117 – 162	1600:5	C50	0.3	0.3	0.3	0.3	0.3	0.819	1.0	0.8
117 – 202	2000:5	C50	0.3	0.3	0.3	0.3	0.3	1.024	1.0	0.6
117 – 252	2500:5	C100	0.3	0.3	0.3	0.3	0.3	1.279	1.0	0.6
117 – 302	3000:5	-	0.3	0.3	0.3	0.3	0.3	1.428	1.0	0.6
117 – 322	3200:5	-	0.3	0.3	0.3	0.3	0.3	1.523	1.0	0.6
117 – 402	4000:5	-	0.3	0.3	0.3	0.3	0.3	2.385	0.8	0.6

EXCITATION CURVE



Model 117

Current Transformer

Model 7A
rev 03182021


7ASHT


7ASFT

CERTIFICATIONS:

E228202

223647

ISO 9001
QUALITY MANAGEMENT

APPLICATION:
Ammeters and wattmeters

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
2.50”

APPROXIMATE WEIGHT:
1.5 lbs.

CONNECTIONS:
-Terminals are brass studs No. 8-32 with one flat washer, lockwasher, and regular nut
-Flexible leads are UL 1015 105° C, CSA approved, #16 AWG, 24” long
-Non-standard, lead length can be specified
-Order Mounting Bracket Kit 0221B00182 separately for model 7ASHT
-Model 7ASHT and model 7ASFT also available as 7ASHL and 7ASFL with leads

Model	7ASHT	7ASFT	7ARL
Window Size	2.50	2.50	2.50
Width	4.56	4.56	4.60
Height	4.88	4.71	4.60
Depth	1.10	2.13	1.10

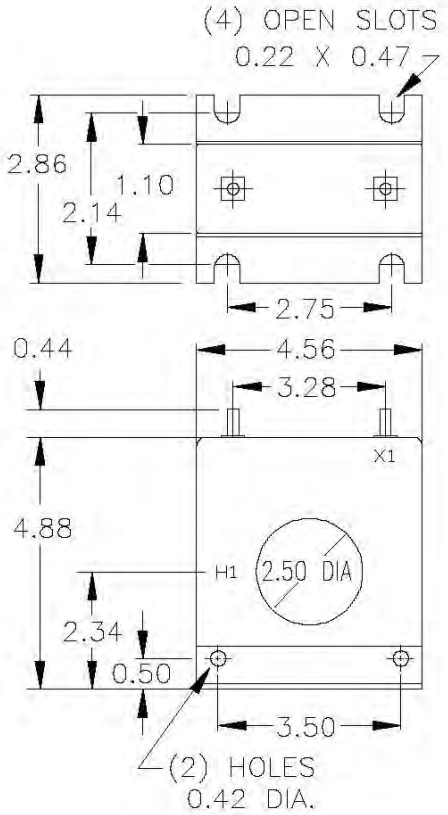
MODEL 7A
Window Diameter 2.50”
Approximate weight: 1.5 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. ± 1% CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
7A**--101	100:5	1.0	2.4	4.8	-	-	-	0.014	2.0	2.0
7A**--151	150:5	2.5	1.2	2.4	4.8	4.8	-	0.025	2.0	2.0
7A**--201	200:5	5.0	0.6	1.2	2.4	4.8	4.8	0.035	2.0	2.0
7A**--251	250:5	7.5	0.3	0.6	1.2	2.4	4.8	0.043	2.0	2.0
7A**--301	300:5	12.5	0.3	0.6	1.2	2.4	2.4	0.052	2.0	1.5
7A**--401	400:5	15.0	0.3	0.3	0.6	1.2	2.4	0.069	2.0	1.5
7A**--501	500:5	25.0	0.3	0.3	0.6	1.2	1.2	0.108	1.5	1.0
7A**--601	600:5	30.0	0.3	0.3	0.6	0.6	1.2	0.130	1.5	1.0
7A**--751	750:5	30.0	0.3	0.3	0.3	0.6	0.6	0.163	1.33	1.0
7A**--801	800:5	35.0	0.3	0.3	0.3	0.6	0.6	0.173	1.33	1.0
7A**--102	1000:5	35.0	0.3	0.3	0.3	0.6	0.6	0.157	1.33	1.0
7A**--122	1200:5	40.0	0.3	0.3	0.3	0.3	0.6	0.234	1.0	1.0
7A**--152	1500:5	50.0	0.3	0.3	0.3	0.3	0.6	0.292	1.0	0.8
7A**--162	1600:5	50.0	0.3	0.3	0.3	0.3	0.6	0.312	1.0	0.8

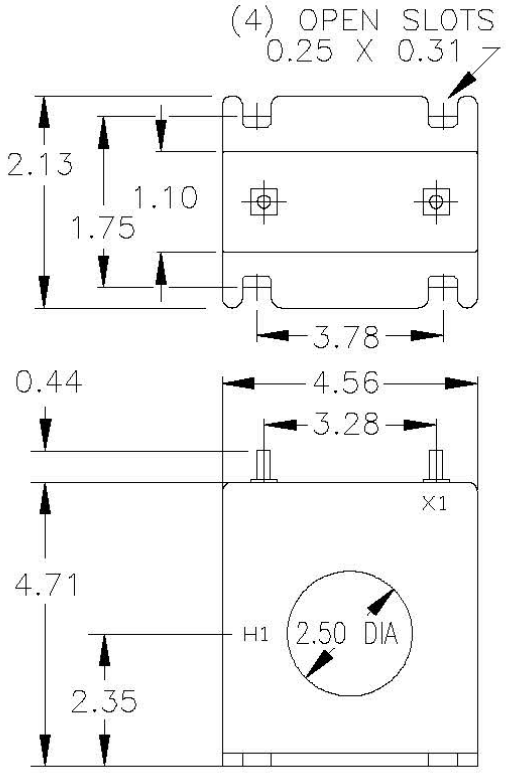
**NOTE: When ordering, prefix Cat. No. with model designation required i.e. 7ASHT-201, 7ARL-301, etc.

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

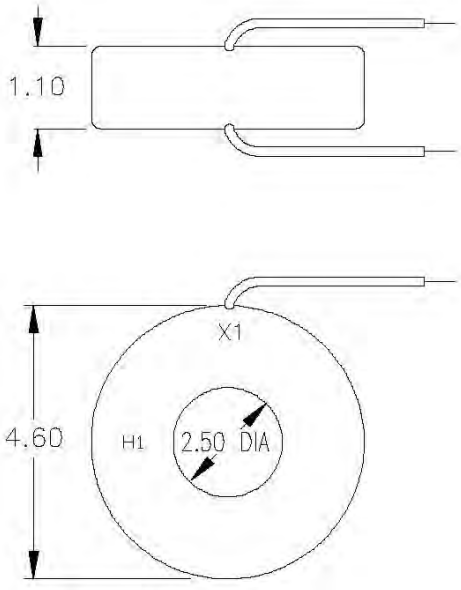
MODEL 7ASHT



MODEL 7ASFT



MODEL 7ARL

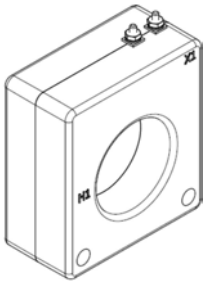


TTL Transformer Technologies Ltd.

Current Transformer

Model 193/194
rev 10172019

APPLICATION:
Relaying and Metering
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
CONNECTIONS:
-Multi-ratios available upon request
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Mounting kits 59-0215 (CR) and 59-0216 (CL)



Model	193	194
Window Size	2.13	2.50
Width	4.50	4.50
Height	4.88	4.88
Depth	2.19	2.19

CERTIFICATIONS:

c UL us
E228202

c SA us
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 193
Window Diameter 2.13"
Approximate weight: 3.5 lbs.

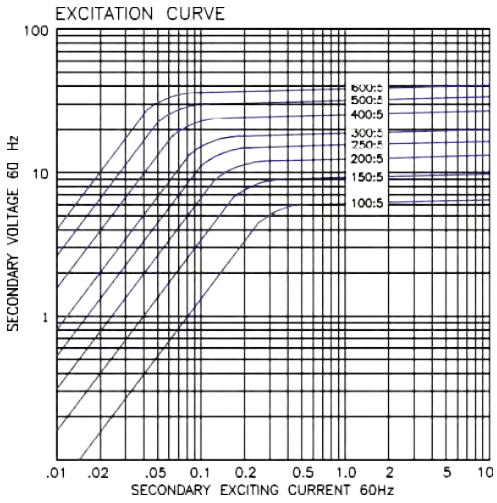
CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE	CONTINUOUS THERMAL RATING	
			B0.1	B0.2	B0.5	BO.9	B1.8	(OHMS @ 75°C)	@ 30°C	@ 55°C
193 – 101	100:5	-	1.2	1.2	4.8	-	-	0.024	2.0	2.0
193 – 151	150:5	-	0.6	0.6	1.2	2.4	4.8	0.038	2.0	2.0
193 – 201	200:5	-	0.3	0.3	1.2	1.2	2.4	0.071	2.0	2.0
193 – 251	250:5	C10	0.3	0.3	0.6	1.2	2.4	0.072	2.0	1.5
193 – 301	300:5	C10	0.3	0.3	0.3	0.6	1.2	0.082	2.0	1.5
193 – 401	400:5	C10	0.3	0.3	0.3	0.3	0.6	0.142	1.5	1.33
193 – 501	500:5	C10	0.3	0.3	0.3	0.3	0.6	0.159	1.5	1.33
193 – 601	600:5	C10	0.3	0.3	0.3	0.3	0.6	0.191	1.5	1.0

MODEL 194
Window Diameter 2.50"
Approximate weight: 3.5 lbs.

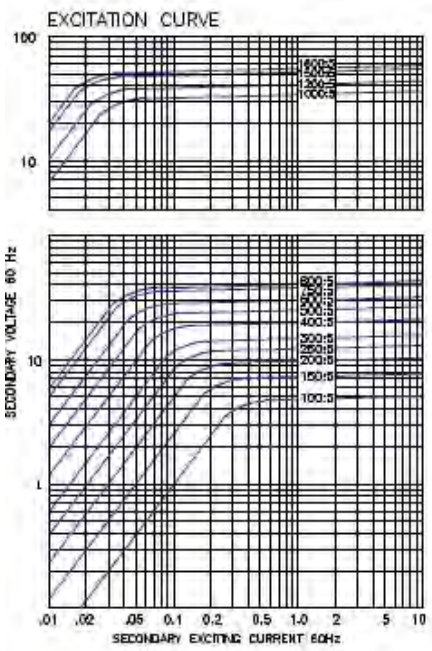
CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE	CONTINUOUS THERMAL RATING	
			B0.1	B0.2	B0.5	BO.9	B1.8	(OHMS @ 75°C)	@ 30°C	@ 55°C
194 – 101	100:5	-	1.2	2.4	4.8	-	-	0.033	2	2
194 – 151	150:5	-	0.6	1.2	2.4	4.8	4.8	0.050	2	2
194 – 201	200:5	-	0.6	0.6	1.2	2.4	4.8	0.065	2	2
194 – 251	250:5	-	0.3	0.3	0.6	1.2	2.4	0.084	2	1.5
194 – 301	300:5	-	0.3	0.3	0.6	1.2	2.4	0.101	2	1.5
194 – 401	400:5	C10	0.3	0.3	0.3	0.6	1.2	0.104	2	1.5
194 – 501	500:5	C10	0.3	0.3	0.3	0.3	0.6	0.133	1.5	1
194 – 601	600:5	C10	0.3	0.3	0.3	0.3	0.6	0.180	1.5	1
194 – 751	750:5	C10	0.3	0.3	0.3	0.3	0.3	0.283	1	0.8
194 – 801	800:5	C10	0.3	0.3	0.3	0.3	0.3	0.302	1	0.8
194 – 102	1000:5	-	0.3	0.3	0.3	0.3	0.3	0.354	1	0.8
194 – 122	1200:5	-	0.3	0.3	0.3	0.3	0.3	0.425	1	0.8
194 – 152	1500:5	-	0.3	0.3	0.3	0.3	0.3	0.531	1	0.6
194 – 162	1600:5	-	0.3	0.3	0.3	0.3	0.3	0.566	0.8	0.6

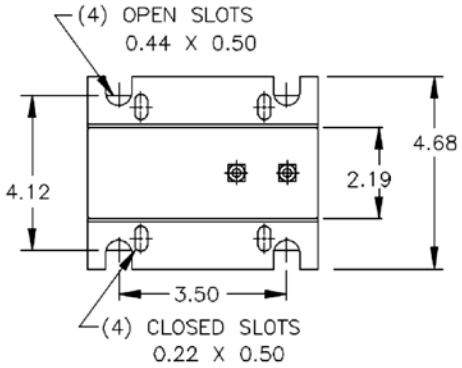
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

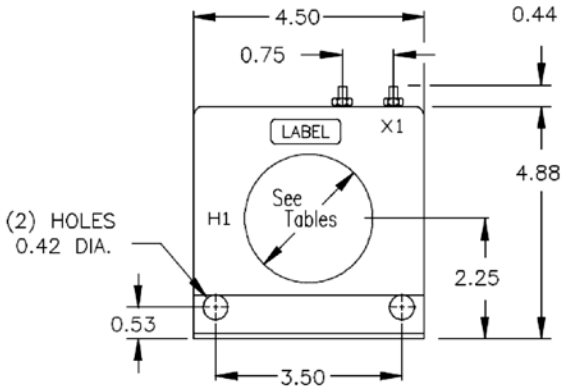
193



194







Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 180
rev 02222024

APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
2.50”

CONNECTIONS:
Non-standard lead length can be specified.
Mounting bracket -59-0225
Flexible leads are UL 1015 105° C ,
#16 AWG, 24" long
Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut

APPROXIMATE WEIGHT:
3 lbs.

180SHT

180RL

Model	180SHT	180RL
Window Size	2.50	2.50
Width	4.50	4.50
Height	4.50	4.50
Depth	2.19	2.19

CERTIFICATIONS:

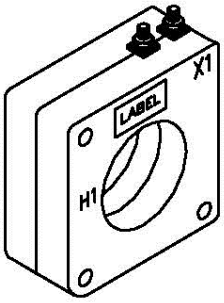
c UL us
E228202

C SA US
223647

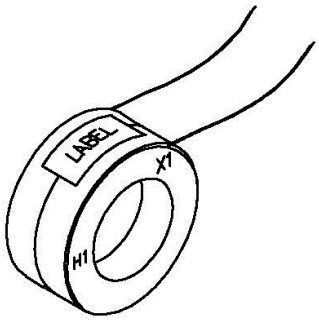
nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 180
Window Diameter 2.50”
Approximate weight: 3 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
180 **---500	50:5	1.5	2.4	-	-	-	-	0.009	1.33	1
180 **---750	75:5	2.5	1.2	2.4	-	-	-	0.018	1.33	1
180 **---101	100:5	2.5	1.2	2.4	4.8	-	-	0.021	1.33	1
180 **---151	150:5	5	0.6	1.2	2.4	4.8	-	0.038	1.33	1
180 **---201	200:5	12.5	0.6	0.6	1.2	2.4	-	0.051	1.33	1
180 **---251	250:5	12.5	0.3	0.3	0.6	1.2	-	0.064	1.33	1
180 **---301	300:5	25	0.3	0.3	0.6	1.2	2.4	0.076	1.33	1
180 **---401	400:5	50	0.3	0.3	0.3	0.6	1.2	0.102	1.33	1
180 **---501	500:5	50	0.3	0.3	0.3	0.6	1.2	0.148	1.33	1
180 **---601	600:5	50	0.3	0.3	0.3	0.6	1.2	0.177	1.33	1
180 **---751	750:5	50	0.3	0.3	0.3	0.6	1.2	0.174	1.33	1
180 **---801	800:5	75	0.3	0.3	0.3	0.6	1.2	0.202	1.33	1
180 **---102	1000:5	100	0.3	0.3	0.3	0.3	0.6	0.253	1.33	1
180 **---122	1200:5	125	0.3	0.3	0.3	0.3	0.3	0.303	1.33	1
180 **---152	1500:5	160	0.3	0.3	0.3	0.3	0.3	0.307	1.33	1
180 **---162	1600:5	175	0.3	0.3	0.3	0.3	0.3	0.359	1.25	1
180 **---202	2000:5	200	0.3	0.3	0.3	0.3	0.3	0.449	1.00	0.75



180SHT



180RL

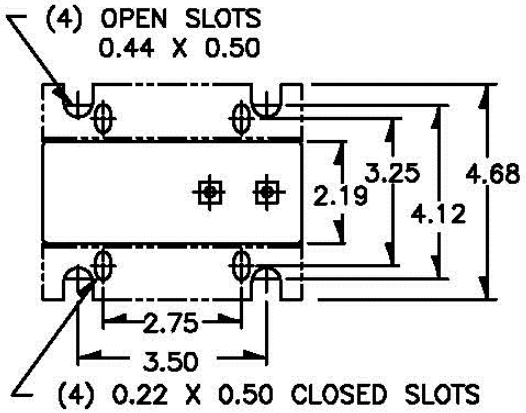
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

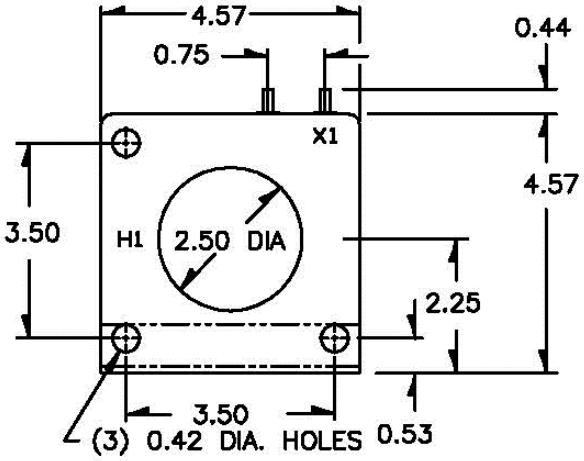
TTL Transformer Technologies Ltd.

Current Transformer

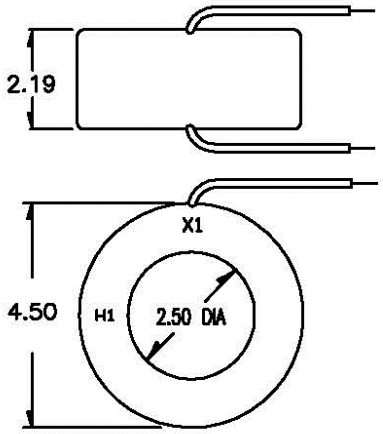
Model 180
rev 11152021

180SHT

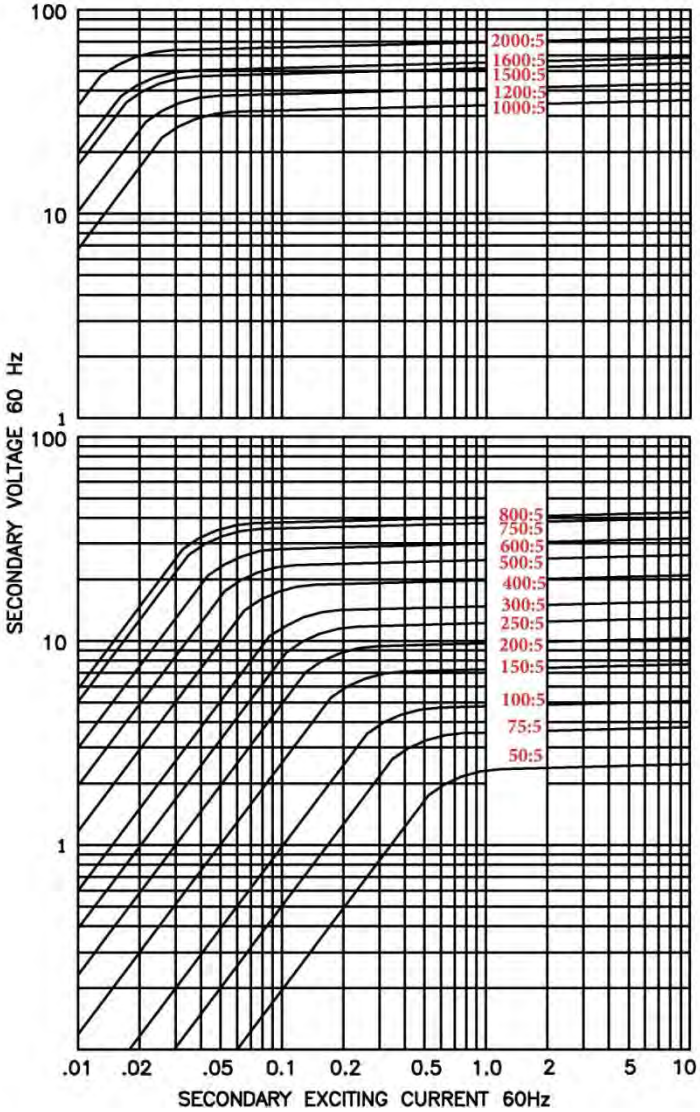




180RL



EXCITATION CURVE



Model 180

TTL Transformer Technologies Ltd.

Current Transformer

Model 8
rev 03182021

8SHT

8RL

CERTIFICATIONS:

E228202

223647

ISO 9001 QUALITY MANAGEMENT

APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
3.25"

APPROXIMATE WEIGHT:
2.5 lbs.

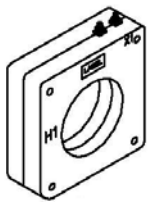
CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved #16 AWG, 24" long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-SHT case styles also available with Leads
-Order Mounting Bracket Kit E separately when required for Model 8SHT
-Mounting Kit 59-0220

Model	8SHT	8RL
Window Size	3.25	3.25
Width	5.73	5.73
Height	5.73	5.73
Depth	1.15	1.15

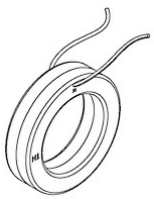
MODEL 8SHT and 8RL
Window Diameter 3.25"
Approximate weight: 2.5 lbs.

CATALOG NUMBER	CURRENT RATIO	VA FOR ± 1% CLASS	ANSI METERING CLASS AT 60HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINOUS THERMAL RATING FACTOR	
			BO.1	BO.2	BO.5	BO.9	B1.8		@ 30° C	@ 55° C
8**-201	200:5	5	1.2	1.2	2.4	4.8	4.8	0.03	2	2
8**-251	250:5	7.5	0.6	0.6	1.2	2.4	4.8	0.044	2	2
8**-301	300:5	15	0.6	0.6	1.2	2.4	2.4	0.049	2	2
8**-401	400:5	25	0.3	0.3	0.6	1.2	2.4	0.079	2	1.5
8**-501	500:5	35	0.3	0.3	0.6	0.6	1.2	0.102	2	1.5
8**-601	600:5	50	0.3	0.3	0.6	0.6	1.2	0.147	1.5	1.33
8**-751	750:5	50	0.3	0.3	0.6	0.6	1.2	0.184	1.5	1
8**-801	800:5	60	0.3	0.3	0.3	0.6	0.6	0.197	1.5	1
8**-102	1000:5	75	0.3	0.3	0.3	0.6	0.6	0.246	1.33	1
8**-122	1200:5	75	0.3	0.3	0.3	0.3	0.6	0.169	1.5	1
8**-152	1500:5	90	0.3	0.3	0.3	0.3	0.6	0.316	1.33	1
8**-162	1600:5	100	0.3	0.3	0.3	0.3	0.6	0.337	1.33	0.8
8**-202	2000:5	120	0.3	0.3	0.3	0.3	-	0.422	1	0.8
8**-252	2500:5	50	0.3	0.3	0.3	0.3	-	0.438	1	0.8
8**-302	3000:5	60	0.3	0.3	0.3	0.3	-	0.526	1	0.8
8**-322	3200:5	70	0.3	0.3	0.3	0.3	-	0.561	1	0.8

Note: When ordering, Prefix Cat. No. with model designation required, i.e. 8RL-301 or 8SHT-301



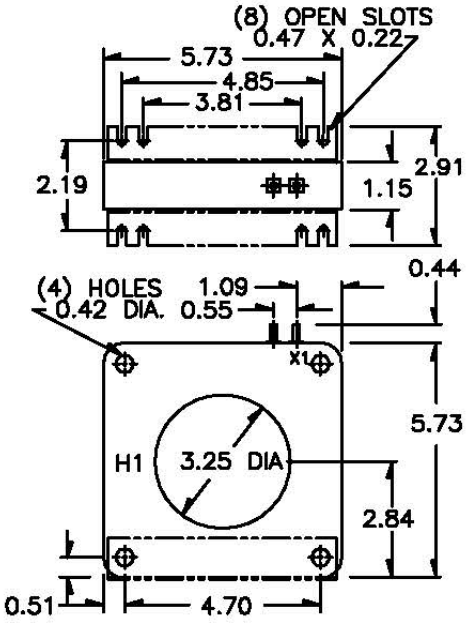
8SHT



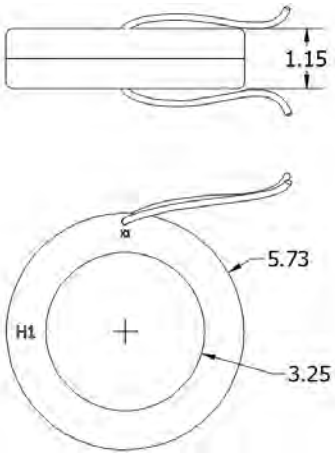
8RL

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

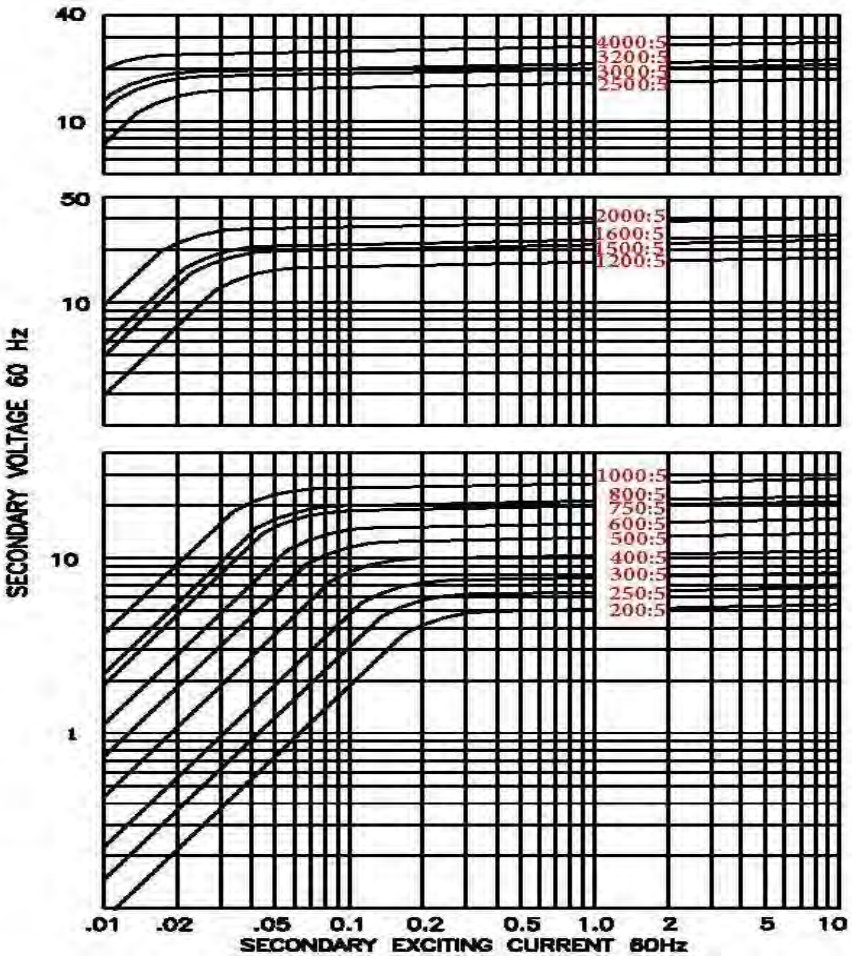
8SHT



8RL



EXCITATION CURVE



Model 8

Current Transformer

Model 8SHT-0.333

8SHT-0.333

APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
3.25”

APPROXIMATE WEIGHT:
2.5 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved #16 AWG, 24” long
-Non-standard length to be specified
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Mounting kit 59-0220

Model	8SHT-0.333
Window Size	3.25
Width	5.73
Height	5.73
Depth	1.15

CERTIFICATIONS:

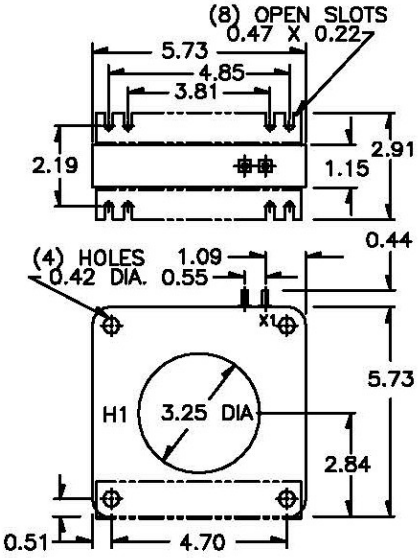
E228202

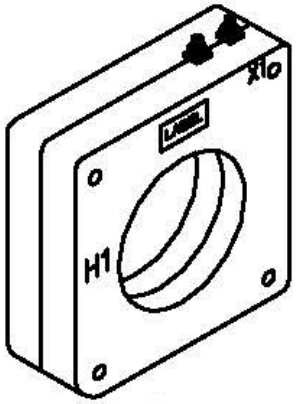
223647

ISO 9001 QUALITY MANAGEMENT

MODEL 8SHT
Window Diameter 3.25”
Approximate weight: 2.5 lbs.

CATALOG NUMBER	CURRENT VOLTAGE RATIO
8SHT-201-0.333	200:0.333
8SHT-251-0.333	250:0.333
8SHT-301-0.333	300:0.333
8SHT-401-0.333	400:0.333
8SHT-501-0.333	500:0.333
8SHT-601-0.333	600:0.333
8SHT-751-0.333	750:0.333
8SHT-801-0.333	800:0.333
8SHT-102-0.333	1000:0.333
8SHT-122-0.333	1200:0.333
8SHT-152-0.333	1500:0.333
8SHT-162-0.333	1600:0.333
8SHT-202-0.333	2000:0.333
8SHT-252-0.333	2500:0.333
8SHT-302-0.333	3000:0.333
8SHT-322-0.333	3200:0.333





8SHT-0.333

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 100
rev 011218

APPLICATION:
Relaying and Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
4.0"

APPROXIMATE WEIGHT:
6.5 lbs.

CONNECTIONS:
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Multi-ratios available upon request
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)

Model	100
Window Size	4.00
Width	7.00
Height	7.00
Depth	2.17

CERTIFICATIONS:

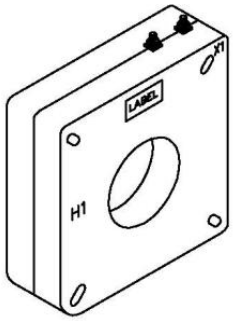
c UL us
E228202

CSA
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

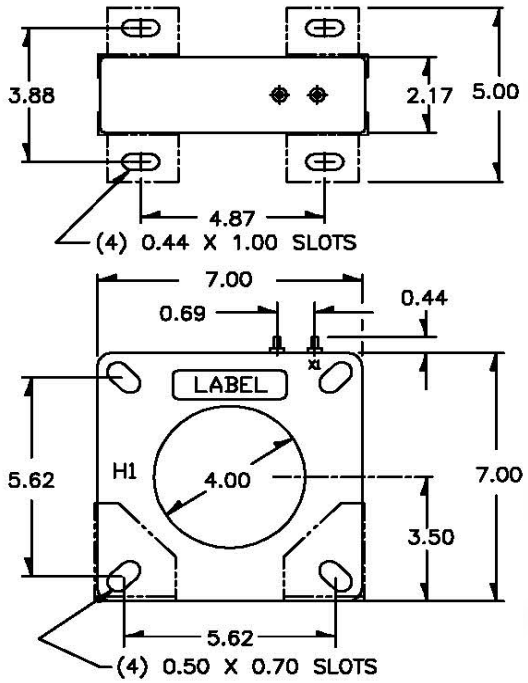
MODEL 100
Window Diameter 4.0"
Approximate weight: 9.5 lbs.

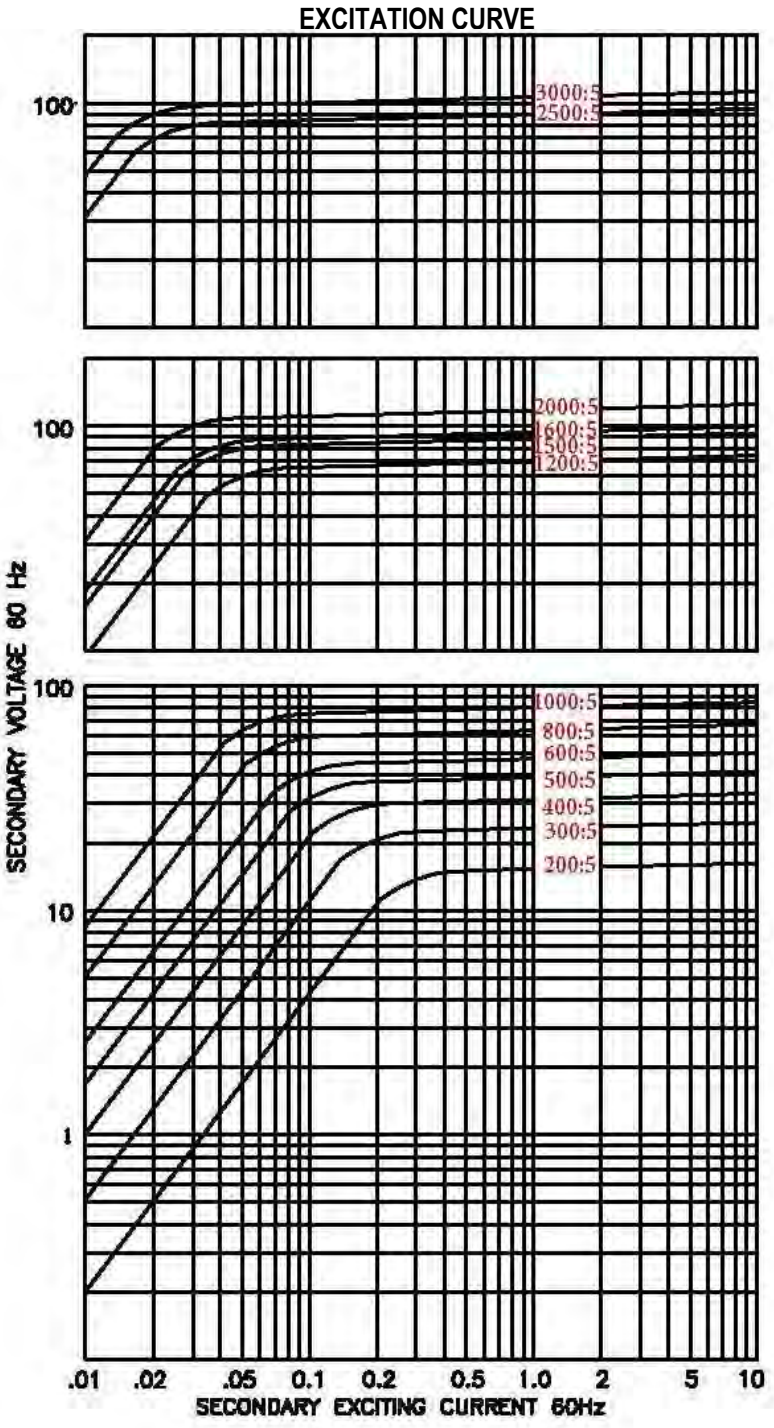
CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	B0.9	B1.8	(OHMS @ 75° C)	@ 30°C	@ 55°C
100 – 201	200:5	C10	0.6	0.6	1.2	2.4	-	0.057	2	2
100 – 301	300:5	C10	0.3	0.3	0.6	1.2	-	0.091	2	2
100 – 401	400:5	C20	0.3	0.3	0.6	0.6	1.2	0.133	2	2
100 – 501	500:5	C20	0.3	0.3	0.6	0.6	1.2	0.166	2	1.5
100 – 601	600:5	C20	0.3	0.3	0.3	0.6	0.6	0.199	2	1.5
100 – 801	800:5	C20	0.3	0.3	0.3	0.3	0.6	0.266	1.5	1.33
100 – 102	1000:5	C50	0.3	0.3	0.3	0.3	0.3	0.332	1.5	1
100 – 122	1200:5	C20	0.3	0.3	0.3	0.3	0.3	0.374	1.5	1
100 – 152	1500:5	C20	0.3	0.3	0.3	0.3	0.3	0.468	1.33	1
100 – 162	1600:5	C50	0.3	0.3	0.3	0.3	0.3	0.499	1.33	1
100 – 202	2000:5	C50	0.3	0.3	0.3	0.3	0.3	0.624	1	0.8
100 – 252	2500:5	C50	0.3	0.3	0.3	0.3	0.3	0.735	1	0.8
100 – 302	3000:5	C50	0.3	0.3	0.3	0.3	0.3	0.882	1	0.8



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Model 100





Model 100

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 110
rev 011218

APPLICATION:
Relaying and Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full

WINDOW DIAMETER:
4.0"

APPROXIMATE WEIGHT:
10 lbs.

CONNECTIONS:
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher and regular nut
-Mounting Bracket's 59-0215 (CR) and 59-0216 (CL)

Model	110
Window Size	4.00
Width	7.00
Height	7.00
Depth	2.88

CERTIFICATIONS:

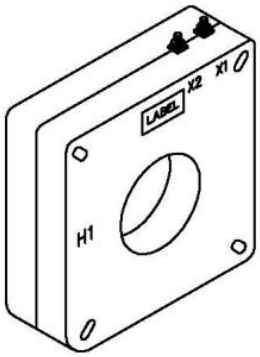
c UL us
E228202

CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

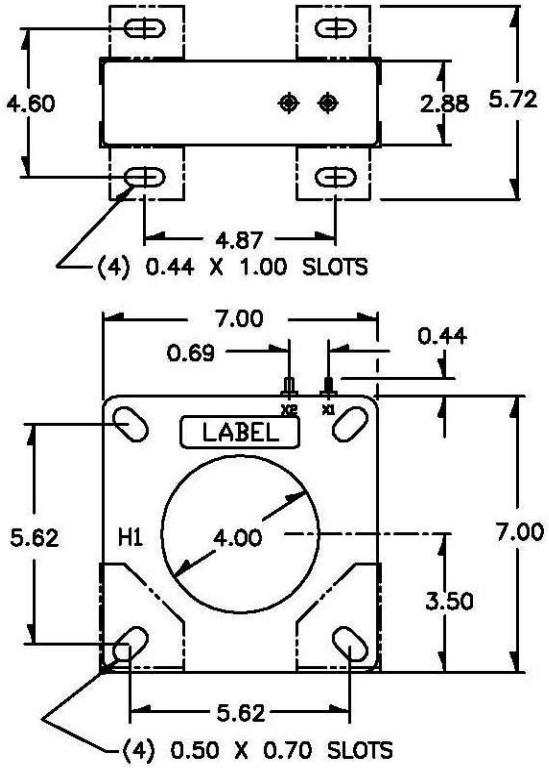
MODEL 110
Window Diameter 4.0"
Approximate weight: 13 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	B0.9	B1.8		@ 30°C	@ 55°C
110 – 201	200:5	C10	0.6	1.2	1.2	2.4	-	0.085	2	2
110 – 301	300:5	C20	0.3	0.6	0.6	1.2	2.4	0.128	2	2
110 – 401	400:5	C20	0.3	0.3	0.3	0.6	1.2	0.152	2	2
110 – 501	500:5	C20	0.3	0.3	0.3	0.6	0.6	0.214	2	1.5
110 – 601	600:5	C50	0.3	0.3	0.3	0.3	0.6	0.256	2	1.5
110 – 801	800:5	C50	0.3	0.3	0.3	0.3	0.3	0.342	1.5	1.33
110 – 102	1000:5	C100	0.3	0.3	0.3	0.3	0.3	0.427	1.5	1
110 – 122	1200:5	C50	0.3	0.3	0.3	0.3	0.3	0.489	1.5	1
110 – 152	1500:5	C100	0.3	0.3	0.3	0.3	0.3	0.611	1.33	1
110 – 162	1600:5	C100	0.3	0.3	0.3	0.3	0.3	0.652	1	1
110 – 202	2000:5	C100	0.3	0.3	0.3	0.3	0.3	0.815	1	0.8
110 – 252	2500:5	C100	0.3	0.3	0.3	0.3	0.3	0.974	1	0.8
110 – 302	3000:5	C100	0.3	0.3	0.3	0.3	0.3	1.168	1	0.6

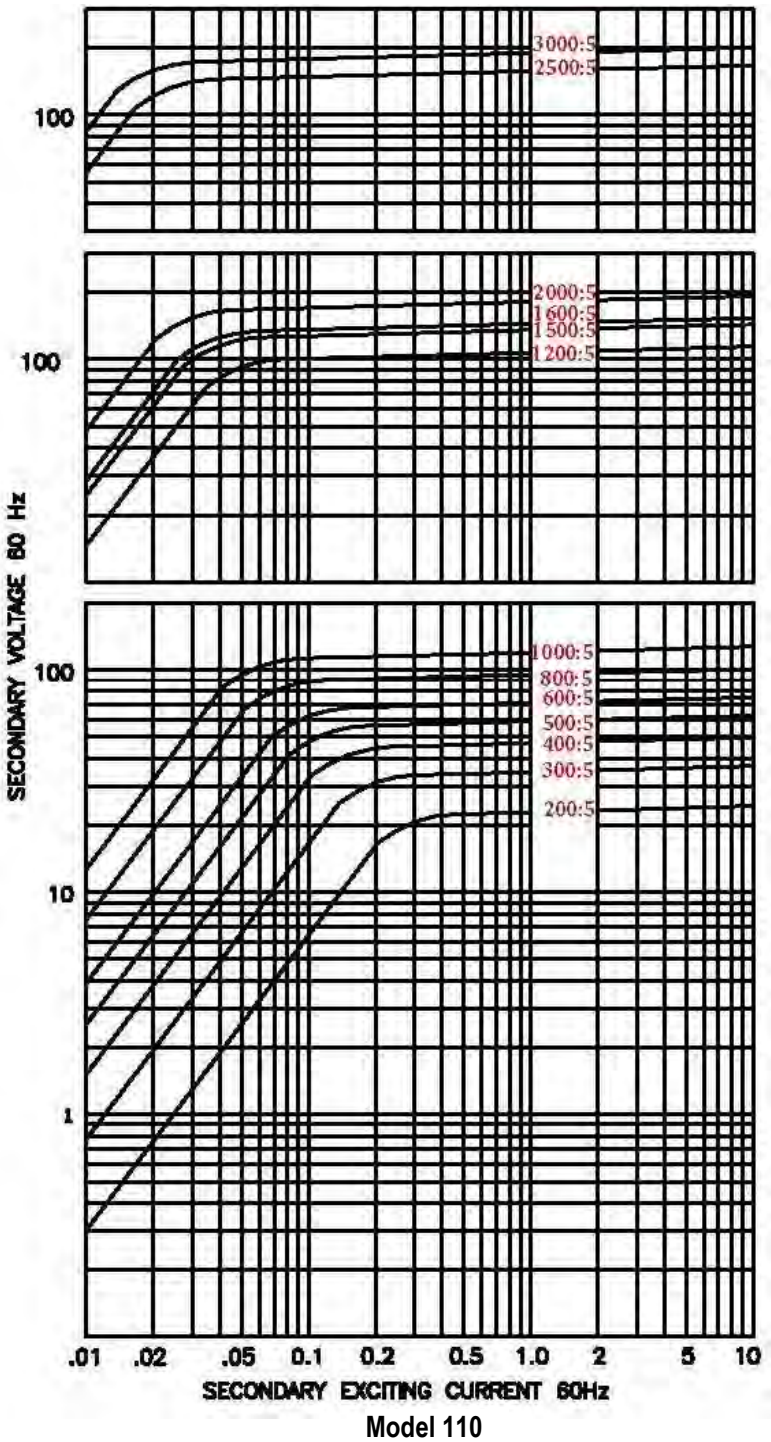


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Model 110



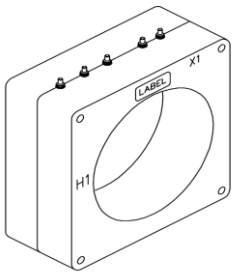
EXCITATION CURVE



Model 110

Current Transformer

Model 115MR



APPLICATION:
Relaying

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
4.0”

APPROXIMATE WEIGHT:
19 lbs.

CONNECTIONS:
- Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
- The transformer winding is arranged so that the turns are fully distributed between all taps

Model	115MR
Window Size	4.00
Width	7.00
Height	7.12
Depth	4.00

CERTIFICATIONS:

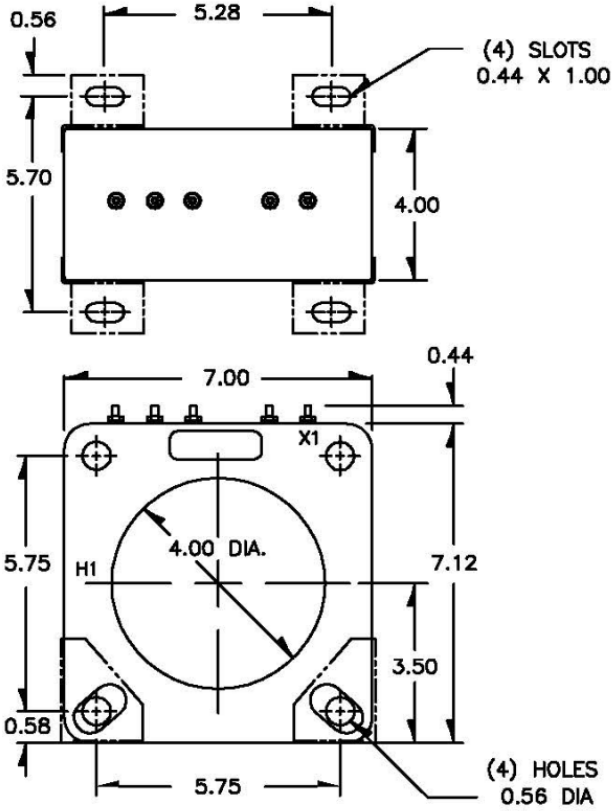
E228202

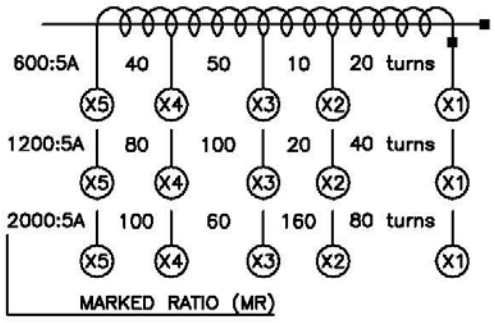
223647

ISO 9001 QUALITY MANAGEMENT

MODEL 115MR
Window Diameter 4.0”
Approximate weight: 19 lbs.

Catalog Number	Relay Class	Continuous Thermal	
		@ 30°C	@ 50°C
115-601MR	C50	2.0	1.5
115-122MR	C100	1.33	1.0
115-202MR	C200	1.0	0.8





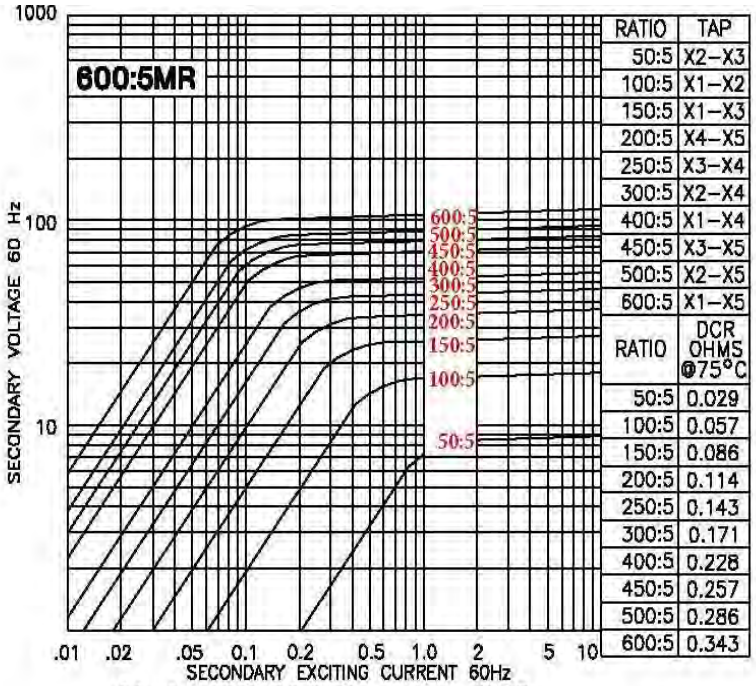
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 115MR

EXCITATION CURVE

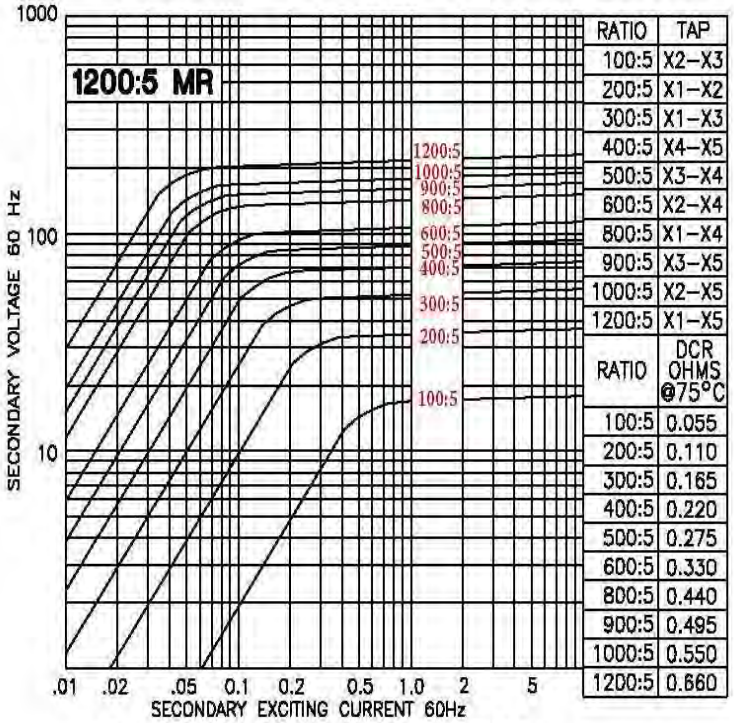


RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.029
100:5	0.057
150:5	0.086
200:5	0.114
250:5	0.143
300:5	0.171
400:5	0.228
450:5	0.257
500:5	0.286
600:5	0.343

Model 115-601MR- rating C50

TRF= 2.00 @ 30°C. 1.5 @ 55°C amb.

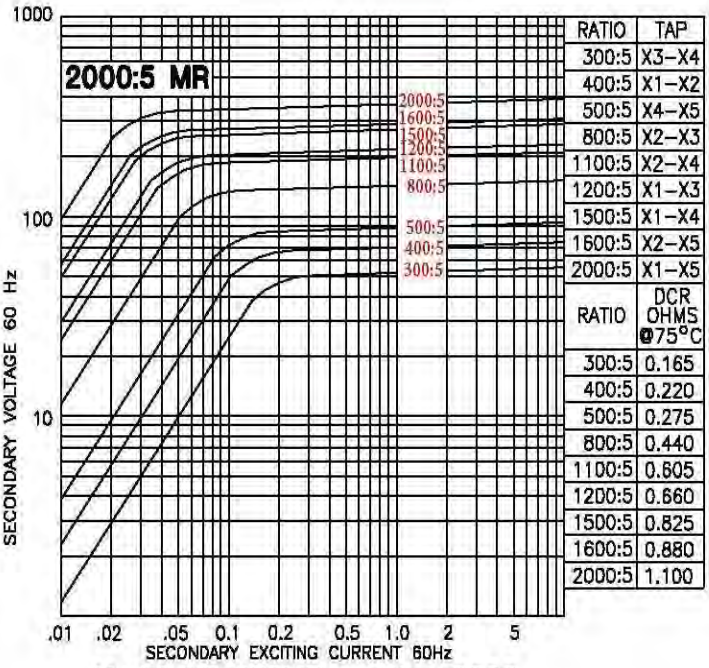


RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.055
200:5	0.110
300:5	0.165
400:5	0.220
500:5	0.275
600:5	0.330
800:5	0.440
900:5	0.495
1000:5	0.550
1200:5	0.660

Model 115-122MR - rating C100

TRF= 1.33 @ 30°C, 1.0 @ 55°C amb.



RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.165
400:5	0.220
500:5	0.275
800:5	0.440
1100:5	0.605
1200:5	0.660
1500:5	0.825
1600:5	0.880
2000:5	1.100

Model 115-202MR - rating C200

TRF= 1.00 @ 30°C, 0.8 @ 55°C amb.

TTL Transformer Technologies Ltd.

Current Transformer

Model 19
rev 012821


19SHT


19RL

CERTIFICATIONS:

E228202

223647

ISO 9001
QUALITY MANAGEMENT

APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
4.25"

APPROXIMATE WEIGHT:
1.5 lbs.

CONNECTIONS:
-Flexible Leads are UL 1015 105°C, CSA approved #15AWG, 24" long
-Non-standard length to be specified
-SHT Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut

Model	19SHT	19RL
Window Size	4.25	4.25
Width	5.92	5.92
Height	6.17	5.92
Depth	1.15	1.14

MODEL 19SHT and 19RL
Window Diameter 4.25"
Approximate weight: 3 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75° C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	B0.9	B1.8		@ 30°C	@ 55°C
19**-301	300:5	4	0.6	1.2	2.4	-	-	0.048	2	2
19**-401	400:5	10	0.3	0.6	1.2	-	-	0.064	2	2
19**-501	500:5	15	0.3	0.6	1.2	-	-	0.087	2	1.5
19**-601	600:5	15	0.3	0.3	0.6	1.2	-	0.116	2	1.5
19**-751	750:5	25	0.3	0.3	0.6	0.6	-	0.145	1.5	1.33
19**-801	800:5	30	0.3	0.3	0.6	0.6	-	0.155	1.5	1.33
19**-102	1000:5	30	0.3	0.3	0.6	0.6	-	0.242	1.33	1
19**-122	1200:5	40	0.3	0.3	0.3	0.6	-	0.291	1.33	1
19**-152	1500:5	15	0.3	0.3	0.6	1.2	-	0.200	1.5	1
19**-162	1600:5	15	0.3	0.3	0.3	0.6	-	0.213	1.5	1
19**-202	2000:5	20	0.3	0.3	0.3	0.6	-	0.266	1.33	1
19**-252	2500:5	20	0.3	0.3	0.3	0.3	-	0.333	1	0.8
19**-302	3000:5	25	0.3	0.3	0.3	0.3	-	0.399	1	0.8

Note: When ordering, prefix catalog number with model designation required., i.e. 19RL-301, or 19SHT-301 etc.

19SHT


19RL

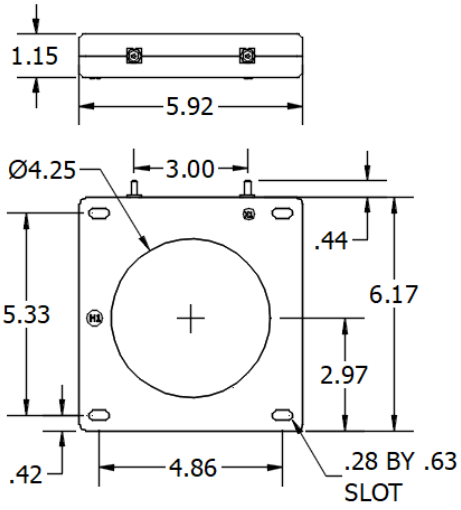
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

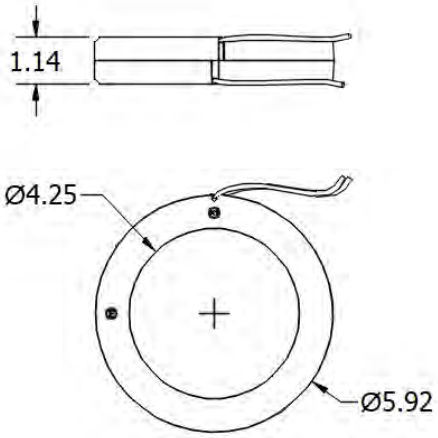
Current Transformer

Model 19
rev 012821

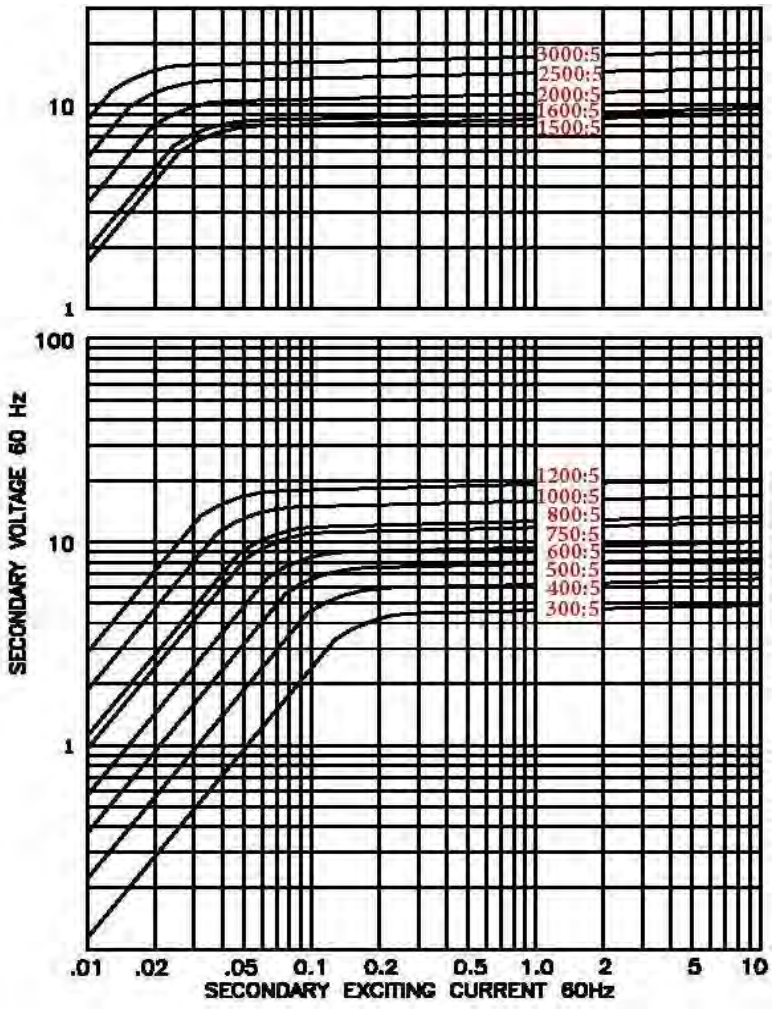
19 SHT



19RL



EXCITATION CURVE



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 170
rev 03182021

170SHT 170RL

CERTIFICATIONS:

c UL us E228202

CSA C US 223647

nqa. ISO 9001 QUALITY MANAGEMENT

APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
4.25”

APPROXIMATE WEIGHT:
3 lbs.

CONNECTIONS:
-Flexible leads are UL 1015 105° C CSA approved, #16 AWG, 24" long
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Also available as 170SHL with leads
Mounting kit – 59-0221

Model	170SHT	170RL
Window Size	4.25	4.25
Width	6.73	6.73
Height	6.73	6.73
Depth	1.28	1.25

MODEL 170
Window Diameter 4.25”
Approximate weight: 3 lbs.

CATALOG NUMBER	CURRENT RATIO	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
170 **---201	200:5	5	0.6	1.2	2.4	-	-	0.040	2	2
170 **---251	250:5	5	0.6	0.6	1.2	2.4	-	0.047	2	2
170 **---301	300:5	12.5	0.6	0.6	1.2	2.4	-	0.053	2	2
170 **---401	400:5	25	0.3	0.3	0.6	1.2	2.4	0.080	2	2
170 **---501	500:5	25	0.3	0.3	0.6	1.2	1.2	0.110	2	1.5
170 **---601	600:5	25	0.3	0.3	0.6	0.6	1.2	0.121	2	1.5
170 **---751	750:5	40	0.3	0.3	0.3	0.6	0.6	0.151	2	1.5
170 **---801	800:5	50	0.3	0.3	0.3	0.6	0.6	0.162	2	1.5
170 **---102	1000:5	75	0.3	0.3	0.3	0.6	0.6	0.265	1.33	1
170 **---122	1200:5	100	0.3	0.3	0.3	0.3	0.6	0.318	1.33	1
170 **---152	1500:5	80	0.3	0.3	0.3	0.3	0.6	0.344	1.33	1
170 **---162	1600:5	90	0.3	0.3	0.3	0.3	0.6	0.367	1.33	1
170 **---202	2000:5	100	0.3	0.3	0.3	0.3	0.3	0.459	1	0.8
170 **---252	2500:5	130	0.3	0.3	0.3	0.3	0.3	0.573	1	0.8
170 **---302	3000:5	160	0.3	0.3	0.3	0.3	0.3	0.424	1	1
170 **---352	3500:5	190	0.3	0.3	0.3	0.3	0.3	0.495	1	0.8
170 **---402	4000:5	200	0.3	0.3	0.3	0.3	0.3	0.646	1	0.8

Note: When ordering, prefix ** catalog # with model designation required, i.e. 170SHT-201, or 170RL-301

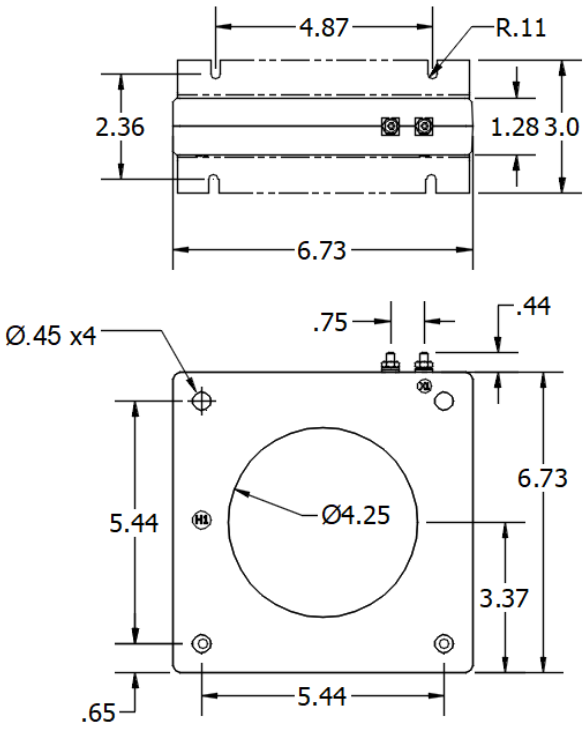
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

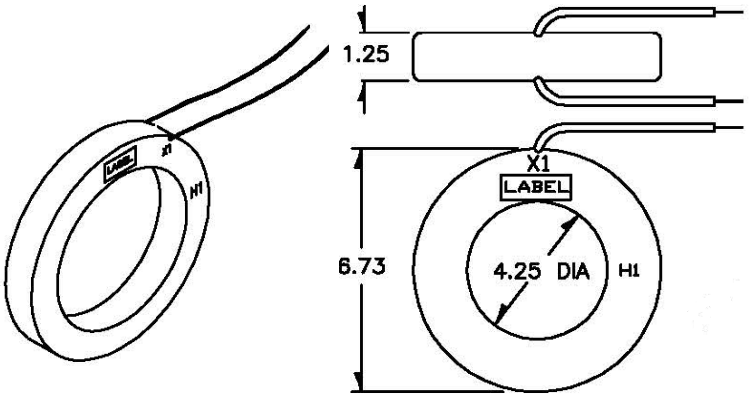
Current Transformer

Model 170
rev 03182021

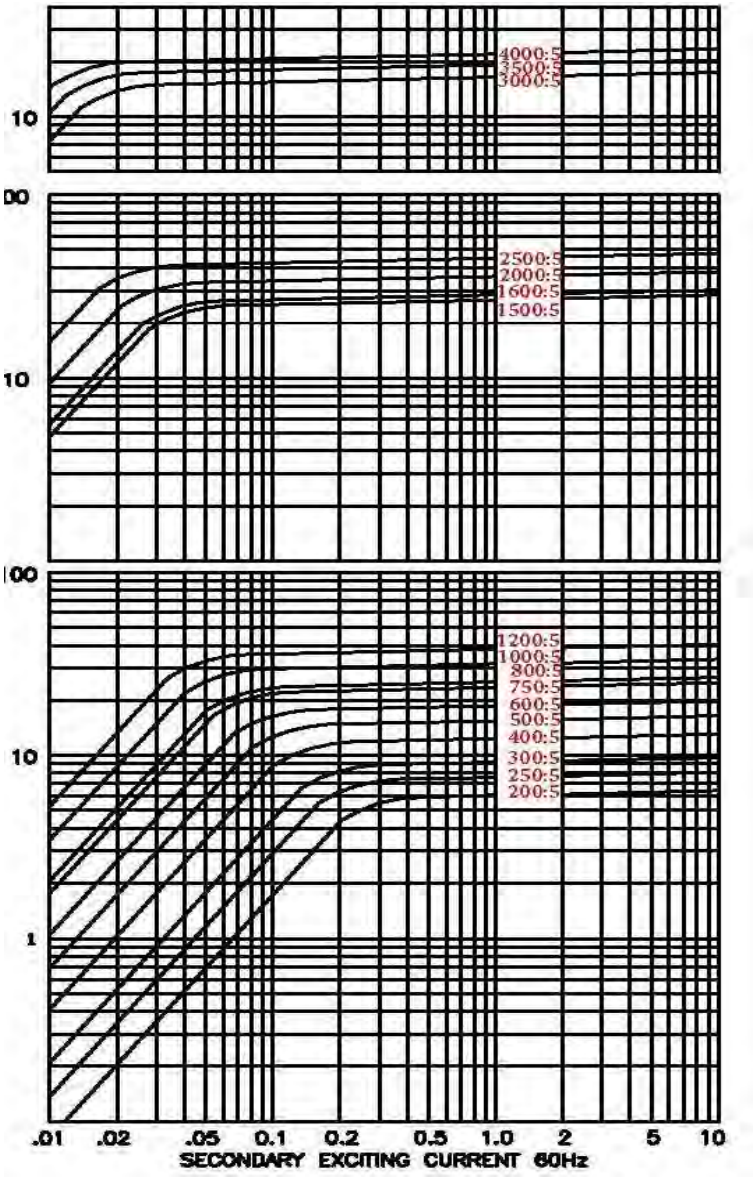
170SHT



170RL



EXCITATION CURVE



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Current Transformer

Model 170SHT-0.333
rev 03182021

CERTIFICATIONS:

E228202

223647

ISO 9001 QUALITY MANAGEMENT

APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
4.25”

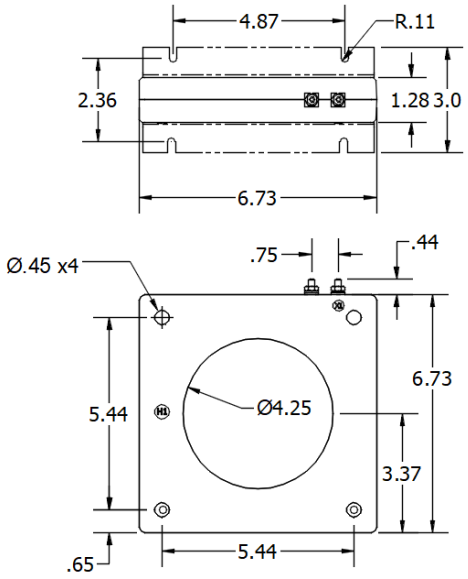
APPROXIMATE WEIGHT:
3 lbs.

CONNECTIONS:
-Flexible leads are UL 1015 105° C CSA approved, #16 AWG, 24" long
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Mounting kit – 59-0221

Model	170SHT
Window Size	4.25
Width	6.73
Height	6.73
Depth	1.28

MODEL 170SHT
Window Diameter 4.25”
Approximate weight: 3 lbs.

CATALOG NUMBER	CURRENT VOLTAGE RATIO
170SHT-201-0.333	200:0.333
170SHT-251-0.333	250:0.333
170SHT-301-0.333	300:0.333
170SHT-401-0.333	400:0.333
170SHT-501-0.333	500:0.333
170SHT-601-0.333	600:0.333
170SHT-751-0.333	750:0.333
170SHT-801-0.333	800:0.333
170SHT-102-0.333	1000:0.333
170SHT-122-0.333	1200:0.333
170SHT-152-0.333	1500:0.333
170SHT-162-0.333	1600:0.333
170SHT-202-0.333	2000:0.333
170SHT-252-0.333	2500:0.333
170SHT-302-0.333	3000:0.333
170SHT-352-0.333	3500:0.333
170SHT-402-0.333	4000:0.333

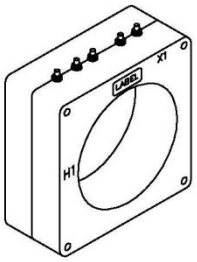


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 117MR



APPLICATION:
Relaying

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
4.62”

APPROXIMATE WEIGHT:
13 lbs.

CONNECTIONS:
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-The transformer winding is arranged so that the turns are fully distributed between all taps

Model	117MR
Window Size	4.62
Width	7.00
Height	7.12
Depth	4.00

CERTIFICATIONS:

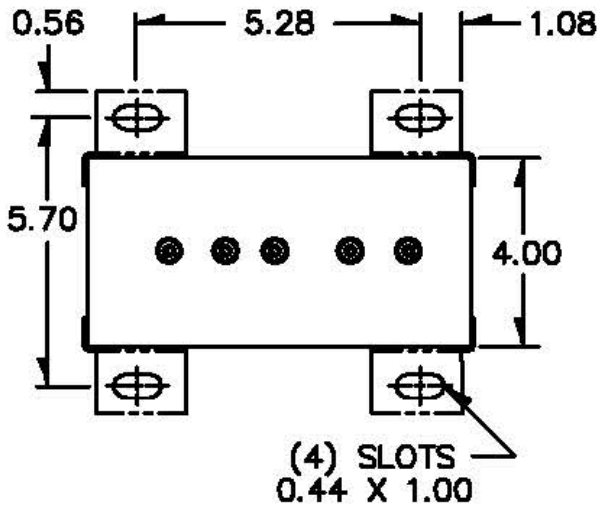
E228202

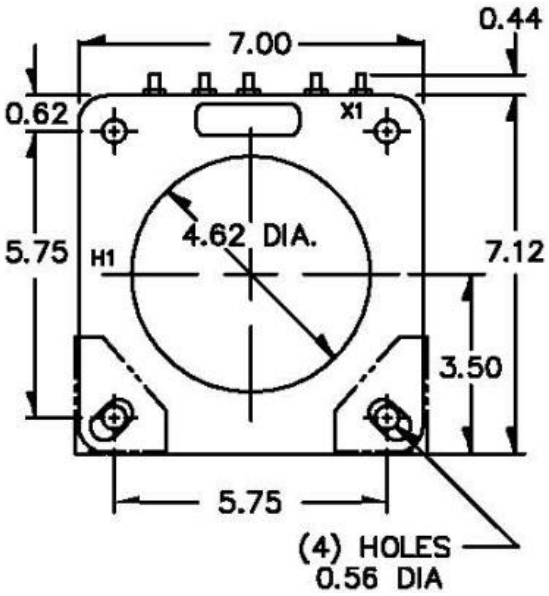
223647

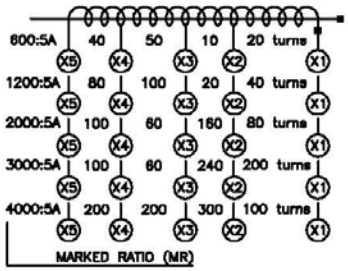
ISO 9001 QUALITY MANAGEMENT

MODEL 117MR
Window Diameter 4.62”
Approximate weight: 13 lbs.

Catalog Number	Relay Class	Continuous Thermal	
		@ 30°C	@ 50°C
117-601MR	C20	2.0	1.5
117-122MR	C100	1.33	1.0
117-202MR	C50	1.0	0.6







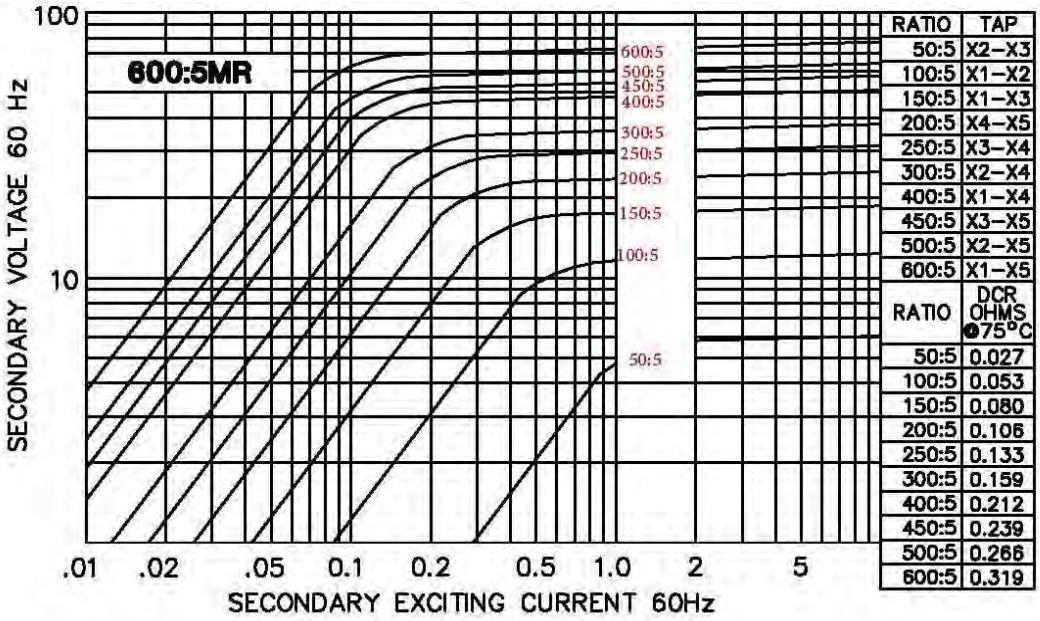
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 117MR

EXCITATION CURVE

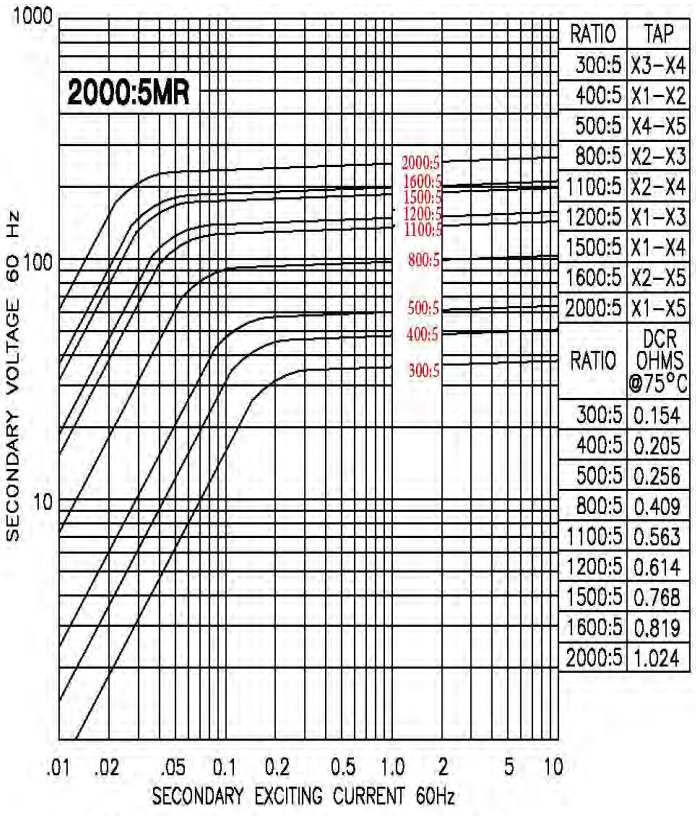


RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.027
100:5	0.053
150:5	0.080
200:5	0.106
250:5	0.133
300:5	0.159
400:5	0.212
450:5	0.239
500:5	0.266
600:5	0.319

Model 117-601MR - rating C20

TRF= 2.0 @ 30°C, 1.5 @ 55°C amb.

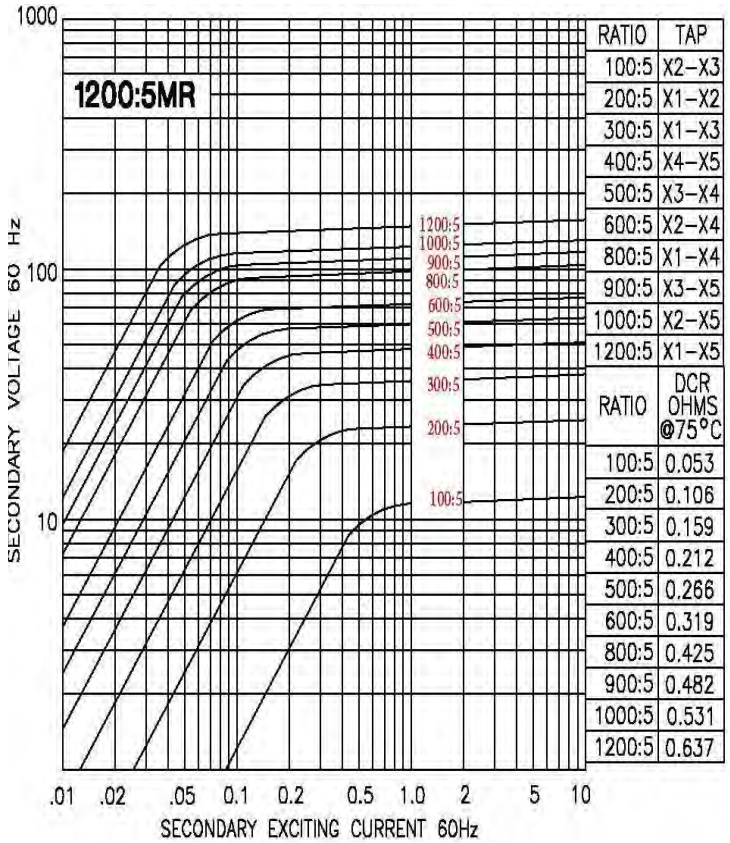


RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.154
400:5	0.205
500:5	0.256
800:5	0.409
1100:5	0.563
1200:5	0.614
1500:5	0.768
1600:5	0.819
2000:5	1.024

Model 117-202MR - rating C50

TRF= 1.00 @ 30°C, 0.6 @ 55°C amb.



RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.053
200:5	0.106
300:5	0.159
400:5	0.212
500:5	0.266
600:5	0.319
800:5	0.425
900:5	0.482
1000:5	0.531
1200:5	0.637

Model 117-122MR - rating C100

TRF= 1.33 @ 30°C, 1.0 @ 55°C amb.

TTL Transformer Technologies Ltd.

Current Transformer

Model 120
rev 011218

APPLICATION:
Relaying and Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
5.75”

APPROXIMATE WEIGHT:
8.5 lbs.

CONNECTIONS:
-Multi-ratios available upon request
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Mounting kits 59-0215 (CR) and 59-0216 (CL)

Model	120
Window Size	5.75
Width	8.50
Height	8.50
Depth	2.17

CERTIFICATIONS:

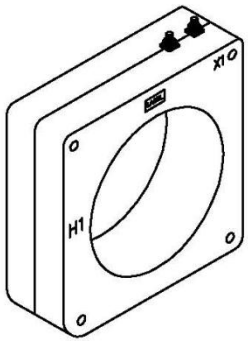
c UL us E228202

CSA C US 223647

nqa. ISO 9001 QUALITY MANAGEMENT

MODEL 120
Window Diameter 5.75”
Approximate weight: 11 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
120 – 201	200:5	-	1.2	1.2	2.4	4.8	4.8	0.053	2	2
120 – 301	300:5	C10	0.3	0.6	1.2	2.4	2.4	0.063	2	2
120 – 401	400:5	C10	0.3	0.3	0.6	1.2	2.4	0.080	2	2
120 – 501	500:5	C20	0.3	0.3	0.6	0.6	1.2	0.137	2	2
120 – 601	600:5	C20	0.3	0.3	0.3	0.6	0.6	0.165	2	2
120 – 801	800:5	C20	0.3	0.3	0.3	0.3	0.6	0.220	2	1.5
120 – 102	1000:5	C20	0.3	0.3	0.3	0.3	0.6	0.309	1.5	1.5
120 – 122	1200:5	C50	0.3	0.3	0.3	0.3	0.3	0.371	1.5	1.33
120 – 152	1500:5	C50	0.3	0.3	0.3	0.3	0.3	0.464	1.5	1
120 – 162	1600:5	C50	0.3	0.3	0.3	0.3	0.3	0.494	1.33	1
120 – 202	2000:5	C50	0.3	0.3	0.3	0.3	0.3	0.592	1.33	1
120 – 252	2500:5	C50	0.3	0.3	0.3	0.3	0.3	0.740	1	0.8
120 – 302	3000:5	C50	0.3	0.3	0.3	0.3	0.3	0.888	1	0.8
120 – 352	3500:5	C20	0.3	0.3	0.3	0.3	0.3	0.964	1	0.8
120 – 402	4000:5	C50	0.3	0.3	0.3	0.3	0.3	1.102	1	0.8



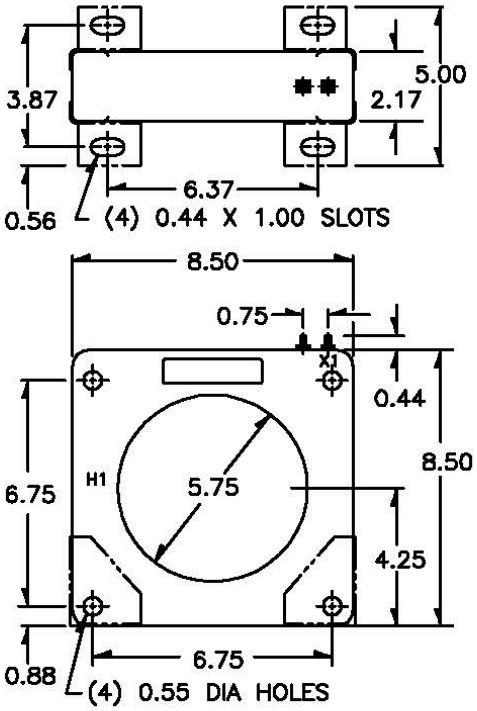
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

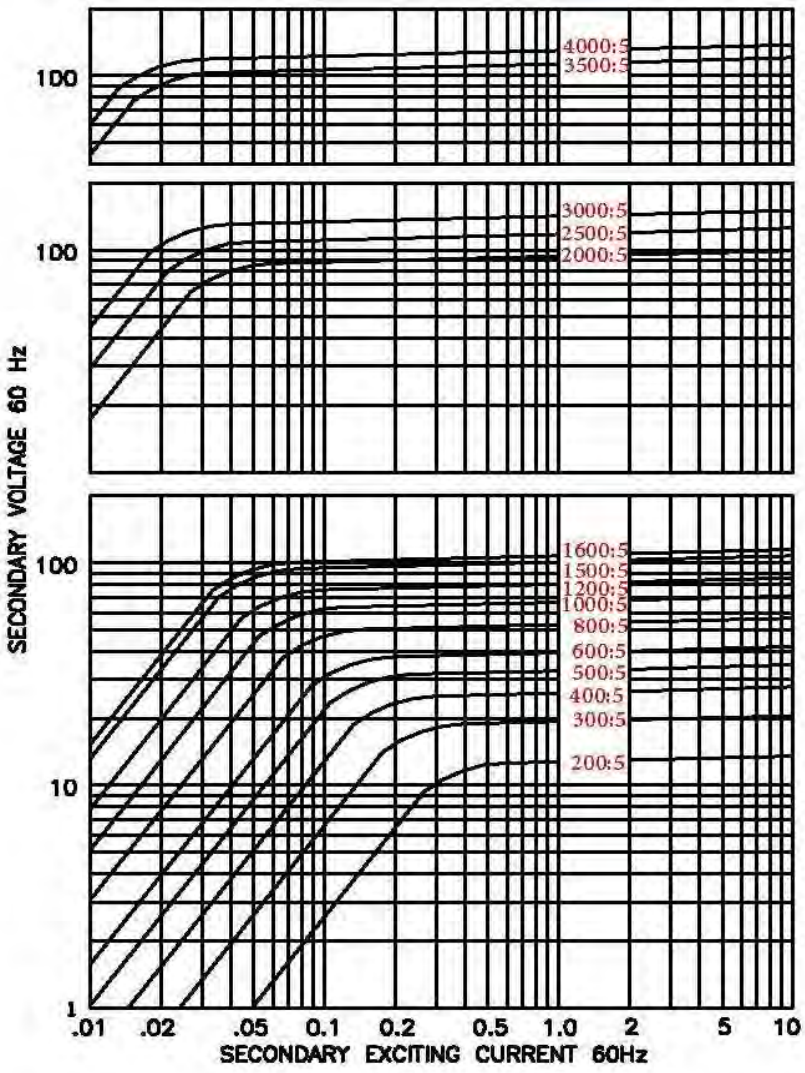
Current Transformer

Model 120
rev 011218

Model 120



EXCITATION CURVE



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 135

APPLICATION:
Relaying and metering.
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
WINDOW DIAMETER:
5.75”
APPROXIMATE WEIGHT:
18 lbs.
CONNECTIONS:
-Terminals are brass connections No. 10-32 UNF with one flat washer, lockwasher, and regular nut
-Multi-ratios available upon request
-Brackets 59-0215 (CR) and 59-0216 (CL)

Model	135
Window Size	5.75
Width	9.21
Height	9.21
Depth	3.00

CERTIFICATIONS:

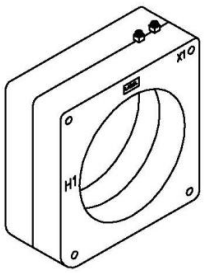
c UL us E228202

c SA us 223647

nqa. ISO 9001 QUALITY MANAGEMENT

MODEL 135
Window Diameter 5.75”
Approximate weight: 18 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
135 – 500	50:5	-	4.8	-	-	-	-	0.015	2	2
135 – 750	75:5	-	2.4	4.8		-	-	0.027	2	2
135 – 101	100:5	-	1.2	2.4	4.8	-	-	0.036	2	2
135 – 151	150:5	C10	0.6	1.2	2.4	4.8	-	0.059	2	2
135 – 201	200:5	C10	0.6	0.6	1.2	2.4	4.8	0.078	2	2
135 – 251	250:5	C20	0.6	0.6	1.2	2.4	2.4	0.113	2	2
135 – 301	300:5	C20	0.3	0.3	0.6	1.2	2.4	0.117	2	2
135 – 401	400:5	C20	0.3	0.3	0.3	0.6	1.2	0.156	2	2
135 – 501	500:5	C50	0.3	0.3	0.3	0.3	0.6	0.181	2	2
135 – 601	600:5	C50	0.3	0.3	0.3	0.3	0.6	0.217	2	2
135 – 751	750:5	C50	0.3	0.3	0.3	0.3	0.6	0.339	2	1.5
135 – 801	800:5	C50	0.3	0.3	0.3	0.3	0.6	0.362	2	1.5
135 – 102	1000:5	C100	0.3	0.3	0.3	0.3	0.3	0.452	1.5	1.33
135 – 122	1200:5	C100	0.3	0.3	0.3	0.3	0.3	0.543	1.5	1.33
135 – 152	1500:5	C100	0.3	0.3	0.3	0.3	0.3	0.678	1.5	1
135 – 162	1600:5	C100	0.3	0.3	0.3	0.3	0.3	0.694	1.5	1
135 – 202	2000:5	C100	0.3	0.3	0.3	0.3	0.3	0.867	1.33	1
135 – 252	2500:5	C200	0.3	0.3	0.3	0.3	0.3	1.084	1	0.8
135 – 302	3000:5	C200	0.3	0.3	0.3	0.3	0.3	1.301	1	0.8
135 – 322	3200:5	C200	0.3	0.3	0.3	0.3	0.3	1.279	1	0.8
135 – 352	3500:5	C200	0.3	0.3	0.3	0.3	0.3	1.399	1	0.8
135 – 402	4000:5	C200	0.3	0.3	0.3	0.3	0.3	1.598	1	0.6
135 – 502	5000:5	C200	0.3	0.3	0.3	0.3	0.3	2.459	1	0.6



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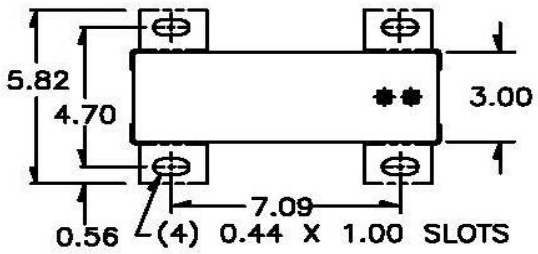
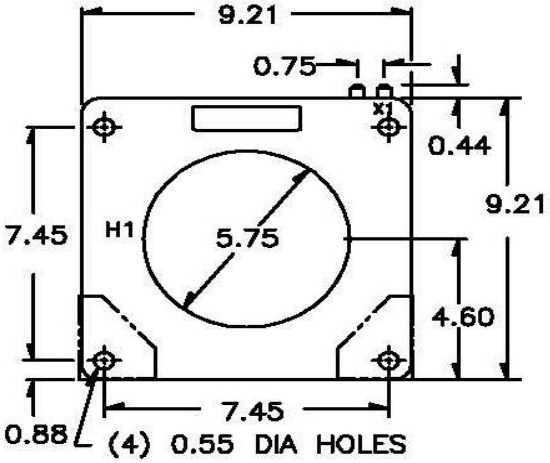
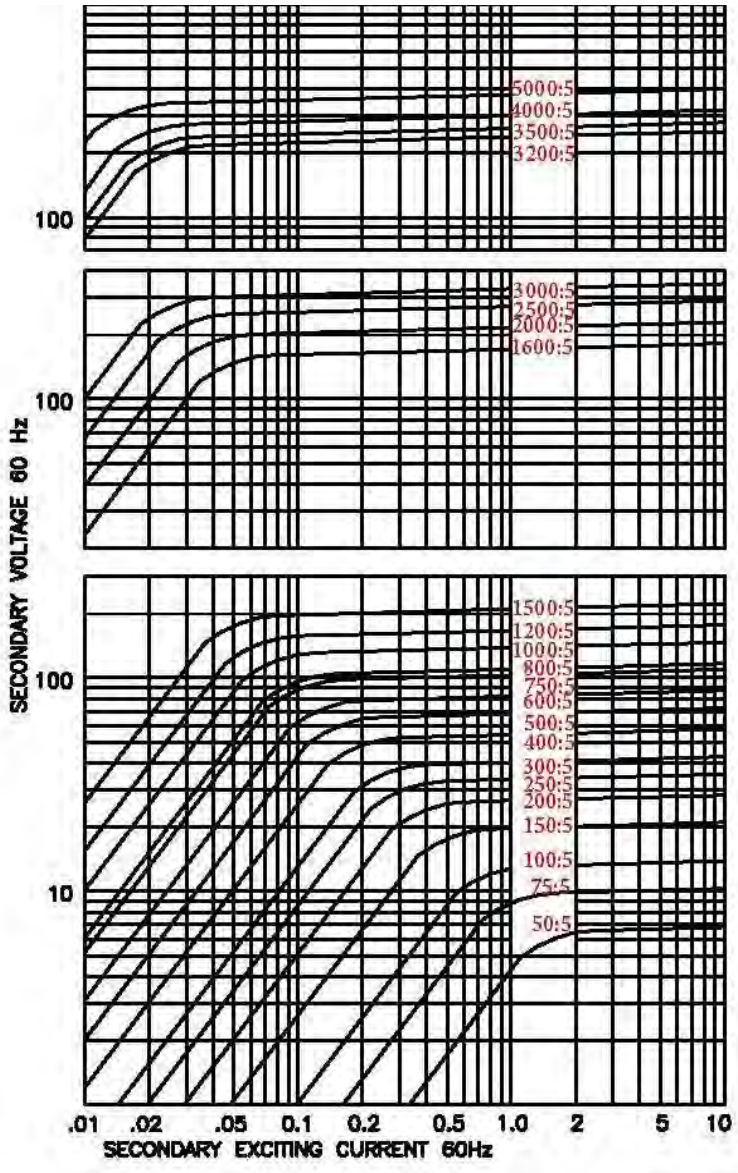
Model 135





EXCITATION CURVE



Model 135

Current Transformer

Model 135MR
rev 03182021

APPLICATION:
Relaying and metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
5.75”

APPROXIMATE WEIGHT:
18 lbs.

CONNECTIONS:
-Terminals are brass studs No. 10-32 UNF with one flat washer, lockwasher, and regular nut
-Brackets 59-0215 (CR) and 59-0216 (CL)

Model	135MR
Window Size	5.75
Width	9.21
Height	9.21
Depth	3.00

CERTIFICATIONS:

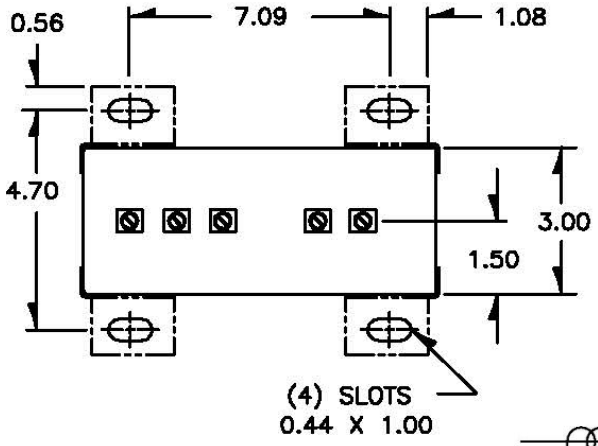
E228202

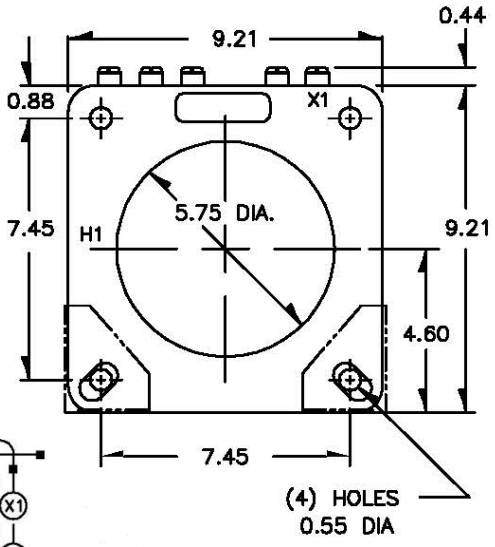
223647

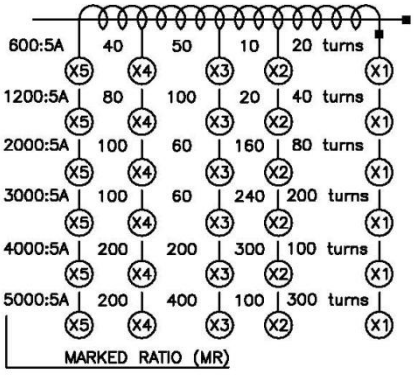
ISO 9001 QUALITY MANAGEMENT

MODEL 135MR
Window Diameter 5.75”
Approximate weight: 18 lbs.

Catalog Number	Relay Class	Continuous Thermal	
		@ 30°C	@ 50°C
135-601MR	C50	2.0	2.0
135-122MR	C100	1.5	1.33
135-202MR	C100	1.0	0.8
135-302MR	C200	1.0	0.8
135-402MR	C200	1.0	0.6
135-502MR	C200	1.0	0.6

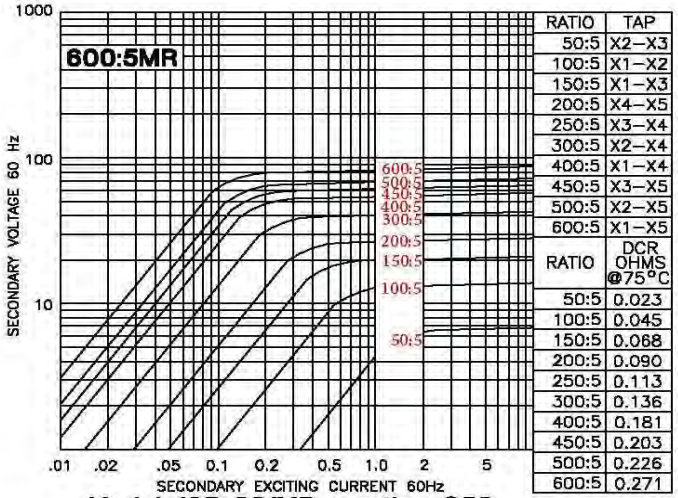






Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

EXCITATION CURVE

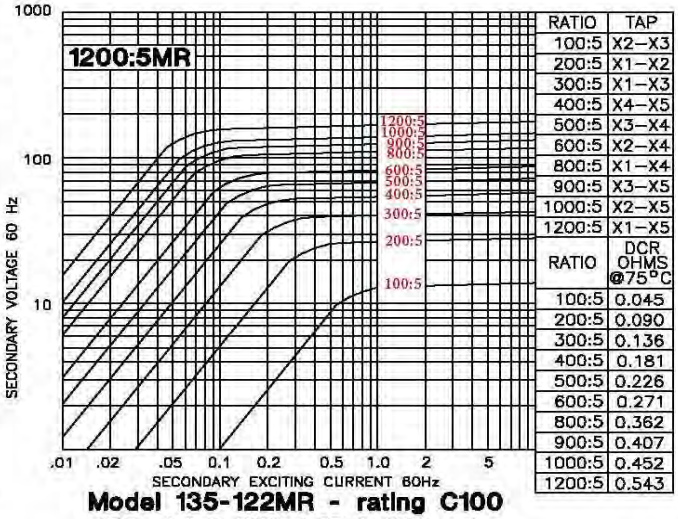


RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.023
100:5	0.045
150:5	0.068
200:5	0.090
250:5	0.113
300:5	0.136
400:5	0.181
450:5	0.203
500:5	0.226
600:5	0.271

Model 135-601MR - rating C50

TRF= 2.0 @ 30°C, 2.0 @ 55°C amb.

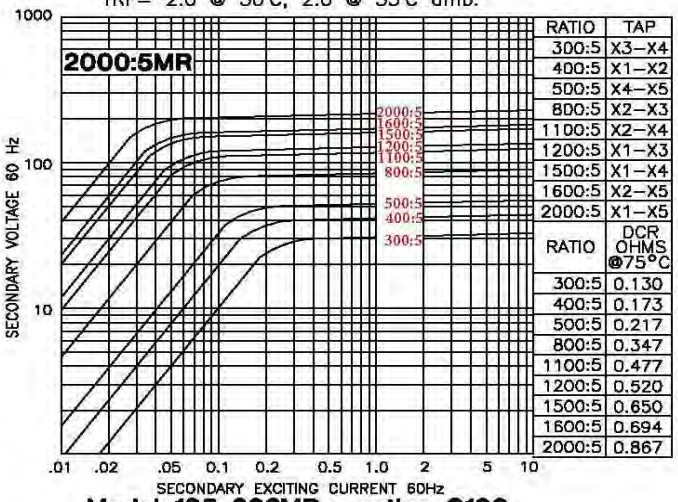


RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.045
200:5	0.090
300:5	0.136
400:5	0.181
500:5	0.226
600:5	0.271
800:5	0.362
900:5	0.407
1000:5	0.452
1200:5	0.543

Model 135-122MR - rating C100

TRF= 1.5 @ 30°C, 1.33 @ 55°C amb.

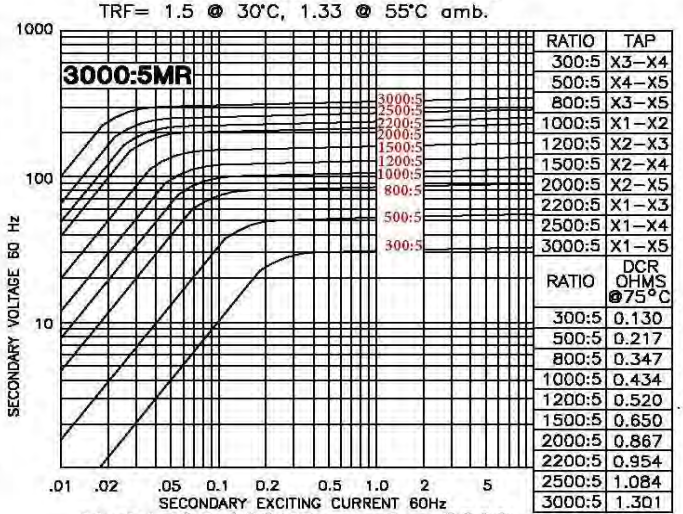


RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.130
400:5	0.173
500:5	0.217
800:5	0.347
1100:5	0.477
1200:5	0.520
1500:5	0.650
1600:5	0.694
2000:5	0.867

Model 135-202MR - rating C100

TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.

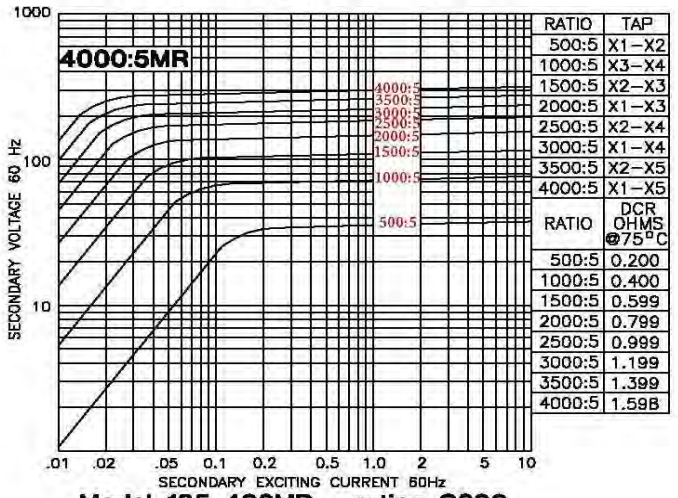


RATIO	TAP
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.130
500:5	0.217
800:5	0.347
1000:5	0.434
1200:5	0.520
1500:5	0.650
2000:5	0.867
2200:5	0.954
2500:5	1.084
3000:5	1.301

Model 135-302MR - rating C200

TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.

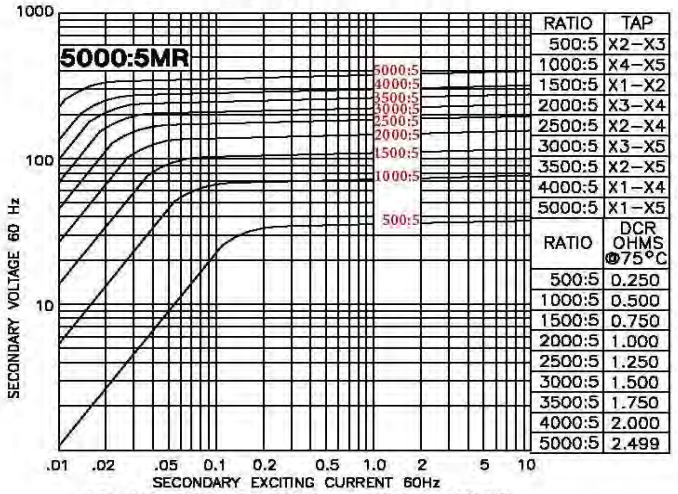


RATIO	TAP
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.200
1000:5	0.400
1500:5	0.599
2000:5	0.799
2500:5	0.999
3000:5	1.199
3500:5	1.399
4000:5	1.598

Model 135-402MR - rating C200

TRF= 1.0 @ 30°C, 0.6 @ 55°C amb.



RATIO	TAP
500:5	X2–X3
1000:5	X4–X5
1500:5	X1–X2
2000:5	X3–X4
2500:5	X2–X4
3000:5	X3–X5
3500:5	X2–X5
4000:5	X1–X4
5000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.250
1000:5	0.500
1500:5	0.750
2000:5	1.000
2500:5	1.250
3000:5	1.500
3500:5	1.750
4000:5	2.000
5000:5	2.499

Model 135-502MR - rating C200

TRF= 1.0 @ 30°C, 0.6 @ 55°C amb.

TTL Transformer Technologies Ltd.

Current Transformer

Model 144
rev 011218

APPLICATION:
Relaying and metering.

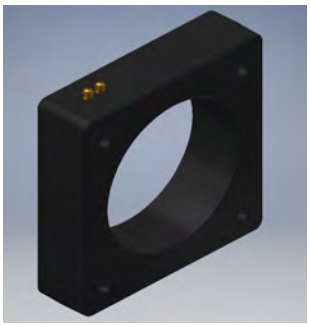
FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
6.00”

APPROXIMATE WEIGHT:
40 lbs.

CONNECTIONS:
-Terminals are brass screws No. 10-32 UNF
with one flat washer and a split lock washer
-Multi-ratios available upon request
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)



Model	144
Window Size	6.00
Width	11.10
Height	11.47
Depth	3.00

CERTIFICATIONS:

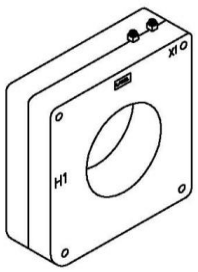
c UL us
E228202

CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 144
Window Diameter 6.00”
Approximate weight: 40 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
144 – 500	50:5	-	2.4	4.8	-	-	-	0.020	2	2
144 – 750	75:5	C10	1.2	2.4	-	-	-	0.032	2	2
144 – 101	100:5	C10	1.2	1.2	2.4	4.8	-	0.040	2	2
144 – 151	150:5	C20	0.6	0.6	1.2	2.4	4.8	0.057	2	2
144 – 201	200:5	C20	0.6	0.6	1.2	2.4	2.4	0.067	2	2
144 – 251	250:5	C50	0.3	0.3	0.6	1.2	2.4	0.125	2	2
144 – 301	300:5	C50	0.3	0.3	0.6	0.6	1.2	0.150	2	2
144 – 401	400:5	C50	0.3	0.3	0.3	0.6	0.6	0.195	2	2
144 – 501	500:5	C100	0.3	0.3	0.3	0.6	0.6	0.282	2	2
144 – 601	600:5	C100	0.3	0.3	0.3	0.3	0.6	0.338	2	1.5
144 – 751	750:5	C100	0.3	0.3	0.3	0.3	0.3	0.213	2	2
144 – 801	800:5	C100	0.3	0.3	0.3	0.3	0.3	0.451	2	1.5
144 – 102	1000:5	C200	0.3	0.3	0.3	0.3	0.3	0.563	2	1.5
144 – 122	1200:5	C200	0.3	0.3	0.3	0.3	0.3	0.676	1.5	1.33
144 – 152	1500:5	C200	0.3	0.3	0.3	0.3	0.3	0.845	1.5	1
144 – 162	1600:5	C200	0.3	0.3	0.3	0.3	0.3	0.902	1.5	1
144 – 202	2000:5	C200	0.3	0.3	0.3	0.3	0.3	1.002	1.5	1
144 – 252	2500:5	C400	0.3	0.3	0.3	0.3	0.3	1.252	1.33	1
144 – 302	3000:5	C400	0.3	0.3	0.3	0.3	0.3	1.503	1	0.8
144 – 322	3200:5	C400	0.3	0.3	0.3	0.3	0.3	1.603	1	0.8
144 – 352	3500:5	C200	0.3	0.3	0.3	0.3	0.3	1.592	1	0.8
144 – 402	4000:5	C400	0.3	0.3	0.3	0.3	0.3	1.820	1	0.8
144 – 502	5000:5	C400	0.3	0.3	0.3	0.3	0.3	2.275	1	0.6
144 – 602	6000:5	C400	0.3	0.3	0.3	0.3	0.3	2.730	0.8	0.6

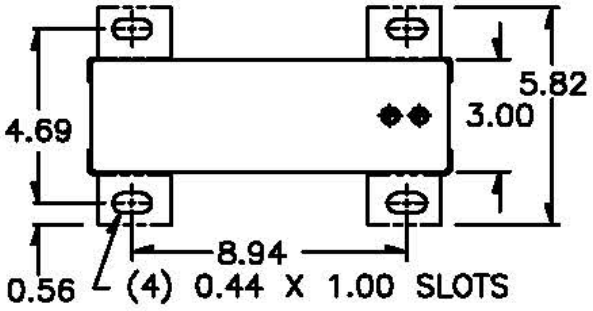


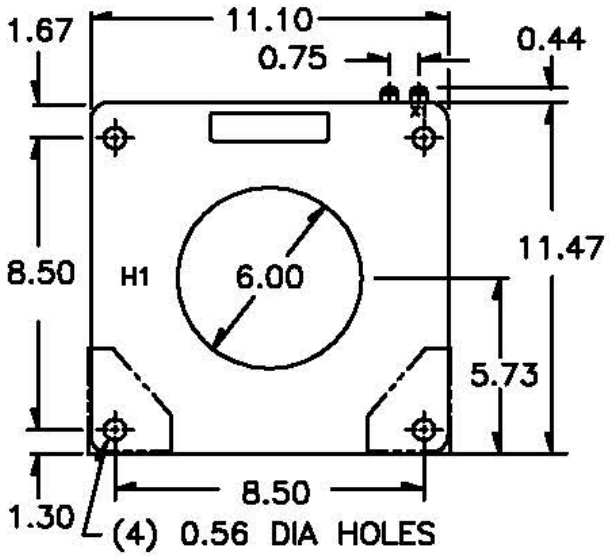
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

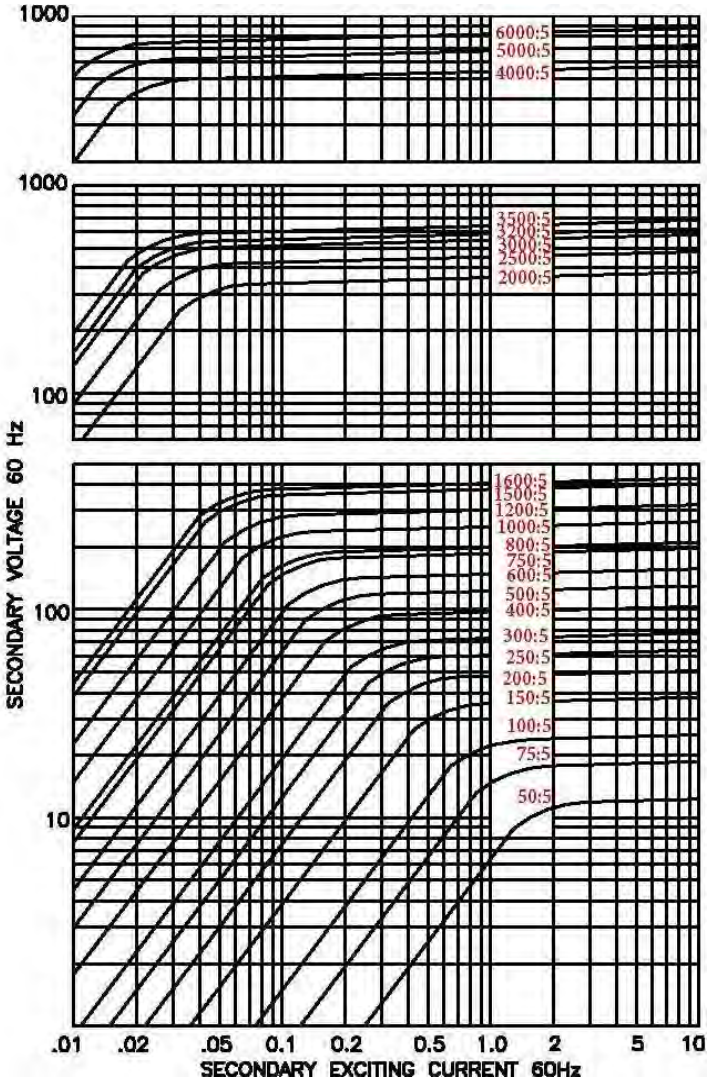
Current Transformer

Model 144
rev 011218





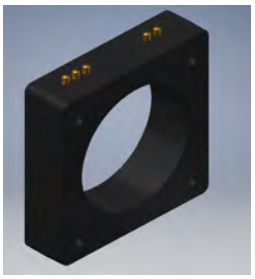
EXCITATION CURVE



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 144MR
rev 03182021



APPLICATION:
Relaying and metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
6.00”

APPROXIMATE WEIGHT:
40 lbs.

CONNECTIONS:
-Terminals are brass screws No. 10-32 UNF with one flat washer and a split lock washer
-Mounting kit – 59-0215 (CR) and 59-0216 (CL)

Model	144MR
Window Size	6.00
Width	11.10
Height	11.47
Depth	3.00

CERTIFICATIONS:

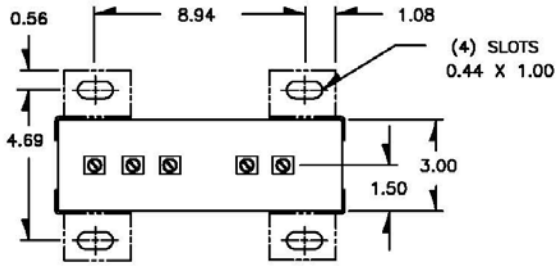
c UL us
E228202

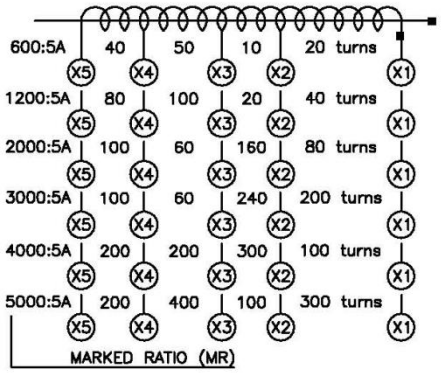
CSA
C US
223647

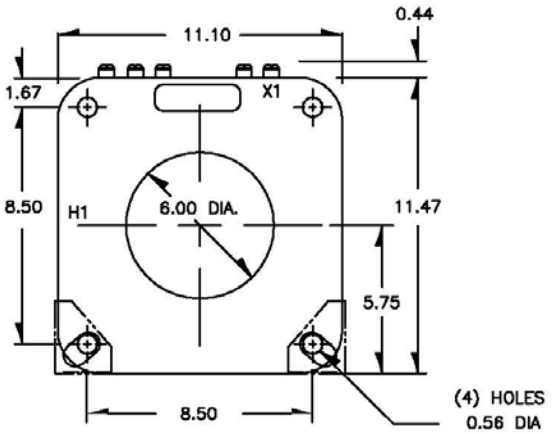
nqa.
ISO 9001
QUALITY MANAGEMENT

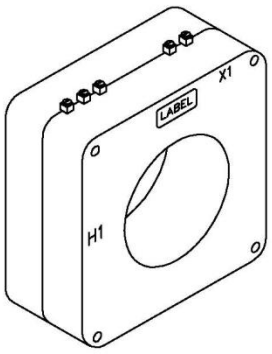
MODEL 144MR
Window Diameter 6.00”
Approximate weight: 40 lbs.

Catalog Number	Relay Class	Continuous Thermal	
		@ 30°C	@ 50°C
144-601MR	C100	2.0	1.5
144-122MR	C200	2.0	1.5
144-202MR	C200	1.5	1.0
144-302MR	C400	1.0	0.8
144-402MR	C400	1.0	0.8
144-502MR	C400	1.0	0.6









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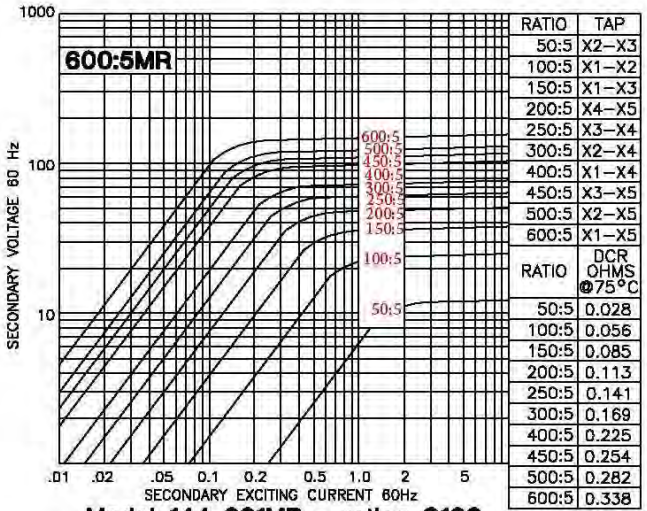
EXCITATION CURVE

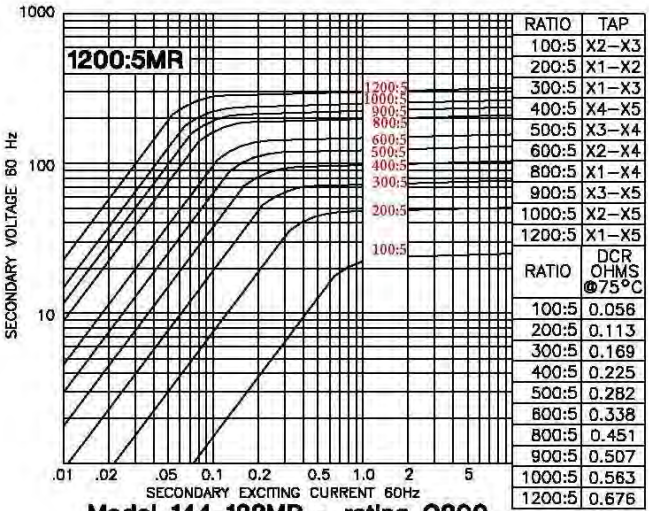


RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.028
100:5	0.056
150:5	0.085
200:5	0.113
250:5	0.141
300:5	0.169
400:5	0.225
450:5	0.254
500:5	0.282
600:5	0.338

Model 144-601MR - rating C100

TRF= 2.0 @ 30°C, 1.5 @ 55°C amb.

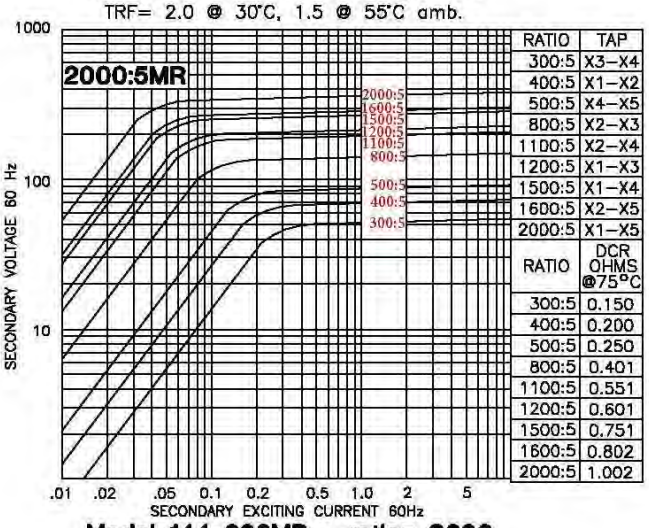


RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.056
200:5	0.113
300:5	0.169
400:5	0.225
500:5	0.282
600:5	0.338
800:5	0.451
900:5	0.507
1000:5	0.563
1200:5	0.676

Model 144-122MR - rating C200

TRF= 2.0 @ 30°C, 1.5 @ 55°C amb.

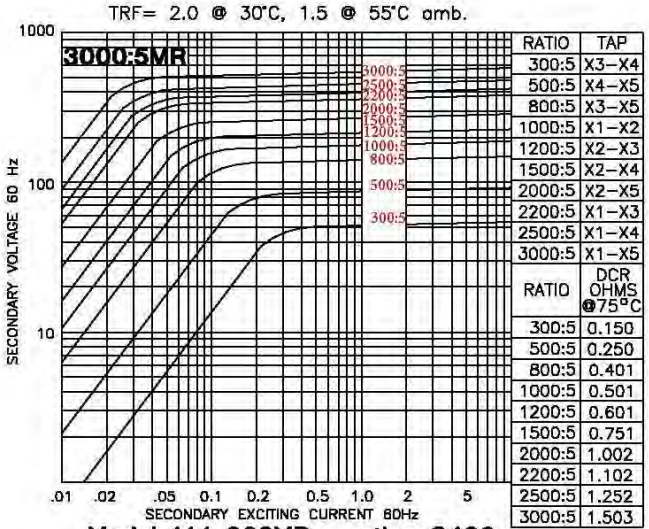


RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.150
400:5	0.200
500:5	0.250
800:5	0.401
1100:5	0.551
1200:5	0.601
1500:5	0.751
1600:5	0.802
2000:5	1.002

Model 144-202MR - rating C200

TRF= 1.5 @ 30°C, 1.0 @ 55°C amb.

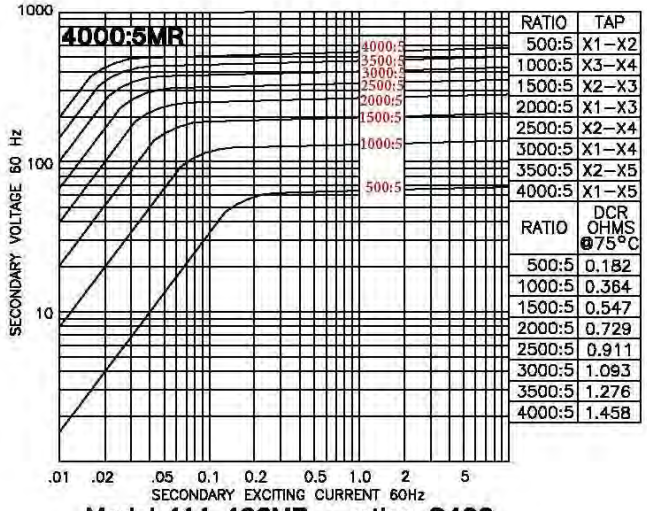


RATIO	TAP
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.150
500:5	0.250
800:5	0.401
1000:5	0.501
1200:5	0.601
1500:5	0.751
2000:5	1.002
2200:5	1.102
2500:5	1.252
3000:5	1.503

Model 144-302MR - rating C400

TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.

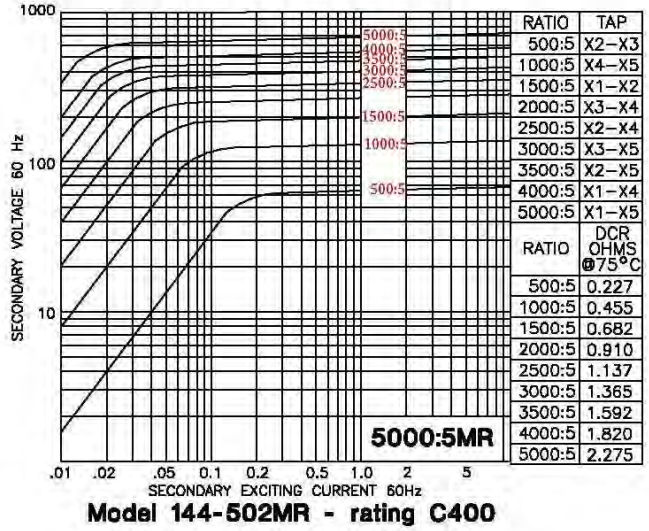


RATIO	TAP
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.182
1000:5	0.364
1500:5	0.547
2000:5	0.729
2500:5	0.911
3000:5	1.093
3500:5	1.276
4000:5	1.458

Model 144-402MR - rating C400

TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.



RATIO	TAP
500:5	X2–X3
1000:5	X4–X5
1500:5	X1–X2
2000:5	X3–X4
2500:5	X2–X4
3000:5	X3–X5
3500:5	X2–X5
4000:5	X1–X4
5000:5	X1–X5

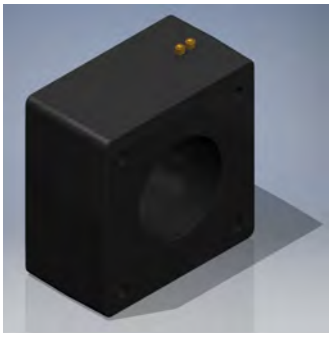
RATIO	DCR OHMS @75°C
500:5	0.227
1000:5	0.455
1500:5	0.682
2000:5	0.910
2500:5	1.137
3000:5	1.365
3500:5	1.592
4000:5	1.820
5000:5	2.275

Model 144-502MR - rating C400

TRF= 1.0 @ 30°C, 0.6 @ 55°C amb.

Current Transformer

Model 145
rev 011218



APPLICATION:
Relaying and metering
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
WINDOW DIAMETER:
6.00”
APPROXIMATE WEIGHT:
83 lbs.
CONNECTIONS:
-Terminals are brass screws No. 10-32 UNF
with one flat washer and a split lock washer
-Multi-ratios available upon request
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)

Model	145
Window Size	6.00
Width	11.10
Height	11.47
Depth	6.00

CERTIFICATIONS:

E228202

223647

ISO 9001
QUALITY MANAGEMENT

MODEL 145
Window Diameter 6.00”
Approximate weight: 83 lbs.

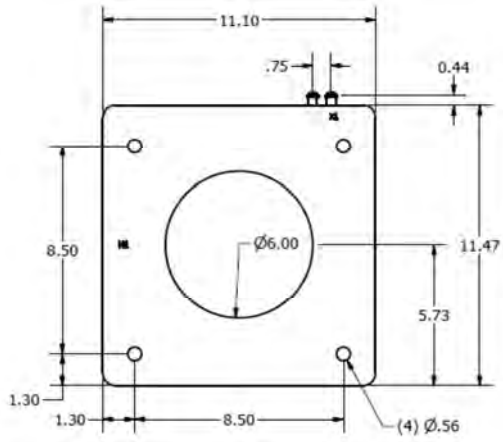
CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
145 – 500	50:5	C20	1.2	4.8	-	-	-	0.030	2	2
145 – 750	75:5	C20	1.2	2.4	4.8	4.8	-	0.045	2	2
145 – 101	100:5	C20	0.6	1.2	2.4	4.8	4.8	0.061	2	2
145 – 151	150:5	C50	0.6	0.6	1.2	2.4	2.4	0.091	2	2
145 – 201	200:5	C100	0.3	0.6	0.6	1.2	2.4	0.121	2	2
145 – 251	250:5	C100	0.3	0.3	0.6	0.6	1.2	0.152	2	2
145 – 301	300:5	C100	0.3	0.3	0.3	0.6	1.2	0.288	2	2
145 – 401	400:5	C200	0.3	0.3	0.3	0.3	0.6	0.384	2	2
145 – 501	500:5	C200	0.3	0.3	0.3	0.3	0.3	0.480	2	1.5
145 – 601	600:5	C200	0.3	0.3	0.3	0.3	0.3	0.576	2	1.5
145 – 751	750:5	C400	0.3	0.3	0.3	0.3	0.3	0.720	2	1.5
145 – 801	800:5	C400	0.3	0.3	0.3	0.3	0.3	0.768	2	1.5
145 – 102	1000:5	C400	0.3	0.3	0.3	0.3	0.3	0.960	1.5	1.33
145 – 122	1200:5	C400	0.3	0.3	0.3	0.3	0.3	1.153	1.5	1
145 – 152	1500:5	C800	0.3	0.3	0.3	0.3	0.3	1.441	1.5	1
145 – 162	1600:5	C800	0.3	0.3	0.3	0.3	0.3	1.537	1.33	1
145 – 202	2000:5	C800	0.3	0.3	0.3	0.3	0.3	1.829	1	1
145 – 252	2500:5	C800	0.3	0.3	0.3	0.3	0.3	2.286	1	0.8
145 – 302	3000:5	C800	0.3	0.3	0.3	0.3	0.3	2.743	1	0.8
145 – 322	3200:5	C800	0.3	0.3	0.3	0.3	0.3	2.926	1	0.8
145 – 352	3500:5	C800	0.3	0.3	0.3	0.3	0.3	3.040	1	0.8
145 – 402	4000:5	C800	0.3	0.3	0.3	0.3	0.3	3.474	1	0.6
145 – 502	5000:5	C800	0.3	0.3	0.3	0.3	0.3	4.342	0.8	0.6
145 – 602	6000:5	C800	0.3	0.3	0.3	0.3	0.3	5.211	0.8	0.6

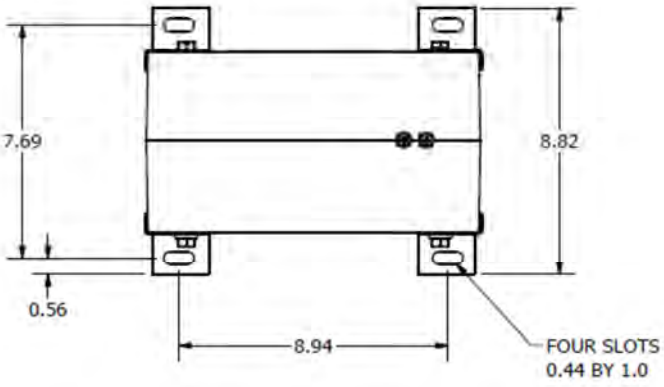
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

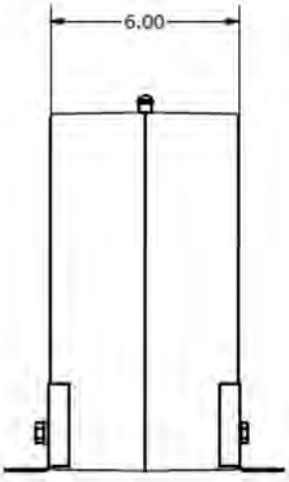
TTL Transformer Technologies Ltd.

Current Transformer

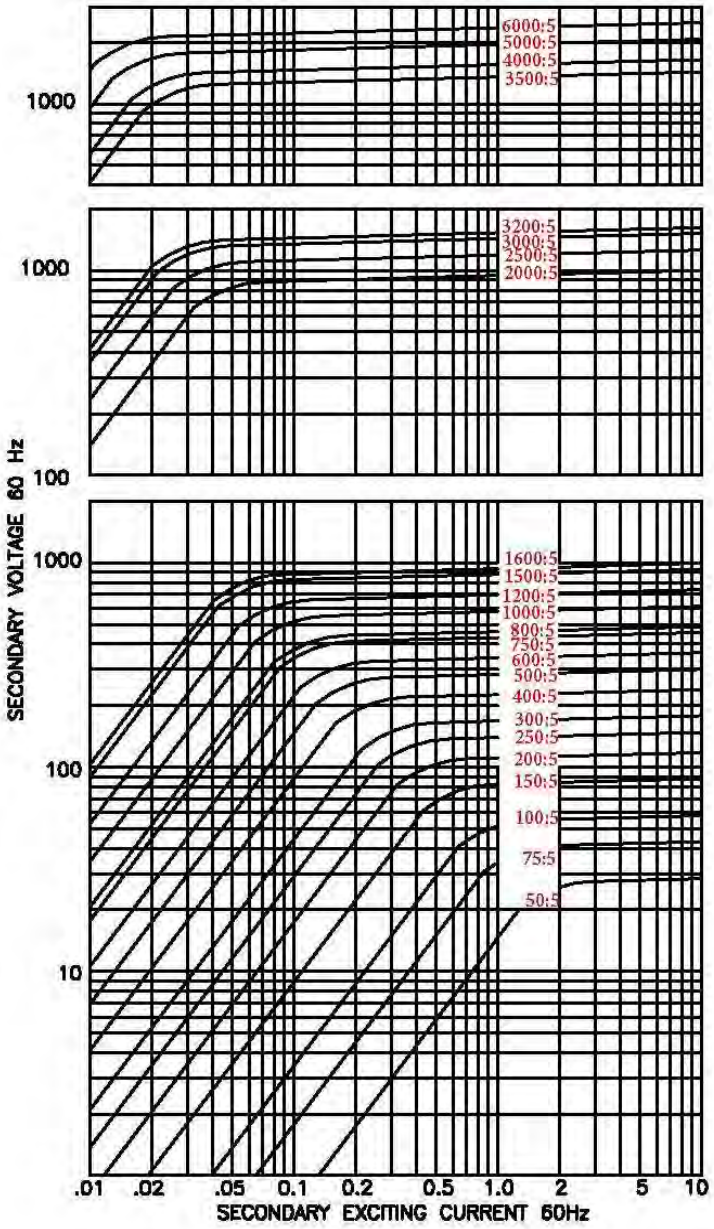
Model 145
rev 011218







EXCITATION CURVE



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 145 MR
rev 011218

APPLICATION:
Relaying and metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
6.00"

APPROXIMATE WEIGHT:
83 lbs.

CONNECTIONS:
-Terminals are brass screws No. 10-32 UNF with one flat washer and a split lock washer

Model	145MR
Window Size	6.00
Width	11.10
Height	11.47
Depth	6.00

CERTIFICATIONS:

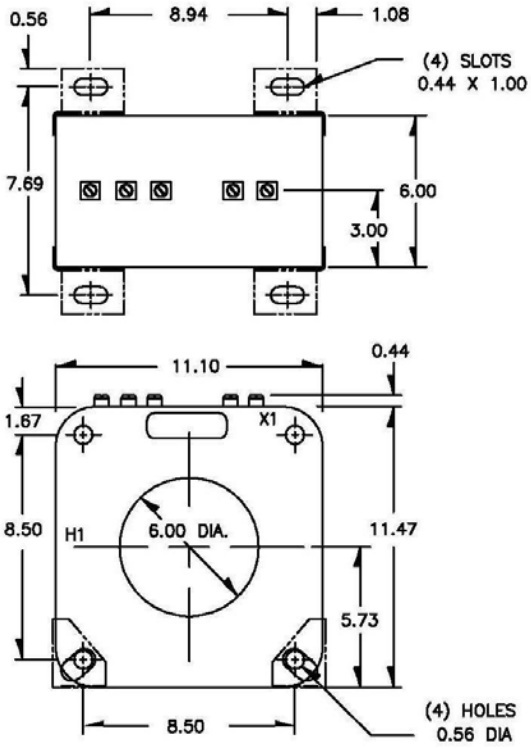
c UL us
E228202

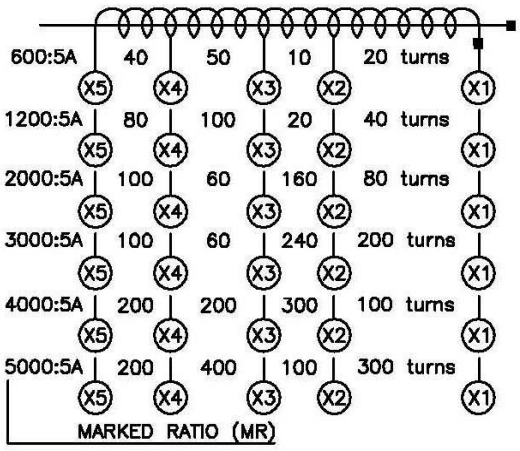
CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 145MR
Window Diameter 6.00"
Approximate weight: 83 lbs.

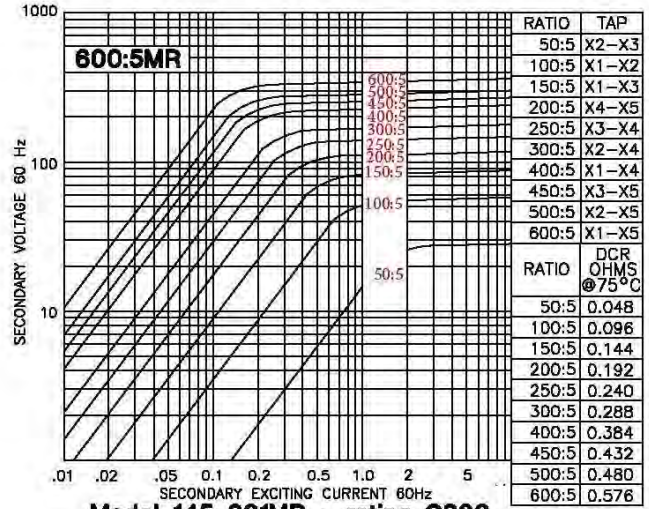
Catalog Number	Relay Class	Continuous Thermal	
		@ 30°C	@ 50°C
145-601MR	C200	2.0	1.5
145-122MR	C400	1.5	1.0
145-202MR	C800	1.33	1.0
145-302MR	C800	1.0	0.8
145-402MR	C800	1.0	0.6
145-502MR	C800	0.8	0.6





Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

EXCITATION CURVE

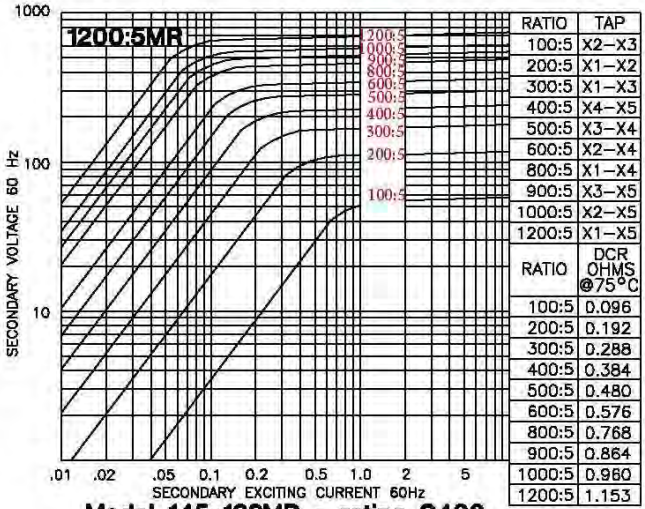


RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.048
100:5	0.096
150:5	0.144
200:5	0.192
250:5	0.240
300:5	0.288
400:5	0.384
450:5	0.432
500:5	0.480
600:5	0.576

Model 145-601MR - rating C200

TRF= 2.0 @ 30°C, 1.5 @ 55°C amb.

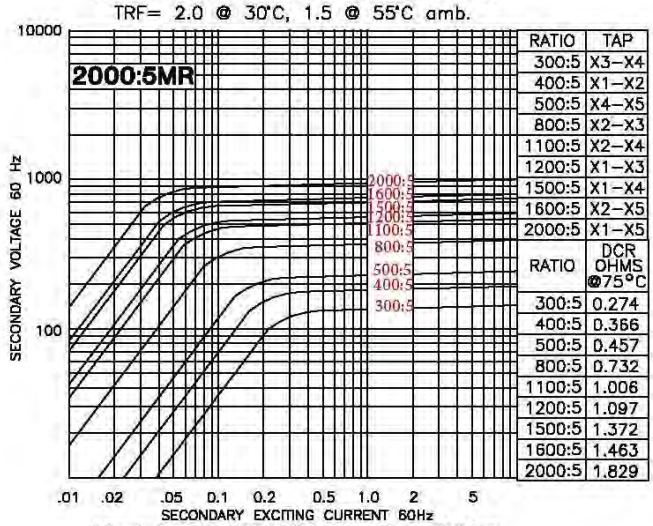


RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.096
200:5	0.192
300:5	0.288
400:5	0.384
500:5	0.480
600:5	0.576
800:5	0.768
900:5	0.864
1000:5	0.960
1200:5	1.153

Model 145-122MR - rating C400

TRF= 1.5 @ 30°C, 1.0 @ 55°C amb.

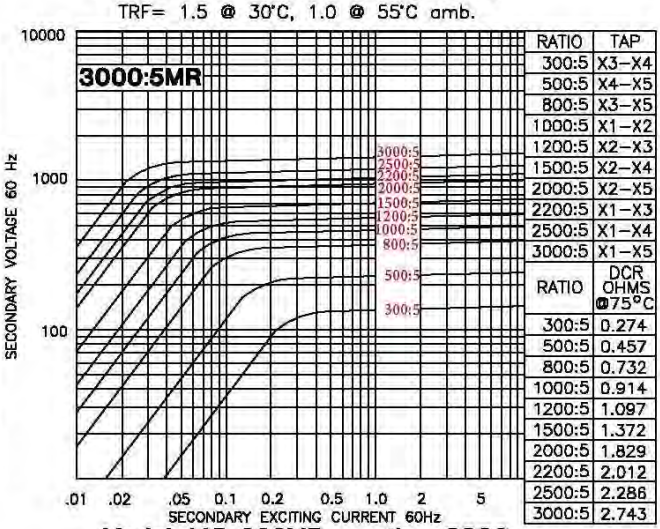


RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.274
400:5	0.366
500:5	0.457
800:5	0.732
1100:5	1.006
1200:5	1.097
1500:5	1.372
1600:5	1.463
2000:5	1.829

Model 145-202MR - rating C800

TRF= 1.33 @ 30°C, 1.0 @ 55°C amb.

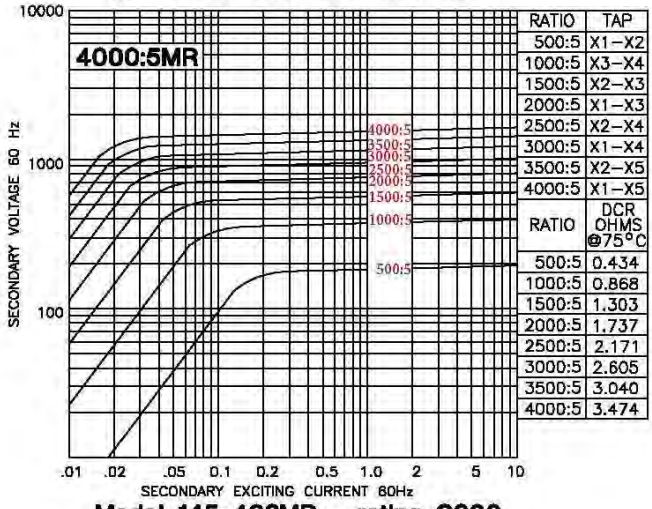


RATIO	TAP
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.274
500:5	0.457
800:5	0.732
1000:5	0.914
1200:5	1.097
1500:5	1.372
2000:5	1.829
2200:5	2.012
2500:5	2.286
3000:5	2.743

Model 145-302MR - rating C800

TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.

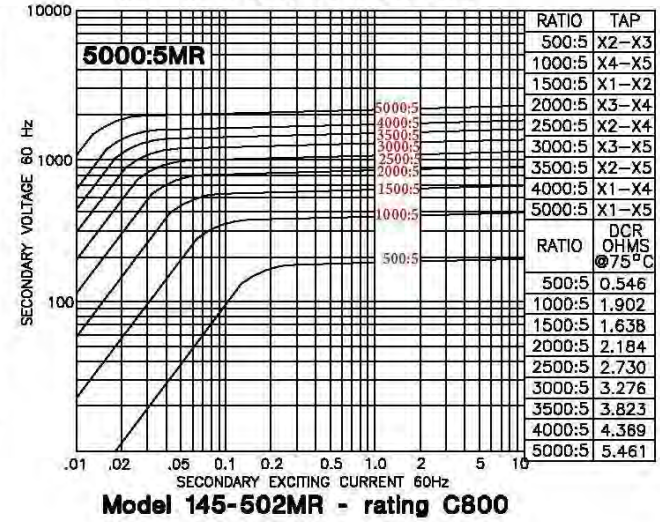


RATIO	TAP
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.434
1000:5	0.868
1500:5	1.303
2000:5	1.737
2500:5	2.171
3000:5	2.605
3500:5	3.040
4000:5	3.474

Model 145-402MR - rating C800

TRF= 1.0 @ 30°C, 0.6 @ 55°C amb.



RATIO	TAP
500:5	X2–X3
1000:5	X4–X5
1500:5	X1–X2
2000:5	X3–X4
2500:5	X2–X4
3000:5	X3–X5
3500:5	X2–X5
4000:5	X1–X4
5000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.546
1000:5	1.902
1500:5	1.638
2000:5	2.184
2500:5	2.730
3000:5	3.276
3500:5	3.823
4000:5	4.389
5000:5	5.461

Model 145-502MR - rating C800

TRF= 0.8 @ 30°C, 0.6 @ 55°C amb.

TTL Transformer Technologies Ltd.

Current Transformer

Model 125

APPLICATION:
Metering
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
WINDOW DIAMETER:
6.31”
APPROXIMATE WEIGHT:
3 lbs.
CONNECTIONS:
-Terminals are brass studs No. 8-32 UNC with one flat washer, lockwasher, and regular nut
-Brackets 59-0215 (CR) and 59-0216 (CL)

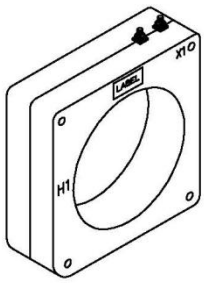
Model	125
Window Size	6.31
Width	8.50
Height	8.50
Depth	1.28

CERTIFICATIONS:

c UL us
E228202
CSA C US
223647
nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 125
Window Diameter 6.31”
Approximate weight: 3 lbs.

CATALOG NUMBER	CURRENT RATIO	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
		B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
125 – 601	600:5	0.3	0.3	1.2	1.2	2.4	0.071	1.5	1.33
125 – 751	750:5	0.3	0.3	0.6	1.2	2.4	0.143	1.5	1.33
125 – 801	800:5	0.3	0.3	0.6	1.2	2.4	0.116	1.5	1.33
125 – 102	1000:5	0.3	0.3	0.3	0.6	1.2	0.187	1.5	1.33
125 – 122	1200:5	0.3	0.3	0.3	0.6	1.2	0.224	1.5	1.33
125 – 152	1500:5	0.3	0.3	0.3	0.3	0.6	0.285	1.5	1.33
125 – 162	1600:5	0.3	0.3	0.3	0.3	0.6	0.304	1.5	1.33
125 – 202	2000:5	0.3	0.3	0.3	0.3	0.6	0.280	1.5	1.0
125 – 252	2500:5	0.3	0.3	0.3	0.3	0.6	0.351	1.33	1.0
125 – 302	3000:5	0.3	0.3	0.3	0.3	0.6	0.421	1.33	1.0
125 – 352	3500:5	0.3	0.3	0.3	0.3	0.3	0.491	1.33	1.0
125 – 402	4000:5	0.3	0.3	0.3	0.3	0.3	0.696	1.0	0.8



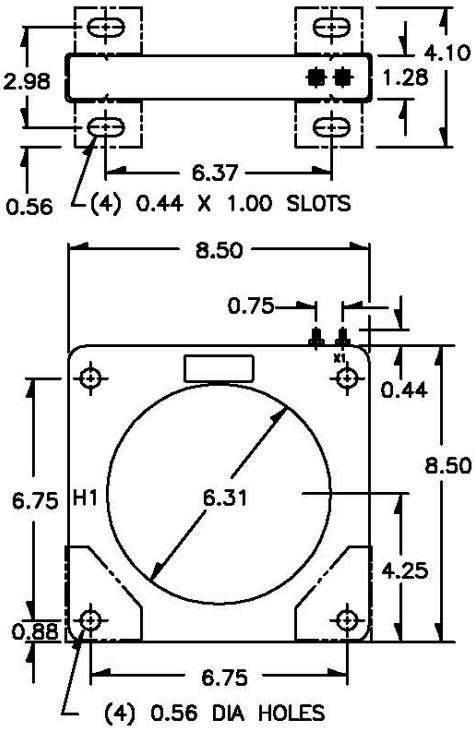
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

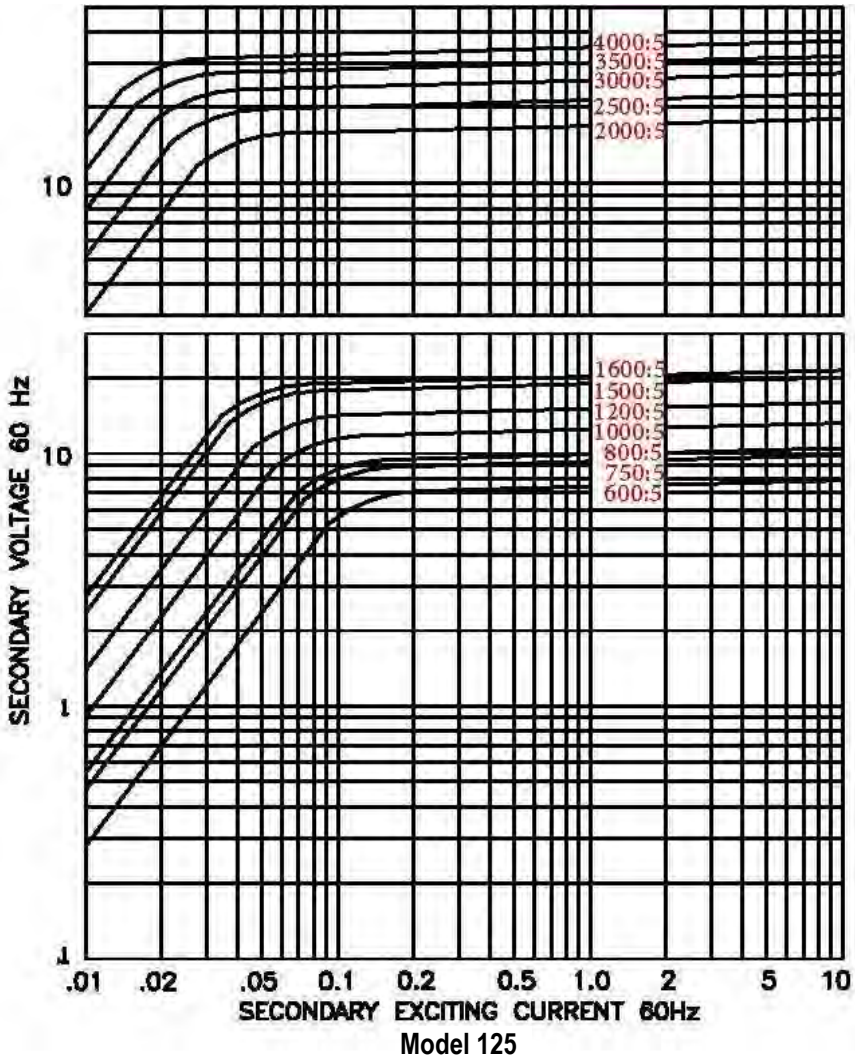
Current Transformer

Model 125

Model 125



EXCITATION CURVE



Model 125

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 142
rev 011218

APPLICATION:
Relaying and metering.

FREQUENCY:
50-400 Hz.

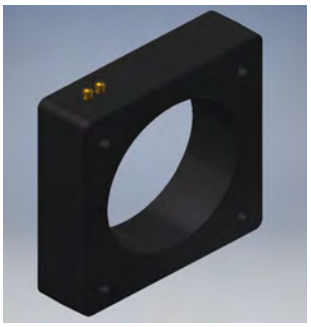
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
7.25”

APPROXIMATE WEIGHT:
31 lbs.

CONNECTIONS:

-Terminals are brass screws No. 10-32 UNF with one flat washer and a split lock washer
-Multi-ratios available upon request
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)



Model	142
Window Size	7.25
Width	11.10
Height	11.47
Depth	3.00

CERTIFICATIONS:

c UL us
E228202

CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 142
Window Diameter 7.25”
Approximate weight: 31 lbs.

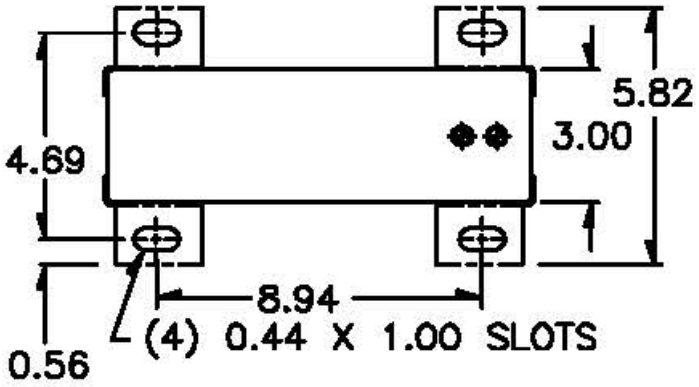
CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
142 – 500	50:5	-	-	-	-	-	-	0.031	2	2
142 – 750	75:5	-	2.4	4.8	-	-	-	0.035	2	2
142 – 101	100:5	C10	1.2	2.4	4.8	-	-	0.051	2	2
142 – 151	150:5	C10	1.2	1.2	2.4	4.8	-	0.070	2	2
142 – 201	200:5	C20	0.6	0.6	1.2	2.4	4.8	0.102	2	2
142 – 251	250:5	C20	0.6	0.6	1.2	1.2	2.4	0.127	2	2
142 – 301	300:5	C30	0.3	0.3	0.6	1.2	2.4	0.153	2	2
142 – 401	400:5	C50	0.3	0.3	0.3	0.6	1.2	0.196	2	2
142 – 501	500:5	C50	0.3	0.3	0.3	0.6	0.6	0.252	2	2
142 – 601	600:5	C50	0.3	0.3	0.3	0.3	0.6	0.255	2	2
142 – 751	750:5	C100	0.3	0.3	0.3	0.3	0.3	0.304	2	1.5
142 – 801	800:5	C100	0.3	0.3	0.3	0.3	0.3	0.336	2	1.5
142 – 102	1000:5	C100	0.3	0.3	0.3	0.3	0.3	0.486	2	1.5
142 – 122	1200:5	C100	0.3	0.3	0.3	0.3	0.3	0.735	1.5	1
142 – 152	1500:5	C200	0.3	0.3	0.3	0.3	0.3	0.918	1.5	1
142 – 162	1600:5	C200	0.3	0.3	0.3	0.3	0.3	0.979	1.33	1
142 – 202	2000:5	C200	0.3	0.3	0.3	0.3	0.3	0.544	2	1.5
142 – 252	2500:5	C200	0.3	0.3	0.3	0.3	0.3	1.066	1.5	1
142 – 302	3000:5	C200	0.3	0.3	0.3	0.3	0.3	1.280	1	0.8
142 – 322	3200:5	C200	0.3	0.3	0.3	0.3	0.3	1.365	1	0.8
142 – 352	3500:5	C200	0.3	0.3	0.3	0.3	0.3	1.493	1	0.8
142 – 402	4000:5	C200	0.3	0.3	0.3	0.3	0.3	1.452	1	0.8
142 – 502	5000:5	C200	0.3	0.3	0.3	0.3	0.3	1.915	1	0.8
142 - 602	6000:5	C200	0.3	0.3	0.3	0.3	0.3	2.298	1	0.6

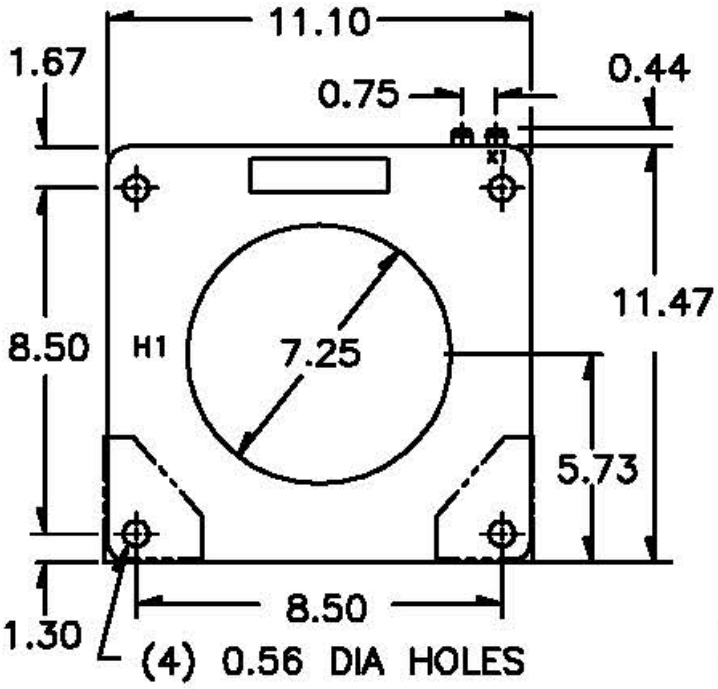
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

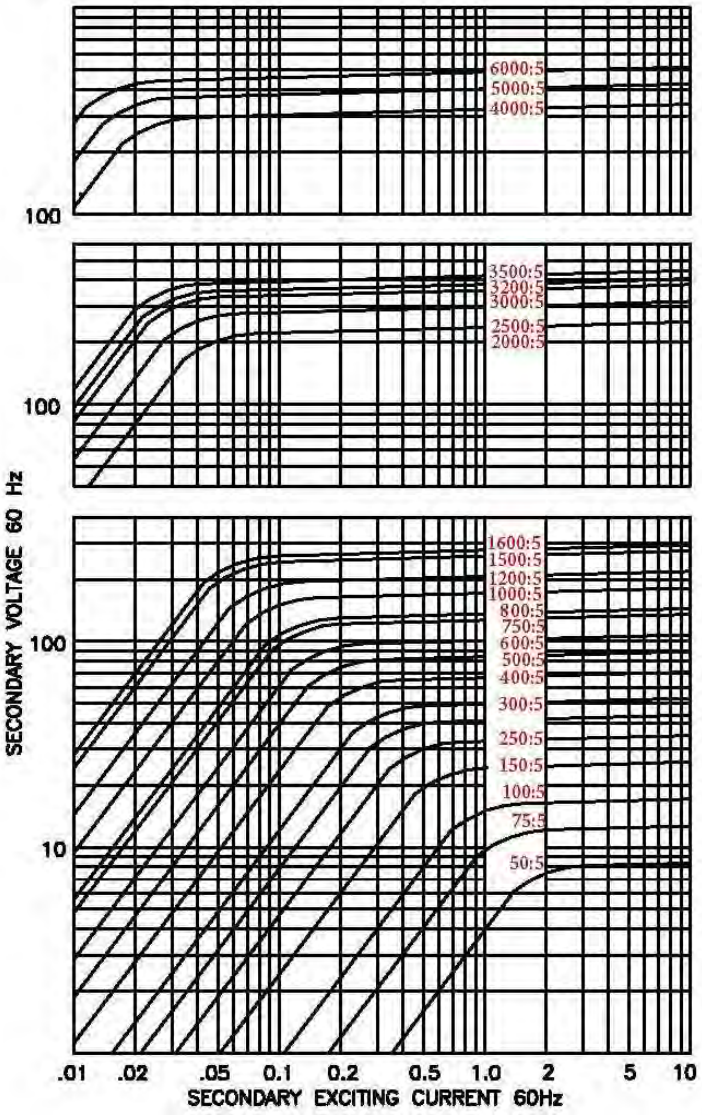
Current Transformer

Model 142
rev 011218





EXCITATION CURVE



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 142MR
rev 011218

APPLICATION:
Relaying and metering

FREQUENCY:
50-400 Hz.

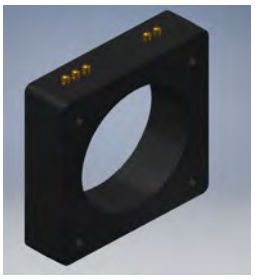
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
7.25”

APPROXIMATE WEIGHT:
31 lbs.

CONNECTIONS:

-Terminals are brass screws No. 10-32 UNF
with one flat washer and a split lock washer
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)



Model	142MR
Window Size	7.25
Width	11.10
Height	11.47
Depth	3.00

MODEL 142MR
Window Diameter 7.25”
Approximate weight: 31 lbs.

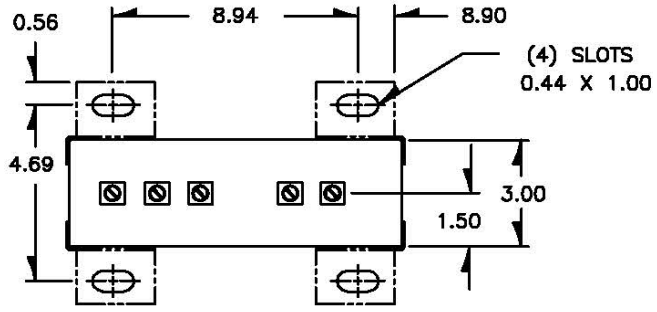
CERTIFICATIONS:

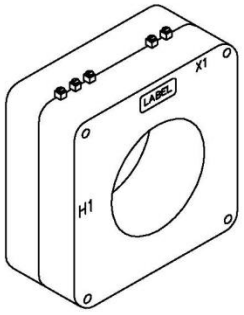
c UL us
E228202

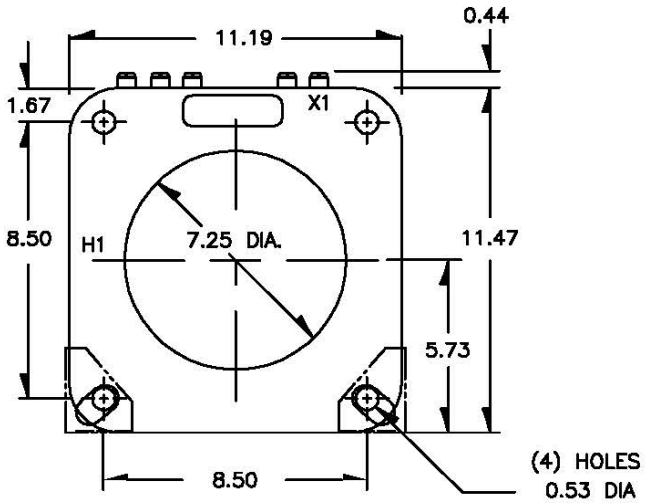
c SA us
223647

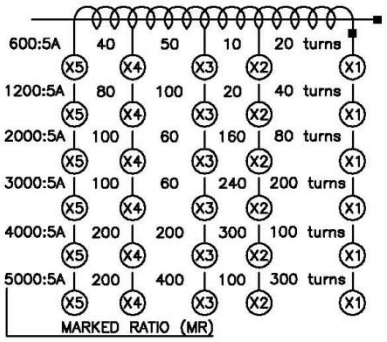
nqa.
ISO 9001
QUALITY MANAGEMENT

Catalog Number	Relay Class	Continuous Thermal	
		@ 30°C	@ 50°C
142-601MR	C50	2.0	2.0
142-122MR	C200	1.5	1.0
142-202MR	C200	2.0	1.5
142-302MR	C200	1.0	0.8
142-402MR	C200	1.0	0.8
142-502MR	C200	1.0	0.8









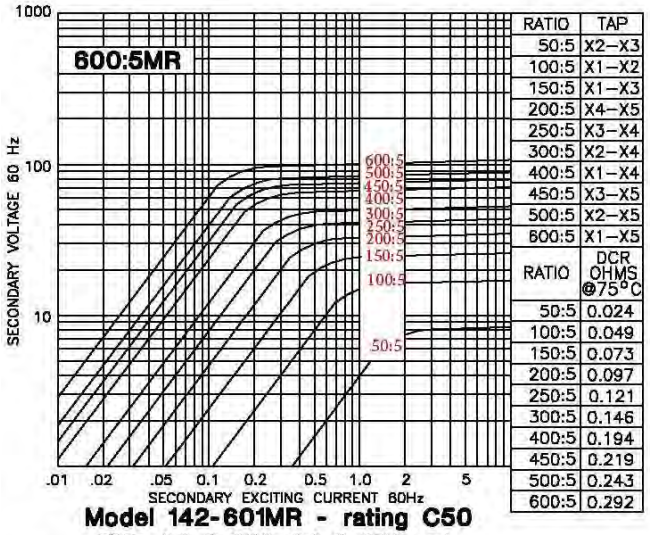
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 142MR
rev 011218

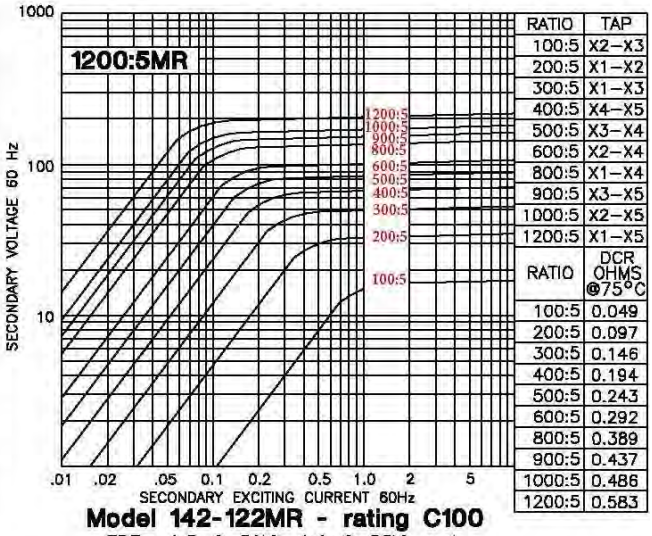
EXCITATION CURVE



RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.024
100:5	0.049
150:5	0.073
200:5	0.097
250:5	0.121
300:5	0.146
400:5	0.194
450:5	0.219
500:5	0.243
600:5	0.292

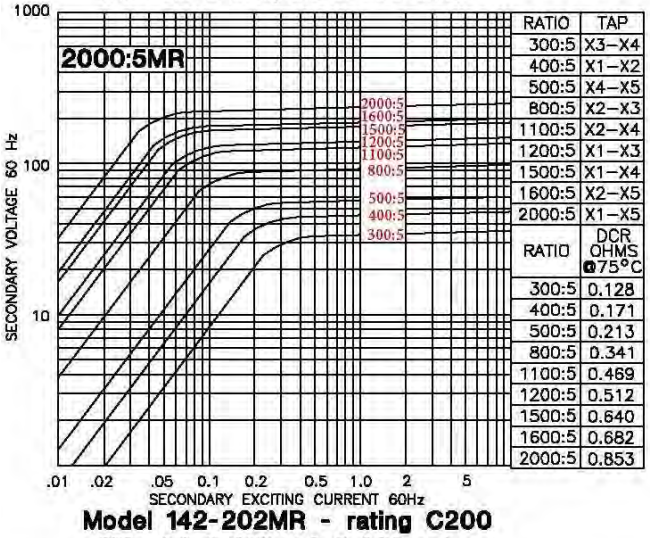
Model 142-601MR - rating C50
TRF= 2.0 @ 30°C, 2.0 @ 55°C amb.



RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.049
200:5	0.097
300:5	0.146
400:5	0.194
500:5	0.243
600:5	0.292
800:5	0.389
900:5	0.437
1000:5	0.486
1200:5	0.583

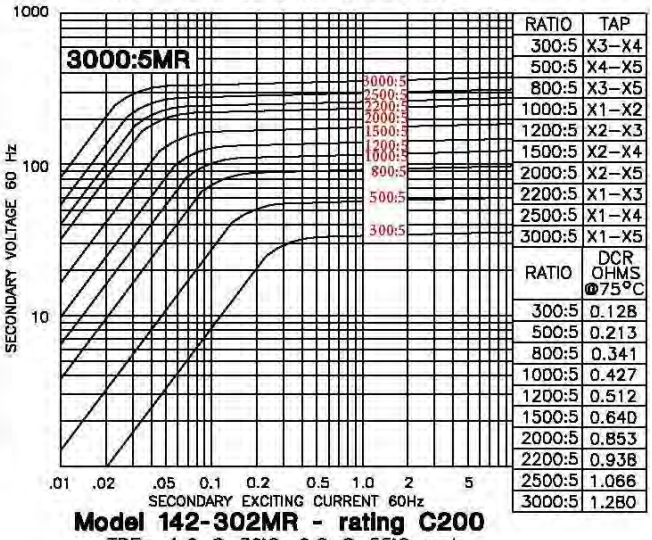
Model 142-122MR - rating C100
TRF= 1.5 @ 30°C, 1.0 @ 55°C amb.



RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.128
400:5	0.171
500:5	0.213
800:5	0.341
1100:5	0.469
1200:5	0.512
1500:5	0.640
1600:5	0.682
2000:5	0.853

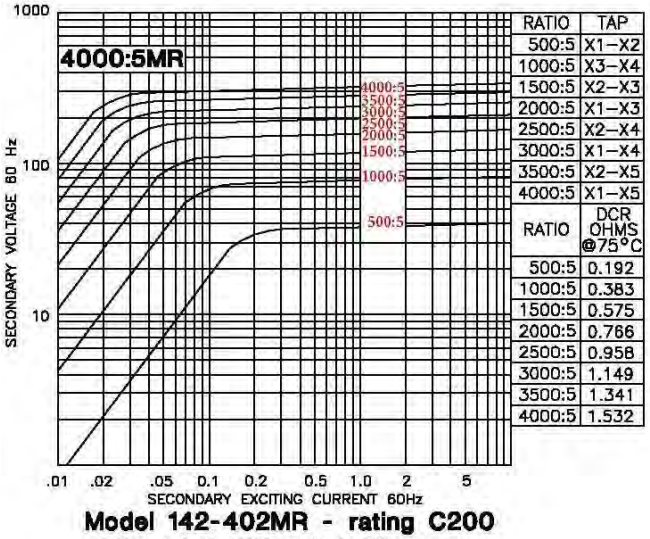
Model 142-202MR - rating C200
TRF= 2.0 @ 30°C, 1.5 @ 55°C amb.



RATIO	TAP
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.128
500:5	0.213
800:5	0.341
1000:5	0.427
1200:5	0.512
1500:5	0.640
2000:5	0.853
2200:5	0.938
2500:5	1.066
3000:5	1.280

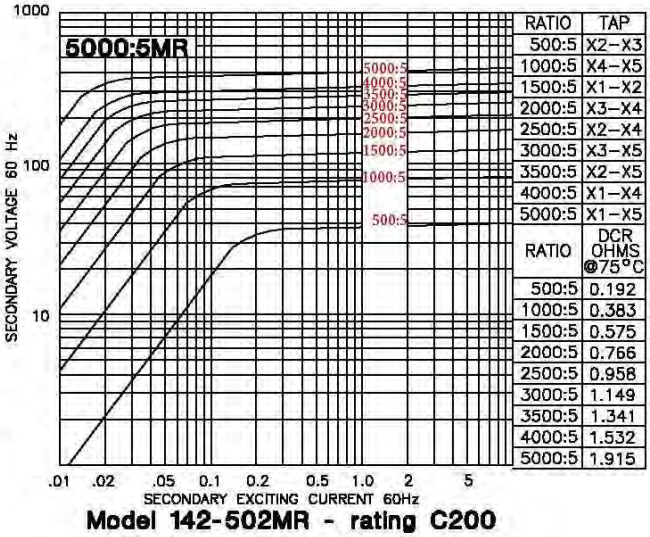
Model 142-302MR - rating C200
TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.



RATIO	TAP
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.192
1000:5	0.383
1500:5	0.575
2000:5	0.766
2500:5	0.958
3000:5	1.149
3500:5	1.341
4000:5	1.532

Model 142-402MR - rating C200
TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.



RATIO	TAP
500:5	X2–X3
1000:5	X4–X5
1500:5	X1–X2
2000:5	X3–X4
2500:5	X2–X4
3000:5	X3–X5
3500:5	X2–X5
4000:5	X1–X4
5000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.192
1000:5	0.383
1500:5	0.575
2000:5	0.766
2500:5	0.958
3000:5	1.149
3500:5	1.341
4000:5	1.532
5000:5	1.915

Model 142-502MR - rating C200
TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.

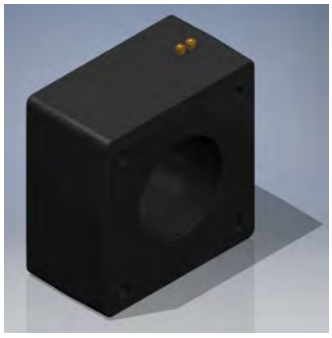
TTL Transformer Technologies Ltd.

Current Transformer

Model 143
rev 011218

APPLICATION:
Relaying and metering.
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
WINDOW DIAMETER:
7.31”
APPROXIMATE WEIGHT:
60 lbs.
CONNECTIONS:

-Terminals are brass screws No. 10-32 UNF with one flat washer and a split lock washer
-Multi-ratios available upon request
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)



Model	143
Window Size	7.31
Width	11.10
Height	11.47
Depth	6.00

MODEL 143
Window Diameter 7.31”
Approximate weight: 60 lbs.

CERTIFICATIONS:

c UL us E228202

CSA C US 223647

nqa. ISO 9001 QUALITY MANAGEMENT

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
143 – 500	50:5	C20	4.8	4.8	-	-	-	0.014	2	2
143 – 750	75:5	C20	2.4	2.4	-	-	-	0.042	2	2
143 – 101	100:5	C20	1.2	2.4	4.8	-	-	0.056	2	2
143 – 151	150:5	C20	0.6	0.6	1.2	4.8	4.8	0.121	2	2
143 – 201	200:5	C50	0.3	0.3	0.6	2.4	2.4	0.161	2	2
143 – 251	250:5	C50	0.3	0.3	0.6	1.2	2.4	0.175	2	2
143 – 301	300:5	C100	0.3	0.3	0.3	1.2	1.2	0.241	2	2
143 – 401	400:5	C100	0.3	0.3	0.3	0.6	0.6	0.322	2	2
143 – 501	500:5	C100	0.3	0.3	0.3	0.3	0.6	0.441	2	2
143 – 601	600:5	C200	0.3	0.3	0.3	0.3	0.3	0.530	2	1.5
143 – 751	750:5	C200	0.3	0.3	0.3	0.3	0.3	0.662	2	1.5
143 – 801	800:5	C200	0.3	0.3	0.3	0.3	0.3	0.706	2	1.5
143 – 102	1000:5	C200	0.3	0.3	0.3	0.3	0.3	0.883	1.5	1.33
143 – 122	1200:5	C400	0.3	0.3	0.3	0.3	0.3	1.059	1.5	1
143 – 152	1500:5	C400	0.3	0.3	0.3	0.3	0.3	1.324	1.5	1
143 – 162	1600:5	C400	0.3	0.3	0.3	0.3	0.3	1.413	1.33	1
143 – 202	2000:5	C400	0.3	0.3	0.3	0.3	0.3	1.678	1.33	1
143 – 252	2500:5	C400	0.3	0.3	0.3	0.3	0.3	2.097	1	0.8
143 – 302	3000:5	C800	0.3	0.3	0.3	0.3	0.3	2.516	1	0.8
143 – 322	3200:5	C800	0.3	0.3	0.3	0.3	0.3	2.684	1	0.8
143 – 352	3500:5	C800	0.3	0.3	0.3	0.3	0.3	2.936	1	0.8
143 – 402	4000:5	C800	0.3	0.3	0.3	0.3	0.3	3.353	1	0.6
143 – 502	5000:5	C800	0.3	0.3	0.3	0.3	0.3	3.983	1	0.6
143 – 602	6000:5	C800	0.3	0.3	0.3	0.3	0.3	4.780	0.8	0.6

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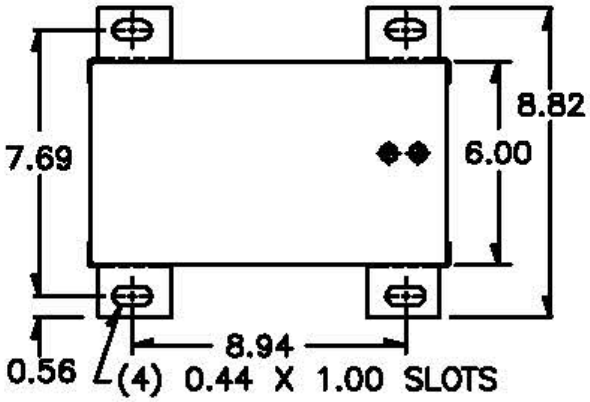
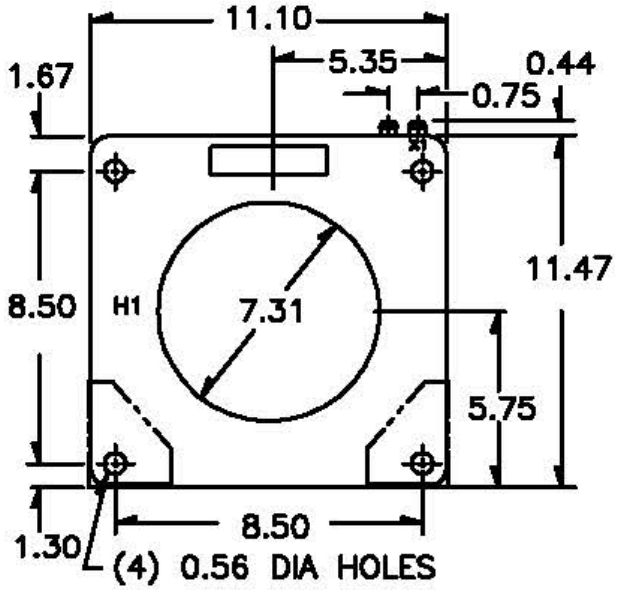
TTL Transformer Technologies Ltd.

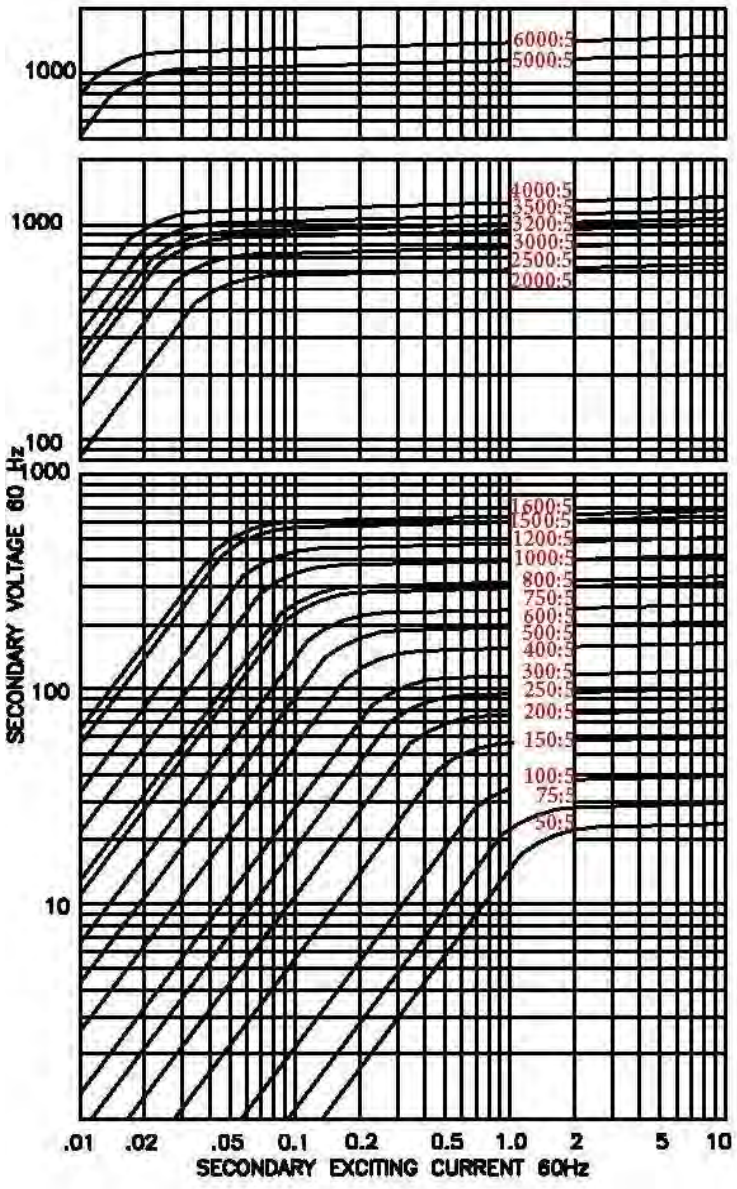
Current Transformer

Model 143
rev 011218





EXCITATION CURVE



TTL Transformer Technologies Ltd.

Current Transformer

Model 143MR
rev 03182021

APPLICATION:
Relaying and metering.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
7.31”

APPROXIMATE WEIGHT:
60 lbs.

CONNECTIONS:
-Terminals are brass screws No. 10-32 UNF
with one flat washer and a split lock washer
-Mounting kit – 59-0215 (CR) and 59-0216 (CL)

Model	143MR
Window Size	7.31
Width	11.10
Height	11.47
Depth	6.00

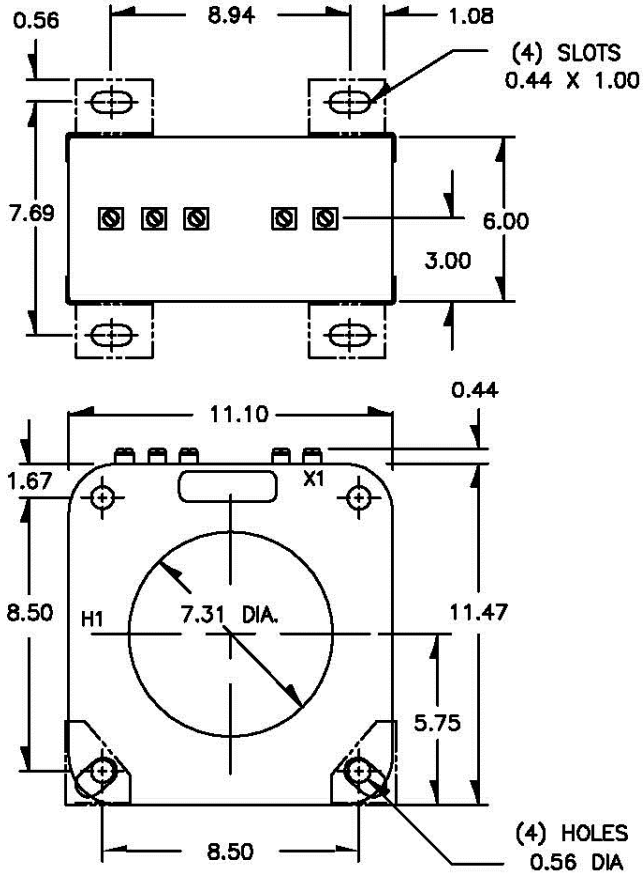
MODEL 143MR
Window Diameter 7.31”
Approximate weight: 60 lbs.

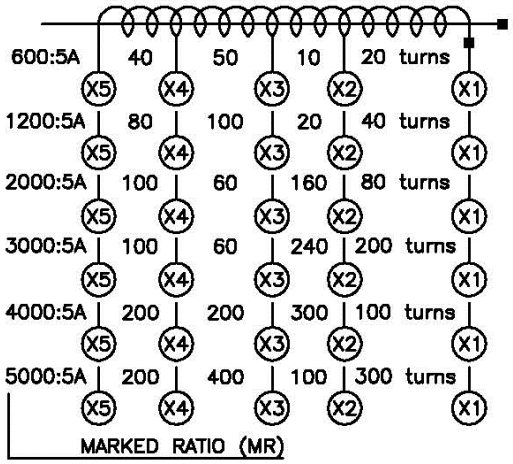
CERTIFICATIONS:

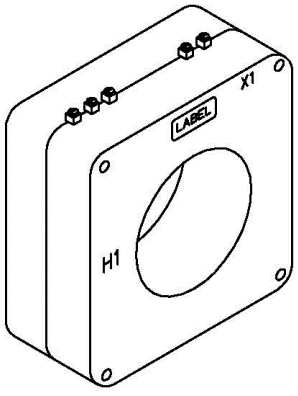
c UL us
E228202

CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

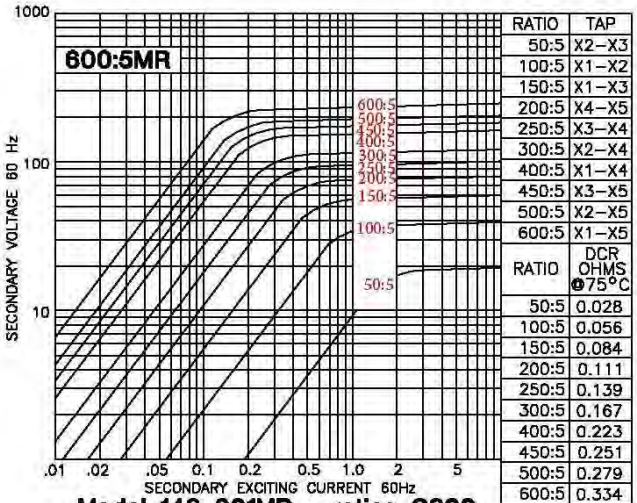






Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

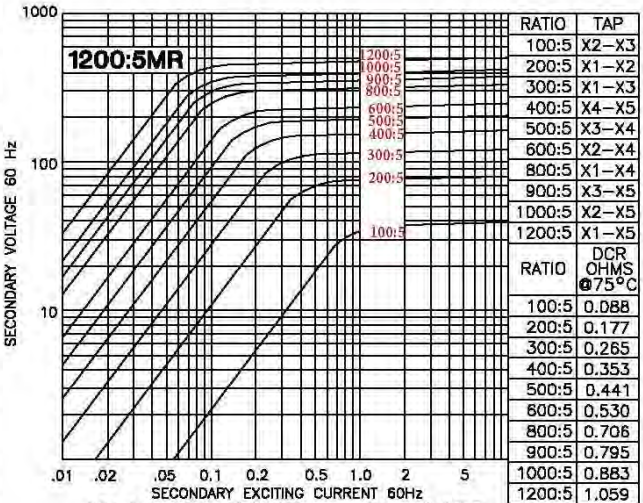
EXCITATION CURVE



RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.028
100:5	0.056
150:5	0.084
200:5	0.111
250:5	0.139
300:5	0.167
400:5	0.223
450:5	0.251
500:5	0.279
600:5	0.334

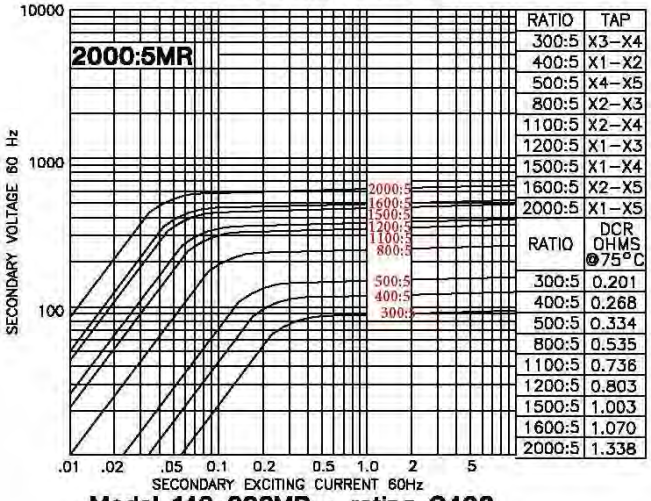
Model 143-601MR - rating C200
TRF= 2.0 @ 30°C, 1.5 @ 55°C amb.



RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.088
200:5	0.177
300:5	0.265
400:5	0.353
500:5	0.441
600:5	0.530
800:5	0.706
900:5	0.795
1000:5	0.883
1200:5	1.059

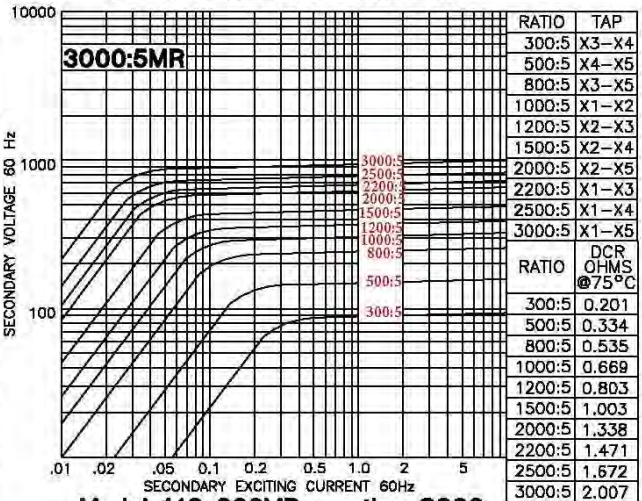
Model 143-122MR - rating C400
TRF= 1.5 @ 30°C, 1.0 @ 55°C amb.



RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.201
400:5	0.268
500:5	0.334
800:5	0.535
1100:5	0.736
1200:5	0.803
1500:5	1.003
1600:5	1.070
2000:5	1.338

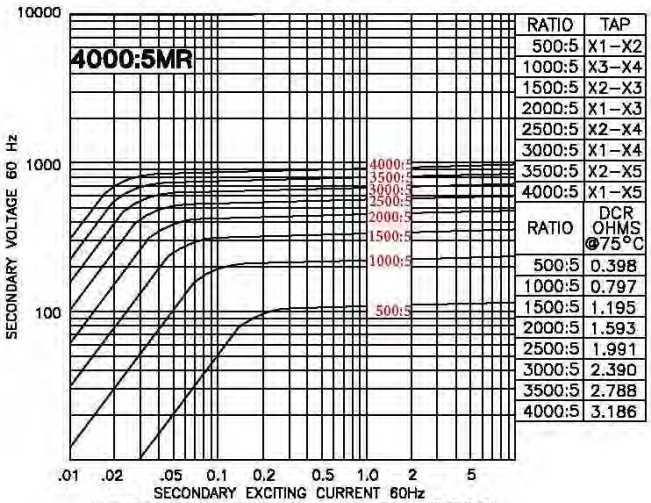
Model 143-202MR - rating C400
TRF= 1.33 @ 30°C, 1.0 @ 55°C amb.



RATIO	TAP
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.201
500:5	0.334
800:5	0.535
1000:5	0.669
1200:5	0.803
1500:5	1.003
2000:5	1.338
2200:5	1.471
2500:5	1.672
3000:5	2.007

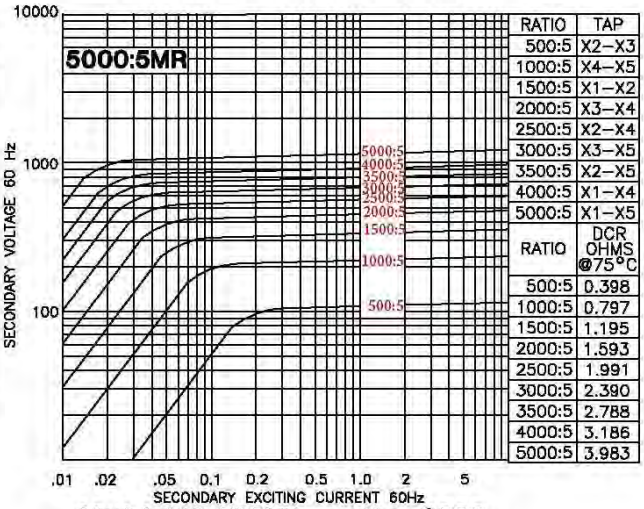
Model 143-302MR - rating C800
TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.



RATIO	TAP
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.398
1000:5	0.797
1500:5	1.195
2000:5	1.593
2500:5	1.991
3000:5	2.390
3500:5	2.788
4000:5	3.186

Model 143-402MR - rating C800
TRF= 1.0 @ 30°C, 0.6 @ 55°C amb.



RATIO	TAP
500:5	X2–X3
1000:5	X4–X5
1500:5	X1–X2
2000:5	X3–X4
2500:5	X2–X4
3000:5	X3–X5
3500:5	X2–X5
4000:5	X1–X4
5000:5	X1–X5

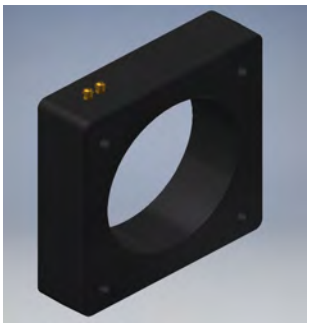
RATIO	DCR OHMS @75°C
500:5	0.398
1000:5	0.797
1500:5	1.195
2000:5	1.593
2500:5	1.991
3000:5	2.390
3500:5	2.788
4000:5	3.186
5000:5	3.983

Model 143-502MR - rating C800
TRF= 1.0 @ 30°C, 0.6 @ 55°C amb.

TTL Transformer Technologies Ltd.

Current Transformer

Model 140
rev 011218



APPLICATION:
Relaying and metering.
FREQUENCY:
50-400 Hz.
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
WINDOW DIAMETER:
8.13”
APPROXIMATE WEIGHT:
22 lbs.
CONNECTIONS:
-Terminals are brass screws No. 10-32 UNF
with one flat washer and a split lock washer
-Multi-ratios available upon request
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)

Model	140
Window Size	8.13
Width	11.10
Height	11.47
Depth	3.00

CERTIFICATIONS:

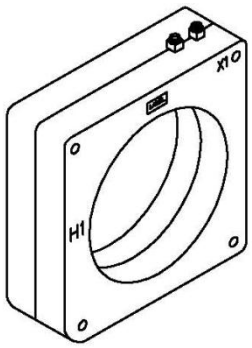
c UL us
E228202

c SA us
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

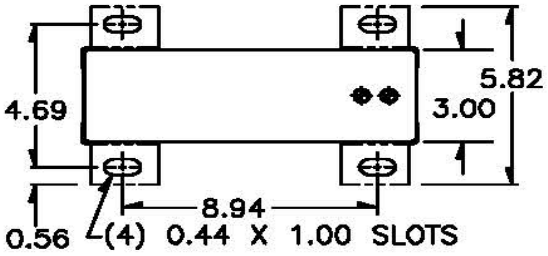
MODEL 140
Window Diameter 8.13”
Approximate weight: 22 lbs.

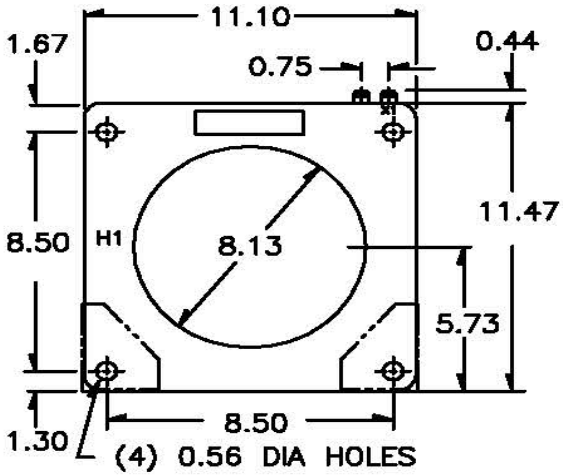
CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
140 – 500	50:5	-	-	-	-	-	-	0.022	2	2
140 – 101	100:5	-	2.4	4.8	-	-	-	0.043	2	2
140 – 201	200:5	C10	1.2	1.2	2.4	4.8	-	0.088	2	2
140 – 251	250:5	C20	1.2	1.2	2.4	2.4	4.8	0.110	2	2
140 – 301	300:5	C20	0.6	1.2	1.2	2.4	2.4	0.131	2	2
140 – 401	400:5	C20	0.3	0.3	0.6	1.2	2.4	0.150	2	2
140 – 501	500:5	C20	0.3	0.3	0.6	1.2	1.2	0.216	2	2
140 – 601	600:5	C50	0.3	0.3	0.3	0.6	1.2	0.276	2	2
140 – 801	800:5	C50	0.3	0.3	0.3	0.3	0.6	0.351	2	2
140 – 102	1000:5	C50	0.3	0.3	0.3	0.3	0.6	0.432	2	1.5
140 – 122	1200:5	C100	0.3	0.3	0.3	0.3	0.3	0.529	1.5	1.5
140 – 152	1500:5	C100	0.3	0.3	0.3	0.3	0.3	0.657	1.5	1
140 – 202	2000:5	C100	0.3	0.3	0.3	0.3	0.3	0.865	1.33	1
140 – 252	2500:5	C100	0.3	0.3	0.3	0.3	0.3	1.009	1.33	1
140 – 302	3000:5	C100	0.3	0.3	0.3	0.3	0.3	1.211	1	0.8
140 – 402	4000:5	C200	0.3	0.3	0.3	0.3	0.3	1.614	1	0.8
140 – 502	5000:5	C50	0.3	0.3	0.3	0.3	0.3	1.836	1	0.8
140 – 602	6000:5	C100	0.3	0.3	0.3	0.3	0.3	2.203	1	0.6



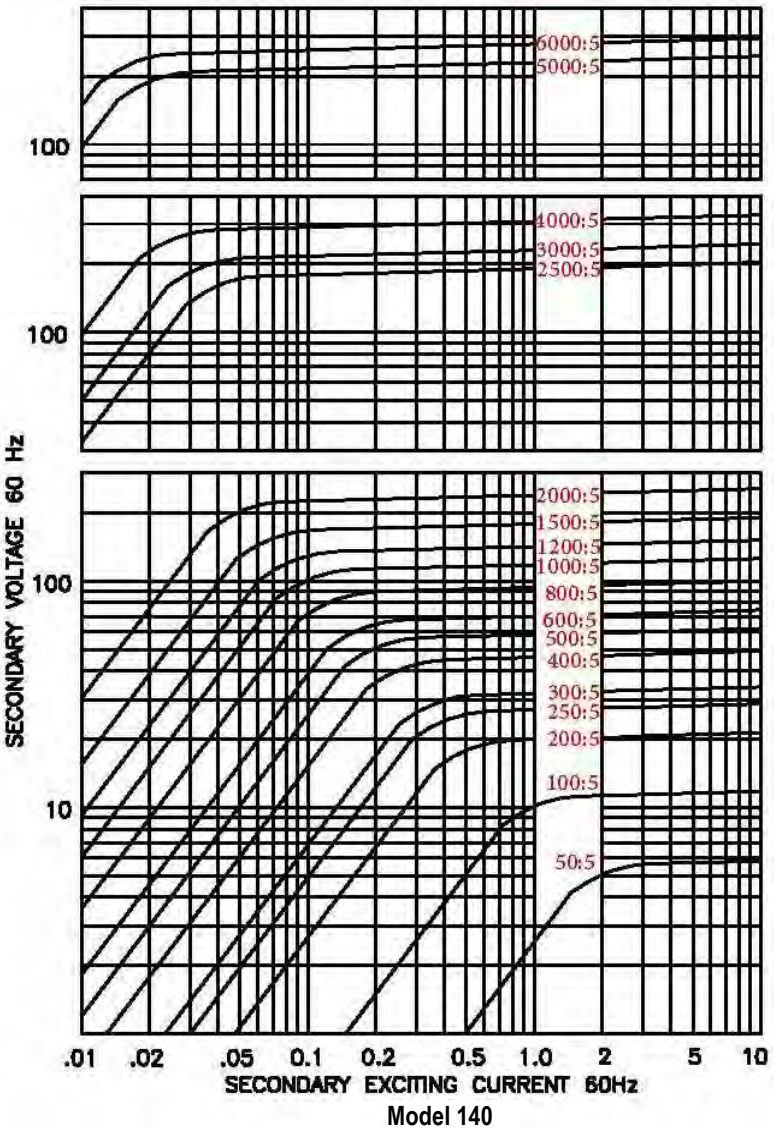
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Model 140





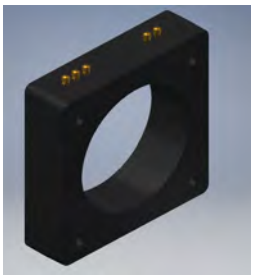
EXCITATION CURVE



Model 140

Current Transformer

Model 140MR
rev 011218



APPLICATION:
Relaying and metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
8.13”

APPROXIMATE WEIGHT:
22 lbs.

CONNECTIONS:
-Terminals are brass screws No. 10-32 UNF
with one flat washer and a split lock washer
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)

Model	140MR
Window Size	8.13
Width	11.10
Height	11.47
Depth	3.00

CERTIFICATIONS:

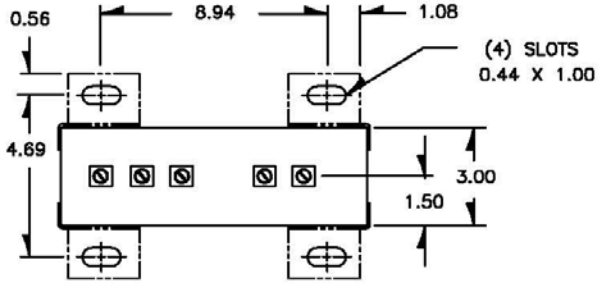
E228202

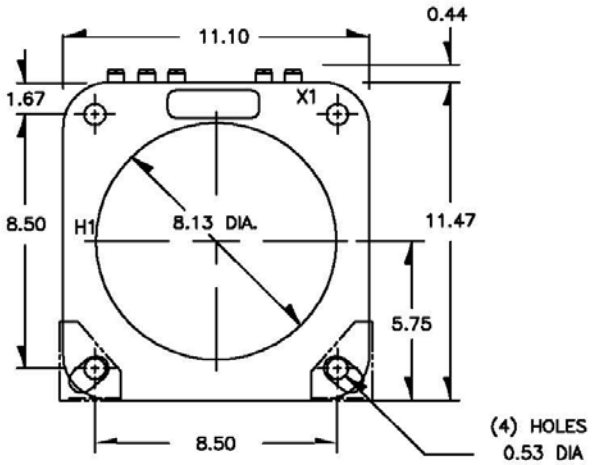
223647

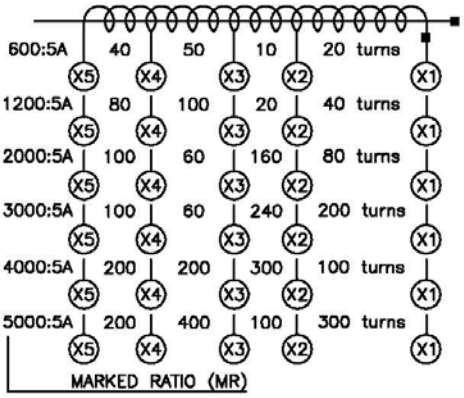
ISO 9001
QUALITY MANAGEMENT

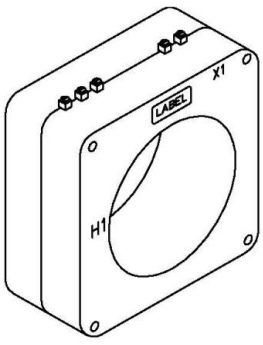
MODEL 140MR
Window Diameter 8.13”
Approximate weight: 22 lbs.

Catalog Number	Relay Class	Continuous Thermal	
		@ 30°C	@ 50°C
140-601MR	C50	2.0	2.0
140-122MR	C100	1.5	1.5
140-202MR	C100	1.33	1.0
140-302MR	C100	1.0	0.8
140-402MR	C100	1.0	0.8
140-502MR	C50	1.0	0.8









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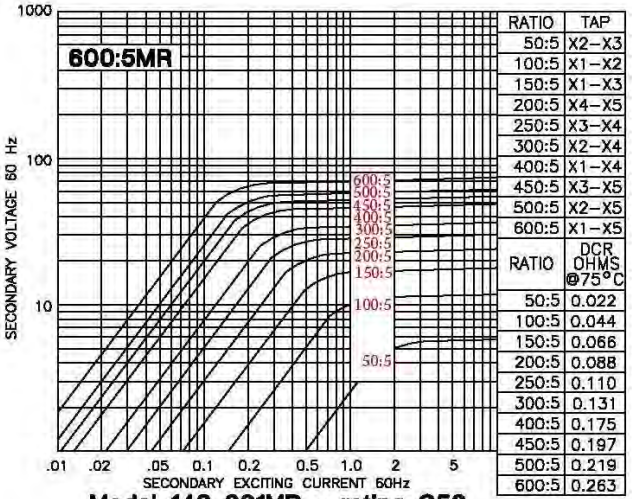
TTL Transformer Technologies Ltd.

Current Transformer

Model 140MR
rev 011218

EXCITATION CURVE

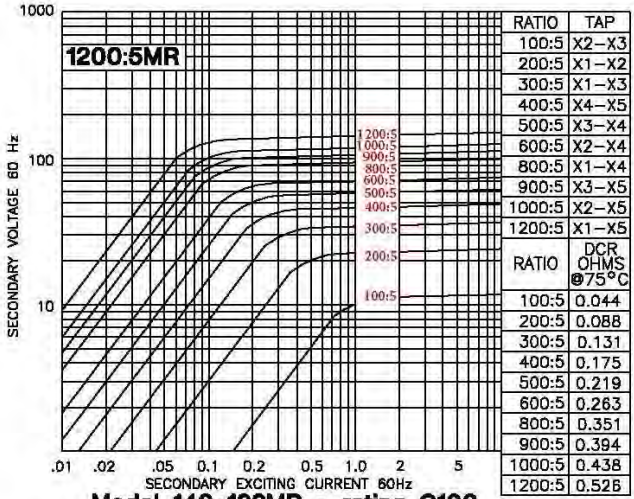


RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.022
100:5	0.044
150:5	0.066
200:5	0.088
250:5	0.110
300:5	0.131
400:5	0.175
450:5	0.197
500:5	0.219
600:5	0.263

Model 140-601MR - rating C50

TRF= 2.0 @ 30°C, 2.0 @ 55°C amb.

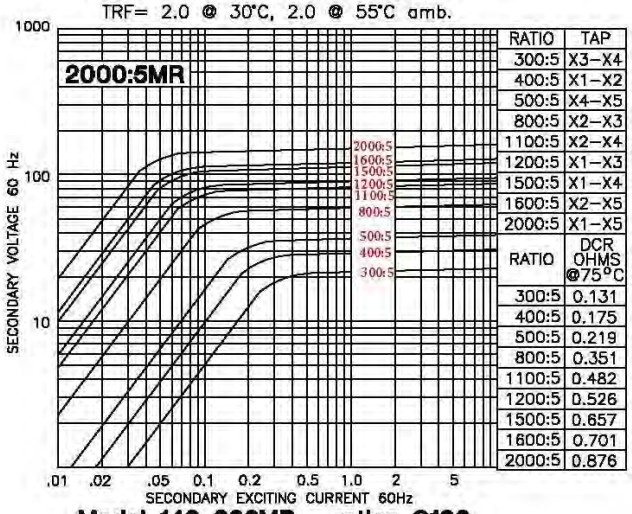


RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.044
200:5	0.088
300:5	0.131
400:5	0.175
500:5	0.219
600:5	0.263
800:5	0.351
900:5	0.394
1000:5	0.438
1200:5	0.526

Model 140-122MR - rating C100

TRF= 1.5 @ 30°C, 1.5 @ 55°C amb.

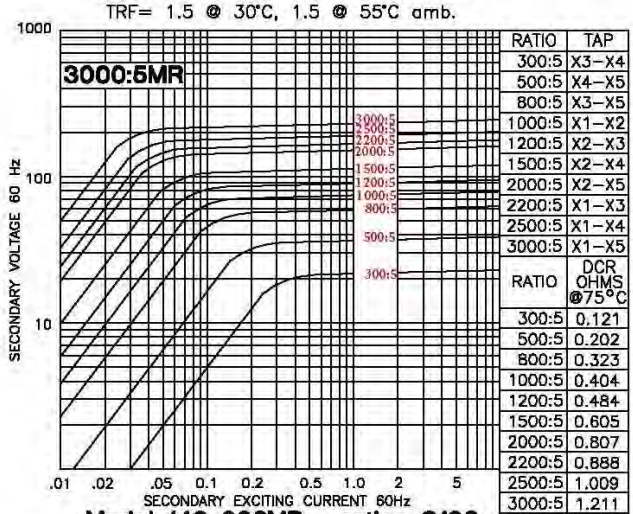


RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.131
400:5	0.175
500:5	0.219
800:5	0.351
1100:5	0.482
1200:5	0.526
1500:5	0.657
1600:5	0.701
2000:5	0.876

Model 140-202MR - rating C100

TRF= 1.33 @ 30°C, 1.0 @ 55°C amb.

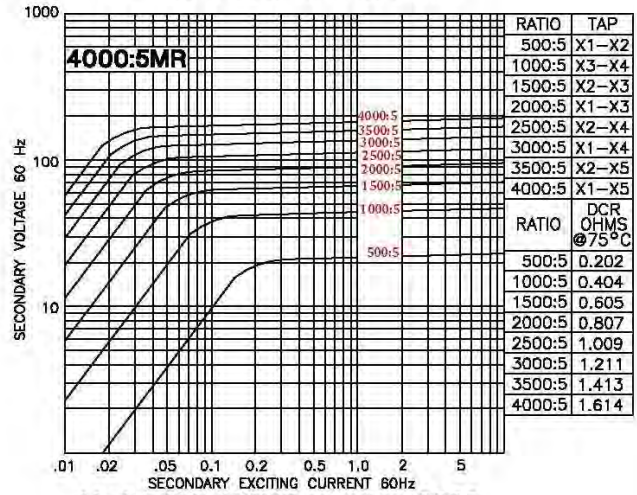


RATIO	TAP
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.121
500:5	0.202
800:5	0.323
1000:5	0.404
1200:5	0.484
1500:5	0.605
2000:5	0.807
2200:5	0.888
2500:5	1.009
3000:5	1.211

Model 140-302MR - rating C100

TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.

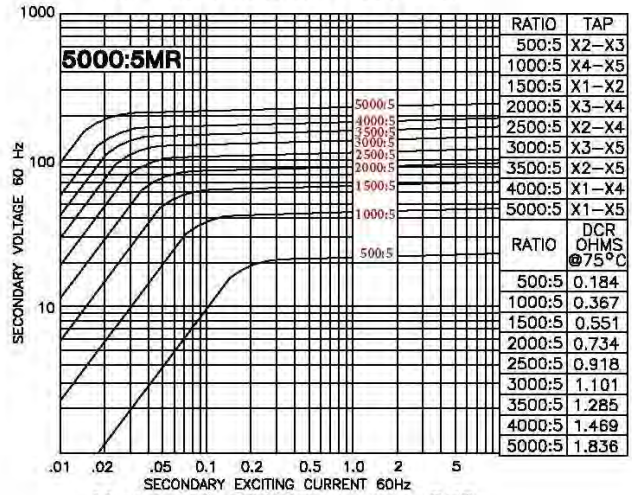


RATIO	TAP
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.202
1000:5	0.404
1500:5	0.605
2000:5	0.807
2500:5	1.009
3000:5	1.211
3500:5	1.413
4000:5	1.614

Model 140-402MR - rating C200

TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.



RATIO	TAP
500:5	X2–X3
1000:5	X4–X5
1500:5	X1–X2
2000:5	X3–X4
2500:5	X2–X4
3000:5	X3–X5
3500:5	X2–X5
4000:5	X1–X4
5000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.184
1000:5	0.367
1500:5	0.551
2000:5	0.734
2500:5	0.918
3000:5	1.101
3500:5	1.285
4000:5	1.469
5000:5	1.836

Model 140-502MR - rating C50

TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.

TTL Transformer Technologies Ltd.

Current Transformer

Model 141
rev 011218

APPLICATION:
Relaying and metering.

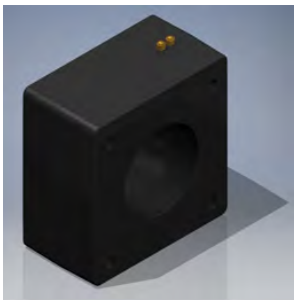
FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
8.13”

APPROXIMATE WEIGHT:
44 lbs.

CONNECTIONS:
Terminals are brass screws No. 10-32 UNF with one flat washer and a split lock washer



Model	141
Window Size	8.13
Width	11.10
Height	11.47
Depth	6.00

CERTIFICATIONS:

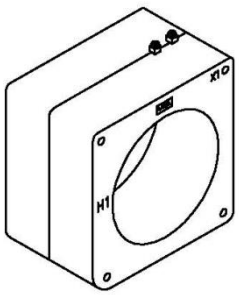
c UL us E228202

SP C US 223647

nqa. ISO 9001 QUALITY MANAGEMENT

MODEL 141
Window Diameter 8.13”
Approximate weight: 44 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
141 – 500	50:5	C10	4.8	-	-	-	-	0.033	2	2
141 – 101	100:5	C10	2.4	2.4	-	-	-	0.066	2	2
141 – 201	200:5	C20	0.6	1.2	1.2	2.4	4.8	0.117	2	2
141 – 301	300:5	C50	0.6	0.6	1.2	1.2	2.4	0.248	2	2
141 – 401	400:5	C50	0.3	0.3	0.6	0.6	1.2	0.277	2	2
141 – 501	500:5	C100	0.3	0.3	0.3	0.6	0.6	0.415	2	2
141 – 601	600:5	C100	0.3	0.3	0.3	0.3	0.6	0.498	2	1.5
141 – 801	800:5	C100	0.3	0.3	0.3	0.3	0.3	0.664	2	1.5
141 – 102	1000:5	C200	0.3	0.3	0.3	0.3	0.3	0.829	2	1.5
141 – 122	1200:5	C200	0.3	0.3	0.3	0.3	0.3	1.009	2	1.5
141 – 152	1500:5	C400	0.3	0.3	0.3	0.3	0.3	1.253	2	1.5
141 – 202	2000:5	C400	0.3	0.3	0.3	0.3	0.3	1.659	1.33	1
141 – 252	2500:5	C400	0.3	0.3	0.3	0.3	0.3	0.963	1.5	1.33
141 – 302	3000:5	C400	0.3	0.3	0.3	0.3	0.3	2.356	1.5	1
141 – 402	4000:5	C400	0.3	0.3	0.3	0.3	0.3	3.141	1	0.8
141 – 502	5000:5	C200	0.3	0.3	0.3	0.3	0.3	2.862	1	0.8
141 – 602	6000:5	C400	0.3	0.3	0.3	0.3	0.3	4.302	1	0.8



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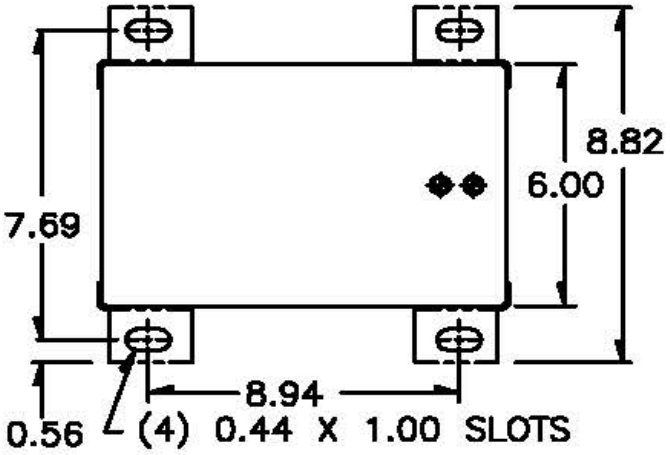
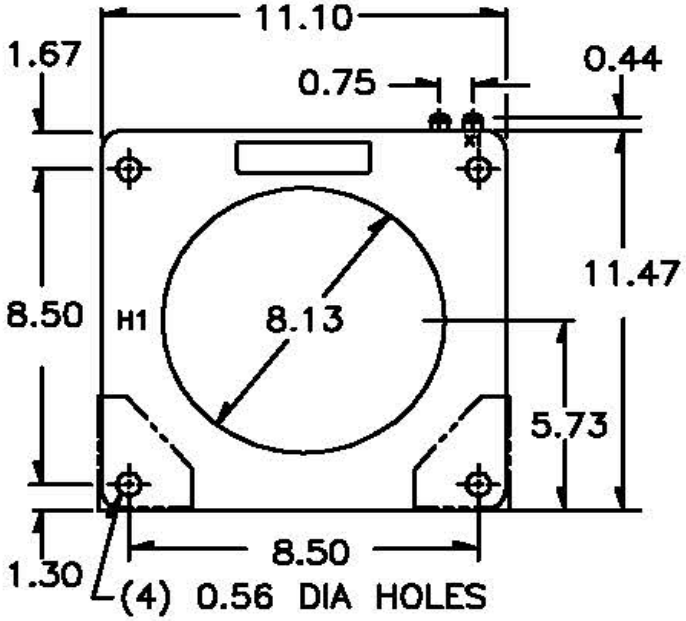
TTL Transformer Technologies Ltd.

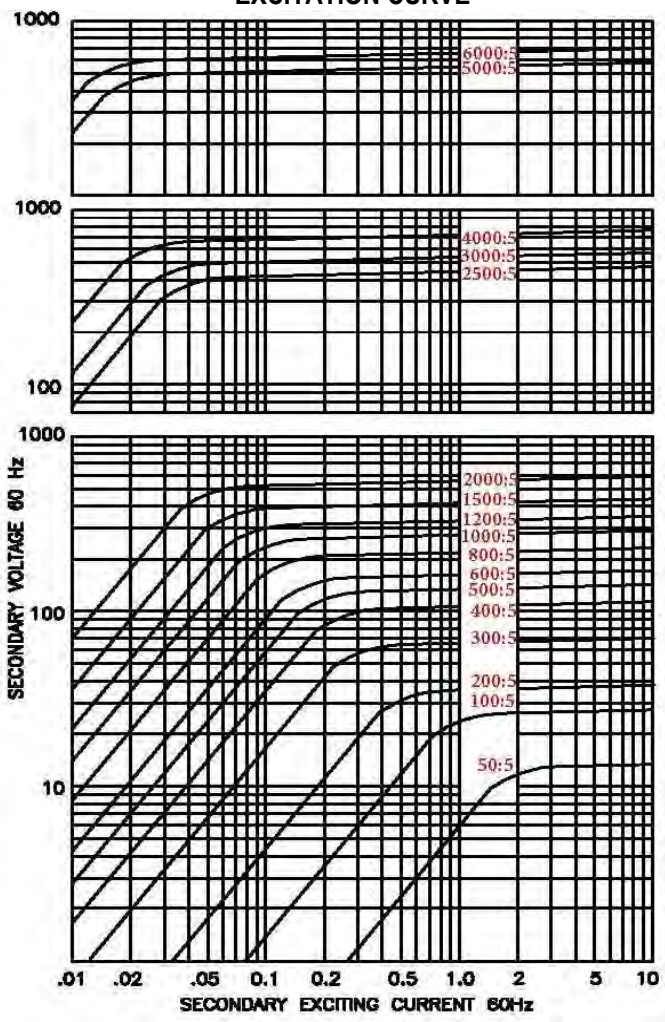
Current Transformer

Model 141
rev 011218





EXCITATION CURVE



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TTL Transformer Technologies Ltd.

Current Transformer

Model 141MR
rev 011218

APPLICATION:
Relaying and metering.

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
8.13”

APPROXIMATE WEIGHT:
44 lbs.

CONNECTIONS:
-Terminals are brass screws No. 10-32 UNF with one flat washer and a split lock washer

Model	141MR
Window Size	8.13
Width	11.10
Height	11.47
Depth	6.00

CERTIFICATIONS:

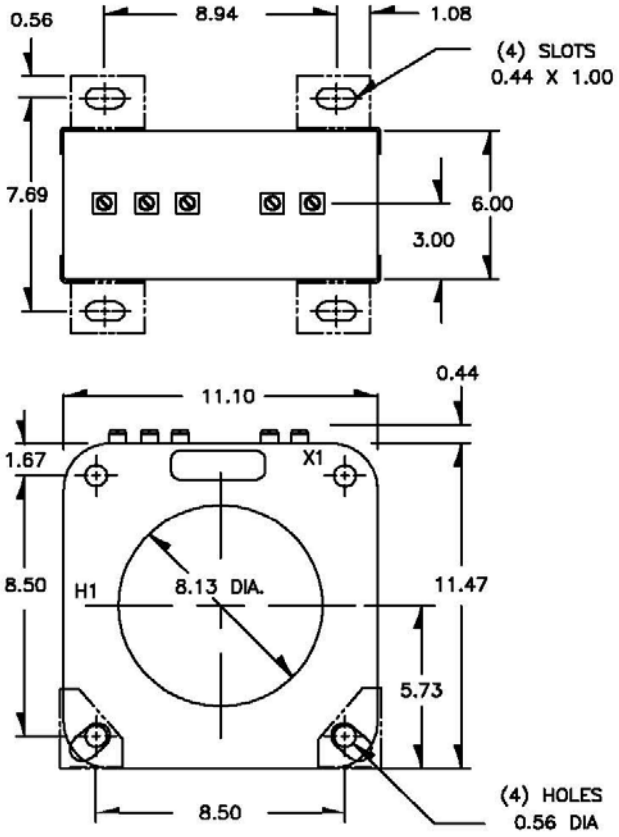
c UL us E228202

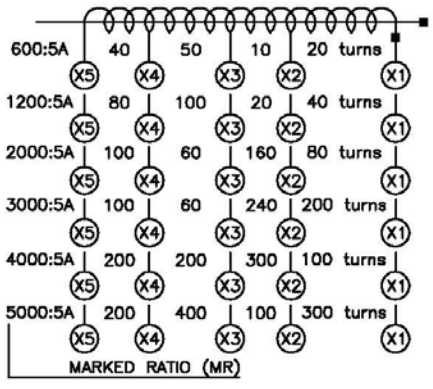
CSA C US 223647

nqa. ISO 9001 QUALITY MANAGEMENT

MODEL 141MR
Window Diameter 8.13”
Approximate weight: 44 lbs.

Catalog Number	Relay Class	Continuous Thermal	
		@ 30°C	@ 50°C
141-601MR	C100	2.0	1.5
141-122MR	C200	2.0	1.5
141-202MR	C400	1.33	1.0
141-302MR	C400	1.5	1.33
141-402MR	C400	1.0	0.8
141-502MR	C200	1.0	0.8





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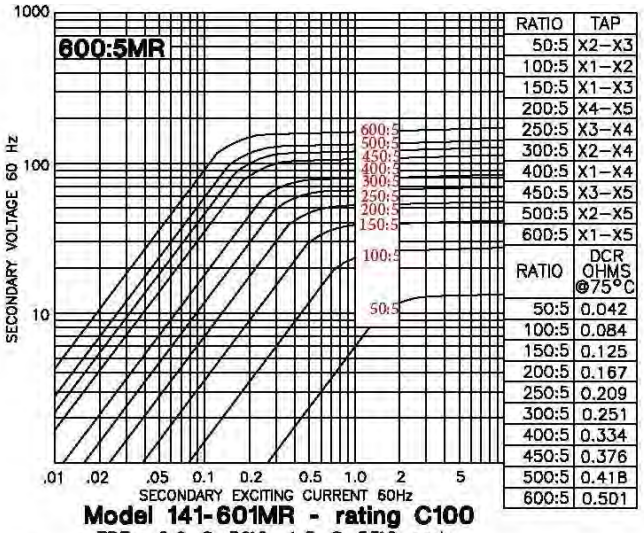
TTL Transformer Technologies Ltd.

Current Transformer

Model 141MR
rev 011218

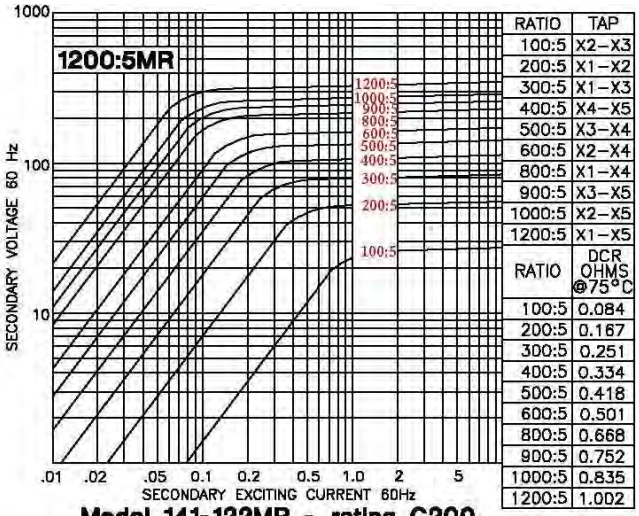
EXCITATION CURVE



RATIO	TAP
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @75°C
50:5	0.042
100:5	0.084
150:5	0.125
200:5	0.167
250:5	0.209
300:5	0.251
400:5	0.334
450:5	0.376
500:5	0.418
600:5	0.501

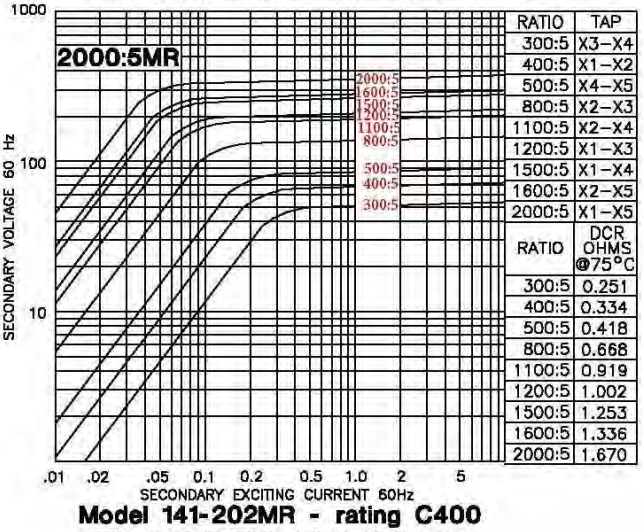
Model 141-601MR - rating C100
TRF= 2.0 @ 30°C, 1.5 @ 55°C amb.



RATIO	TAP
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @75°C
100:5	0.084
200:5	0.167
300:5	0.251
400:5	0.334
500:5	0.418
600:5	0.501
800:5	0.668
900:5	0.752
1000:5	0.835
1200:5	1.002

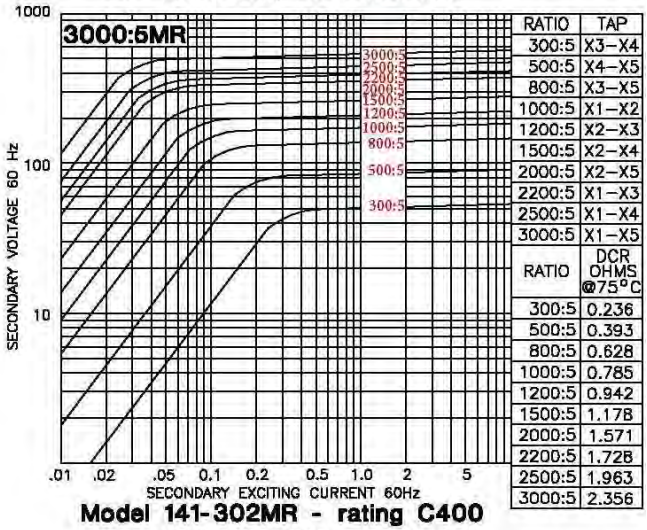
Model 141-122MR - rating C200
TRF= 2.0 @ 30°C, 1.5 @ 55°C amb.



RATIO	TAP
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.251
400:5	0.334
500:5	0.418
800:5	0.668
1100:5	0.919
1200:5	1.002
1500:5	1.253
1600:5	1.336
2000:5	1.670

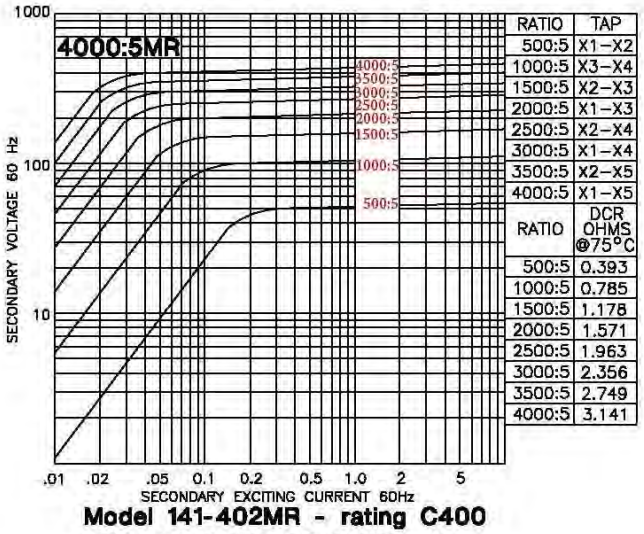
Model 141-202MR - rating C400
TRF= 1.33 @ 30°C, 1.0 @ 55°C amb.



RATIO	TAP
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @75°C
300:5	0.236
500:5	0.393
800:5	0.628
1000:5	0.785
1200:5	0.942
1500:5	1.178
2000:5	1.571
2200:5	1.728
2500:5	1.963
3000:5	2.356

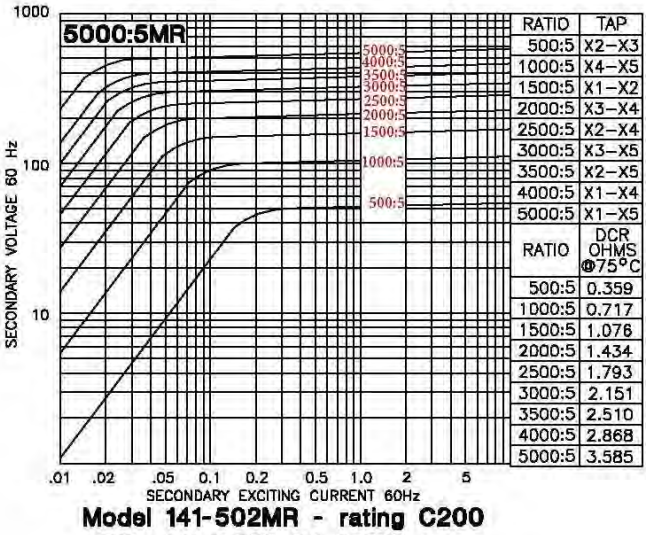
Model 141-302MR - rating C400
TRF= 1.5 @ 30°C, 1.33 @ 55°C amb.



RATIO	TAP
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.393
1000:5	0.785
1500:5	1.178
2000:5	1.571
2500:5	1.963
3000:5	2.356
3500:5	2.749
4000:5	3.141

Model 141-402MR - rating C400
TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.



RATIO	TAP
500:5	X2–X3
1000:5	X4–X5
1500:5	X1–X2
2000:5	X3–X4
2500:5	X2–X4
3000:5	X3–X5
3500:5	X2–X5
4000:5	X1–X4
5000:5	X1–X5

RATIO	DCR OHMS @75°C
500:5	0.359
1000:5	0.717
1500:5	1.076
2000:5	1.434
2500:5	1.793
3000:5	2.151
3500:5	2.510
4000:5	2.868
5000:5	3.585

Model 141-502MR - rating C200
TRF= 1.0 @ 30°C, 0.8 @ 55°C amb.

Current Transformer

Model 190 and 190X
Rev 020720

APPLICATION:

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
0.6 kV, BIL 10 kV full wave

APPROXIMATE WEIGHT:
4 lbs.

CONNECTIONS:
-Terminals are brass studs No. 8-32 with one flatwasher, lockwasher and regular nut, for ratios up to 25:5 and ¼-20 studs for higher ratios.

E228202

223647

ISO 9001 QUALITY MANAGEMENT

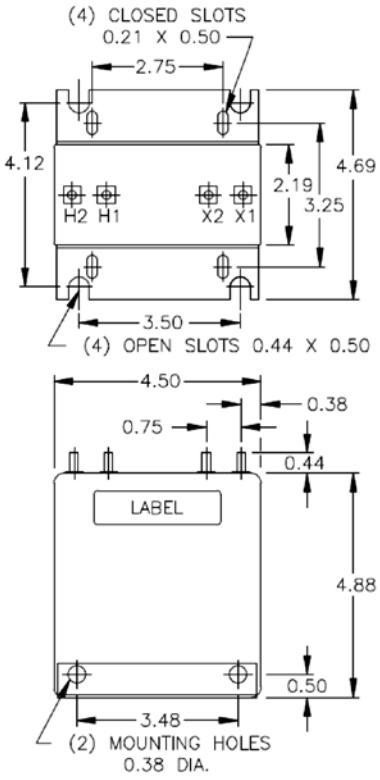
Catalog Number	V.A. ± 1% Class	ANSI Metering Class at 60 Hz				
		B0.1	B0.2	B0.5	B0.9	B1.8
190-2-XXX	**12.5**	**0.6**	**0.6**	**1.2**	**2.4**	**-**
190-4-XXX	**30.0**	**0.3**	**0.3**	**0.3**	**0.3**	**1.2**

Ratio	1:5	2.5:5	5:5	7.5:5	10:5	15:5	20:5	25:5	30:5	40:5	50:5	
Suffix	001	0025	005	0075	010	015	020	025	030*	040*	050*	*1/4-20 stud terminals

The Model 190 is a low ratio primary current transformer, suitable for primary currents up to 50 amperes. The table below lists the most common current ratings.

Model 190 Wound Primary & 190X Auxiliary Transformer

ANSI Metering Class: 0.3 B0.5
The Model 190X is an auxiliary transformer for use in the secondary of main current transformers to change the ratio for metering applications. Since the Model 190X is used in the secondary of another current transformer it has no voltage rating. It is given a 2,500 volt 60 Hz potential test. It is designed to be used on circuits not to exceed 600 volts to ground or between windings.



Catalog Number	Current Ratio
190X0100	5:0.1
190X0200	5:0.2
190X0250	5:0.25
190X0500	5:0.5
190X0625	5:0.625
190X1000	5:1
190X1250	5:1.25
190X1667	5:1.667
190X2000	5:2
190X2395	5:2.395
190X2500	5:2.5
190X2890	5:2.89
190X3000	5:3
190X3330	5:3.33
190X3750	5:3.75
190X4000	5:4
190X5000	5:5
190X5330	5:5.33

Catalog Number	Current Ratio
190X6250	5:6.25
190X7500	5:7.5
190X8000	5:8
190X10000	5:10
190X12500	5:12.5
190X15000	5:15
190X1500-5	1.5:5
190X1667-5	1.667:5
190X2500-5	2.5:5
190X2875-5	2.875:5
190X7500-5	7.5:5
190X10000-5	10:5
190X0500-1	0.5:1
190X0923-1	0.923:1
190X0400-10	0.4:10
190XSUM-2**	5+5:5
190XSUM-4**	5+5+5+5:5
190XSUM-5**	5+5+5+5+5:5

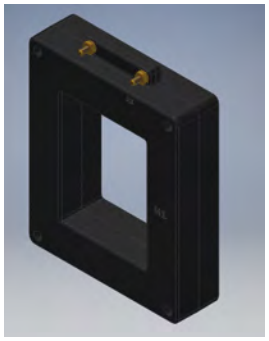
***The circuits of up to five secondaries may be totalized. Equal or unequal line current transformers can be summed with this transformer. Advise the ratios of the line current transformers to be totalized for unequal ratios. Output terminals are X1-X2.*

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 560
rev 02222024



APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

CONTINUOUS THERMAL RATING FACTOR:
1.33 at 30°C amb., 1.0 at 55°C amb.

INSULATION SYSTEM:
Temperature Class H (180°C.)

WINDOW DIAMETER:
3.25" x 4.25"

APPROXIMATE WEIGHT:
3.5 lbs.

CONNECTIONS:
Secondary terminals are No. 10-32 brass studs with one flat

Model	560
Window Size	3.25 x 4.25
Width	5.75
Height	6.88
Depth	1.63

CERTIFICATIONS:

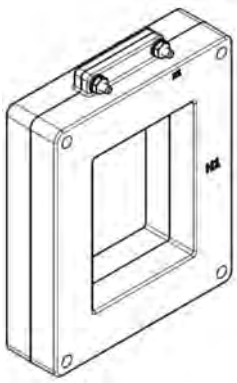
c UL us
E228202

CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 560
Window Diameter 3.25" x 4.25"
Approximate weight: 6 lbs.

CATALOG NUMBER	CURRENT RATIO	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)
		B0.1	B0.2	B0.5	BO.9	B1.8	
560-101	100:5	2.4	-	-	-	-	0.012
560-151	150:5	1.2	2.4	-	-	-	0.017
560-201	200:5	1.2	1.2	-	-	-	0.023
560-251	250:5	0.6	1.2	2.4	-	-	0.038
560-301	300:5	0.6	0.6	1.2	-	-	0.045
560-401	400:5	0.6	0.6	1.2	2.4	-	0.095
560-501	500:5	0.3	0.3	0.6	1.2	2.4	0.118
560-601	600:5	0.3	0.3	0.6	1.2	1.2	0.142
560-751	750:5	0.3	0.3	0.3	0.6	1.2	0.178
560-801	800:5	0.3	0.3	0.3	0.6	0.6	0.190
560-102	1000:5	0.3	0.3	0.3	0.6	0.6	0.211
560-122	1200:5	0.3	0.3	0.3	0.3	0.6	0.253
560-152	1500:5	0.3	0.3	0.3	0.3	0.6	0.368
560-162	1600:5	0.3	0.3	0.3	0.3	0.6	0.262
560-202	2000:5	0.3	0.3	0.3	0.3	0.6	0.328
560-252	2500:5	0.3	0.3	0.3	0.3	0.3	0.410
560-302	3000:5	0.3	0.3	0.3	0.3	0.3	0.347
560-322	3200:5	0.3	0.3	0.3	0.3	0.3	0.370
560-402	4000:5	0.3	0.3	0.3	0.3	0.3	0.462



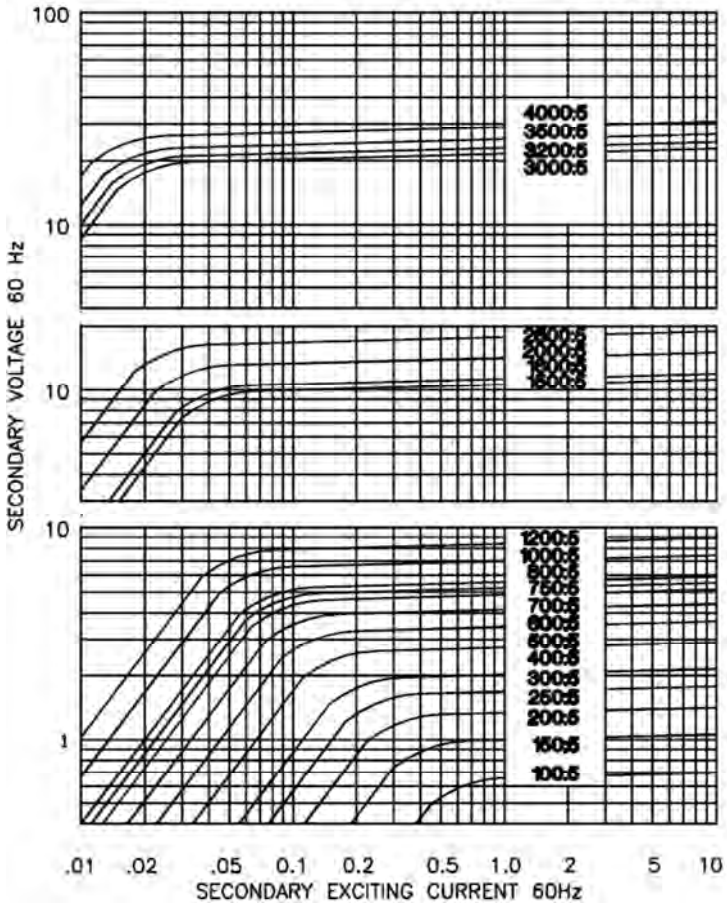
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

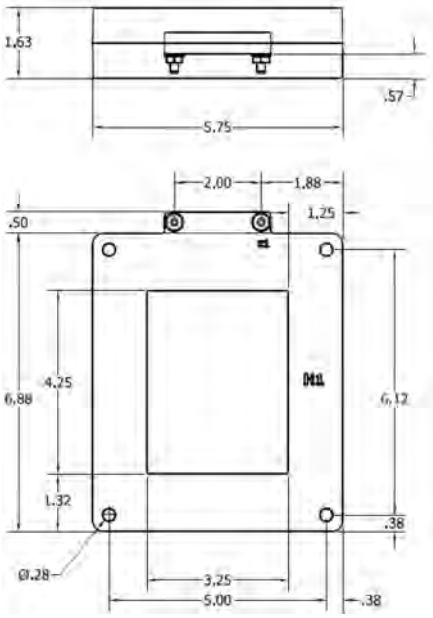
Current Transformer

Model 560
rev 11152021

EXCITATION CURVE



DIMENSIONS

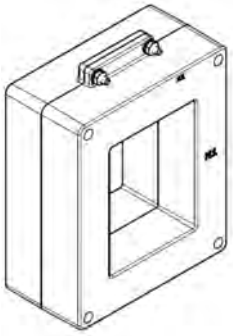


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 561
rev 02222024



APPLICATION:
Relaying and Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

CONTINUOUS THERMAL RATING FACTOR:
1.33 at 30°C amb., 1.0 at 55°C amb.

INSULATION SYSTEM:
Temperature Class H (150°C.)

WINDOW DIAMETER:
3.25" x 4.25"

APPROXIMATE WEIGHT:
8 lbs.

CONNECTIONS:
Secondary terminals are No. 10-32 brass studs with one flat

Model	561
Window Size	3.25 x 4.25
Width	5.75
Height	6.88
Depth	2.88

CERTIFICATIONS:

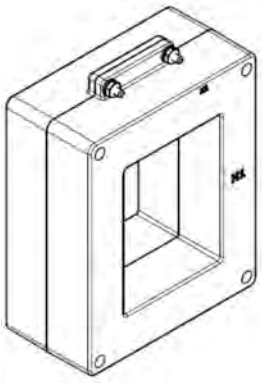
c UL us
E228202

CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

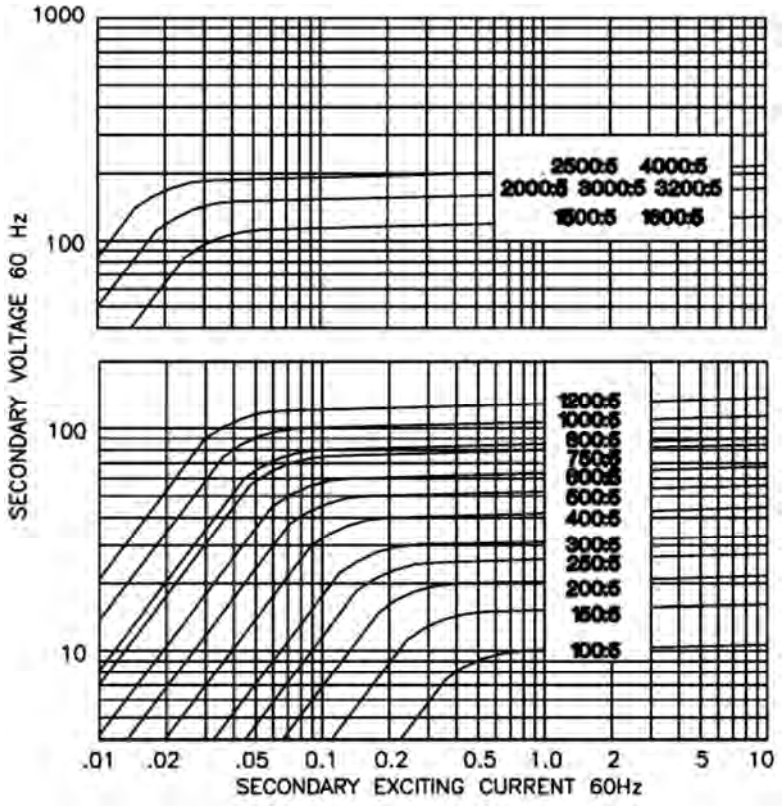
MODEL 561
Window Diameter 3.25" x 4.25"
Approximate weight: 8 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)
			B0.1	B0.2	B0.5	BO.9	B1.8	
561-101	100:5	-	2.4	-	-	-	-	0.021
561-151	150:5	C10	1.2	2.4	-	-	-	0.032
561-201	200:5	C10	0.6	1.2	2.4	2.4	-	0.043
561-251	250:5	C20	0.6	0.6	1.2	2.4	-	0.054
561-301	300:5	C20	0.3	0.6	1.2	1.2	2.4	0.064
561-401	400:5	C20	0.6	0.3	0.6	1.2	1.2	0.086
561-501	500:5	C20	0.3	0.3	0.3	0.6	0.6	0.170
561-601	600:5	C20	0.3	0.3	0.3	0.3	0.6	0.161
561-751	750:5	C50	0.3	0.3	0.3	0.3	0.6	0.202
561-801	800:5	C50	0.3	0.3	0.3	0.3	0.6	0.340
561-102	1000:5	C50	0.3	0.3	0.3	0.3	0.3	0.425
561-122	1200:5	C100	0.3	0.3	0.3	0.3	0.3	0.510
561-152	1500:5	C50	0.3	0.3	0.3	0.3	0.3	0.766
561-162	1600:5	C50	0.3	0.3	0.3	0.3	0.3	1.817
561-202	2000:5	C100	0.3	0.3	0.3	0.3	0.3	1.021
561-252	2500:5	C100	0.3	0.3	0.3	0.3	0.3	1.276
561-302	3000:5	C50	0.3	0.3	0.3	0.3	0.3	1.396
561-322	3200:5	C50	0.3	0.3	0.3	0.3	0.3	1.489
561-402	4000:5	C100	0.3	0.3	0.3	0.3	0.3	1.861

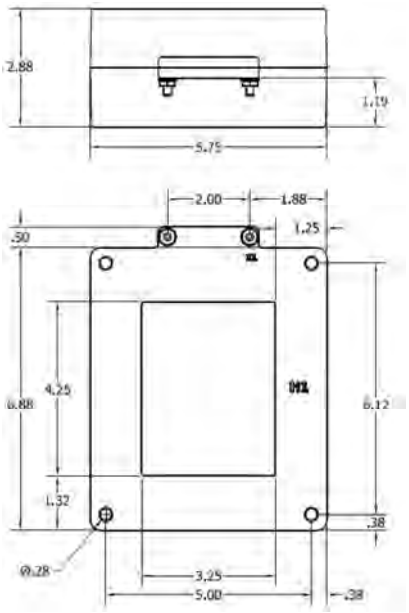


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

EXCITATION CURVE



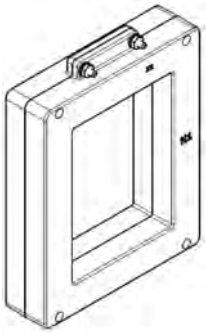
DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 562
rev 11152021



APPLICATION:
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

CONTINUOUS THERMAL RATING FACTOR:
1.33 at 30°C amb., 1.0 at 55°C amb.

INSULATION SYSTEM:
Temperature Class H (150°C.)

WINDOW DIAMETER:
4.00" x 5.38"

APPROXIMATE WEIGHT:
8 lbs.

CONNECTIONS:
Secondary terminals are No. 10-32 brass studs with one flat

Model	562
Window Size	4.00 x 5.38
Width	6.30
Height	7.63
Depth	1.63

CERTIFICATIONS:

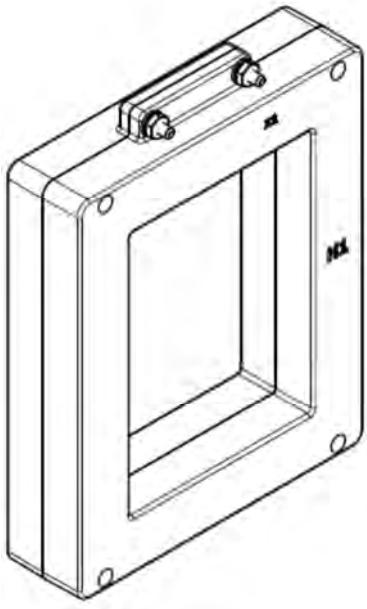
c UL us
E228202

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 562

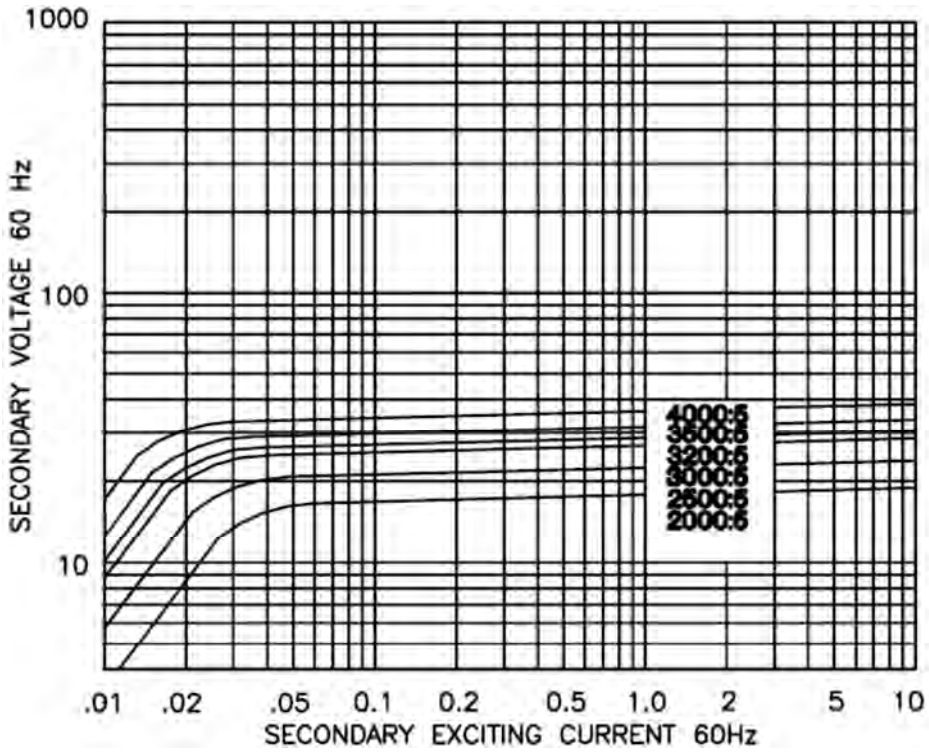
Window Diameter 4.00" x 5.38"
Approximate weight: 8 lbs.

CATALOG NUMBER	CURRENT RATIO	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)
		B0.1	B0.2	B0.5	BO.9	B1.8	
562-202	2000:5	0.3	0.3	0.3	0.6	0.6	0.345
562-252	2500:5	0.3	0.3	0.3	0.3	0.6	0.431
562-302	3000:5	0.3	0.3	0.3	0.3	0.6	0.517
562-322	3200:5	0.3	0.3	0.3	0.3	0.6	0.552
562-352	3500:5	0.3	0.3	0.3	0.3	0.3	0.604
562-402	4000:5	0.6	0.3	0.3	0.3	0.3	0.600

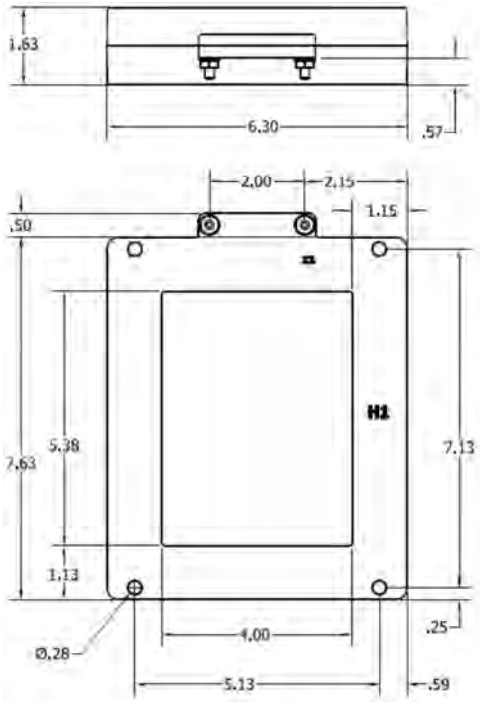


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

EXCITATION CURVE



DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Extended Lead 100 to 240 inch Leads

Model 562-Long Lead
rev 111821

CERTIFICATIONS:

E228202

ISO 9001 QUALITY MANAGEMENT

APPLICATION
Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

CONTINUOUS THERMAL RATING FACTOR:
1.33 at 30°C amb., 1.0 at 55°C amb.

INSULATION SYSTEM:
Temperature Class H (150°C.)

WINDOW DIAMETER:
4.00" x 5.38"

APPROXIMATE WEIGHT:
8 lbs.

CONNECTIONS:
-Flexible leads are UL 1015 105°C, #16 AWG
-Non-standard length to be specified

Model	562
Window Size	4.00 x 5.38
Width	6.30
Height	7.63
Depth	1.63

MODEL 562
Window Diameter 4.00" x 5.38"
Approximate weight: 8 lbs.

CATALOG NUMBER	CURRENT RATIO	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)
		B0.1	B0.2	B0.5	BO.9	B1.8	
562-122-LL-XXX	1200:5	0.6	0.6	0.6	1.2	N/A	0.115
562-202-LL-XXX	2000:5	0.3	0.3	0.6	0.6	0.6	0.345
562-252-LL-XXX	2500:5	0.3	0.3	0.6	0.6	0.6	0.431
562-302-LL-XXX	3000:5	0.3	0.3	0.6	0.6	0.6	0.517
562-322-LL-XXX	3200:5	0.3	0.3	0.6	0.6	0.6	0.552
562-352-LL-XXX	3500:5	0.3	0.3	0.6	0.6	0.6	0.604
562-402-LL-XXX	4000:5	0.3	0.3	0.6	0.6	0.6	0.600

XXX = 100 to 240 inch leads

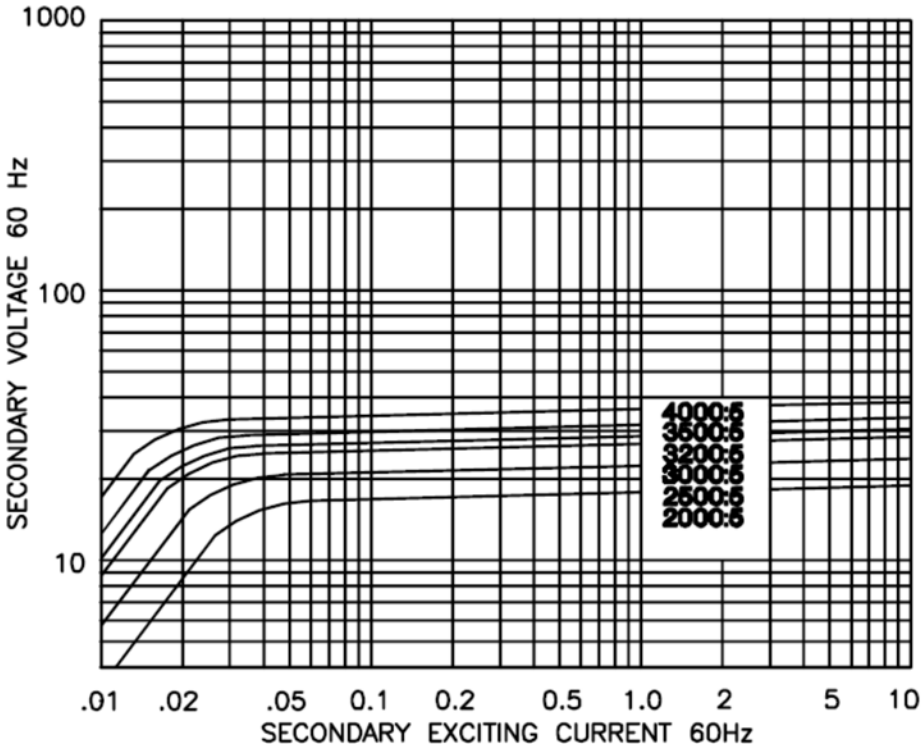
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

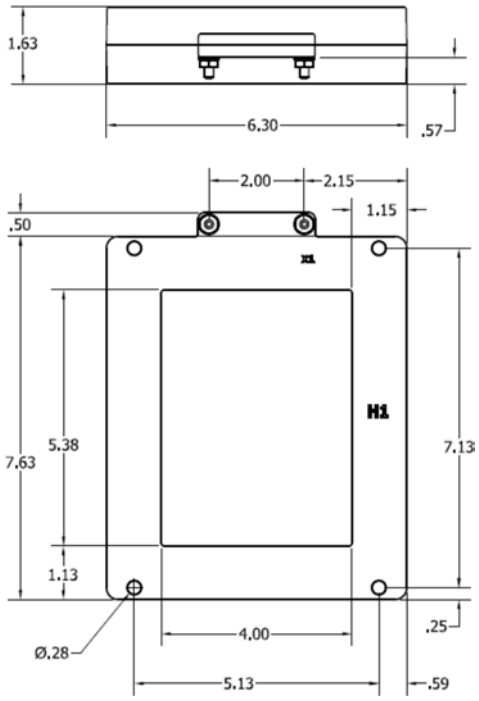
Extended Lead 100 to 240 inch Leads

Model 562-Long Lead
rev 090419

EXCITATION CURVE



DIMENSIONS

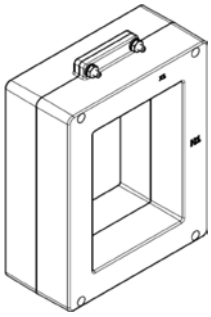


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 563
rev 11152021



CERTIFICATIONS:

E228202

ISO 9001 QUALITY MANAGEMENT

APPLICATION:
Relaying and Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

INSULATION SYSTEM:
Temperature Class H (150°C.)

WINDOW DIAMETER:
4.00" x 5.38"

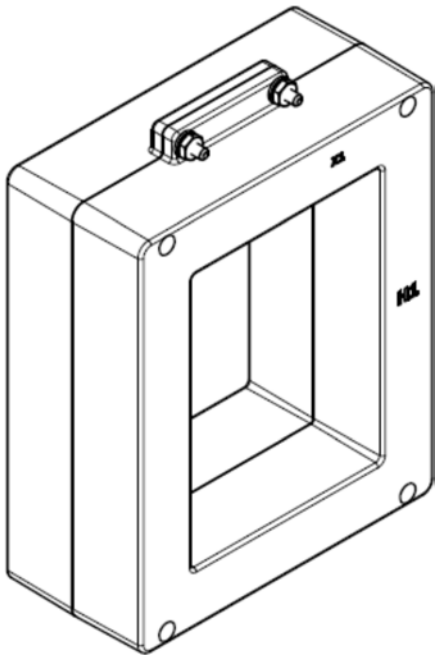
APPROXIMATE WEIGHT:
12 lbs.

CONNECTIONS:
Secondary terminals are No. 10-32 brass studs with one flat

Model	563
Window Size	4.00 x 5.38
Width	6.30
Height	7.63
Depth	2.88

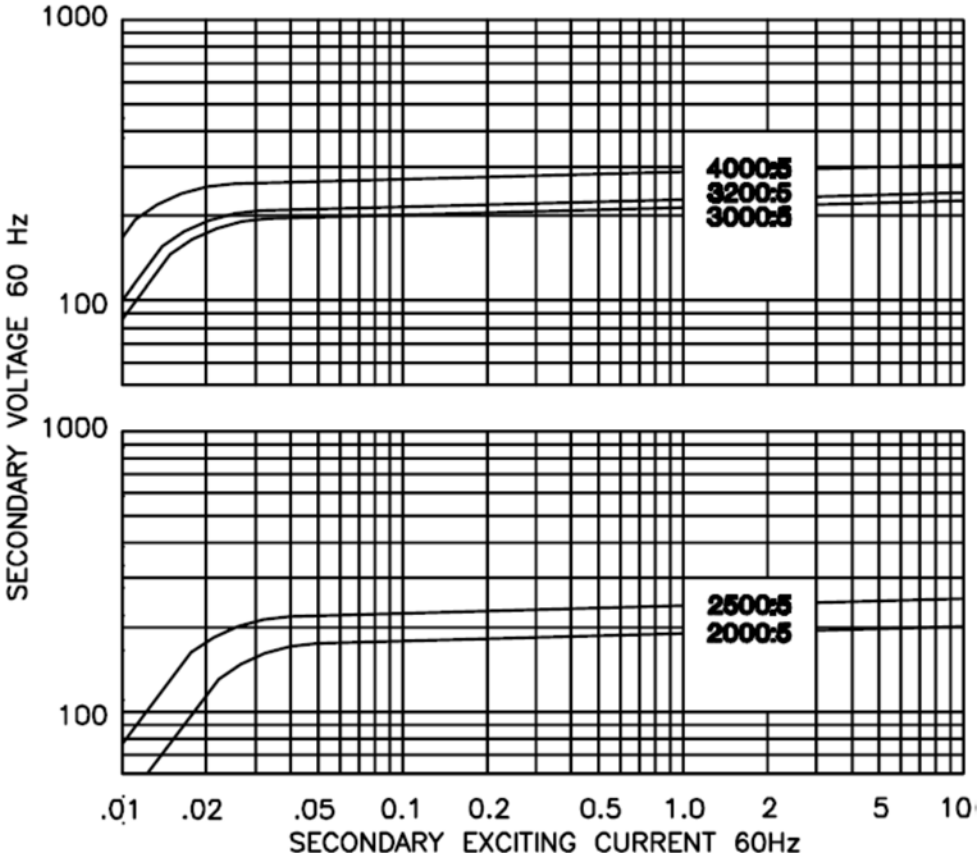
MODEL 563
Window Diameter 4.00" x 5.38"
Approximate weight: 12 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	THERMAL RATING
			B.1	B.2	B0.5	B0.9	B1.8		
563-202	2000:5	C50	0.3	0.3	0.3	0.3	0.3	0.995	1.3
563-252	2500:5	C50	0.3	0.3	0.3	0.3	0.3	1.244	1.3
563-302	3000:5	C20	0.3	0.3	0.3	0.3	0.3	1.382	1.3
563-322	3200:5	C20	0.3	0.3	0.3	0.3	0.3	1.474	1.3
563-402	4000:5	C20	0.3	0.3	0.3	0.3	0.3	1.842	1.3
563-502	5000:5	C20	0.3	0.3	0.3	0.3	0.3	2.158	1.0

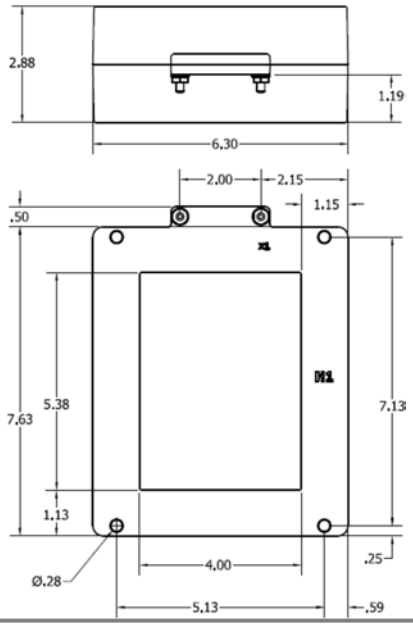


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

EXCITATION CURVE



DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 592
rev 03182021

APPLICATION:
Relaying

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

CONTINUOUS THERMAL RATING FACTOR:
2.0 at 30°C amb., 1.5 at 55°C amb.

INSULATION SYSTEM:
Cast in polyurethane resin. Temp. class 130 deg. C. Red

WINDOW DIAMETER:
5.00" x 14.00"

APPROXIMATE WEIGHT:
150 lbs.

CONNECTIONS:
Secondary terminals are No. 10-32 brass studs with one flat washer, lockwasher and regular nut.

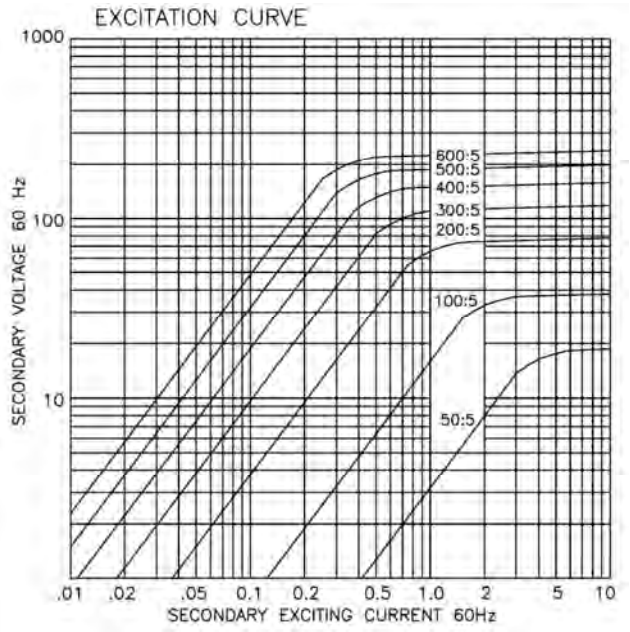
Model	592
Window Size	5.00 x 14.00
Width	14.00
Height	23.00
Depth	4.00

CERTIFICATIONS:

c UL us
E228202

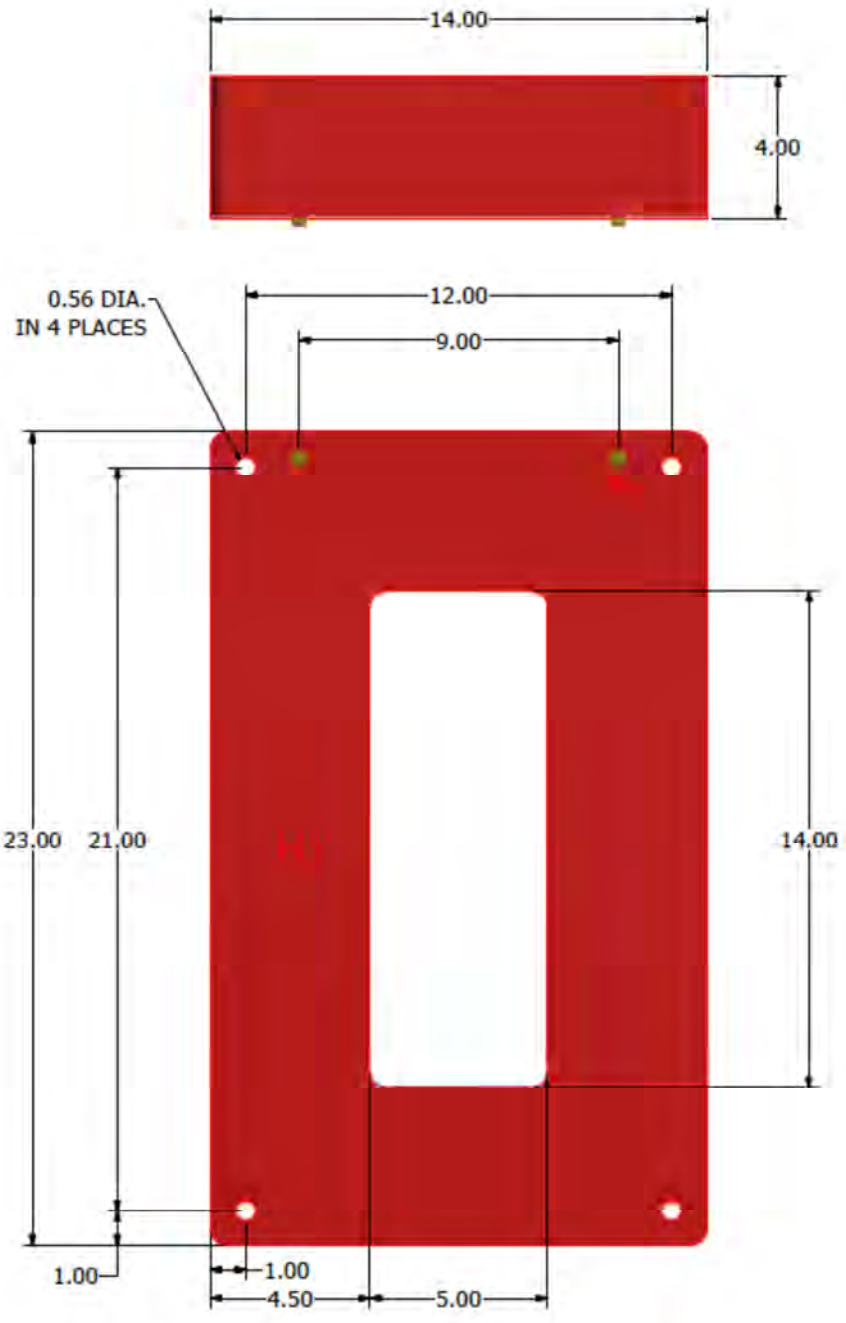
nqa.
ISO 9001
QUALITY MANAGEMENT

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	SECONDARY WINDING RESISTANCE (OHMS @ 75°C)
592-500	50:5	C15	0.014
592-101	100:5	C30	0.028
592-201	200:5	C60	0.056
592-301	300:5	C100	0.097
592-401	400:5	C120	0.123
592-501	500:5	C150	0.161
592-601	600:5	C200	0.193



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

DIMENSIONS


14.00
4.00
0.56 DIA.
IN 4 PLACES
12.00
9.00
23.00
21.00
14.00
1.00
1.00
4.50
5.00

Current Transformer

Model 593
rev 08012023

CERTIFICATIONS:

E228202

ISO 9001 QUALITY MANAGEMENT

APPLICATION:
Relaying

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

CONTINUOUS THERMAL RATING FACTOR:
2.0 at 30°C amb., 2.0 at 55°C amb.

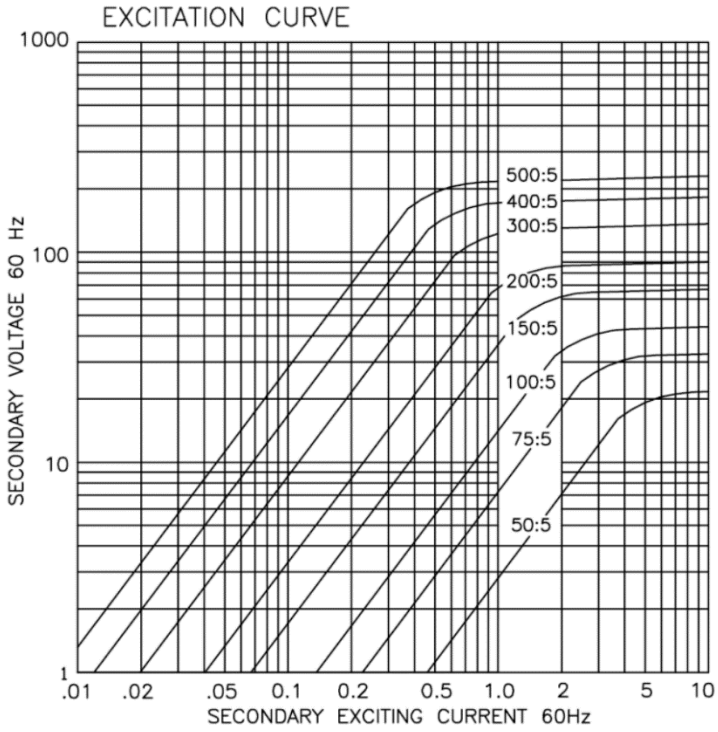
WINDOW DIAMETER:
8.06” x 22.06”

APPROXIMATE WEIGHT:
150 lbs.

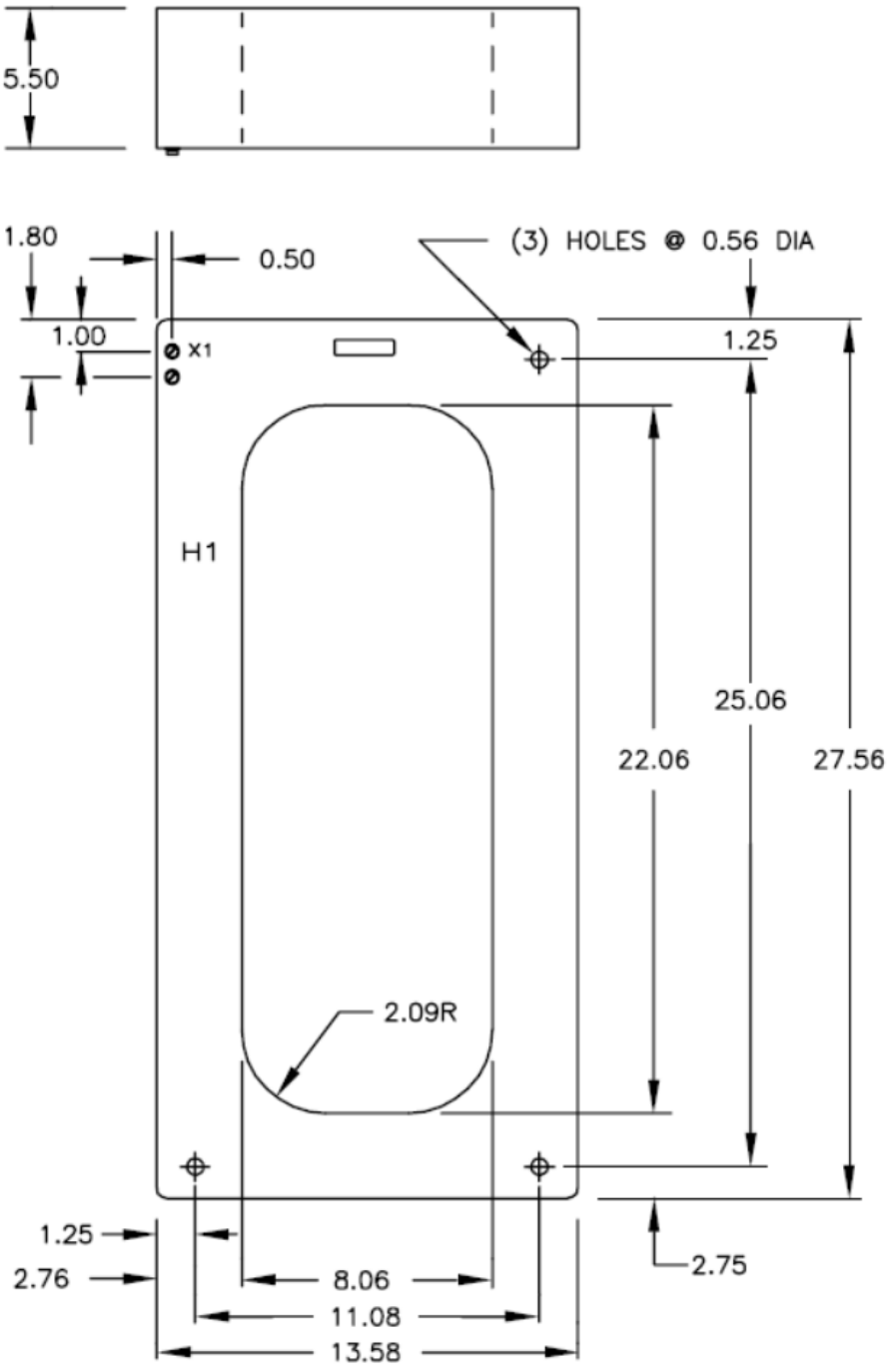
CONNECTIONS:
Secondary terminals are No. 10-32 brass studs with one flat washer, lockwasher and regular nut.

Model	593
Window Size	8.06 x 22.06
Width	13.58
Height	27.56
Depth	5.5

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	SECONDARY WINDING RESISTANCE (OHMS @ 75°C)
593-500	50:5	C10	0.013
593-750	75:5	C20	0.020
593-101	100:5	C30	0.027
593-151	150:5	C50	0.040
593-201	200:5	C50	0.054
593-301	300:5	C100	0.081
593-401	400:5	C100	0.108
593-501	500:5	C200	0.134



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA


5.50
1.80
0.50
(3) HOLES @ 0.56 DIA
1.00
X1
1.25
H1
25.06
22.06
27.56
2.09R
1.25
2.76
8.06
11.08
13.58
2.75

TTL Transformer Technologies Ltd.

Current Transformer

Model 126
rev 090624

APPLICATION:
Metering.

FREQUENCY:
50-400 Hz.

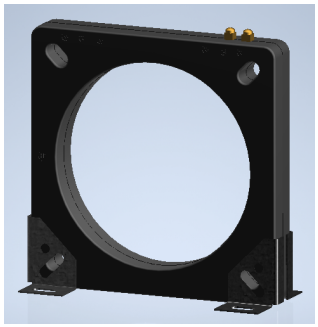
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
8.25"

APPROXIMATE WEIGHT:
5.5 lbs.

CONNECTIONS:

-Terminals are brass screws No. 10-32 UNF with one flat washer and a split lock washer
-Multi-ratios available upon request
-Mounting Kit – 59-0215 (CR) and 59-0216 (CL)



Model	126
Window Size	8.25
Width	10.48
Height	10.48
Depth	1.53

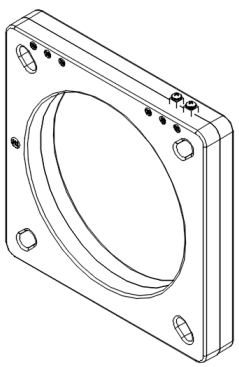
CERTIFICATIONS:

c UL us E228202

CSA C US 223647

nqa. ISO 9001 QUALITY MANAGEMENT

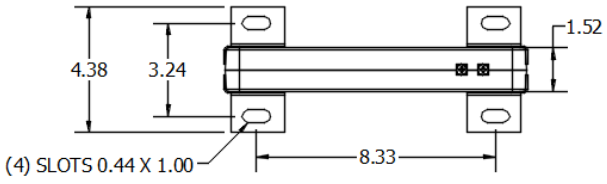
CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)	CONTINUOUS THERMAL RATING FACTOR	
			B0.1	B0.2	B0.5	BO.9	B1.8		@ 30°C	@ 55°C
126 – 401	400:5	C4	0.6	1.2	2.4	4.8	4.8	0.116	2	2
126 – 501	500:5	C7.5	0.6	0.6	1.2	2.4	2.4	0.145	2	2
126 – 601	600:5	C10	0.6	0.6	1.2	1.2	2.4	0.173	2	2
126 –751	750:5	C15	0.3	0.6	0.6	1.2	1.2	0.217	2	1.5
126 – 801	800:5	C20	0.3	0.3	0.6	0.6	1.2	0.231	2	1.5
126 – 102	1000:5	C25	0.3	0.3	0.6	0.6	1.2	0.289	2	1.5
126 – 122	1200:5	C40	0.3	0.3	0.3	0.6	0.6	0.347	1.5	1.33
126 – 152	1500:5	C50	0.3	0.3	0.3	0.3	0.6	0.434	1.5	1
126 – 162	1600:5	C50	0.3	0.3	0.3	0.3	0.6	0.462	1.5	1
126 – 202	2000:5	C60	0.3	0.3	0.3	0.3	0.3	0.578	1.33	1
126 – 252	2500:5	C75	0.3	0.3	0.3	0.3	0.3	0.904	1	0.8
126 – 302	3000:5	C90	0.3	0.3	0.3	0.3	0.3	0.722	1.33	1
126 – 322	3200:5	C95	0.3	0.3	0.3	0.3	0.3	0.770	1.33	1
126 – 352	3500:5	C100	0.3	0.3	0.3	0.3	0.3	0.842	1	0.8
126 – 402	4000:5	C125	0.3	0.3	0.3	0.3	0.3	0.962	1	0.8
126 – 502	5000:5	C140	0.3	0.3	0.3	0.3	0.3	1.203	1	0.8



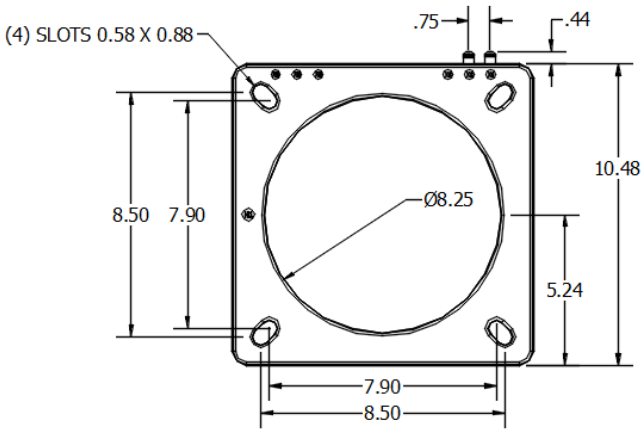
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

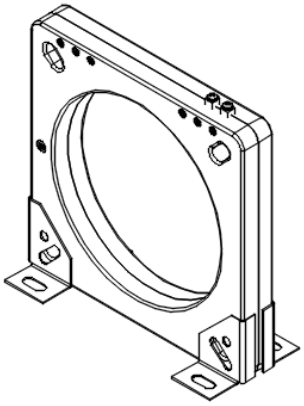
Current Transformer

Model 126
rev 090624

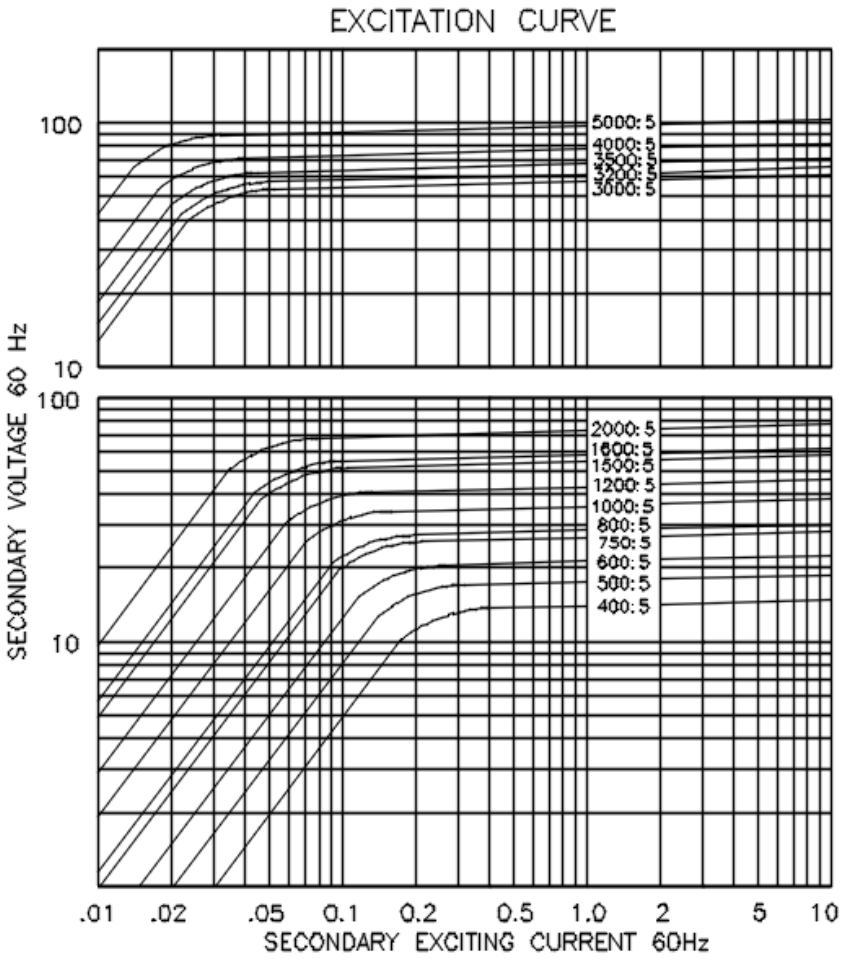


Top view shown with optional mounting kit installed





Model 126



VOLTAGE TRANSFORMERS

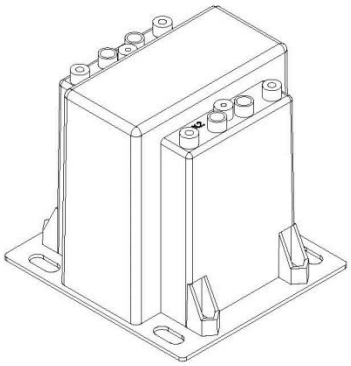
For Metering and Instrumentation

VOLTAGE TRANSFORMERS

For Metering and Instrumentation

Voltage Transformer

Model 450



FREQUENCY:
60 Hz.
STANDARD SECONDARY VOLTAGE:
120 Volts
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
ACCURACY CLASS:
0.3 W, X, M & Y, 1.2Z
@0.3 W, 0.6 X, M & Y
THERMAL RATING:
750 VA AT 30°c. AMB, 500 VA AT 55°c. amb.
APPROXIMATE WEIGHT:
25 lbs.
CONNECTIONS:
-The primary and secondary terminals are No. 10-32 screws into 3/8" deep brass inserts are fitted with one lockwasher and flat washer and are contained in a sealable terminal cover

CERTIFICATIONS:

E228202

223647

ISO 9001 QUALITY MANAGEMENT

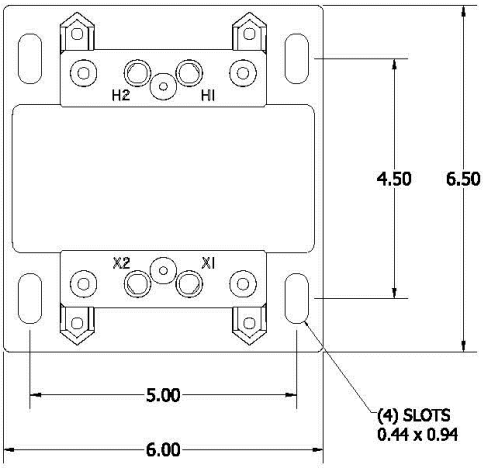
MODEL 450

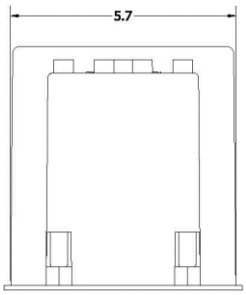
Approximate weight: 25 lbs.

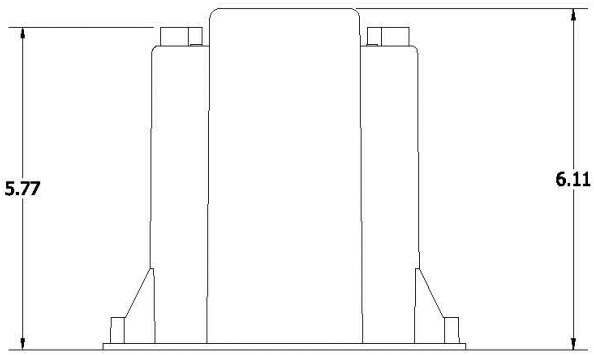
CATALOG NUMBER NOT FUSED	VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
****450-069**	69.3:120	0.58:1	15.0
****450-120**	120:120	1:1	10.0
450-208	208:120	1.73:1	8.0
450-240	240:120	2:1	8.0
450-277	277:120	2.31:1	8.0
450-288	288:120	2.4:1	6.0
450-300	300:120	2.5:1	6.0
450-346	346:120	2.88:1	5.0
450-480*	480:120	4:1	4.0
450-600*	600:120	5:1	3.0

***Models marked ** have Accuracy Class of 0.3 W, 0.6 X, M & Y – All others without asterisks are 0.3 W, X, M & Y, 1.2Z**

- Core and coil assembly is encased in a thermoplastic shell and filled with resin.
- These transformers are designed for operation line to line. They may also be operated line to ground or line to neutral at reduced voltage, (58% of rated volts).
- It is desirable to use an 8.0 Amp BBS type or equal fuse in the secondary to protect the transformer.
- With two exceptions these transformers are ANSI C57.13 group 1. Those marked * are group 2.
- Model designed specifically for 50Hz operation are available with reduced performance consult factory for details.







Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Voltage Transformer

Model 456
rev 02142024

Model	456
Width	6.00
Height	6.11
Depth	6.50

CERTIFICATIONS:

E228202

223647

ISO 9001

QUALITY MANAGEMENT

FREQUENCY:
60 Hz.

STANDARD SECONDARY VOLTAGE:
120 Volts

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

ACCURACY CLASS:
0.3 W, X & M, 0.6 Y
Those marked with ** are
0.6 W, X, M & Y

THERMAL RATING:
500 VA AT 30°C. amb., 300 VA AT 55°C. amb.

APPROXIMATE WEIGHT:
18.5 lbs.

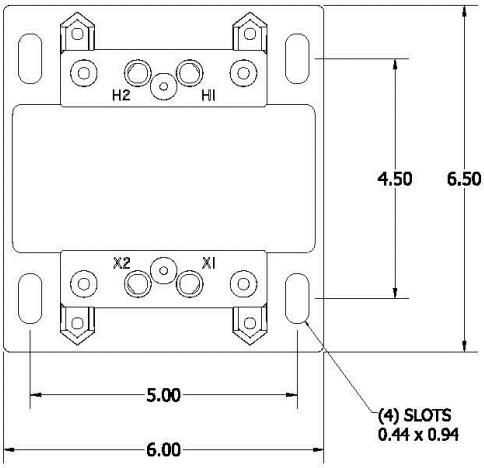
CONNECTIONS:
-Terminals are brass studs No. 10-32 with one lockwasher, flat washer, and regular nut

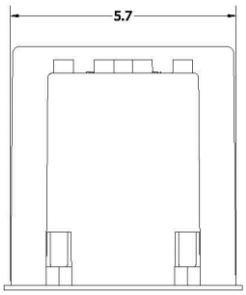
MODEL 456

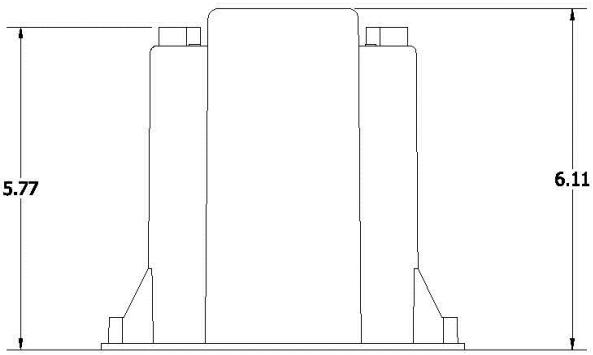
Approximate weight: 18.5 lbs.

CATALOG NUMBER NOT FUSED	VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
**456-069	69.3:120	0.58:1	12
**456-120	120:120	1:1	10
456-208	208:120	1.73:1	6
456-240	240:120	2:1	6
456-277	277:120	2.31:1	6
456-288	288:120	2.4:1	5
456-300	300:120	2.5:1	4
456-346	346:120	2.88:1	4
456-480*	480:120	4:1	3
456-600*	600:120	5:1	2

- Each transformer has two plastic terminal covers.
- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- These transformers are designed for operation line to line. They may also be operated line to ground or line to neutral at reduced voltage (58% of rated volts).
- It is desirable to use a 1.6 amp fuse in the secondary to protect the transformer.
- With two exceptions these transformers are ANSI C57.13 group 1. Those marked * are group 2.
- Models designed specifically for 50 Hz operation are avaliable with reduced performance consult factory for details.







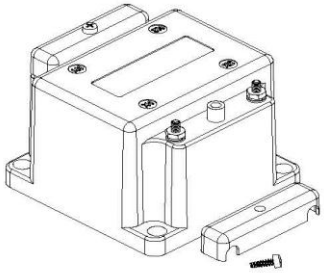
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Voltage Transformer

Model 460
rev 03262024

FREQUENCY:
SEE CHART
STANDARD SECONDARY VOLTAGE:
120 Volts @ 60Hz, 110 Volts @ 50Hz
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
ACCURACY CLASS:
0.6 W, 1.2 X at 60 Hz
THERMAL RATING:
150 VA AT 30°c. AMB, 100 VA AT 55°c. amb.
APPROXIMATE WEIGHT:
7.75 lbs.
CONNECTIONS:
-Terminals are brass studs No. 10-32 with one lockwasher, flat washer, and regular nut



Model	460
Width	4.50
Height	3.50
Depth	4.63

CERTIFICATIONS:

c UL us E228202

SA c US 223647

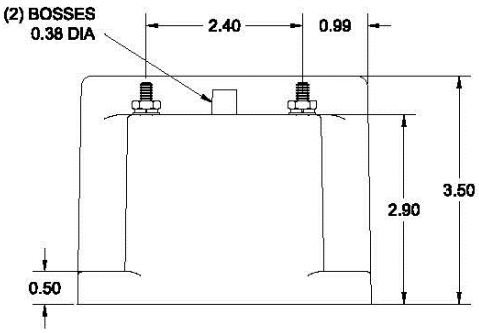
nqa. ISO 9001 QUALITY MANAGEMENT

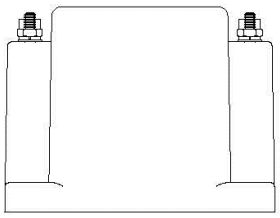
MODEL 460

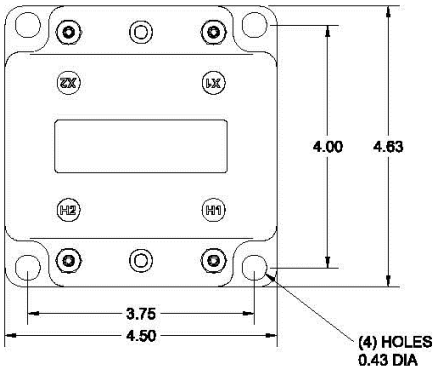
Approximate weight: 7.75 lbs.

CATALOG NUMBER NOT FUSED	VOLTAGE RATING	VOLT (TURN) RATIO	REC. PRIMARY FUSE RATING	FREQUENZY
460-069	69.3:120	0.58:1	5	60 Hz
460-120	120:120	1:1	4	60 Hz
460-208	208:120	1.73:1	2	60 Hz
460-240	240:120	2:1	2	60 Hz
460-277	277:120	2.31:1	2	60 Hz
460-288	288:120	2.4:1	1.5	60 Hz
460-300	300:120	2.5:1	1.5	60 Hz
460-346	346:120	2.88:1	1.5	60 Hz
460-480*	480:120	4:1	1	60 Hz
460-600*	600:120	5:1	0.75	60 Hz
460I-690**	690:110	6.27:1	0.5	50 Hz

- Each transformer has two plastic terminal covers.
- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- These transformers are designed for operation line to line. They may also be operated line to ground or line to neutral at reduced voltage (58% of rated volts).
- It is desirable to use a 1.6 amp fuse in the secondary to protect the transformer.
- With three exceptions these transformers are ANSI C57.13 group 1. Those marked * are group 2 and those marked ** are IEC
- Models designed specifically for 50 Hz operation are avaliable with reduced performance consult factory for details.







Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Voltage Transformer

Model 465
rev 02222024

FREQUENCY:
60 Hz.
STANDARD SECONDARY VOLTAGE:
120 Volts
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
ACCURACY CLASS:
0.6 W, 1.2 X at 60 Hz
THERMAL RATING:
150 VA AT 30°C. amb., 100 VA AT 55°C. amb.
APPROXIMATE WEIGHT:
7.75 lbs.
CONNECTIONS:
-Terminals are brass studs No. 10-32 with one lockwasher, flat washer, and regular nut

Model	465
Width	3.63
Height	4.25
Depth	3.75

CERTIFICATIONS:

E228202

223647

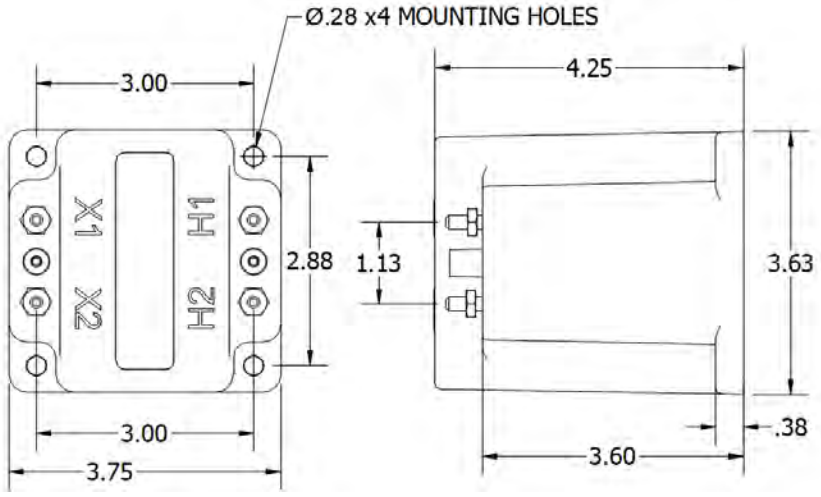
ISO 9001 QUALITY MANAGEMENT

MODEL 465

Approximate weight: 7.75 lbs.

CATALOG NUMBER NOT FUSED	VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
465-069	69.3:120	0.58:1	5
465-120	120:120	1:1	4
465-208	208:120	1.73:1	2
465-240	240:120	2:1	2
465-277	277:120	2.31:1	2
465-288	288:120	2.4:1	1.5
465-300	300:120	2.5:1	1.5
465-346	346:120	2.88:1	1.5
465-480*	480:120	4:1	1
465-600*	600:120	5:1	0.75

- Each transformer has two plastic terminal covers.
- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- These transformers are designed for operation line to line. They may also be operated line to ground or line to neutral at reduced voltage (58% of rated volts).
- It is desirable to use a 1.6 amp fuse in the secondary to protect the transformer.
- With two exceptions these transformers are ANSI C57.13 group 1. Those marked * are group 2.
- Models designed specifically for 50 Hz operation are avaliable with reduced performance consult factory for details.



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Voltage Transformer

Model 467
rev 03182021

FREQUENCY:
60 Hz.

STANDARD SECONDARY VOLTAGE:
120 Volts

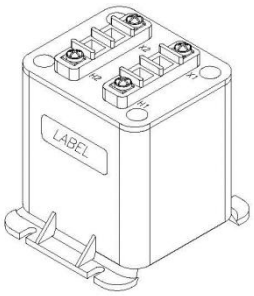
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

ACCURACY CLASS:
± 1% at all burdens up to 5 VA at 1.0 and 0.95 P.F.

THERMAL RATING:
40 VA at 30°C . amb, 27 VA at 55°C. amb

APPROXIMATE WEIGHT:
2.5 lbs.

CONNECTIONS:
-Terminals are No. 6-32 screws with one lockwasher and one flat washer



Model	467
Width	3.27
Height	3.76
Depth	3.55

CERTIFICATIONS:

E228202

223647

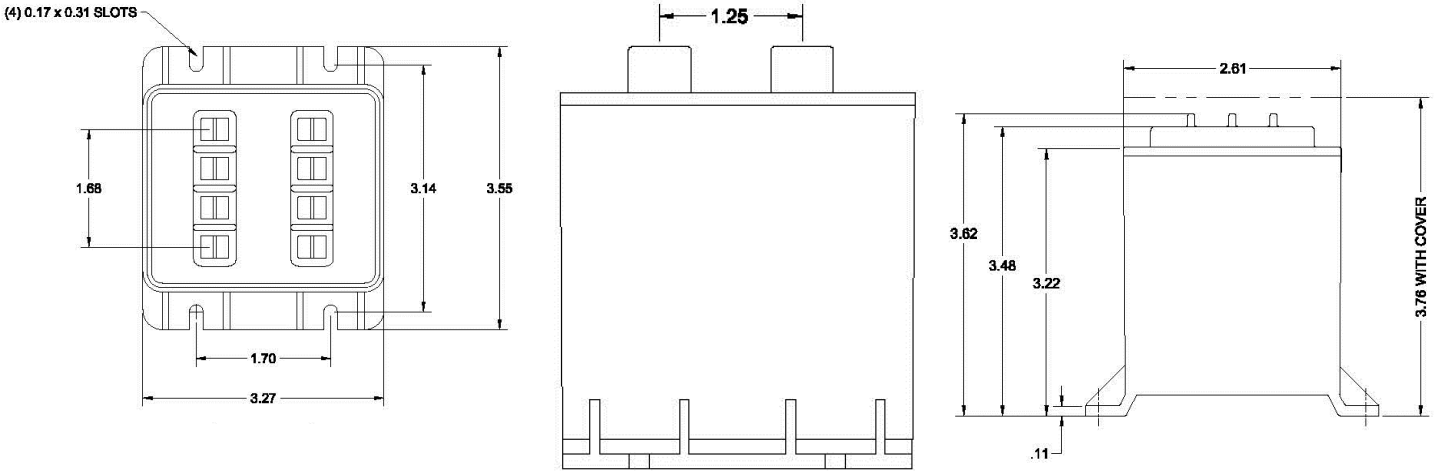
ISO 9001

QUALITY MANAGEMENT

MODEL 467
Approximate weight: 2.5 lbs.

CATALOG NUMBER	VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
467-069	69.3:120	0.58:1	1.5
467-120	120:120	1:1	1
467-208	208:120	1.73:1	0.5
467-240	240:120	2:1	0.5
467-277	277:120	2.31:1	0.5
467-288	288:120	2.4:1	0.4
467-300	300:120	2.5:1	0.4
467-346	346:120	2.88:1	0.4
467-480*	480:120	4:1	0.25
467-600*	600:120	5:1	0.25

- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- Each transformer has a clear plastic terminal cover.
- These transformers are designed for operation line to line. They may also be operated line to ground or line to neutral at reduced voltage (58% of rated volts).
- It is desirable to use a 0.40 amp fuse in the secondary to protect the transformer.
- With two exceptions these transformers are ANSI C57.13 group 1. Those marked * are group 2.
- Models designed specifically for 50Hz operation are available with reduced performance consult factory for details.



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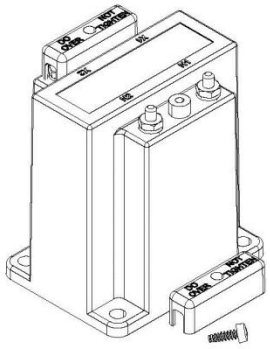
Voltage Transformer

Model 468
rev 050418

FREQUENCY:
60 Hz.
STANDARD SECONDARY VOLTAGE:
120 Volts
INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave
ACCURACY CLASS:
± 0.6% at all burdens up to 7.5 VA and ±1.5% 20 VA Burden.
THERMAL RATING:
75 VA AT 30°c . amb., 50 VA AT 55°c. amb.
APPROXIMATE WEIGHT:
4 lbs.
CONNECTIONS:
-Terminals are brass studs No. 10-32 screws with one lockwasher, one flat washer, and regular nut.



CERTIFICATIONS:

E228202

223647

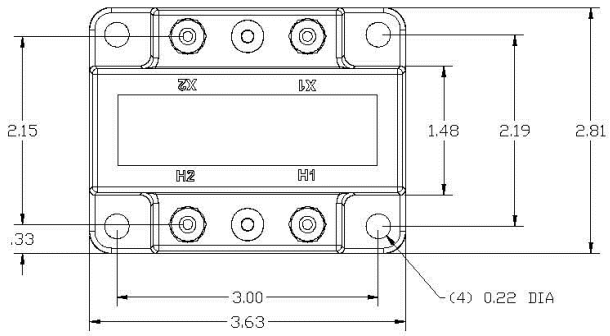
ISO 9001 QUALITY MANAGEMENT

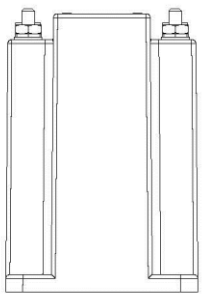
MODEL 468

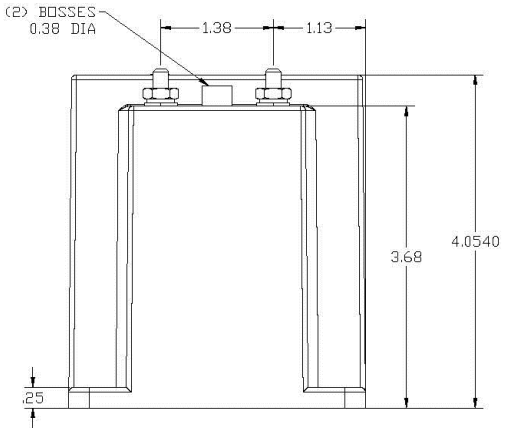
Approximate weight: 4 lbs.

CATALOG NUMBER	VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
468-069	69.3:120	0.58:1	3
468-120	120:120	1:1	2
468-208	208:120	1.73:1	1
468-240	240:120	2:1	1
468-277	277:120	2.31:1	1
468-288	288:120	2.4:1	0.75
468-300	300:120	2.5:1	0.75
468-346	346:120	2.88:1	0.75
468-480*	480:120	4:1	0.50
468-600*	600:120	5:1	0.40

- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- Each transformer has two plastic terminal covers.
- These transformers are designed for operation line to line. They may also be operated line to ground or line to neutral at reduced voltage (58% of rated volts).
- It is desirable to use a 0.80 amp fuse in the secondary to protect the transformer.
- With two exceptions these transformers are ANSI C57. 13 group 1. Those marked * are group 2.







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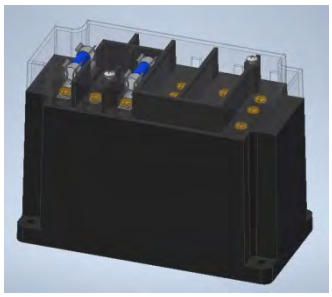
3 Phase
Voltage Transformer

Model 2VT460-600MR
rev 02222024

FREQUENCY:
60 Hz.
STANDARD SECONDARY VOLTAGE:
120 Volts Line-to-2X1
ACCURACY CLASS: (Per Phase)
± 1% at all burdens up to 2 VA
INSULATION LEVEL
600 Volts, 10 kV BIL. full wave
THERMAL RATING: (Per Phase)
25 VA at 30°C amb.
15 VA at 55°C. amb.
APPROXIMATE WEIGHT:
15.5 lbs.



CERTIFICATIONS:

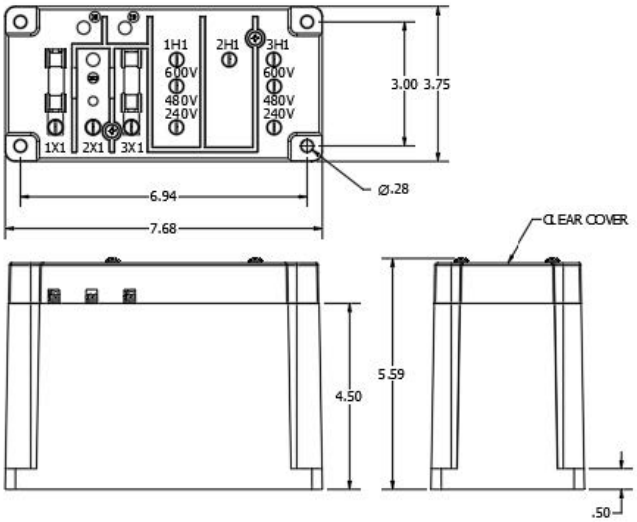
E228202

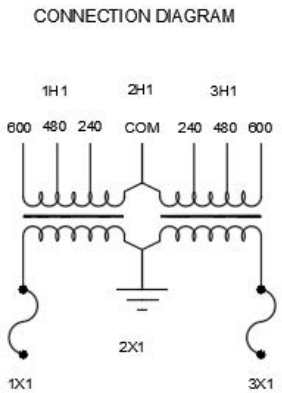
223647

ISO 9001 QUALITY MANAGEMENT

- The model 2VT460-600MR is an assembly of two Multi-tapped transformers in one case.
- The primary and secondary terminals are No. 6-32 screws and fitted with one lock washer and flat washer.
- The core and coil assembly are encased in a thermoplastic shell and filled with resin.
- Spacing between live parts per U.L. 1558.
- The transformer has three taps 600 "5 to 1", 480 "4 to 1", 240 "2 to 1" All to 120 vac
- The transformer has a clear plastic terminal cover.
- Taps are changed by moving three wires "see picture"
- A 0.40 amp fuse in recommend to protect the transformer

MODEL 2VT460-600MR		TAPS		
Catalog Number	**Connections**	240	480	600
2VT460-600MR	Screws			
2VT460-600MR-FF	Secondary Fuses			
2VT460-600MR-CCC-X1	Secondary Clips Only	2 to 1	4 to 1	5 to 1



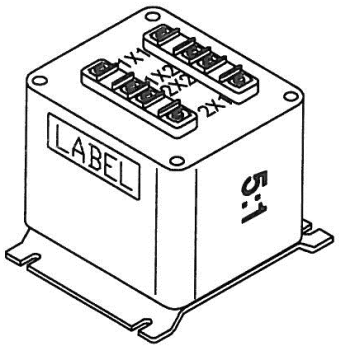


- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- Transformers are designed for open delta connection.

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Voltage Transformer

Model 2VT469



FREQUENCY:
60 Hz.

STANDARD SECONDARY VOLTAGE:
120 Volts

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

ACCURACY CLASS:
± 1% at all burdens up to 5 VA at 1.0 and 0.95 P.F.

THERMAL RATING:
40 VA AT 30°c . amb
27 VA AT 55°c. amb.

APPROXIMATE WEIGHT:
4.5 lbs.

CONNECTIONS:
Terminals are No. 6-32 screws with one lockwasher and one flat washer

CERTIFICATIONS:

E228202

223647

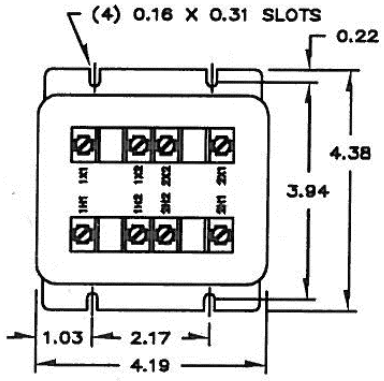
ISO 9001 QUALITY MANAGEMENT

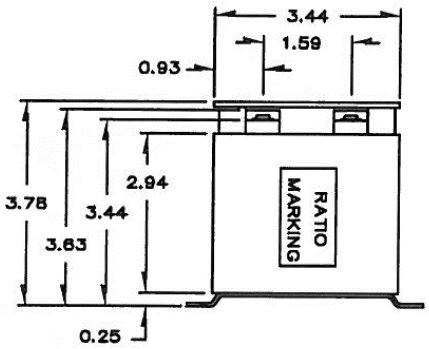
MODEL 2VT469

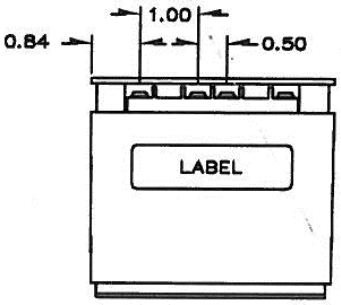
Approximate weight: 4.5 lbs.

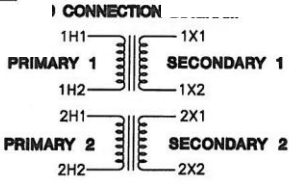
CATALOG NUMBER	VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
2VT469-069	69.3:120	0.58:1	1.5
2VT469-120	120:120	1:1	1
2VT469-208	208:120	1.73:1	0.5
2VT469-240	240:120	2:1	0.5
2VT469-277	277:120	2.31:1	0.5
2VT469-288	288:120	2.4:1	0.4
2VT469-300	300:120	2.5:1	0.4
2VT469-346	346:120	2.88:1	0.4
2VT469-480*	480:120	4:1	0.25
2VT469-600*	600:120	5:1	0.25

- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- A clear plastic terminal cover is provided with each unit.
- These transformers are designed for operation line to line. They may also be operated line to ground or line to neutral at reduced voltage, (58% of rated volts).
- It is desirable to use a 0.40 amp fuse in the secondary to protect the transformer.
- With two exceptions these transformers are ANSI C57.13 group 1. Those marked * are group 2.
- Model 469 is an assembly of two transformers in one case with all terminals accessible, for open delta connection.









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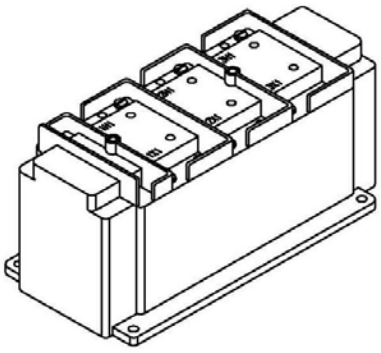
3 Phase Voltage Transformer

Model 3VTL460



FREQUENCY:
60 Hz.
STANDARD SECONDARY VOLTAGE:
120 Volts Line-to-Line
ACCURACY CLASS: **(Per Phase)**
0.6 W, 1.2 X at 60 Hz
INSULATION LEVEL:
600 Volts, 10 kV BIL. full wave
THERMAL RATING: **(Per Phase)**
150 VA at 30°C amb.
100 VA at 55°C. amb.
APPROXIMATE WEIGHT:
24 lbs.

CERTIFICATIONS:

E228202

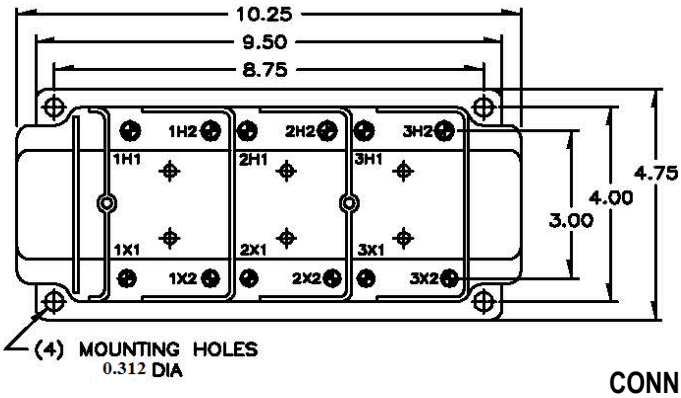
223647

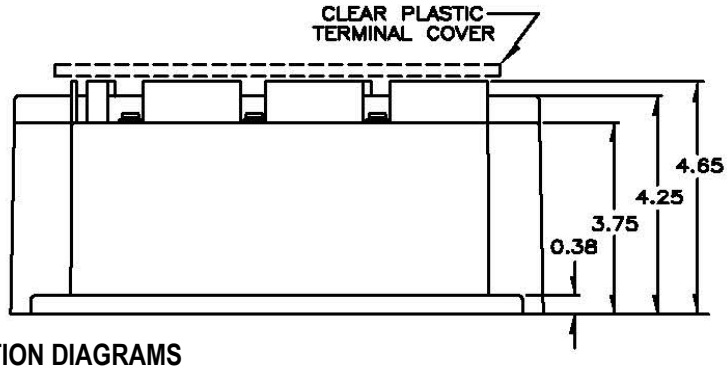
ISO 9001 QUALITY MANAGEMENT

- The model 3VTL460 is an assembly of three transformers in one case.
- The primary and secondary terminals are No. 8-32 screws into ½" deep brass inserts fitted with one lockwasher and flat washer.
- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- These transformers are designed for operation line to line. All terminals are accessible.
- Spacing between live parts per U.L. 1558.
- The transformer has a clear plastic terminal cover.

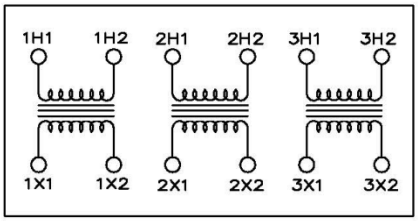
MODEL 3VTL460
Approximate weight: 24 lbs.

CATALOG NUMBER	LINE TO LINE VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
3VTL460-120	120:120	1:1	4.0
3VTL460-208	208:120	1.73:1	2.0
3VTL460-240	240:120	2:1	2.0
3VTL460-288	288:120	2.4:1	1.5
3VTL460-480	480:120	4:1	1.0
3VTL460-600	600:120	5:1	0.75





CONNECTION DIAGRAMS



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3 Phase Voltage Transformer

Model 3VTL460MR
rev 03182021

FREQUENCY:
60 Hz.
STANDARD SECONDARY VOLTAGE:
120 Volts Line-to-neutral
ACCURACY CLASS: (Per Phase)
± 1% at all burdens up to 2 VA
INSULATION LEVEL
600 Volts, 10 kV BIL. full wave
THERMAL RATING: (Per Phase)
25 VA at 30°C amb.
15 VA at 55°C. amb.
APPROXIMATE WEIGHT:
8 lbs.

CERTIFICATIONS:

E228202

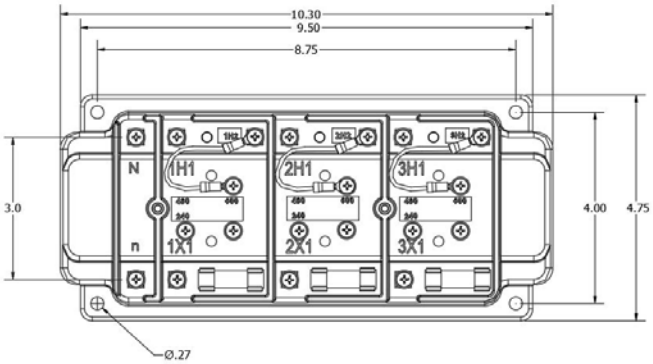
223647

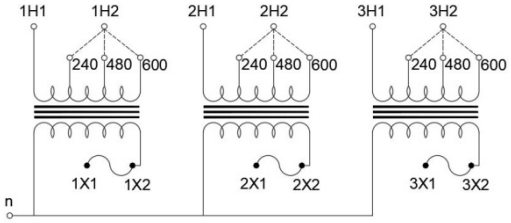
ISO 9001 QUALITY MANAGEMENT

- The model 3VTL460MR is an assembly of three Multi-tapped transformers in one case.
- The primary and secondary terminals are No. 6-32 screws and fitted with one lock washer and flat washer.
- The core and coil assembly are encased ina thermoplastic shell and filled with resin.
- These transformers are designed for operation line to neutral.
- Spacing between live parts per U.L. 1558.
- The transformer has three taps 600 “5 to 1”, 480 “4 to 1”, 240 “2 to 1” All to 120 vac
- The transformer has a clear plastic terminal cover.
- Only ground N/n terminals if source is 3 phase, 4 wire effectively grounded.
- Taps are changed by moving three wires “seepicture”
- A 0.40 amp fuse in recommend to protect the transformer

MODEL 3VTL460-MR		TAPS		
Catalog Number	**Connections**	240	480	600
3VTL460-600MR	Screws	2 to 1	4 to 1	5 to 1
3VTL460-600MR-FFF	Fuses			
3VTL460-600MR-CCC	Clips only			
3VTL460-600MR-CCC-X1	Secondary Clips Only			

CONNECTION DIAGRAMS





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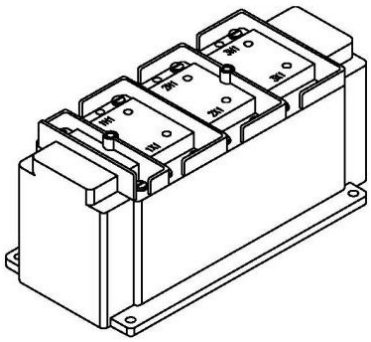
3 Phase Voltage Transformer

Model 3VTN460
rev 061319



CERTIFICATIONS:

E228202

223647

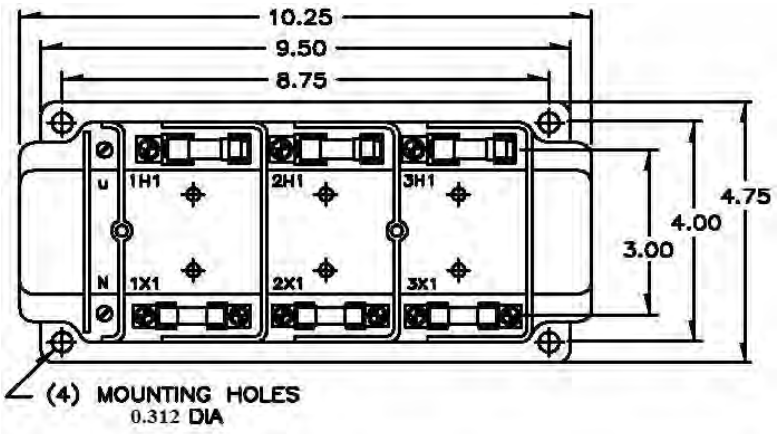
ISO 9001 QUALITY MANAGEMENT

FREQUENCY:
60 Hz.
STANDARD SECONDARY VOLTAGE:
120 Volts Line-to-neutral
ACCURACY CLASS: (Per Phase)
0.6 W, 1.2 X at 60 Hz.
INSULATION LEVEL:
600 Volts, 10 kV BIL. full wave
THERMAL RATING: (Per Phase)
150 VA at 30°C amb.
100 VA at 55°C. amb.
APPROXIMATE WEIGHT:
24 lbs.

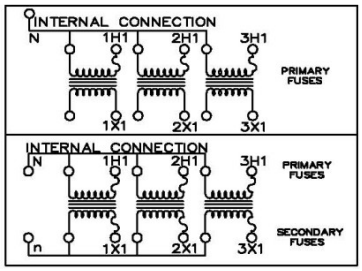
- The model 3VTN460 is an assembly of three transformers in one case.
- The primary and secondary terminals are No. 6-32 screws and fitted with one lockwasher and flat washer.
- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- These transformers are designed for operation line to neutral.
- Spacing between live parts per U.L. 1558.
- It is desirable to use a 1.6 amp BBS type or equal fuse in the secondary to protect the transformer.
- The transformer has a clear plastic terminal cover.
- Only ground N/n terminals if source is 3 phase, 4 wire effectively grounded.

MODEL 3VTN460
Approximate weight: 24 lbs.

CATALOG NUMBER		LINE TO NEUTRAL VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
PRIMARY FUSES ONLY	PRIMARY AND SECONDARY FUSES			
3VTN460-069*	3VTN460-069FF*	69.3:120	0.58:1	5.0
3VTN460-120F*	3VTN460-120FF*	120:120	1:1	4.0
3VTN460-240F*	3VTN460-240FF*	240:120	2:1	2.0
3VTN460-277F*	3VTN460-277FF*	277:120	2.31:1	2.0
3VTN460-300F*	3VTN460-300FF*	300:120	2.5:1	1.5
3VTN460-346F*	3VTN460-346FF*	346:120	2.88:1	1.5



CONNECTION DIAGRAMS



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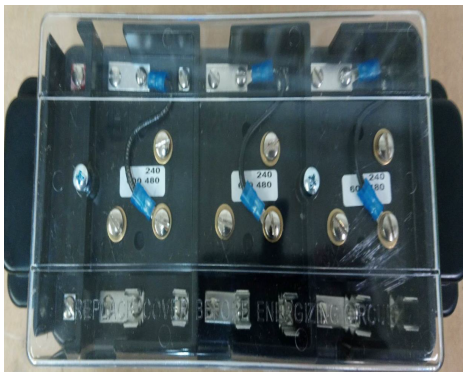
3 Phase Voltage Transformer

Model 3VTN460MR
rev 08122024



CERTIFICATIONS:

E228202

223647

ISO 9001 QUALITY MANAGEMENT

FREQUENCY:
60 Hz.

STANDARD SECONDARY VOLTAGE:
120 Volts Line-to-neutral

ACCURACY CLASS: (Per Phase)
± 1% at all burdens up to 2 VA

INSULATION LEVEL
600 Volts, 10 kV BIL. full wave

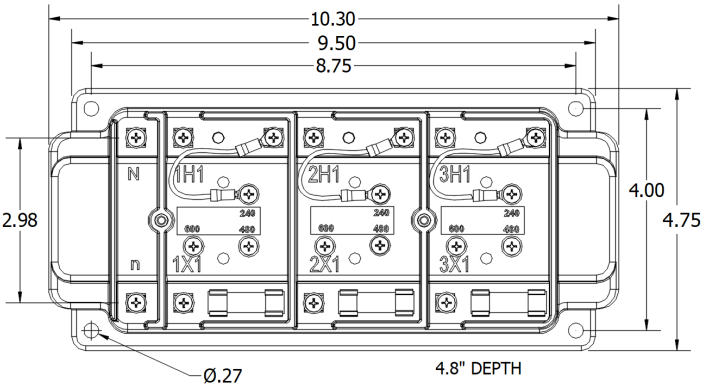
THERMAL RATING: (Per Phase)
40 VA at 30°C amb.
25 VA at 50°C amb.

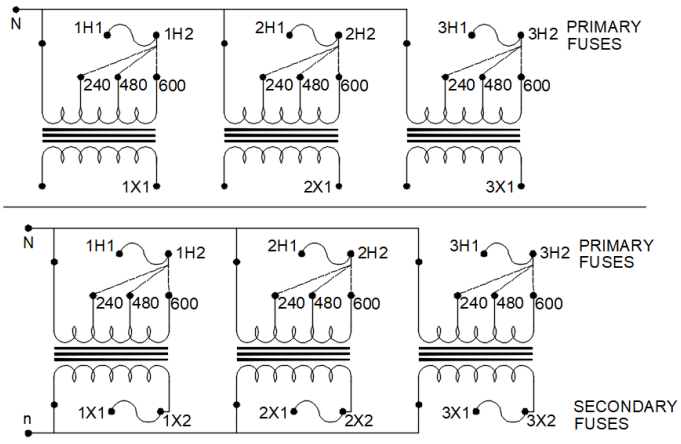
APPROXIMATE WEIGHT:
8 lbs.

- The model 3VTN460MR is an assembly of three Multi-tapped transformers in one case.
- The primary and secondary terminals are No. 6-32 screws and fitted with one lock washer and flat washer.
- The core and coil assembly are encased in a thermoplastic shell and filled with resin.
- These transformers are designed for operation line to neutral.
- Spacing between live parts per U.L. 1558.
- The transformer has three taps 600 “5 to 1”, 480 “4 to 1”, 240 “2 to 1” All to 120 vac
- The transformer has a clear plastic terminal cover.
- Only ground N/n terminals if source is 3 phase, 4 wire effectively grounded.
- Taps are changed by moving three wires “see picture”
- It is desirable to use a 1.6 amp BBS type or equal fuse in the secondary to protect the transformer.
- A 0.40 amp fuse is recommended to protect the transformer's primary
- A 1.6 amp fuse is recommended to protect the transformer's secondary

MODEL 3VTN460-MR		TAPS		
Catalog Number	**Connections**	240	480	600
3VTN460-600MR	Screws	2 to 1	4 to 1	5 to 1
3VTN460-600MR-FFF	Fuses			
3VTN460-600MR-CCC	Clips only			
3VTN460-600MR-CCC-X1	Secondary Clips Only			

CONNECTION DIAGRAMS





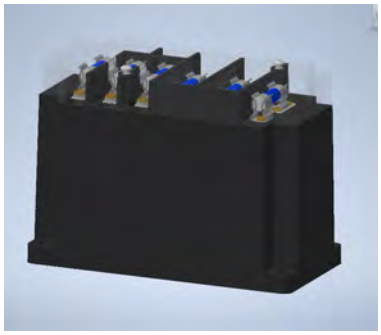
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

3 Phase
Voltage Transformer

Model 3VTN468
rev 08122024

FREQUENCY:
60 Hz.
STANDARD SECONDARY VOLTAGE:
120 Volts
ACCURACY CLASS: (Per Phase)
± 0.6% at 7.5 VA
INSULATION LEVEL
600 Volts, 10 kV BIL. full wave
THERMAL RATING: (Per Phase)
75 VA at 30°C amb.
50 VA at 55°C. amb.
APPROXIMATE WEIGHT:
8 lbs.



CERTIFICATIONS:

c UL us
E228202

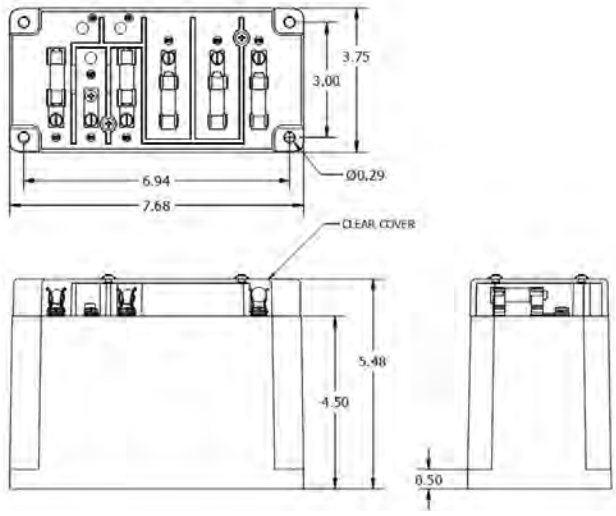
c SA us
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

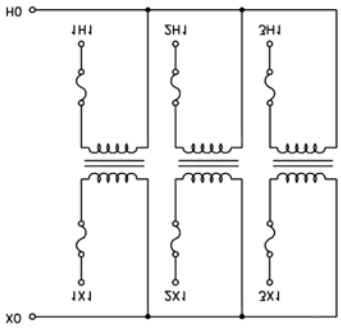
- The primary and secondary terminals are No. 8-32 screws and fitted with one lock washer and flat washer.
- The core and coil assembly are encased in a thermoplastic shell and filled with resin.
- These transformers are designed for application to Y connected systems.
- Models designed specifically for 50Hz operation are available with reduced performance. Consult factory for details.
- Only ground XO/HO terminals of source is 3 phase, 4 wire effectively grounded.
- Primary fuses are class CC rejection type
- It is desirable to use a 0.80 amp BBS type or equal fuse in the secondary to protect the transformer.
- Supplied with a clear plastic terminal cover.

MODEL 3VTN468

CATALOG NUMBERS					
NOT FUSED	PRIMARY FUSES ONLY	PRIMARY AND SECONDARY FUSES	LINE/NEUTRAL VOLTAGE RATING	TURNS RATION	REC. PRIMARY FUSE RATING
3VTN468-069	3VTN468-069F	3VTN468-069FF	69.3:120	0.58:1	3.0
3VTN468-120	3VTN468-120F	3VTN468-120FF	120:120	1:1	2.0
3VTN468-208	3VTN468-208F	3VTN468-208FF	208:120	1.73:1	1.0
3VTN468-240	3VTN468-240F	3VTN468-240FF	240:120	2:1	1.0
3VTN468-277	3VTN468-277F	3VTN468-277FF	277:120	2.31:1	1.0
3VTN468-288	3VTN468-288F	3VTN468-288FF	288:120	2.4:1	0.75
3VTN468-300	3VTN468-300F	3VTN468-300FF	300:120	2.5:1	0.75
3VTN468-346	3VTN468-346F	3VTN468-346FF	346:120	2.88:1	0.75



CONNECTION DIAGRAM



- The core and coil assembly is encased in a thermoplastic shell and filled with resin.

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

CURRENT TRANSFORMERS

For Metering and Instrumentation

600V Current Transformers
ANSI Rated Bushing Type

TTL Transformer Technologies Ltd.

Current Transformer

Model 780
rev 090117

APPLICATION:
Relaying and Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

CONTINUOUS THERMAL RATING FACTOR:
50:5 thru 1200:5 2.0 at 30°C amb, 1.5 at 55°C amb,
1500:5 thru 4000:5 1.5 at 30ºC amb., 1.33 at 55ºC amb.

WINDOW DIAMETER:
6.50”

APPROXIMATE WEIGHT:
30 lbs.

CONNECTIONS:
-Secondary terminals are No. 10-32 brass screws with one flat washer, lockwasher and regular nut.

Model	780
Window Size	6.50
Width	9.88
Height	9.88
Depth	3.38

CERTIFICATIONS:

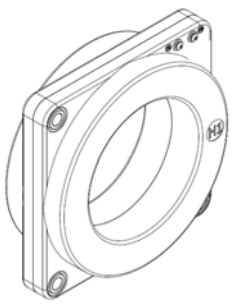
c UL us
E228202

CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 780
Window Diameter 6.50”
Approximate weight: 30 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ					SECONDARY WINDING RESISTANCE (OHMS @ 75°C)
			B0.1	B0.2	B0.5	BO.9	B1.8	
780-500	50:5	-	4.8	-	-	-	-	0.008
780-750	75:5	C10	4.8	4.8	-	-	-	0.016
780-101	100:5	C10	1.2	2.4	4.8	-	-	0.027
780-151	150:5	C20	0.6	1.2	2.4	2.4	4.8	0.042
780-201	200:5	C20	0.6	0.6	1.2	2.4	4.8	0.054
780-251	250:5	C20	0.6	0.6	0.6	1.2	2.4	0.067
780-301	300:5	C20	0.3	0.6	0.6	1.2	2.4	0.097
780-401	400:5	C50	0.3	0.3	0.6	0.6	1.2	0.129
780-501	500:5	C50	0.3	0.3	0.3	0.6	0.6	0.161
780-601	600:5	C100	0.3	0.3	0.3	0.3	0.6	0.193
780-751	750:5	C100	0.3	0.3	0.3	0.3	0.6	0.242
780-801	800:5	C100	0.3	0.3	0.3	0.3	0.3	0.258
780-102	1000:5	C100	0.3	0.3	0.3	0.3	0.3	0.322
780-122	1200:5	C200	0.3	0.3	0.3	0.3	0.3	0.387
780-152	1500:5	C200	0.3	0.3	0.3	0.3	0.3	0.608
780-162	1600:5	C200	0.3	0.3	0.3	0.3	0.3	0.649
780-202	2000:5	C200	0.3	0.3	0.3	0.3	0.3	0.588
780-252	2500:5	C200	0.3	0.3	0.3	0.3	0.3	0.735
780-302	3000:5	C200	0.3	0.3	0.3	0.3	0.3	1.105
780-322	3200:5	C200	0.3	0.3	0.3	0.3	0.3	0.859
780-352	3500:5	C200	0.3	0.3	0.3	0.3	0.3	0.940
780-402	4000:5	C200	0.3	0.3	0.3	0.3	0.3	1.074
780-502	5000:5	C200	0.3	0.3	0.3	0.3	0.3	1.858

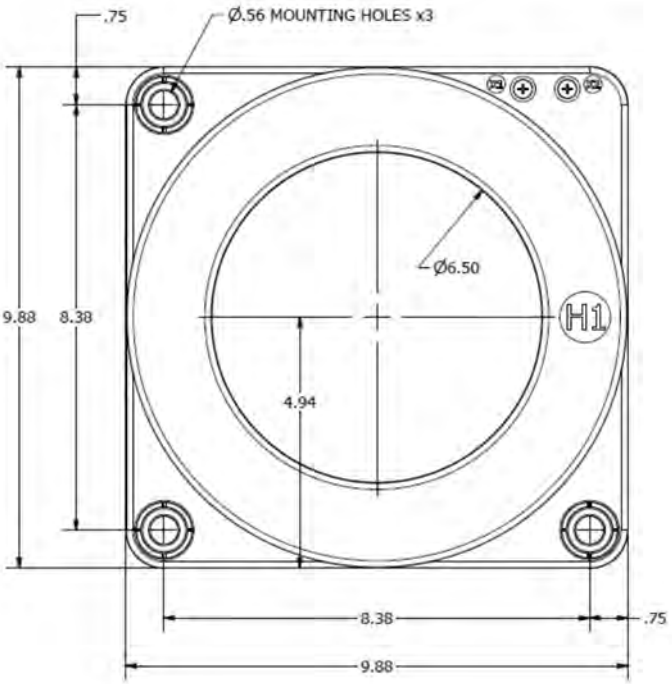


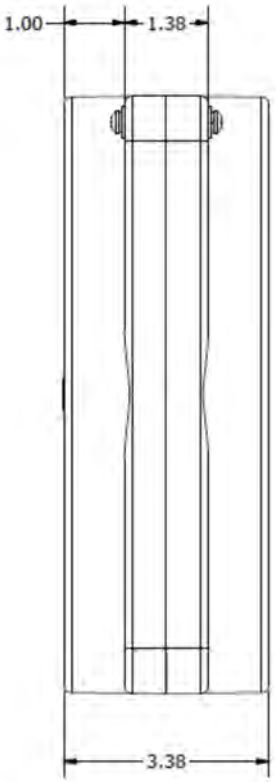
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

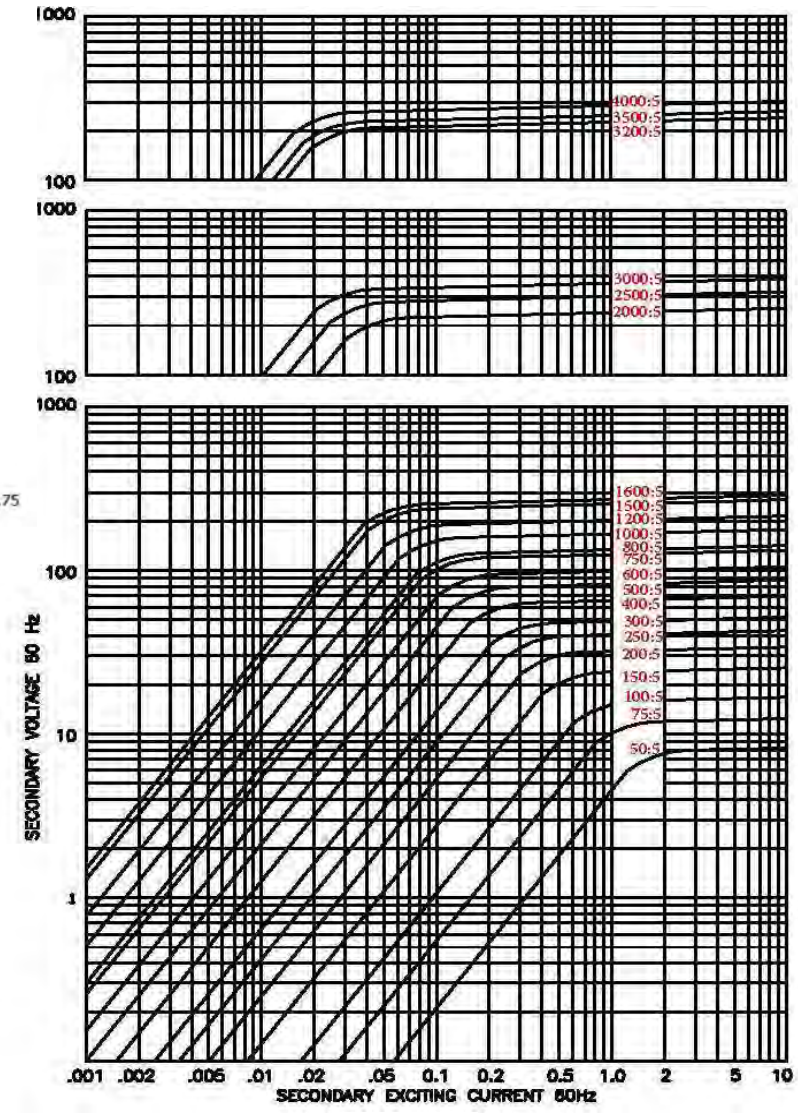
Current Transformer

Model 780
rev 090117





EXCITATION CURVES



Model 780

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 781MR

APPLICATION:
Relaying and metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

WINDOW DIAMETER:
6.5”

APPROXIMATE WEIGHT:
31 lbs.

CONTINUOUS THERMAL CURRENT RATING FACTOR:
2.0 at 30°c amb., 1.5 at 55°c amb

CONNECTIONS:
-Secondary terminals are No. 10-32 brass screws with one flat washer, lockwasher, and regular nut

Model	781MR
Window Size	6.50
Width	9.88
Height	9.88
Depth	3.38

CERTIFICATIONS:

E228202

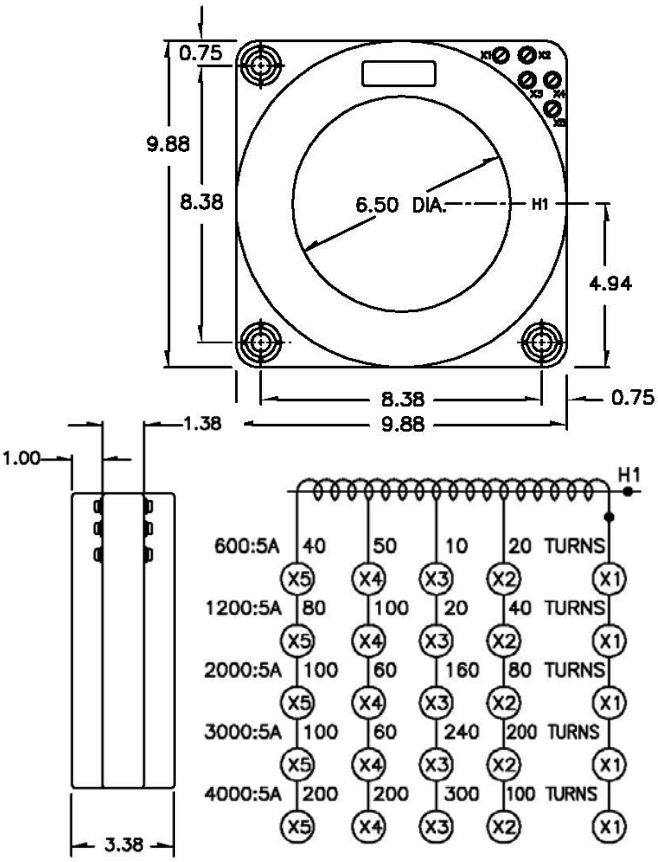
223647

ISO 9001

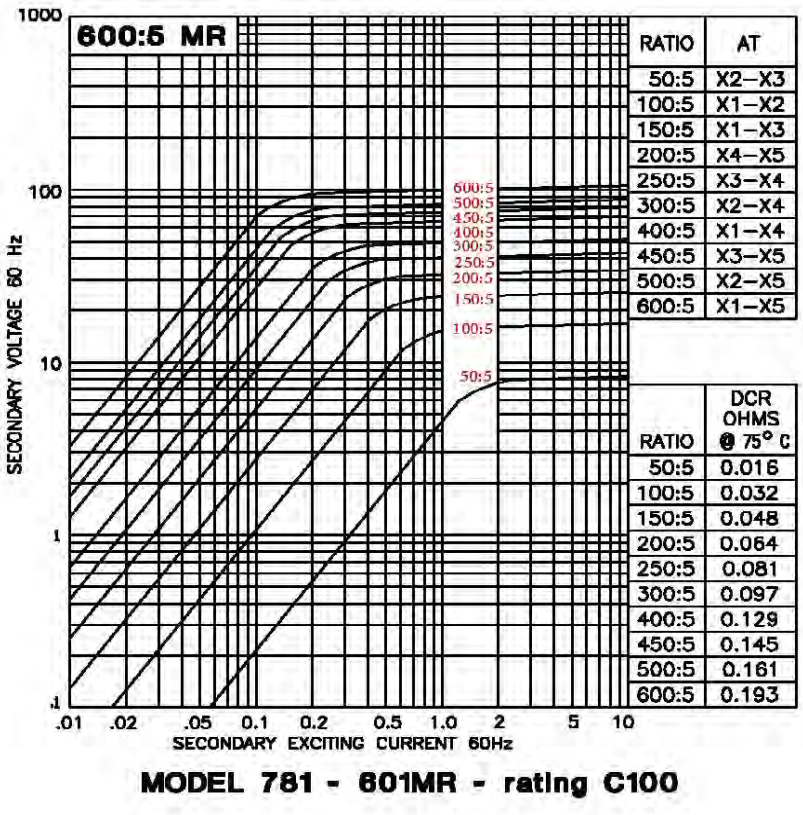
QUALITY MANAGEMENT

MODEL 781MR
Window Diameter 6.5”
Approximate weight: 31 lbs.

Catalog Number	Relay Class	ANSI Metering Class at 60Hz	Continuous Thermal @ 30°C	Continuous Thermal @ 50°C
781-601MR	C100	0.3 B0.5	2.0	1.5
781-122MR	C200	0.3 B1.8	2.0	1.5
781-202MR	C200	0.3 B1.8	2.0	1.5
781-302MR	C200	0.3 B1.8	1.33	1.33
781-402MR	C200	0.3 B1.8	1.33	0.8



EXCITATION CURVE



MODEL 781 - 601MR - rating C100

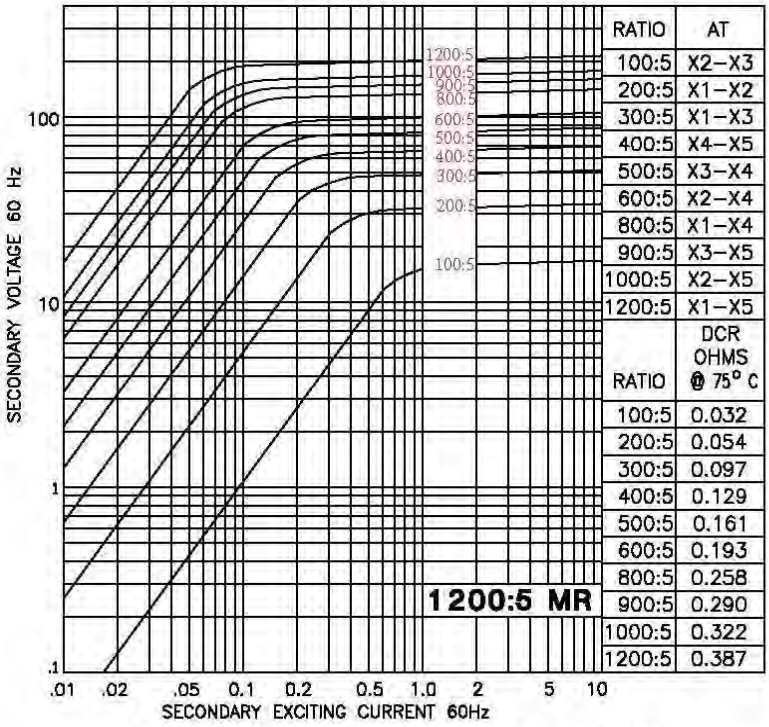
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 781MR

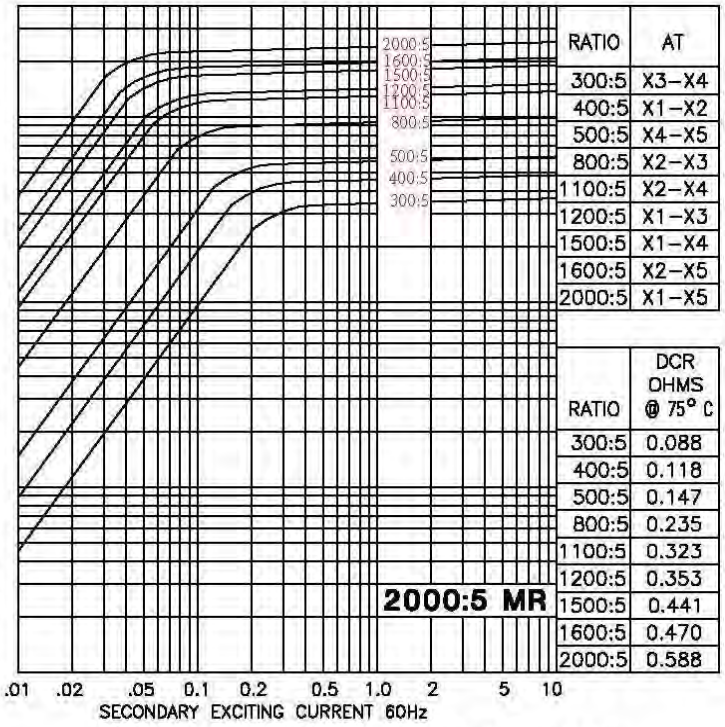
EXCITATION CURVES



RATIO	AT
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @ 75° C
100:5	0.032
200:5	0.054
300:5	0.097
400:5	0.129
500:5	0.161
600:5	0.193
800:5	0.258
900:5	0.290
1000:5	0.322
1200:5	0.387

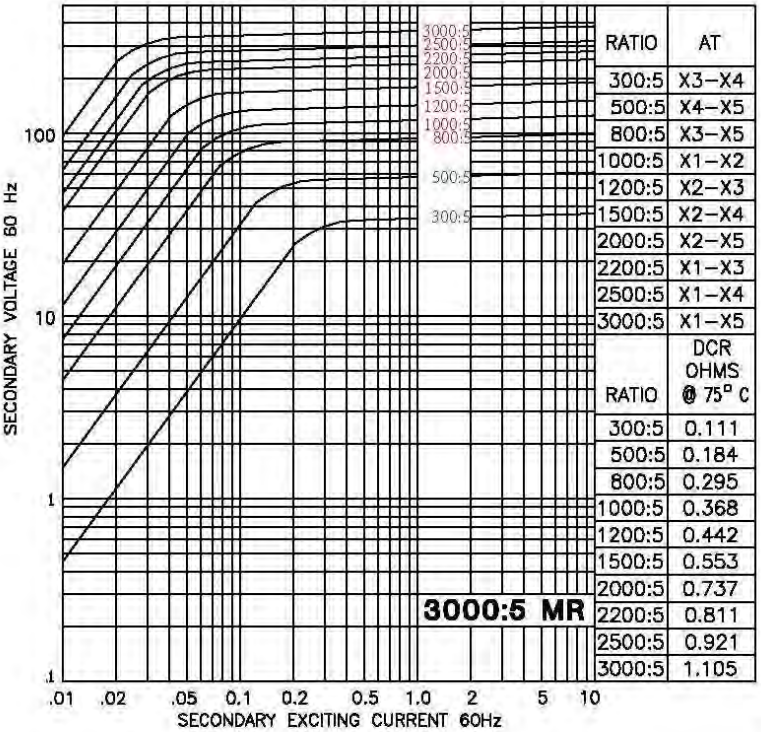
MODEL 781 - 122MR - rating C200



RATIO	AT
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @ 75° C
300:5	0.088
400:5	0.118
500:5	0.147
800:5	0.235
1100:5	0.323
1200:5	0.353
1500:5	0.441
1600:5	0.470
2000:5	0.588

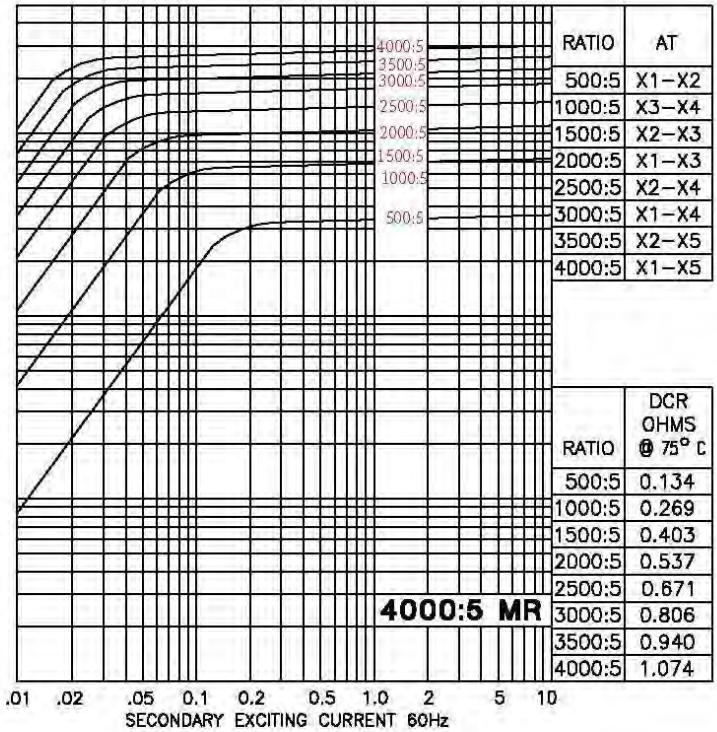
MODEL 781 - 202MR - rating C200



RATIO	AT
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @ 75° C
300:5	0.111
500:5	0.184
800:5	0.295
1000:5	0.368
1200:5	0.442
1500:5	0.553
2000:5	0.737
2200:5	0.811
2500:5	0.921
3000:5	1.105

MODEL 781 - 302MR - rating C200



RATIO	AT
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @ 75° C
500:5	0.134
1000:5	0.269
1500:5	0.403
2000:5	0.537
2500:5	0.671
3000:5	0.806
3500:5	0.940
4000:5	1.074

MODEL 781 - 402MR - rating C200

TTL Transformer Technologies Ltd.

Current Transformer

Model 785

APPLICATION:
Relaying and Metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. full wave

CONTINOUS THERMAL CURRENT RATING FACTOR:
50:5 thru 1200:5 2.0 at 30°C amb., 1.5 at 55°C amb.
1500:5 thru 2500:5 1.5 at 30°C amb., 1.33 at 55°C amb.
3000:5 thru 4000:5 1.33 at 30°C amb., 1.0 at 55°C amb.

WINDOW DIAMETER:
6.5”

APPROXIMATE WEIGHT:
58 lbs.

CONNECTIONS:
-Secondary terminals are No. 10-32 brass screws with one flat washer, lockwasher, and regular nut.

Model	785
Window Size	6.50
Width	9.88
Height	9.88
Depth	6.75

CERTIFICATIONS:

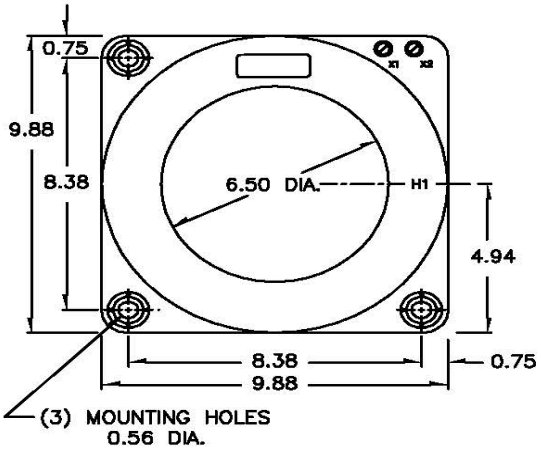
c UL us
E228202

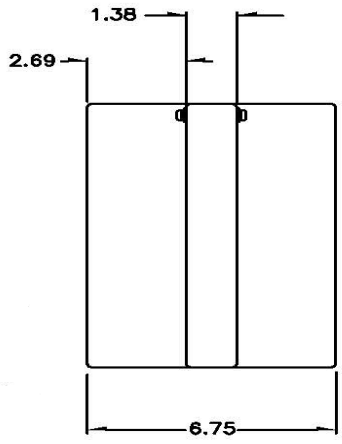
CSA C US
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 785
Window Diameter 6.5”
Approximate weight: 58 lbs.

CATALOG NUMBER	CURRENT RATIO	RELAY CLASS	ANSI METERING CLASS AT 60 HZ				
			B0.1	B0.2	B0.5	BO.9	B1.8
785-500	50:5	C10	2.4	4.8	-	-	-
785-750	75:5	C20	1.2	1.2	4.8	-	-
785-101	100:5	C20	0.6	1.2	2.4	-	-
785-151	150:5	C50	0.6	0.6	1.2	2.4	-
785-201	200:5	C50	0.3	0.3	0.6	1.2	2.4
785-251	250:5	C50	0.3	0.3	0.6	1.2	2.4
785-301	300:5	C100	0.3	0.3	0.3	0.6	1.2
785-401	400:5	C100	0.3	0.3	0.3	0.6	1.2
785-501	500:5	C100	0.3	0.3	0.3	0.3	0.6
785-601	600:5	C200	0.3	0.3	0.3	0.3	0.6
785-751	750:5	C200	0.3	0.3	0.3	0.3	0.3
785-801	800:5	C200	0.3	0.3	0.3	0.3	0.3
785-102	1000:5	C200	0.3	0.3	0.3	0.3	0.3
785-122	1200:5	C400	0.3	0.3	0.3	0.3	0.3
785-152	1500:5	C400	0.3	0.3	0.3	0.3	0.3
785-162	1600:5	C400	0.3	0.3	0.3	0.3	0.3
785-202	2000:5	C400	0.3	0.3	0.3	0.3	0.3
785-252	2500:5	C400	0.3	0.3	0.3	0.3	0.3
785-302	3000:5	C400	0.3	0.3	0.3	0.3	0.3
785-402	4000:5	C400	0.3	0.3	0.3	0.3	0.3





Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model 786MR
rev 03182021

APPLICATION:
Relaying and metering

FREQUENCY:
50-400 Hz.

INSULATION LEVEL:
600 Volts. 10 kV BIL. Full wave

CONTINUOUS THERMAL CURRENT RATING FACTOR:
2.0 at 30°c amb., 1.5 at 55°c amb

WINDOW DIAMETER:
6.5”

APPROXIMATE WEIGHT:
58lbs.

CONNECTIONS:
-Secondary terminals are brass studs No. 10-32 with one flat washer, lockwasher, and regular nut

Model	786MR
Window Size	6.50
Width	9.88
Height	9.88
Depth	6.75

CERTIFICATIONS:

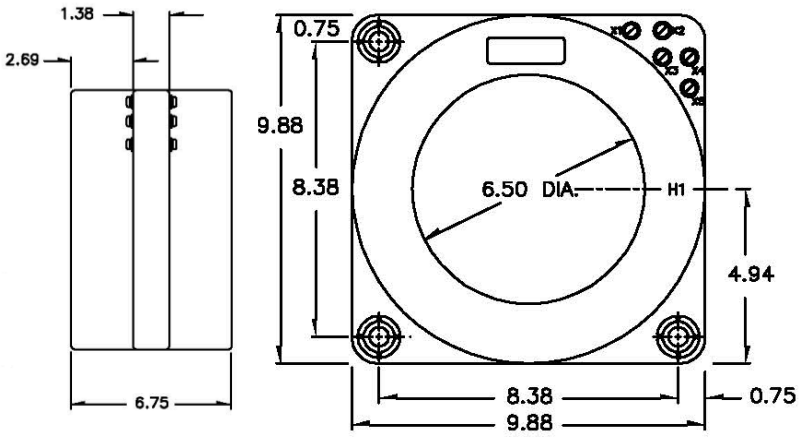
c UL us
E228202

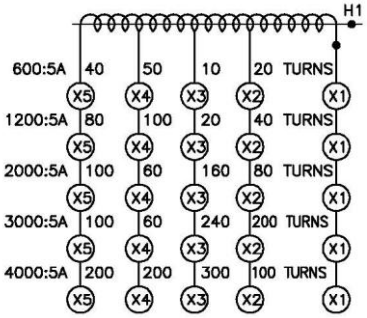
CSA
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

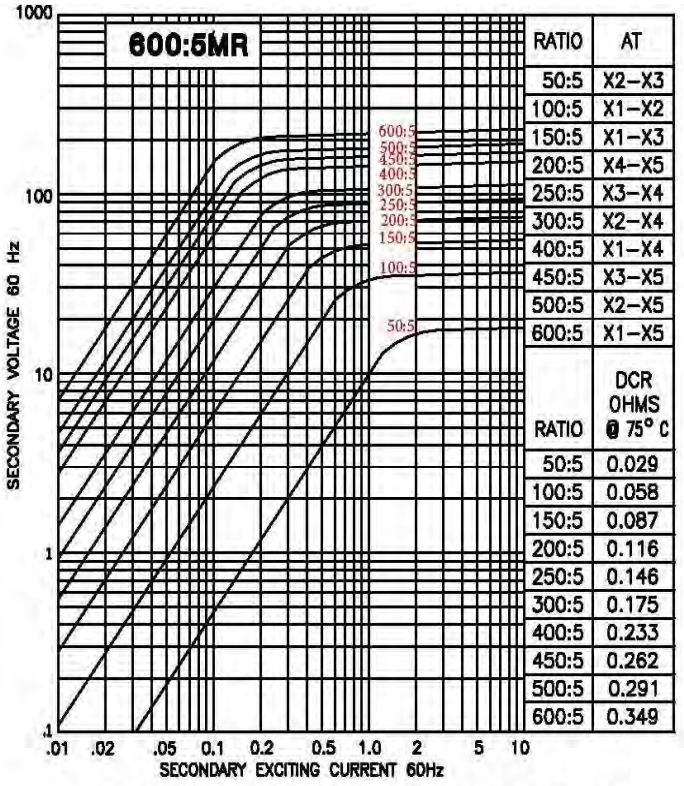
MODEL 786MR
Window Diameter 6.5”
Approximate weight: 58 lbs.

Catalog Number	Relay Class	ANSI Metering Class at 60Hz	Continuous Thermal @ 30°C	Continuous Thermal @ 50°C
786-601MR	C200	0.6 B0.9	2.0	1.5
786-122MR	C400	0.3 B1.8	2.0	1.5
786-202MR	C400	0.3 B1.8	2.0	1.5
786-302MR	C400	0.3 B1.8	1.33	1.0
786-402MR	C400	0.3 B1.8	1.33	1.0





EXCITATION CURVE



RATIO	AT
50:5	X2–X3
100:5	X1–X2
150:5	X1–X3
200:5	X4–X5
250:5	X3–X4
300:5	X2–X4
400:5	X1–X4
450:5	X3–X5
500:5	X2–X5
600:5	X1–X5

RATIO	DCR OHMS @ 75° C
50:5	0.029
100:5	0.058
150:5	0.087
200:5	0.116
250:5	0.146
300:5	0.175
400:5	0.233
450:5	0.262
500:5	0.291
600:5	0.349

MODEL 786 - 601MR - rating C200

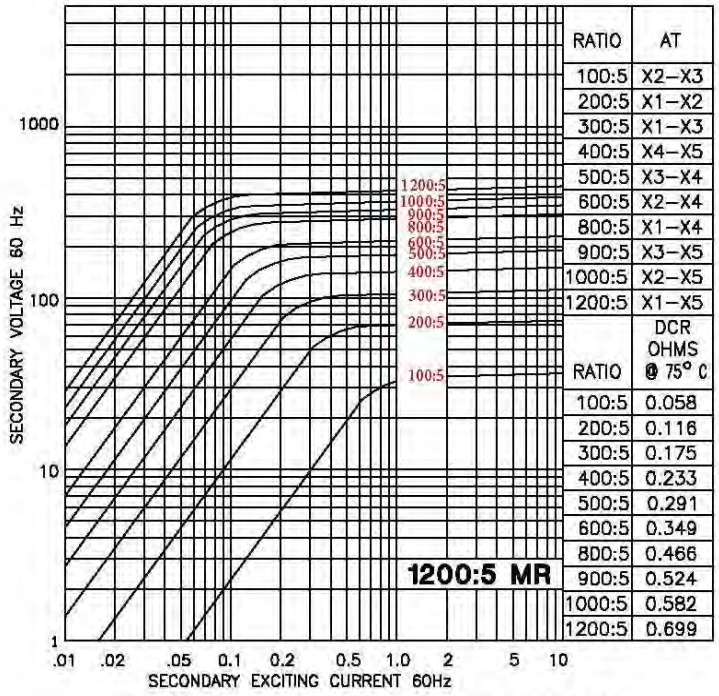
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model 786MR

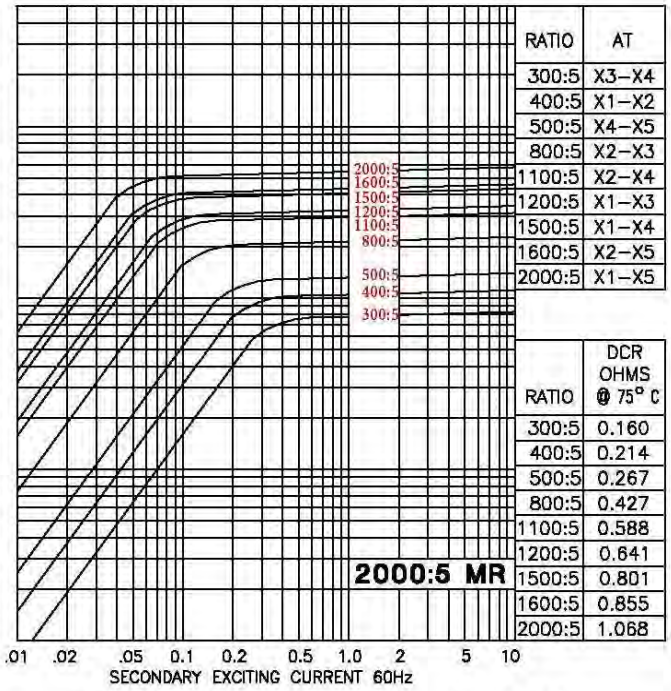
EXCITATION CURVE



RATIO	AT
100:5	X2–X3
200:5	X1–X2
300:5	X1–X3
400:5	X4–X5
500:5	X3–X4
600:5	X2–X4
800:5	X1–X4
900:5	X3–X5
1000:5	X2–X5
1200:5	X1–X5

RATIO	DCR OHMS @ 75° C
100:5	0.058
200:5	0.116
300:5	0.175
400:5	0.233
500:5	0.291
600:5	0.349
800:5	0.466
900:5	0.524
1000:5	0.582
1200:5	0.699

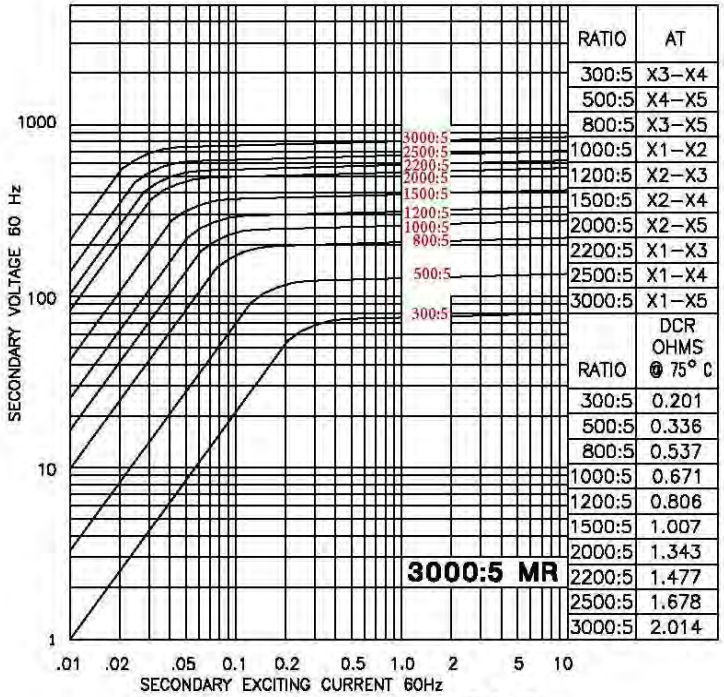
MODEL 786 - 122MR - rating C400



RATIO	AT
300:5	X3–X4
400:5	X1–X2
500:5	X4–X5
800:5	X2–X3
1100:5	X2–X4
1200:5	X1–X3
1500:5	X1–X4
1600:5	X2–X5
2000:5	X1–X5

RATIO	DCR OHMS @ 75° C
300:5	0.160
400:5	0.214
500:5	0.267
800:5	0.427
1100:5	0.588
1200:5	0.641
1500:5	0.801
1600:5	0.855
2000:5	1.068

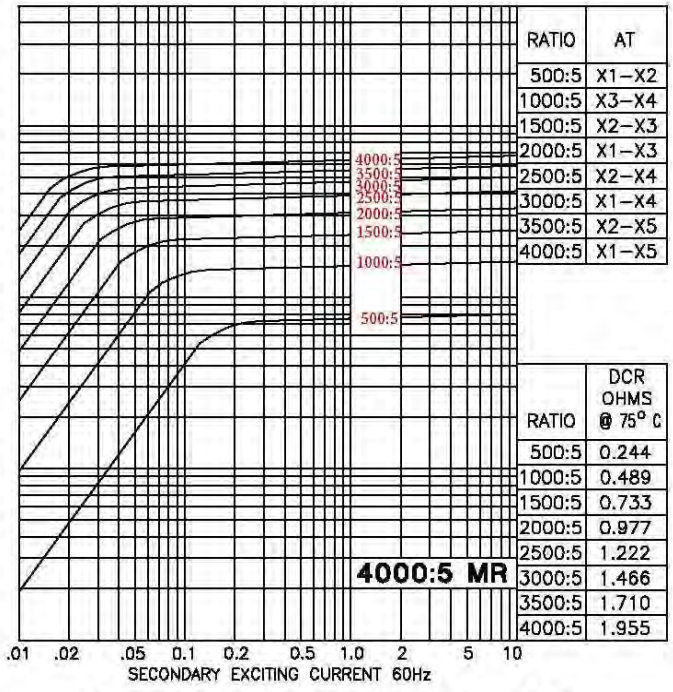
MODEL 786 - 202MR - rating C400



RATIO	AT
300:5	X3–X4
500:5	X4–X5
800:5	X3–X5
1000:5	X1–X2
1200:5	X2–X3
1500:5	X2–X4
2000:5	X2–X5
2200:5	X1–X3
2500:5	X1–X4
3000:5	X1–X5

RATIO	DCR OHMS @ 75° C
300:5	0.201
500:5	0.336
800:5	0.537
1000:5	0.671
1200:5	0.806
1500:5	1.007
2000:5	1.343
2200:5	1.477
2500:5	1.678
3000:5	2.014

MODEL 786 - 302MR - C400



RATIO	AT
500:5	X1–X2
1000:5	X3–X4
1500:5	X2–X3
2000:5	X1–X3
2500:5	X2–X4
3000:5	X1–X4
3500:5	X2–X5
4000:5	X1–X5

RATIO	DCR OHMS @ 75° C
500:5	0.244
1000:5	0.489
1500:5	0.733
2000:5	0.977
2500:5	1.222
3000:5	1.466
3500:5	1.710
4000:5	1.955

MODEL 786 - 402MR - rating C400

CURRENT TRANSFORMERS

For Metering and Instrumentation

720V Current Transformers
IEC Rated Busbar Type

CURRENT TRANSFORMERS

For Metering and Instrumentation

720V Current Transformers
IEC Rated Busbar Type

Current Transformer

Model IE53J
rev 032916

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.22 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IE53J-FIXING-KIT

Model	IE53J
Window Size	30 x 10mm 25 x 15mm 20 x 20mm 25mm diameter
Width	50mm
Height	80mm
Depth	30mm

CERTIFICATIONS:

E228202

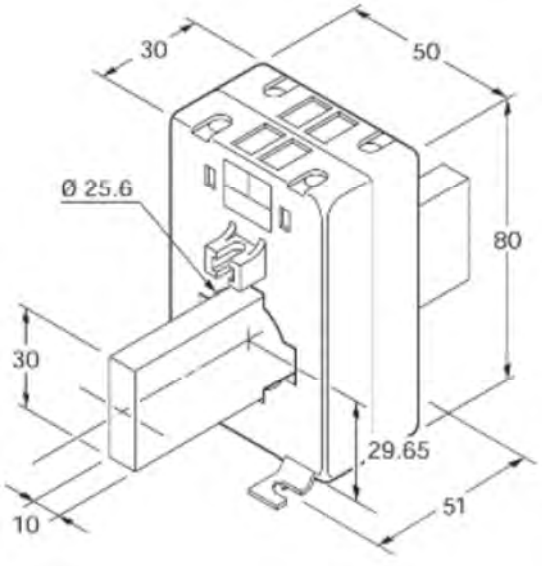
223647

ISO 9001
QUALITY MANAGEMENT

MODEL IE53J

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1
IE53J-100/5	100:5	1.25	-
IE53J-125/5	125:5	1.25	-
IE53J-150/5	150:5	2.5	-
IE53J-160/5	160:5	2.5	-
IE53J-200/5	200:5	2.5	2.5
IE53J-250/5	250:5	3.75	2.5
IE53J-300/5	300:5	5	3.75
IE53J-400/5	400:5	7.5	3.75
Note: Change the end suffix to depict required secondary. For example IE53J-200/1.			

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IE53Q
rev 032916

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.25 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IE53Q-FIXING-KIT

Model	IE53Q
Window Size	20 x 6mm 21mm diameter
Width	45mm
Height	65mm
Depth	30mm

CERTIFICATIONS:

E228202

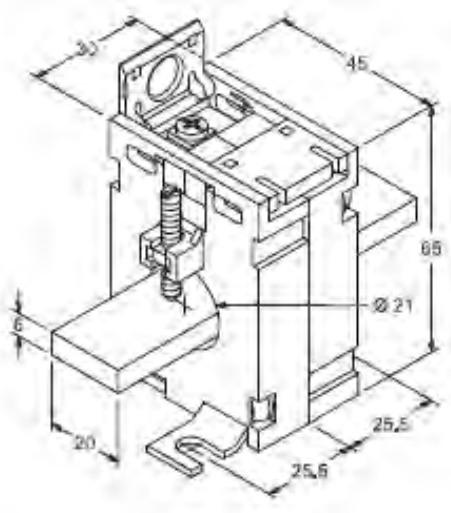
223647

ISO 9001
QUALITY MANAGEMENT

MODEL IE53Q

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1
IE53Q-50/5	50:5	1	-
IE53Q-60/5	60:5	1.25	-
IE53Q-75/5	75:5	1.5	-
IE53Q-80/5	80:5	1.25	-
IE53Q-100/5	100:5	2.5	1.5
IE53Q-125/5	125:5	3	2.5
IE53Q-150/5	150:5	3.75	2.5
IE53Q-200/5	200:5	5	3.75
IE53Q-250/5	250:5	-	5
IE53Q-300/5	300:5	7.5	5
Note: Change the end suffix to depict required secondary. For example IE53Q-200/1.			

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IE55E
rev 032916

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.40 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IE55E-FIXING-KIT

Model	IE55E
Window Size	15 x 5mm 16mm diameter
Width	50mm
Height	80mm
Depth	50mm

CERTIFICATIONS:

E228202

223647

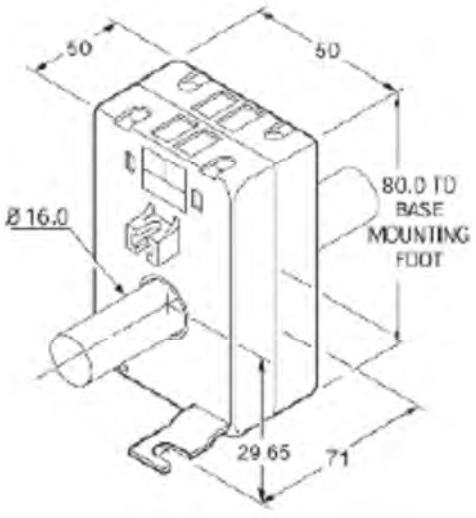
ISO 9001
QUALITY MANAGEMENT

MODEL IE55E

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1
IE55E-30/5	30:5	1.25	-
IE55E-40/5	40:5	2.5	-
IE55E-50/5	50:5	2.5	-
IE55E-60/5	60:5	3.75	2.5
IE55E-75/5	75:5	5	3.75
IE55E-80/5	80:5	5	3.75
IE55E-100/5	100:5	7.5	5

Note: Change the end suffix to depict required secondary. For example IE55E-80/1.

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IE63N
rev 032916

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.30 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IE63N-FIXING-KIT

Model	IE63N
Window Size	40 x 10mm 32mm diameter
Width	60mm
Height	94mm
Depth	30mm

CERTIFICATIONS:

E228202

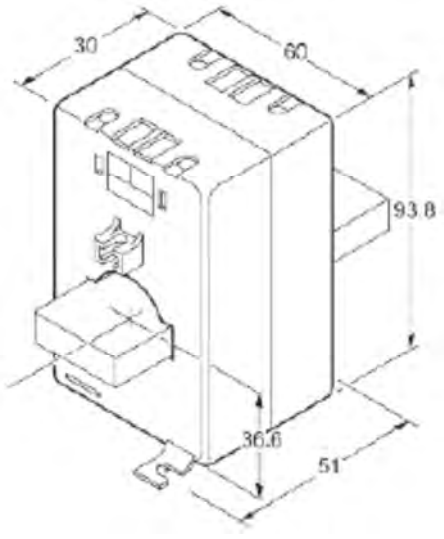
223647

ISO 9001
QUALITY MANAGEMENT

MODEL IE63N

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IE63N-200/5	200:5	2.5	-	-
IE63N-250/5	250:5	3.75	2.5	-
IE63N-300/5	300:5	5	3.75	-
IE63N-400/5	400:5	7.5	5	-
IE63N-500/5	500:5	10	7.5	3.75
IE63N-600/5	600:5	10	7.5	5
IE63N-750/5	750:5	15	10	7.5
IE63N-800/5	800:5	15	10	7.5
Note: Change the end suffix to depict required secondary. For example IE63N-500/1.				

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IE65F
rev 032916

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.40 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IE65F-FIXING-KIT

Model	IE65F
Window Size	20 x 10mm 23mm diameter
Width	60mm
Height	94mm
Depth	50mm

CERTIFICATIONS:

E228202

223647

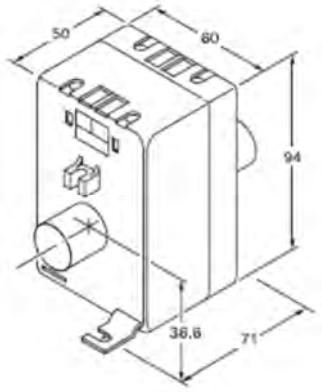
ISO 9001
QUALITY MANAGEMENT

MODEL IE65F

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IE65F-30/5	30:5	1.25	-	-
IE65F-40/5	40:5	2.5	-	-
IE65F-50/5	50:5	2.5	-	-
IE65F-60/5	60:5	3.75	-	-
IE65F-75/5	75:5	5	2.5	-
IE65F-80/5	80:5	5	2.5	-
IE65F-100/5	100:5	7.5	5	2.5
IE65F-125/5	125:5	7.5	5	2.5
IE65F-150/5	150:5	15	10	5
IE65F-200/5	200:5	20	15	7.5
IE65F-250/5	250:5	20	20	10
IE65F-300/5	300:5	30	30	10

Note: Change the end suffix to depict required secondary. For example IE65F-125/1.

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IE93L
rev 03182021

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.45 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IE93L-FIXING-KIT

Model	IE93L
Window Size	50 x 10mm 40 x 30mm 42mm diameter
Width	90mm
Height	131mm
Depth	30mm

CERTIFICATIONS:

E228202

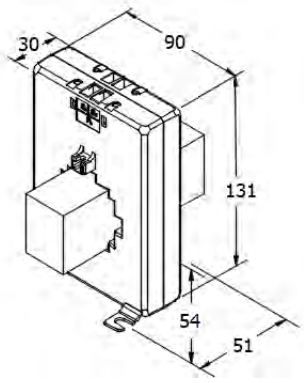
223647

ISO 9001
QUALITY MANAGEMENT

MODEL IE93L

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IE93L-400/5	400:5	15	7.5	3.75
IE93L-500/5	500:5	20	15	5
IE93L-600/5	600:5	30	20	10
IE93L-750/5	750:5	20	15	7.5
IE93L-800/5	800:5	20	15	10
IE93L-1000/5	1000:5	20	20	15
IE93L-1200/5	1200:5	30	30	20
IE93L-1250/5	1250:5	30	30	20
IE93L-1500/5	1500:5	30	30	20
IE93L-1600/5	1600:5	30	30	20
Note: Change the end suffix to depict required secondary. For example IE93L-750/1.				

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IE93R
rev 032916

CERTIFICATIONS:

E228202

223647

ISO 9001 QUALITY MANAGEMENT

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.60 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IE93R-FIXING-KIT

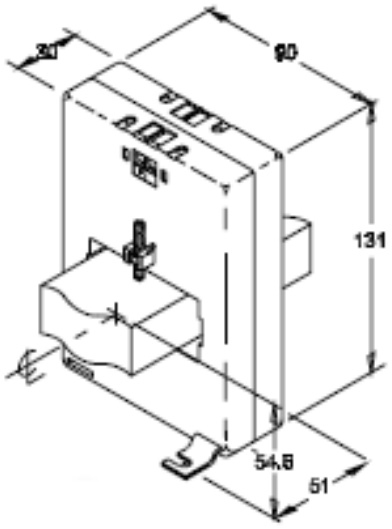
Model	IE93R
Window Size	64 x 12.6mm 60 x 30mm
Width	90mm
Height	131mm
Depth	30mm

MODEL IE93R

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IE93R-800/5	800:5	10	10	5
IE93R-1000/5	1000:5	15	10	7.5
IE93R-1200/5	1200:5	20	15	10
IE93R-1250/5	1250:5	20	15	10
IE93R-1500/5	1500:5	20	20	15
IE93R-1600/5	1600:5	20	20	15
IE93R-2000/5	2000:5	30	20	20

Note: Change the end suffix to depict required secondary. For example IE93R-800/1.

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IE93S
rev 032916

CERTIFICATIONS:

E228202

223647

ISO 9001 QUALITY MANAGEMENT

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.60 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IE93S-FIXING-KIT

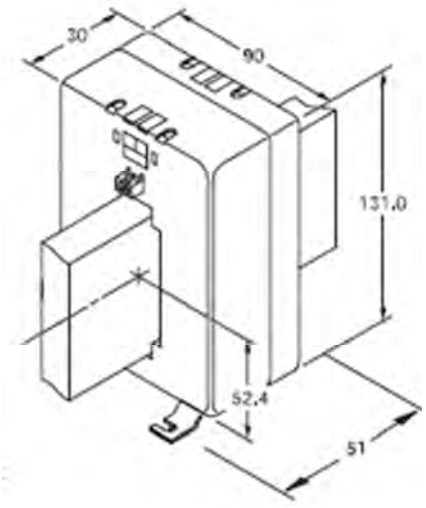
Model	IE93S
Window Size	76.5 x 19mm 60 x 30mm
Width	90mm
Height	131mm
Depth	30mm

MODEL IE93S

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IE93S-800/5	800:5	10	10	5
IE93S-1000/5	1000:5	15	10	7.5
IE93S-1200/5	1200:5	20	15	10
IE93S-1250/5	1250:5	20	20	15
IE93S-1500/5	1500:5	20	20	15
IE93S-1600/5	1600:5	30	20	15
IE93S-2000/5	2000:5	30	20	15

Note: Change the end suffix to depict required secondary. For example IE93S-1200/1.

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IEA5G
rev 032916

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.60 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IEA5G-FIXING-KIT

Model	IEA5G
Window Size	40 x 10mm 30 x 30mm 36mm diameter
Width	77mm
Height	116mm
Depth	50mm

CERTIFICATIONS:

E228202

223647

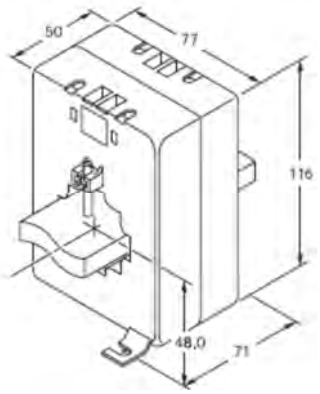
ISO 9001
QUALITY MANAGEMENT

MODEL IEA5G

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IEA5G-100/5	100:5	2.5	-	-
IEA5G-125/5	125:5	5	2.5	-
IEA5G-150/5	150:5	5	3.75	-
IEA5G-200/5	200:5	10	5	2.5
IEA5G-250/5	250:5	10	7.5	5
IEA5G-300/5	300:5	10	7.5	5
IEA5G-400/5	400:5	10	7.5	5
IEA5G-500/5	500:5	10	7.5	5
IEA5G-600/5	600:6	10	10	7.5
IEA5G-750/5	750:5	15	10	10
IEA5G-800/5	800:5	15	10	10
IEA5G-1000/5	1000:5	20	15	15

Note: Change the end suffix to depict required secondary. For example IEA5G-125/1.

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IEA5Y
rev 03182021

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.45 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IEA5Y-FIXING-KIT

Model	IEA5Y
Stud Size	M8
Width	45mm
Height	65mm
Depth	30mm

CERTIFICATIONS:

E228202

223647

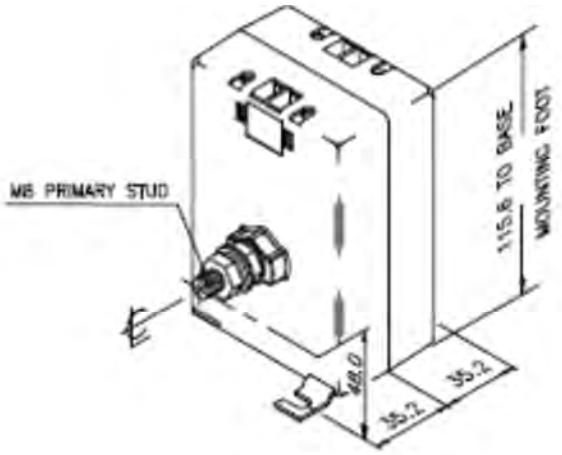
ISO 9001
QUALITY MANAGEMENT

MODEL IEA5Y

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1
IEA5Y-1/5	1:5	7.5	5
IEA5Y-5/5	5:5	7.5	5
IEA5Y-10/5	10:5	7.5	5
IEA5Y-15/5	15:5	7.5	5
IEA5Y-20/5	20:5	7.5	5
IEA5Y-30/5	30:5	7.5	5
IEA5Y-40/5	40:5	7.5	5

Note: Change the end suffix to depict required secondary. For example IEA5Y-30/1.

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IEB5D
rev 032916

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.50 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IEB5D-FIXING-KIT

Model	IEB5D
Window Size	80 x 30mm 60 x 30mm 50 x 50mm 63mm diameter
Width	134mm
Height	156mm
Depth	50mm

CERTIFICATIONS:

E228202

223647

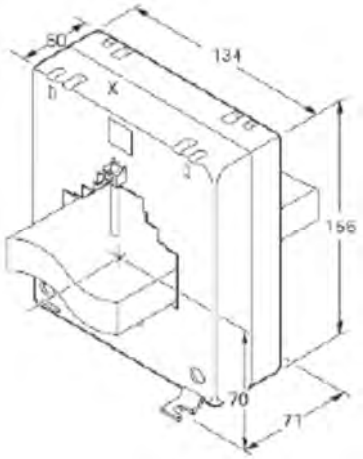
ISO 9001
QUALITY MANAGEMENT

MODEL IEB5D

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IEB5D-400/5	400:5	15	10	7.5
IEB5D-500/5	500:5	20	15	10
IEB5D-600/5	600:5	15	10	5
IEB5D-750/5	750:5	15	10	5
IEB5D-800/5	800:5	20	15	7.5
IEB5D-1000/5	1000:5	22.5	20	10
IEB5D-1200/5	1200:5	30	20	15
IEB5D-1250/5	1250:5	30	20	15
IEB5D-1500/5	1500:5	30	20	15
IEB5D-1600/5	1600:5	40	30	20
IEB5D-2000/5	2000:5	50	40	30

Note: Change the end suffix to depict required secondary. For example IEB5D-800/1.

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Current Transformer

Model IEB5Z
rev 071316

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
0.70 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IEB5Z-FIXING-KIT

Model	IEB5Z
Window Size	104 x 35mm 35mm diameter
Width	134mm
Height	156mm
Depth	50mm

CERTIFICATIONS:

c UL us
E228202

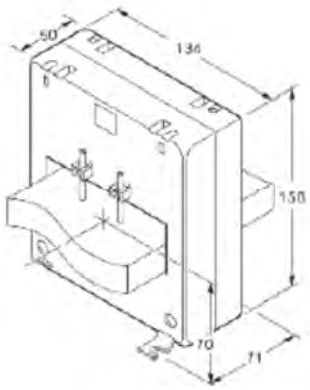
SA c us
223647

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL IEB5Z

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IEB5Z-750/5	750:5	15	7.5	2.5
IEB5Z-800/5	800:5	20	10	2.5
IEB5Z-1000/5	1000:5	22.5	15	2.5
IEB5Z-1200/5	1200:5	30	20	10
IEB5Z-1250/5	1250:5	30	20	15
IEB5Z-1500/5	1500:5	30	20	15
IEB5Z-1600/5	1600:5	30	20	15
IEB5Z-2000/5	2000:5	30	20	15
IEB5Z-2400/5	2400:5	30	20	15
IEB5Z-2500/5	2500:5	30	20	15
IEB5Z-3000/5	3000:5	30	20	15
IEB5Z-4000/5	4000:5	30	20	15
Note: Change the end suffix to depict required secondary. For example IEB5Z-800/1.				

DIMENSIONS



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Current Transformer

Model IEC5T
rev 03182021

APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
1.6 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IEC5T-FIXING-KIT

Model	IEC5T
Window Size	160 x 50mm
Width	140mm
Height	238mm
Depth	50mm

CERTIFICATIONS:

E228202

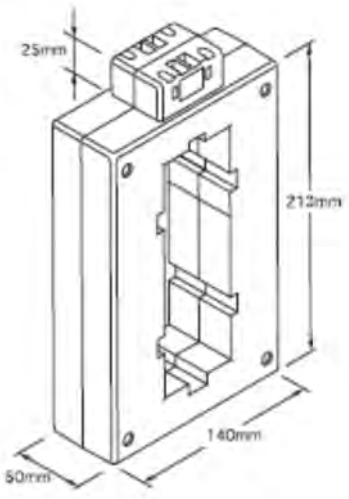
223647

ISO 9001
QUALITY MANAGEMENT

MODEL IEC5T

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IEC5T-1600/5	1600:5	45	30	20
IEC5T-2000/5	2000:5	45	30	20
IEC5T-2500/5	2500:5	60	45	30
IEC5T-3000/5	3000:5	60	45	30
IEC5T-3200/5	3200:5	60	45	30
IEC5T-4000/5	4000:5	60	45	30
IEC5T-5000/5	5000:5	60	45	30
IEC5T-6000/5	6000:5	60	45	30
Note: Change the end suffix to depict required secondary. For example IEC5T-4000/1.				

DIMENSIONS



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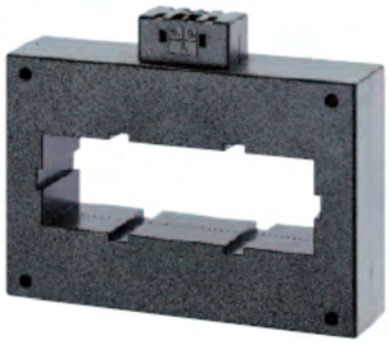
Current Transformer

Model IED5T
rev 03182021



APPLICATION:
Metering
FREQUENCY:
50/60 Hz.
INSULATION LEVEL:
720 Volts. 10 kV BIL. full wave
APPROXIMATE WEIGHT:
1.5 kg
CONNECTIONS:
Secondary terminals screw clamp up to 10mm ² cable. 'Fast on' 6.3mm type. Integral Terminal Cover IP20B
ENCLOSURE CODE:
IP40
INSULATION CLASS:
Class E BS2757 IEC85
COMPLIES WITH / APPROVALS:
IEC60044-1:2003 / BSEN61010-1, EN60044-1
MOUNTING HARDWARE OPTION:
Order p/n: IED5T-FIXING-KIT

Model	IED5T
Window Size	160 x 50mm
Width	213mm
Height	165mm
Depth	50mm

CERTIFICATIONS:

E228202

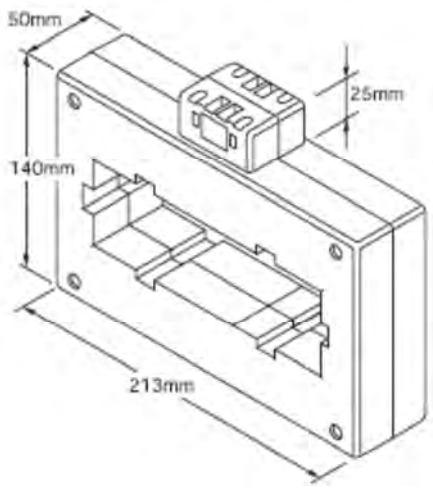
223647

ISO 9001 QUALITY MANAGEMENT

MODEL IED5T

CATALOG NUMBER	CURRENT RATIO	VA at Class 3	VA at Class 1	VA at Class 0.5
IED5T-1600/5	1600:5	45	30	20
IED5T-2000/5	2000:5	45	30	20
IED5T-2500/5	2500:5	60	45	30
IED5T-3000/5	3000:5	60	45	30
IED5T-3200/5	3200:5	60	45	30
IED5T-4000/5	4000:5	60	45	30
IED5T-5000/5	5000:5	60	45	30
IED5T-6000/5	6000:5	60	45	30
Note: Change the end suffix to depict required secondary. For example IED5T-3200/1.				

DIMENSIONS



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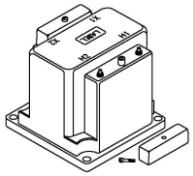
Page 6-2



MODEL 460I

Voltage Transformer

Model 460I
rev 03182021

FREQUENCY:
50 Hz.
STANDARD SECONDARY VOLTAGE:
110 Volts
INSULATION LEVEL:
720 Volts.
ACCURACY CLASS:
0.5 @ 10VA, 1.0 @ 20VA
THERMAL RATING:
125VA AT 30°c. amb., 75VA AT 55°c. amb.
APPROXIMATE WEIGHT:
3.5 kg
CONNECTIONS:
-Terminals are brass studs ASA 10-32 with one lockwasher, flat washer, and regular nut

Model	460I
Width	4.50
Height	3.50
Depth	4.63

CERTIFICATIONS:

c UL us
E228202

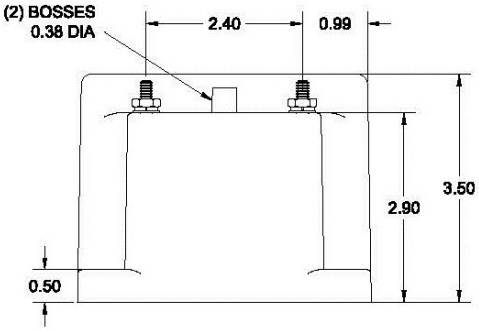
SA c us
223647

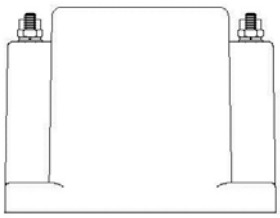
nqa.
ISO 9001
QUALITY MANAGEMENT

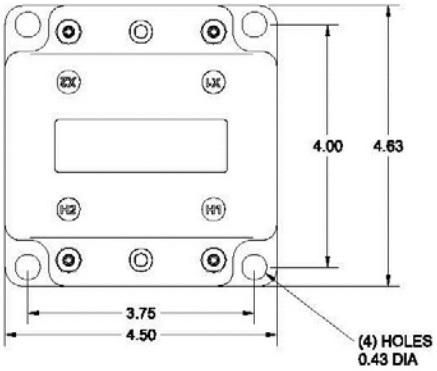
MODEL 460I
Approximate weight: 3.5 kg

CATALOG NUMBER NOT FUSED	VOLTAGE RATING	TURNS RATIO	REC. PRIMARY FUSE RATING
460I-110	110:110	1:1	3
460I-220	220:110	2:1	2
460I-380	380:110	3.45:1	1
460I-400	400:110	3.64:1	1
460I-416	416:110	3.78:1	1
460I-440	440:110	4:1	1

- Each transformer has two plastic terminal covers.
- The core and coil assembly is encased in a thermoplastic shell and filled with resin.
- These transformers are designed for operation line to line. They may also be operated line to ground or line to neutral at reduced voltage (58% of rated volts).
- It is desirable to use a 1.75 amp fuse in the secondary to protect the transformer.







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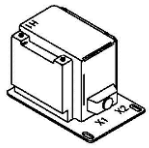
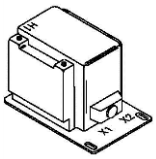
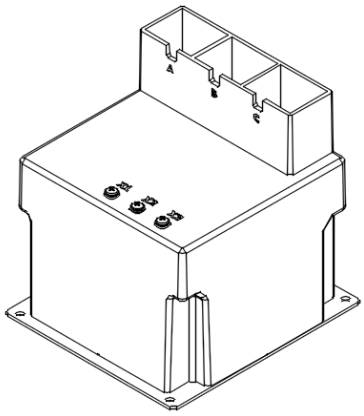
VOLTAGE TRANSFORMERS

For Metering and Instrumentation

MODEL PTG5-1-110 **PTG5-2-110**	**Page 7-15** 
MODEL PTW5-1-110 **PTW5-2-110**	**Page 7-17** 

Indoor Voltage Transformer

Model PT3-60



CERTIFICATIONS:

E196364

ISO 9001 QUALITY MANAGEMENT

ACCURACY CLASS:
0.3 WX, 0.6M, 1.2Y at 100% rated voltage with 120V based ANSI burden

FREQUENCY:
50/60 Hz.

THERMAL RATING:
300 VA total, 150 VA at 30°C. amb.
200 VA total, 100 VA at 50° C. amb.

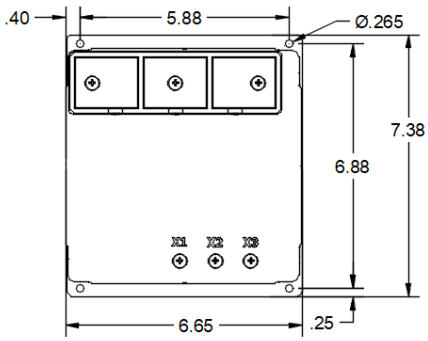
STANDARD SECONDARY
110/120 volts

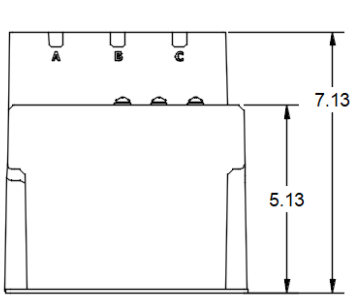
MAXIMUM SYSTEM VOLTAGE:
7.2 kV, BIL 60kV full wave

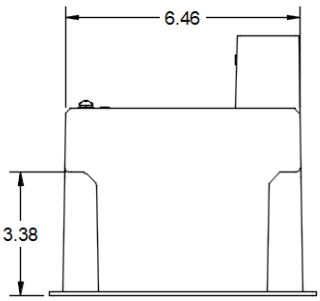
APPROXIMATE WEIGHT:
26 lbs.

- Primary terminals are No. 10-32 brass screws with one flatwasher and lockwasher.
- The core and coil assembly is encased in a plastic enclosure and vacuum encapsulated in polyurethane resin.
- The transformers are tested for partial discharge to Canadian Standards CAN 3-C13-M83. This test can also be carried out to IEC requirements if requested.
- Recommended Spacing is for guidance only. The user needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude.

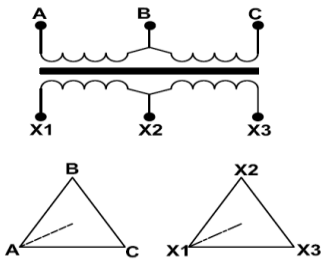
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	FREQUENCY Hz	THERMAL RATING	SUGGESTED FUSE RATING
PT3-60-841	840	7:1	120	60	0.3 kVA	1.0 E
PT3-60-242	2400	20:1	120	60	0.3 kVA	1.0 E
PT3-60-332	3300	30:1	110	50	0.3 kVA	1.0 E
PT3-60-422	4200	35:1	120	60	0.3 kVA	1.0 E
PT3-60-482	4800	40:1	120	60	0.3 kVA	1.0 E
PT3-60-555	5500	50:1	110	50	0.3 kVA	0.5 E
PT3-60-602	6000	50:1	120	60	0.3 kVA	0.5 E
PT3-60-662	6600	60:1	110	50	0.3 kVA	0.5 E
PT3-60-722	7200	60:1	120	60	0.3 kVA	0.5 E







CONNECTION DIAGRAM



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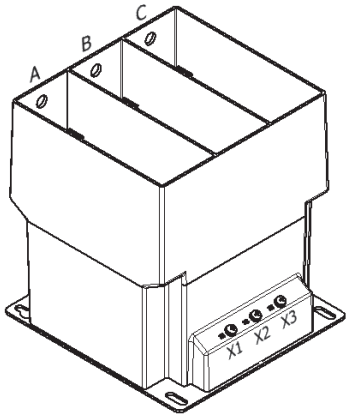
Indoor Voltage Transformer

Model 3PT3-60
Rev 072624



CERTIFICATIONS:

E196364

ISO 9001 QUALITY MANAGEMENT

ACCURACY CLASS:
0.3 WX, 0.6M, 1.2Y at 100% rated voltage with 120V based ANSI burden

FREQUENCY:
50/60 Hz.

THERMAL RATING:
700 VA total, 350 VA per phase, at 30°C. amb.
450 VA total, 225 VA per phase, at 55°C. amb.

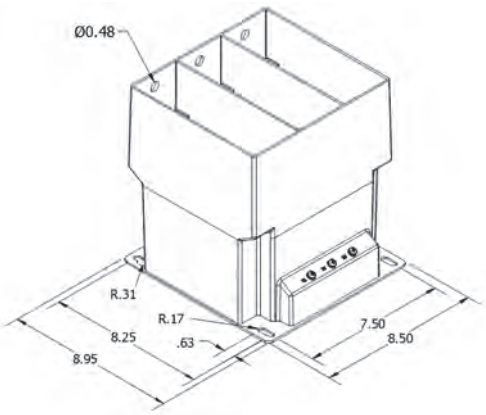
STANDARD SECONDARY VOLTAGE:
120 volts

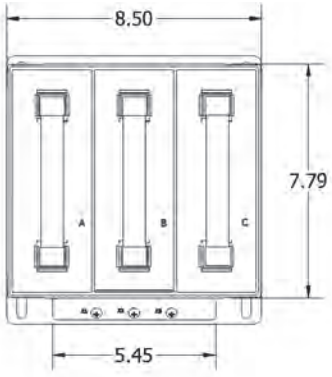
MAXIMUM SYSTEM VOLTAGE: 7
7.2 kV, BIL 60kV full wave

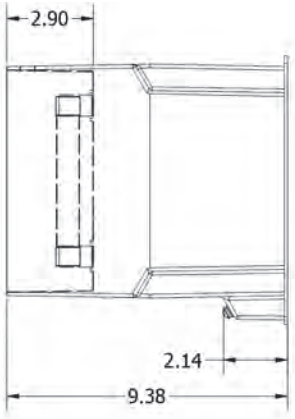
APPROXIMATE WEIGHT:
38 lbs.

- Primary terminals are No. 10-32 brass screws with one flatwasher and lockwasher.
- The core and coil assembly is encased in a plastic enclosure and vacuum encapsulated in polyurethane resin.
- The transformers are tested for partial discharge to Canadian Standards CAN 3-C13-M83. This test can also be carried out to IEC requirements if requested.
- Recommended Spacing is for guidance only. The user needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge; high altitude.

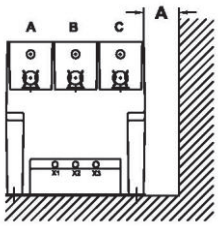
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	FREQUENCY Hz	THERMAL RATING	SUGGESTED FUSE RATING
3PT3-60-841-FFF	840	7:1	120	60	0.7 kVA	1.0 E
3PT3-60-242-FFF	2400	20:1	120	60	0.7 kVA	1.0 E
3PT3-60-332-FFF	3300	30:1	110	50	0.7 kVA	1.0 E
3PT3-60-422-FFF	4200	35:1	120	60	0.7 kVA	0.5 E
3PT3-60-482-FFF	4800	40:1	120	60	0.7 kVA	0.5 E
3PT3-60-555-FFF	5500	50:1	110	50	0.7 kVA	0.5 E
3PT3-60-602-FFF	6000	50:1	120	60	0.7 kVA	0.5 E
3PT3-60-662-FFF	6600	60:1	110	50	0.7 kVA	0.5 E
3PT3-60-722-FFF	7200	60:1	120	60	0.7 kVA	0.5 E



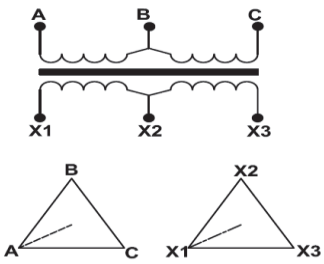




RECOMMENDED SPACING
A - CASE TO GROUND =1.5 " MIN



CONNECTION DIAGRAM



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Indoor Voltage Transformer

Models PTG3-1-60
PTG3-2-60

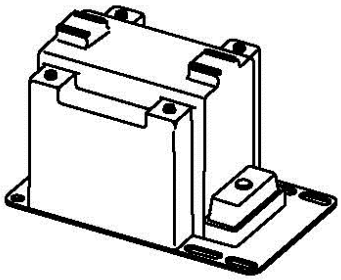
ACCURACY CLASS:
0.3 WXMY, 1.2Z at 100% rated voltage with 120V based ANSI burden; 0.3 WX, 0.6 M, 1.2 Y at 58% rated voltage with 69.3V based ANSI burden

FREQUENCY:
60 Hz.

MAXIMUM SYSTEM VOLTAGE:
5.6kV, BIL 60kV full wave

THERMAL RATING:
750 VA at 30°C. amb.
500 VA at 55°C. amb.

APPROXIMATE WEIGHT:
34 lbs.. unfused

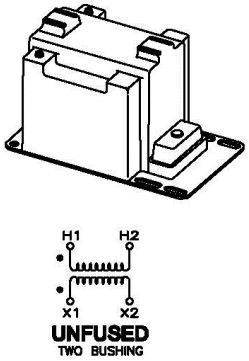


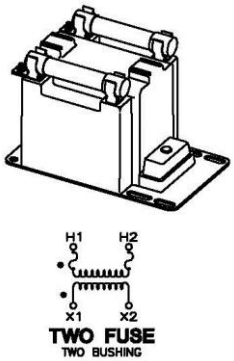
CERTIFICATIONS:

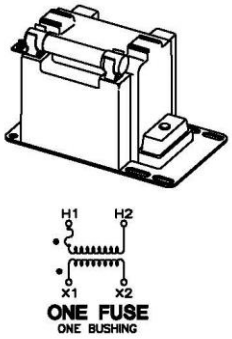
c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

- Primary terminals that are unfused are ¼ - 20 brass screws with one flat washer and lockwasher.
- Primary terminals that are fused are ¼ - 20 brass screws with one flat washer, lockwasher, and two nuts.
- Secondary terminals are No. 10-32 brass screws with one flat washer and lockwasher.
- The core and coil assembly is encased in a plastic enclosure and vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries
- Plated steel mounting base.
- Fuses have 1" Dia Caps and 5" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.







GROUP	ONE BUSHING (b)			RFR FR (c)	CATALOG NUMBERS		
					FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
4A	2400	20:1	120	230	PTG3-1-60-242F	PTG3-1-60-242CSorCL	PTG3-1-60-242S
4B	4200	35:1	120	230	PTG3-1-60-422F	PTG3-1-60-422CSorCL	PTG3-1-60-422S
4B	4800	40:1	120	230	PTG3-1-60-482F	PTG3-1-60-482CSorCL	PTG3-1-60-482S

TWO BUSHING (a)					CATALOG NUMBERS		
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
1	2400	20:1	120	PTG3-2-60-242	PTG3-2-60-242FF	PTG3-2-60-242CCSorCL	PTG3-2-60-242SS
2	3300	30:1	110-50Hz	PTG3-2-60-332	PTG3-2-60-332FF	PTG3-2-60-332CCSorCL	PTG3-2-60-332SS
2	4200	35:1	120	PTG3-2-60-422	PTG3-2-60-422FF	PTG3-2-60-422CCSorCL	PTG3-2-60-422SS
2	4800	40:1	120	PTG3-2-60-482	PTG3-2-60-482FF	PTG3-2-60-482CCSorCL	PTG3-2-60-482SS

(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal using a fuse in the line side of the primary only. By using this connection, a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation, the transformer primary voltage should not exceed 110% of rated value.

(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.

(c) Fuse clips noted as "CCS" or "CS" accept fuses with 1" Dia. Caps and 5" clip centers. Fuse clips noted as "CCL" or "CL" accept fuses with 1.63" Dia. Caps and 5.88" clip centers

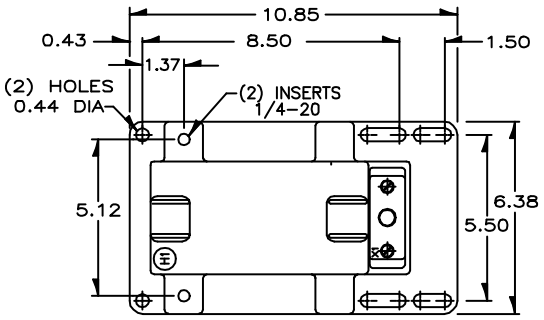
NOTE: It is recommended the system line-to-line voltage not exceed the transformer maximum system voltage level.

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

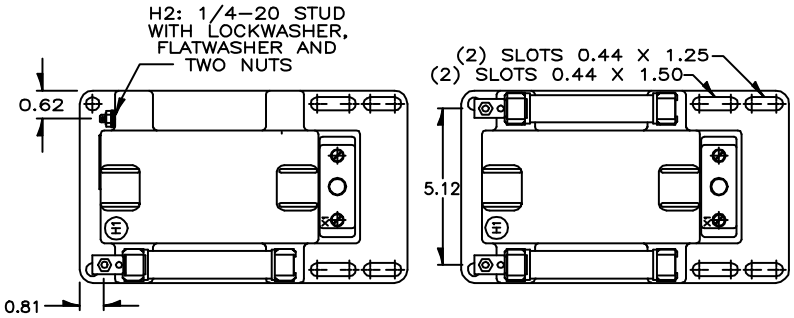
Indoor Voltage Transformer

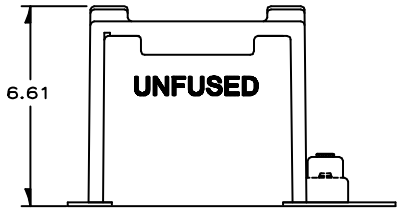
Models PTG3-1-60
PTG3-2-60

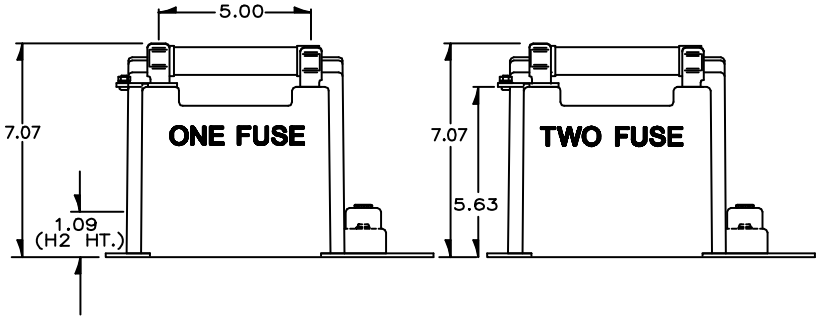
PTG3-1-60



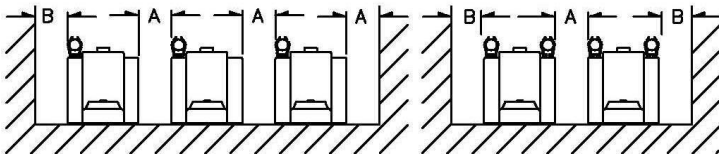
PTG3-2-60







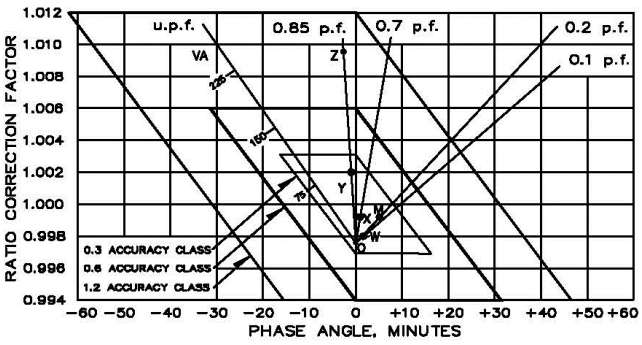
Recommended spacing is for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge, high altitude; and other considerations like configuration.



FUSE FOR MODEL PTG3 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES (SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
2400:120V	5.5kV	45,000	2.0E	1.0	5.63	5.00
3300:110V	5.5kV	45,000	2.0E	1.0	5.63	5.00
4200:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00
4800:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00

CIRCLE DIAGRAM

The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-amperes is shown on the unity power factor line (u.p.f.) and commences at the zero or no-load locus. To use the diagram, measure the known V.A. and scribe an arc about the "zero" locus of a length that contains the angle of the burden power factor. The point at which the arc terminates is the error locus in phase angle minutes and ratio correction factor.



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Indoor Voltage Transformer

Models PTW3-1-60
PTW3-2-60

CERTIFICATIONS:

c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

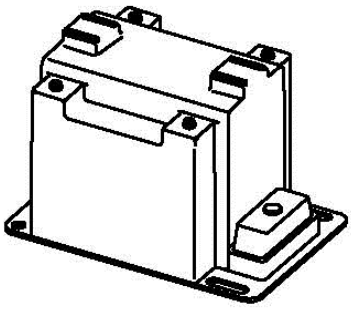
ACCURACY CLASS:
0.3 WXMY, 1.2Z at 100% rated voltage with 120V based ANSI burden; 0.6 WX,1.2 MY, 1.2 Y at 58% rated voltage with 69.3V based ANSI burden

FREQUENCY:
60 Hz.

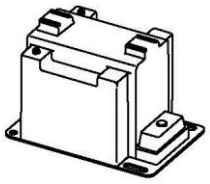
MAXIMUM SYSTEM VOLTAGE:
5.6kV, BIL 60kV full wave

THERMAL RATING:
750 VA at 30°C. amb.
500 VA at 55°C. amb.

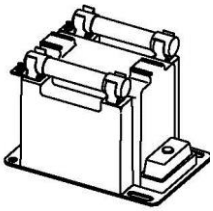
APPROXIMATE WEIGHT:
34 lbs.. unfused



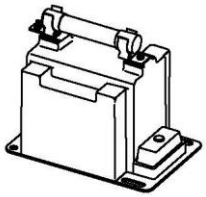
- Primary terminals that are unfused are ¼ - 20 brass screws with one flat washer and lockwasher.
- Primary terminals that are fused are ¼ - 20 brass screws with one flat washer, lockwasher and two nuts.
- Secondary terminals are No. 10-32 brass screws with one flat washer and lockwasher.
- The core and coil assembly is encased in a plastic enclosure and vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries
- Plated steel mounting base.
- Fuses have 1" Dia Caps and 5" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.



UNFUSED
TWO BUSHING



TWO FUSE
TWO BUSHING



ONE FUSE
ONE BUSHING

GROUP	ONE BUSHING (b)			RFR FR (c)	CATALOG NUMBERS		
					FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
4A	2400	20:1	120	230	PTW3-1-60-242F	PTW3-1-60-242CSorCL	PTW3-1-60-242S
4B	4200	35:1	120	230	PTW3-1-60-422F	PTW3-1-60-422CSorCL	PTW3-1-60-422S
4B	4800	40:1	120	230	PTW3-1-60-482F	PTW3-1-60-482CSorCL	PTW3-1-60-482S

TWO BUSHING (a)				CATALOG NUMBERS			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY (d)	SWITCHGEAR STYLE
1	2400	20:1	120	PTW3-2-60-242	PTW3-2-60-242FF	PTW3-2-60-242CCSorCCL	PTW3-2-60-242SS
2	3300	30:1	110-50Hz	PTW3-2-60-332	PTW3-2-60-332FF	PTW3-2-60-332CCSorCCL	PTW3-2-60-332SS
2	4200	35:1	120	PTW3-2-60-422	PTW3-2-60-422FF	PTW3-2-60-422CCSorCCL	PTW3-2-60-422SS
2	4800	40:1	120	PTW3-2-60-482	PTW3-2-60-482FF	PTW3-2-60-482CCSorCCL	PTW3-2-60-482SS

(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal using a fuse in the line side of the primary only. By using this connection, a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation, the transformer primary voltage should not exceed 110% of rated value.

(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.

(c) Fuse clips noted as "CCS" or "CS" accept fuses with 1" Dia. Caps and 5" clip centers. Fuse clips noted as "CCL" or "CL" accept fuses with 1.63" Dia. Caps and 5.88" clip centers

NOTE: It is recommended the system line-to-line voltage not exceed the transformer maximum system voltage level.

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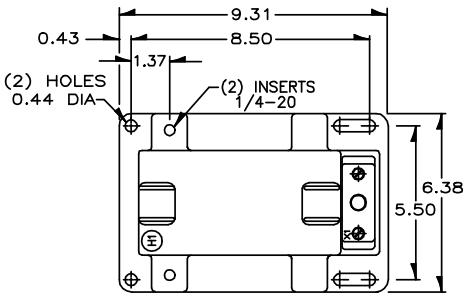
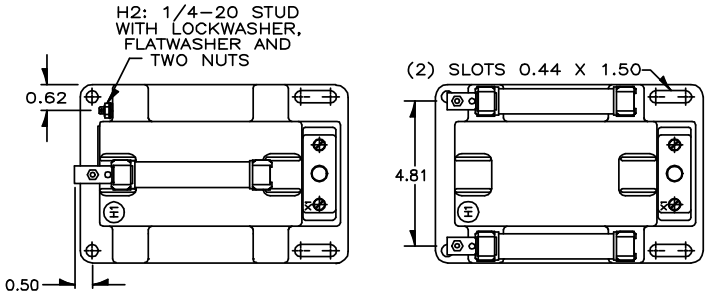
Indoor Voltage Transformer

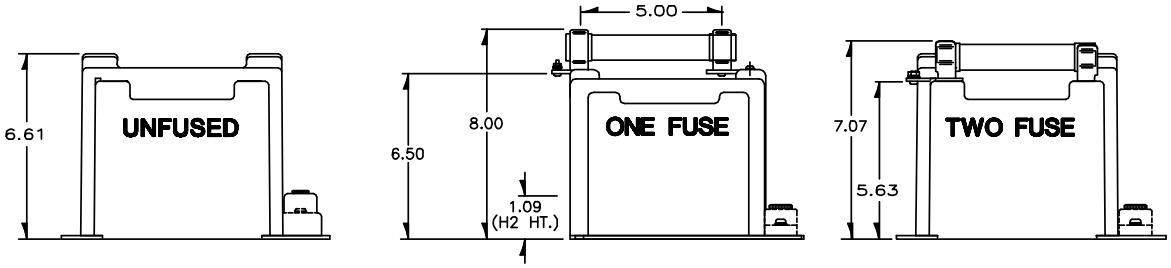
Models PTW3-1-60
PTW3-2-60

PTW3-2-60

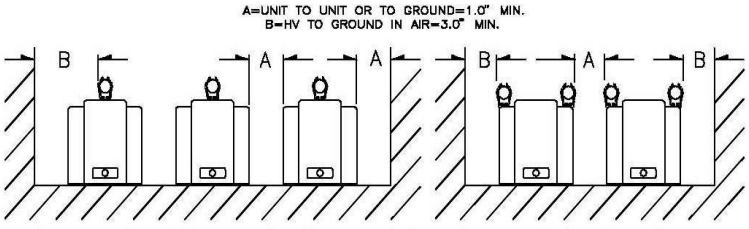


PTW3-1-60





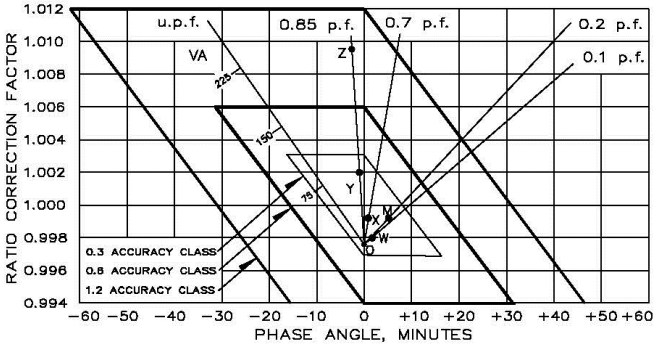
Recommended spacing is for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge, high altitude; and other considerations like configuration.



FUSE FOR MODEL PTW3 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES (SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
2400:120V	5.5kV	45,000	2.0E	1.0	5.63	5.00
3300:110V	5.5kV	45,000	2.0E	1.0	5.63	5.00
4200:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00
4800:120V	5.5kV	45,000	1.0E	1.0	5.63	5.00

CIRCLE DIAGRAM

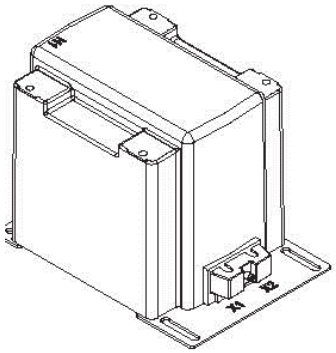
The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-amperes is shown on the unity power factor line (u.p.f.) and commences at the zero or no-load locus. To use the diagram, measure the known V.A. and scribe an arc about the "zero" locus of a length that contains the angle of the burden power factor. The point at which the arc terminates is the error locus in phase angle minutes and ratio correction factor.



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Indoor Voltage Transformer

Models PTG4-1-75
PTG4-2-75
rev 053023



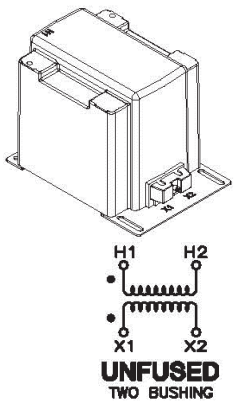
ACCURACY CLASS:
0.3 WXMYZ, 1.2ZZ at 100% rated voltage with 120V based ANSI burden.
0.3 WXMY, 1.2Z at 58% rated voltage with 69.3V based ANSI burden.
FREQUENCY:
60 Hz.
MAXIMUM SYSTEM VOLTAGE:
12 kV, BIL 75kV full wave
THERMAL RATING:
1000 va AT 30°c amb.
750 VA at 55°C. amb.
APPROXIMATE WEIGHT:
60 lbs., unfused

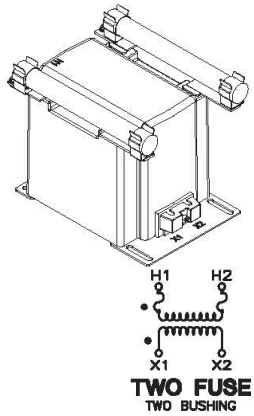
CERTIFICATIONS:

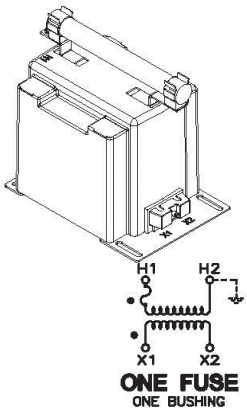
c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

- Primary terminals that are unfused are ¼-20 brass screws with one lockwasher and flat washer.
- Primary terminals that are fused are ¼-20 brass screws with one flat washer, lockwasher and two nuts.
- Secondary terminals are No. 10-32 brass screws with one flat washer and lockwasher.
- The transformers are tested for partial discharge to Canadian Standards CAN 3-C13-M83. This test can also be carried out to IEC requirements if requested.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries
- Plated steel mounting base.
- Fuses have 1.63" Dia Caps and 11.50" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.
- A test cord is provided with each unit.







ONE BUSHING(b)					CATALOG NUMBERS		
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	R FR (c)	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
4A	4200	35:1	120	65	PTG4-1-75-422F	PTG4-1-75-422C	PTG4-1-75-422S
4A	4800	40:1	120	65	PTG4-1-75-482F	PTG4-1-75-482C	PTG4-1-75-482S
4B	6600	60:1	110-50Hz	65	PTG4-1-75-662F	PTG4-1-75-662C	PTG4-1-75-662S
4B	7200	60:1	120	65	PTG4-1-75-722F	PTG4-1-75-722C	PTG4-1-75-722S
4B	8400	70:1	120	65	PTG4-1-75-842F	PTG4-1-75-842C	PTG4-1-75-842S
4B	11000	100:1	110-50Hz	65	PTG4-1-75-113F	PTG4-1-75-113C	PTG4-1-75-113S
4B	12000	100:1	120	65	PTG4-1-75-123F	PTG4-1-75-123C	PTG4-1-75-123S

TWO BUSHING(a)				CATALOG			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
1	4200	35:1	120	PTG4-2-75-422	PTG4-2-75-422FF	PTG4-2-75-422CC	PTG4-2-75-422SS
1	4800	40:1	120	PTG4-2-75-482	PTG4-2-75-482FF	PTG4-2-75-482CC	PTG4-2-75-482SS
2	6600	60:1	110-50Hz	PTG4-2-75-662	PTG4-2-75-662FF	PTG4-2-75-662CC	PTG4-2-75-662SS
2	7200	60:1	120	PTG4-2-75-722	PTG4-2-75-722FF	PTG4-2-75-722CC	PTG4-2-75-722SS
2	8400	70:1	120	PTG4-2-75-842	PTG4-2-75-842FF	PTG4-2-75-842CC	PTG4-2-75-842SS
2	11000	100:1	110-50Hz	PTG4-2-75-113	PTG4-2-75-113FF	PTG4-2-75-113CC	PTG4-2-75-113SS
2	12000	100:1	120	PTG4-2-75-123	PTG4-2-75-123FF	PTG4-2-75-123CC	PTG4-2-75-123SS

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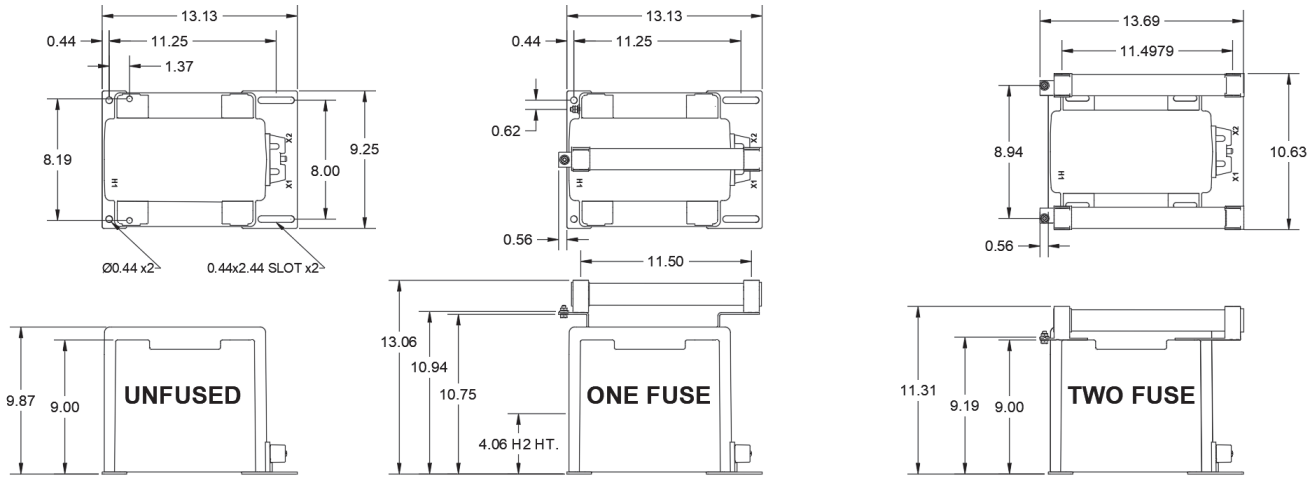
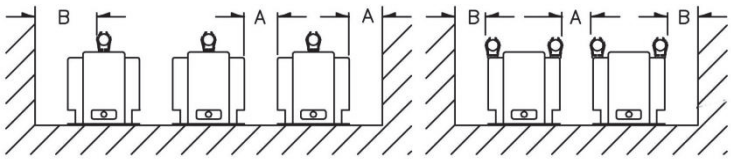
Indoor Voltage Transformer

Models PTG4-1-75
PTG4-2-75
rev 053023

(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal using a fuse in the line side of the primary only. By using this connection, a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation, the transformer primary voltage should not exceed 110% of rated value.
(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.
(c) Possibility of ferroresonance should be considered.



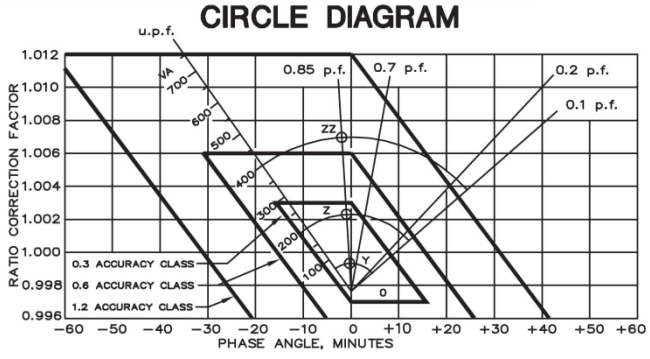
Recommended spacing is for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge, high altitude; and other considerations like configuration.



FUSE FOR MODEL PTG4 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES (SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
4200:120V	12 kV	50,000	2.0E	0.812	10	9.5
4800:120V	12 kV	50,000	2.0E	0.812	10	9.5
6600:110V	12 kV	50,000	1.0E	0.812	10	9.5
7200:120V	12 kV	50,000	1.0E	0.812	10	9.5
8400:120V	12 kV	50,000	1.0E	0.812	10	9.5
11000:110V	12 kV	50,000	0.5E	0.812	10	9.5
12000:120V	12 kV	50,000	0.5E	0.812	10	9.5

The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-amperes is shown on the unity power factor line (u.p.f.) and commences at the zero or no-load locus. To use the diagram, measure the known V.A. and scribe an arc about the "zero" locus of a length that contains the angle of the burden power factor. The point at which the arc terminates is the error locus in phase angle minutes and ratio correction factor.

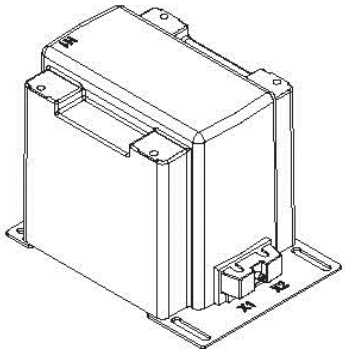
CIRCLE DIAGRAM



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Indoor Voltage Transformer

Models PTG4T-1-75
PTG4T-2-75 rev 53023



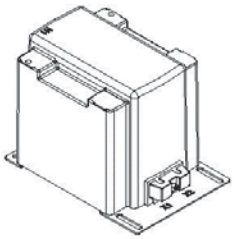
ACCURACY CLASS:
0.3 WXMY, 1.2Z at 100% rated voltage with 120V based ANSI burden.
0.3 WXMY, 1.2Z at 58% rated voltage with 69.3V based ANSI burden.
FREQUENCY:
60 Hz.
MAXIMUM SYSTEM VOLTAGE:
12 kV, BIL 75kV full wave
THERMAL RATING:
1000 va AT 30°c amb.
750 VA at 55°C. amb.
APPROXIMATE WEIGHT:
60 lbs., unfused

CERTIFICATIONS:

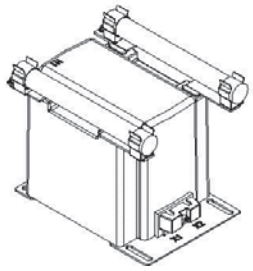
c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

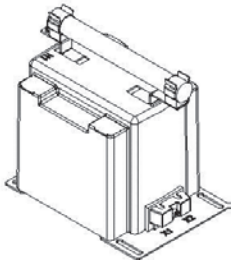
- Primary terminals that are unfused are ¼-20 brass screws with one lockwasher and flat washer.
- Primary terminals that are fused are ¼-20 brass screws with one flat washer, lockwasher and two nuts.
- Secondary terminals are No. 10-32 brass screws with one flat washer and lockwasher.
- The transformers are tested for partial discharge to Canadian Standards CAN 3-C13-M83. This test can also be carried out to IEC requirements if requested.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries
- Plated steel mounting base.
- Fuses have 0.81" Dia Caps and 9.5" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.
- A test cord is provided with each unit.



UNFUSED
TWO BUSHING



TWO FUSE
TWO BUSHING



ONE FUSE
ONE BUSHING

ONE BUSHING(b)					CATALOG NUMBERS		
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	R FR (c)	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
4A	4200	35:1	120	65	PTG4T-1-75-422F	PTG4T-1-75-422C	PTG4T-1-75-422S
4A	4800	40:1	120	65	PTG4T-1-75-482F	PTG4T-1-75-482C	PTG4T-1-75-482S
4B	6600	60:1	110-50Hz	65	PTG4T-1-75-662F	PTG4T-1-75-662C	PTG4T-1-75-662S
4B	7200	60:1	120	65	PTG4T-1-75-722F	PTG4T-1-75-722C	PTG4T-1-75-722S
4B	8400	70:1	120	65	PTG4T-1-75-842F	PTG4T-1-75-842C	PTG4T-1-75-842S
4B	11000	100:1	110-50Hz	65	PTG4T-1-75-113F	PTG4T-1-75-113C	PTG4T-1-75-113S
4B	12000	100:1	120	65	PTG4T-1-75-123F	PTG4T-1-75-123C	PTG4T-1-75-123S

TWO BUSHING(a)				CATALOG			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
1	4200	35:1	120	PTG4T-2-75-422	PTG4T-2-75-422FF	PTG4T-2-75-422CC	PTG4T-2-75-422SS
1	4800	40:1	120	PTG4T-2-75-482	PTG4T-2-75-482FF	PTG4T-2-75-482CC	PTG4T-2-75-482SS
2	6600	60:1	110-50Hz	PTG4T-2-75-662	PTG4T-2-75-662FF	PTG4T-2-75-662CC	PTG4T-2-75-662SS
2	7200	60:1	120	PTG4T-2-75-722	PTG4T-2-75-722FF	PTG4T-2-75-722CC	PTG4T-2-75-722SS
2	8400	70:1	120	PTG4T-2-75-842	PTG4T-2-75-842FF	PTG4T-2-75-842CC	PTG4T-2-75-842SS
2	11000	100:1	110-50Hz	PTG4T-2-75-113	PTG4T-2-75-113FF	PTG4T-2-75-113CC	PTG4T-2-75-113SS
2	12000	100:1	120	PTG4T-2-75-123	PTG4T-2-75-123FF	PTG4T-2-75-123CC	PTG4T-2-75-123SS

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

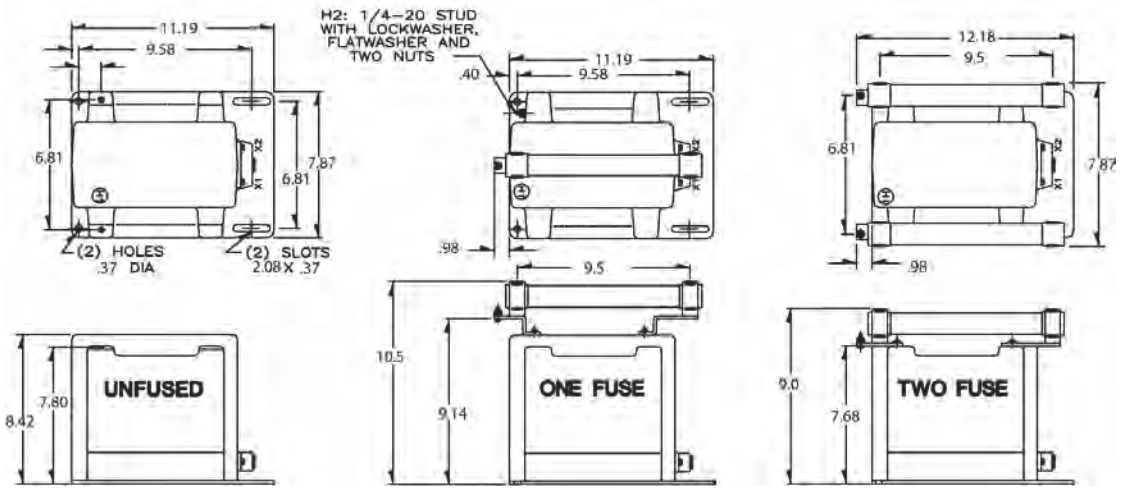
Indoor Voltage Transformer

Models PTG4T-1-75
PTG4T-2-75 rev 053023

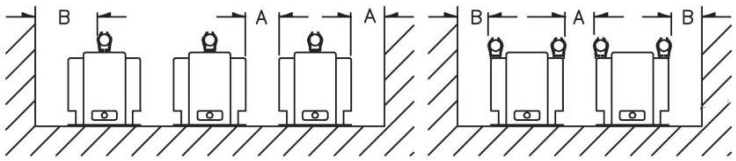
(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal using a fuse in the line side of the primary only. By using this connection, a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation, the transformer primary voltage should not exceed 110% of rated value.

(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.

(c) Possibility of ferroresonance should be considered.



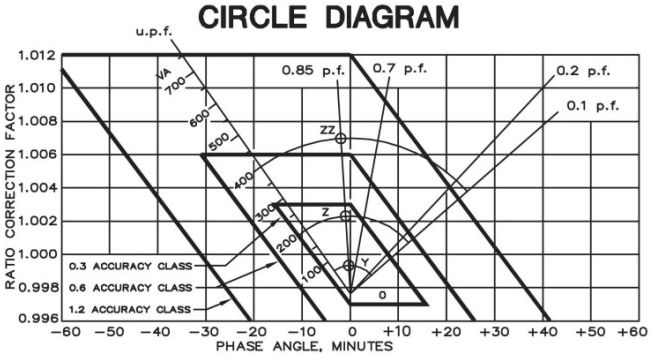
Recommended spacing is for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge, high altitude; and other considerations like configuration.



FUSE FOR MODEL PTG4 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES (SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
4200:120V	12 kV	50,000	2.0E	0.812	10	9.5
4800:120V	12 kV	50,000	2.0E	0.812	10	9.5
6600:110V	12 kV	50,000	1.0E	0.812	10	9.5
7200:120V	12 kV	50,000	1.0E	0.812	10	9.5
8400:120V	12 kV	50,000	1.0E	0.812	10	9.5
11000:110V	12 kV	50,000	0.5E	0.812	10	9.5
12000:120V	12 kV	50,000	0.5E	0.812	10	9.5

The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-amperes is shown on the unity power factor line (u.p.f.) and commences at the zero or no-load locus. To use the diagram, measure the known V.A. and scribe an arc about the "zero" locus of a length that contains the angle of the burden power factor. The point at which the arc terminates is the error locus in phase angle minutes and ratio correction factor.

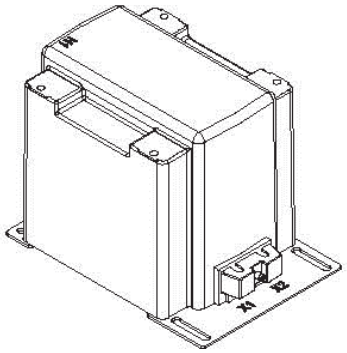
CIRCLE DIAGRAM



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Indoor Voltage Transformer

Models PTW4-1-75
PTW4-2-75 rev 053123



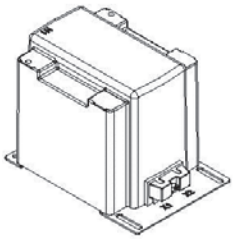
ACCURACY CLASS:
0.3 WXMY, 1.2Z at 100% rated voltage with 120V based ANSI burden.
0.3 WXMY, 1.2Z at 58% rated voltage with 69.3V based ANSI burden.
FREQUENCY:
60 Hz.
MAXIMUM SYSTEM VOLTAGE:
12 kV, BIL 75kV full wave
THERMAL RATING:
1500 va AT 30°c amb.
1000 VA at 55°C. amb.
APPROXIMATE WEIGHT:
85 lbs., unfused

CERTIFICATIONS:

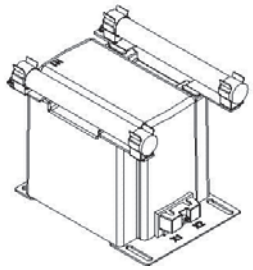
c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

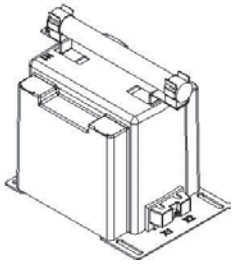
- Primary terminals that are unfused are ¼-20 brass screws with one lockwasher and flat washer.
- Primary terminals that are fused are ¼-20 brass screws with one flat washer, lockwasher and two nuts.
- Secondary terminals are No. 10-32 brass screws with one flat washer and lockwasher.
- The transformers are tested for partial discharge to Canadian Standards CAN 3-C13-M83. This test can also be carried out to IEC requirements if requested.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries
- Plated steel mounting base.
- Fuses have 1.63" Dia Caps and 11.50" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.
- A test cord is provided with each unit.



UNFUSED
TWO BUSHING



TWO FUSE
TWO BUSHING



ONE FUSE
ONE BUSHING

ONE BUSHING(b)					CATALOG NUMBERS		
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	R FR (c)	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
4A	4200	35:1	120	65	PTW4-1-75-422F	PTW4-1-75-422C	PTW4-1-75-422S
4A	4800	40:1	120	65	PTW4-1-75-482F	PTW4-1-75-482C	PTW4-1-75-482S
4B	6600	60:1	110-50Hz	65	PTW4-1-75-662F	PTW4-1-75-662C	PTW4-1-75-662S
4B	7200	60:1	120	65	PTW4-1-75-722F	PTW4-1-75-722C	PTW4-1-75-722S
4B	8400	70:1	120	65	PTW4-1-75-842F	PTW4-1-75-842C	PTW4-1-75-842S
4B	11000	100:1	110-50Hz	65	PTW4-1-75-113F	PTW4-1-75-113C	PTW4-1-75-113S
4B	12000	100:1	120	65	PTW4-1-75-123F	PTW4-1-75-123C	PTW4-1-75-123S

TWO BUSHING(a)				CATALOG			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
1	4200	35:1	120	PTW4-2-75-422	PTW4-2-75-422FF	PTW4-2-75-422CC	PTW4-2-75-422SS
1	4800	40:1	120	PTW4-2-75-48	PTW4-2-75-482FF	PTW4-2-75-482CC	PTW4-2-75-482SS
2	6600	60:1	110-50Hz	PTW4-2-75-662	PTW4-2-75-662FF	PTW4-2-75-662CC	PTW4-2-75-662SS
2	7200	60:1	120	PTW4-2-75-72	PTW4-2-75-722FF	PTW4-2-75-722CC	PTW4-2-75-722SS
2	8400	70:1	120	PTW4-2-75-842	PTW4-2-75-842FF	PTW4-2-75-842CC	PTW4-2-75-842SS
2	11000	100:1	110-50Hz	PTW4-2-75-11	PTW4-2-75-113FF	PTW4-2-75-113CC	PTW4-2-75-113SS
2	12000	100:1	120	PTW4-2-75-123	PTW4-2-75-123FF	PTW4-2-75-123CC	PTW4-2-75-123SS

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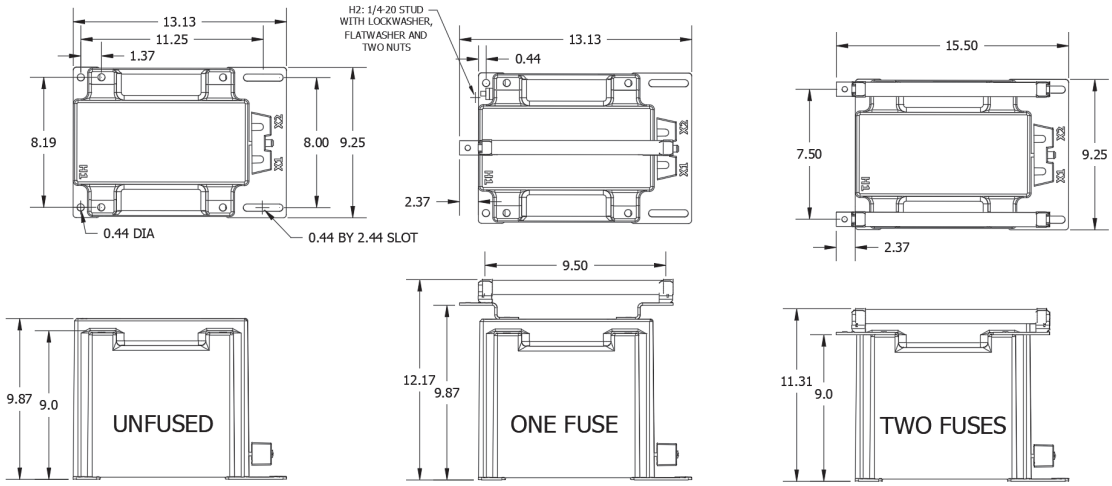
Indoor Voltage Transformer

Models PTW4-1-75
PTW4-2-75
rev 053023

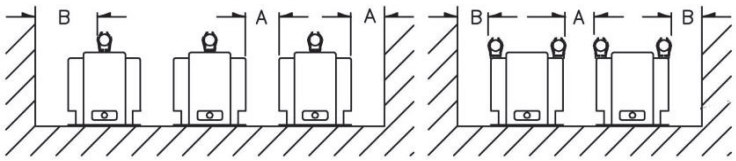
(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal using a fuse in the line side of the primary only. By using this connection, a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation, the transformer primary voltage should not exceed 110% of rated value.

(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.

(c) Possibility of ferroresonance should be considered.



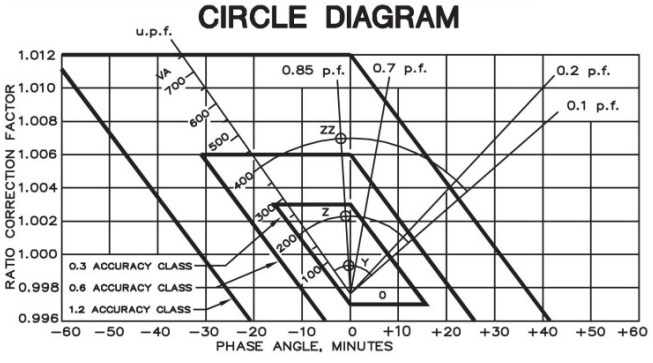
Recommended spacing is for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge, high altitude; and other considerations like configuration.



FUSE FOR MODEL PTW4 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES (SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
4200:120V	12 kV	50,000	2.0E	0.812	10	9.5
4800:120V	12 kV	50,000	2.0E	0.812	10	9.5
6600:110V	12 kV	50,000	1.0E	0.812	10	9.5
7200:120V	12 kV	50,000	1.0E	0.812	10	9.5
8400:120V	12 kV	50,000	1.0E	0.812	10	9.5
11000:110V	12 kV	50,000	0.5E	0.812	10	9.5
12000:120V	12 kV	50,000	0.5E	0.812	10	9.5

The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-amperes is shown on the unity power factor line (u.p.f.) and commences at the zero or no-load locus. To use the diagram, measure the known V.A. and scribe an arc about the "zero" locus of a length that contains the angle of the burden power factor. The point at which the arc terminates is the error locus in phase angle minutes and ratio correction factor.

CIRCLE DIAGRAM



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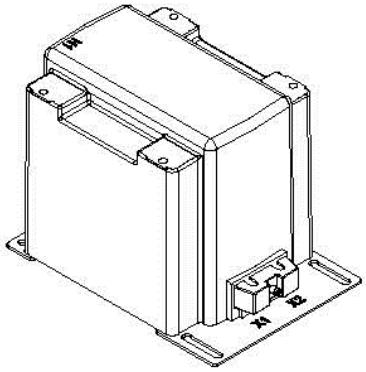
Indoor Voltage Transformer

Models PTG5-1-110
PTG5-2-110
rev 08212024



ACCURACY CLASS:
0.3 WXMYZ, 1.2ZZ at 100% rated voltage with 120V based ANSI burden; 0.3 WXMY, 1.2Z at 58% rated voltage with 69.3V based ANSI burden

FREQUENCY:
50/60 Hz

MAXIMUM SYSTEM VOLTAGE:
15.5kV, BIL 110kV full wave

THERMAL RATING:
1500 VA at 30°C. amb.
1000 VA at 55°C. amb.

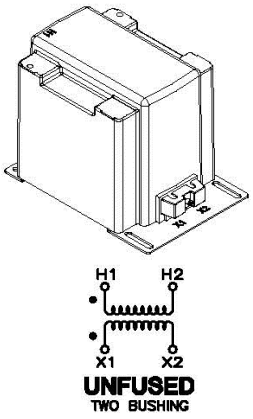
APPROXIMATE WEIGHT:
85 lbs., unfused

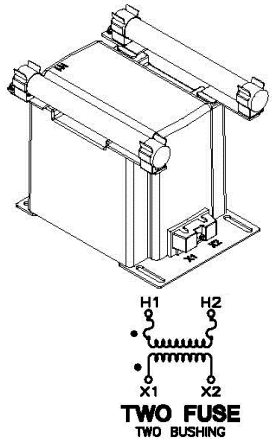
CERTIFICATIONS:

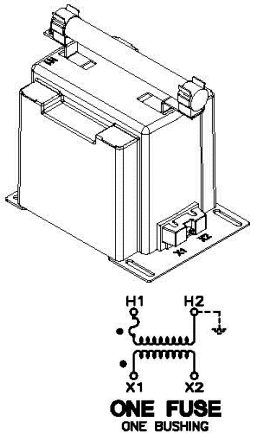
c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

- Primary terminals that are unfused are ¼ - 20 brass screws with one flat washer and lockwasher, unless otherwise specified.
- Primary terminals that are fused are ¼ - 20 brass screws with one flat washer, lockwasher and two nuts.
- Secondary terminals are No. 10-32 brass screws with one flat washer and lockwasher.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries
- Plated steel mounting base.
- Fuses have 1.63" Dia Caps and 11.50" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.
- A test cord is provided with each unit.







GROUP	ONE BUSHING (b)			RFR FR (c)	CATALOG NUMBERS		
					FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
4A	4200	35:1	120	65	PTG5-1-110-422F	PTG5-1-110-422C	PTG5-1-110-422S
4A	7200	60:1	120	65	PTG5-1-110-722F	PTG5-1-110-722C	PTG5-1-110-722S
4A	8400	70:1	120	65	PTG5-1-110-842F	PTG5-1-110-842C	PTG5-1-110-842S
4B	11000	100:1	110-50Hz	65	PTG5-1-110-113F	PTG5-1-110-113C	PTG5-1-110-113S
4B	12000	100:1	120	65	PTG5-1-110-123F	PTG5-1-110-123C	PTG5-1-110-123S
4B	13200	110:1	120	65	PTG5-1-110-1322F	PTG5-1-110-1322C	PTG5-1-110-1322S
4B	14400	120:1	120	65	PTG5-1-110-1442F	PTG5-1-110-1442C	PTG5-1-110-1442S

	TWO BUSHING (a)			CATALOG NUMBERS			
GROUP	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
1	4200	35:1	120	PTG5-2-110-422	PTG5-2-110-422FF	PTG5-2-110-422CC	PTG5-2-110-422SS
1	7200	60:1	120	PTG5-2-110-722	PTG5-2-110-722FF	PTG5-2-110-722CC	PTG5-2-110-722SS
1	8400	70:1	120	PTG5-2-110-842	PTG5-2-110-842FF	PTG5-2-110-842CC	PTG5-2-110-842SS
2	11000	100:1	110-50Hz	PTG5-2-110-113	PTG5-2-110-113FF	PTG5-2-110-113CC	PTG5-2-110-113SS
2	12000	100:1	120	PTG5-2-110-123	PTG5-2-110-123FF	PTG5-2-110-123CC	PTG5-2-110-123SS
2	13200	110:1	120	PTG5-2-110-1322	PTG5-2-110-1322FF	PTG5-2-110-1322CC	PTG5-2-110-1322SS
2	14400	120:1	120	PTG5-2-110-1442	PTG5-2-110-1442FF	PTG5-2-110-1442CC	PTG5-2-110-1442SS

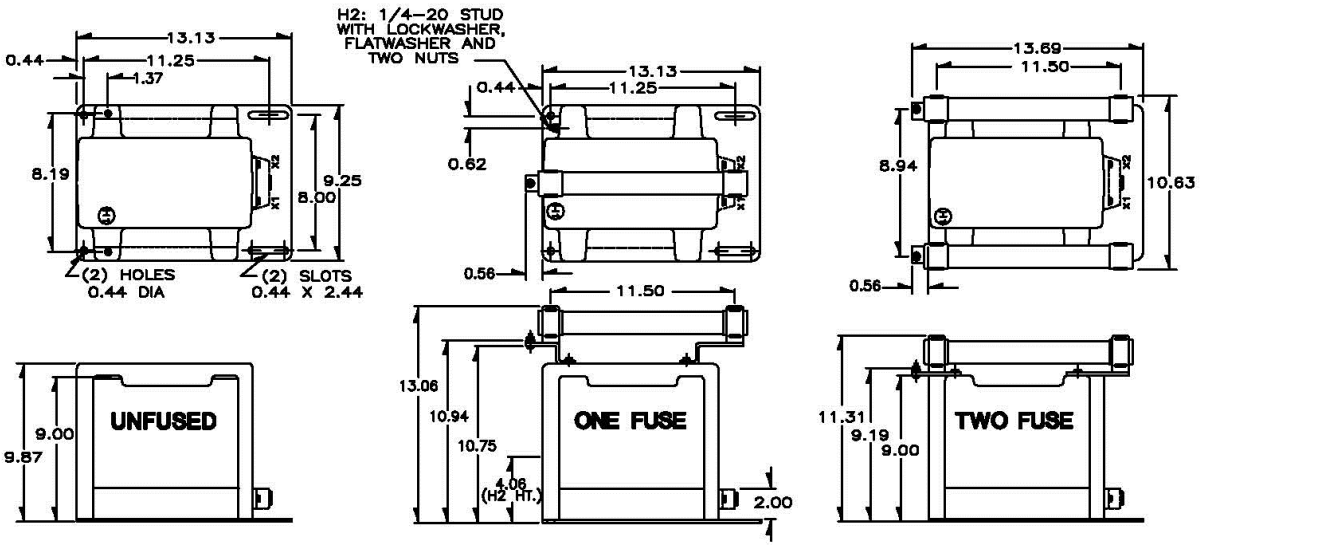
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Indoor Voltage Transformer

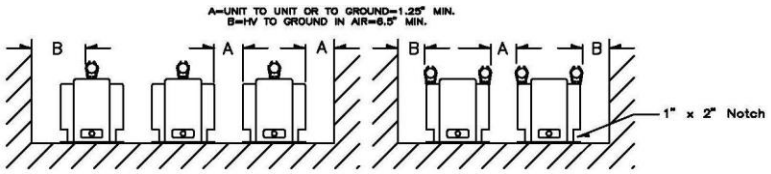
Models PTG5-1-110
PTG5-2-110
rev 08212024

(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal using a fuse in the line side of the primary only. By using this connection. a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation, the transformer primary voltage should not exceed 100% of rated value.
(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.
(c) Possibility of ferroresonance should be considered.

PTG5-1-110 **PTG5-2-110**



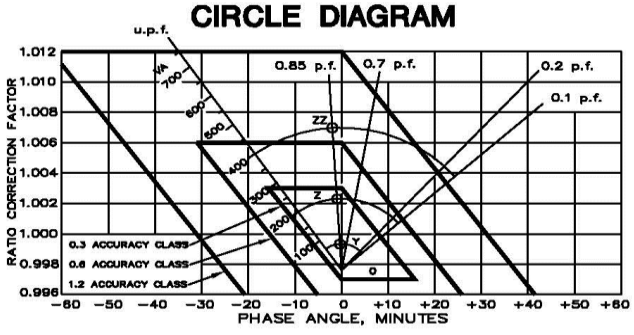
Recommended spacing is for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge, high altitude; and other considerations like configuration.



FUSE FOR MODEL PTG5 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES (SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
4200:120V	15.5kV	80,000	2.0E	1.63	13	11.50
7200:120V	15.5kV	80,000	1.0E	1.63	13	11.50
8400:120V	15.5kV	80,000	1.0E	1.63	13	11.50
11000:110V	15.5kV	80,000	0.5E	1.63	13	11.50
12000:120V	15.5kV	80,000	0.5E	1.63	13	11.50
13200:120V	15.5kV	80,000	0.5E	1.63	13	11.50
14400:120V	15.5kV	80,000	0.5E	1.63	13	11.50

CIRCLE DIAGRAM

The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-amperes is shown on the unity power factor line (u.p.f.) and commences at the zero or no-load locus. To use the diagram, measure the known V.A. and scribe an arc about the "zero" locus of a length that contains the angle of the burden power factor. The point at which the arc terminates is the error locus in phase angle minutes and ratio correction factor.



Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Indoor Voltage Transformer

Models PTW5-1-110
PTW5-2-110

Manufactured to meet the requirements of ANSI/IEEE C57.13

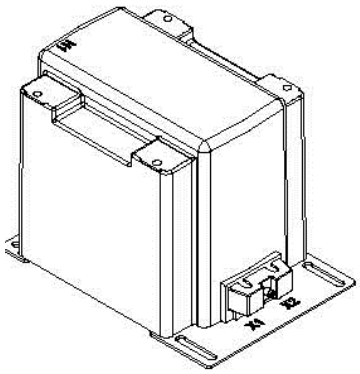
ACCURACY CLASS:
0.3 WXMYZ, 1.2ZZ at 100% rated voltage with 120V based ANSI burden; 0.3 WXMY, 1.2Z at 58% rated voltage with 69.3V based ANSI burden

FREQUENCY:
60 Hz.

MAXIMUM SYSTEM VOLTAGE:
15.5kV, BIL 110kV full wave

THERMAL RATING:
1500 VA at 30°C. amb.
1000 VA at 55°C. amb.

APPROXIMATE WEIGHT:
85 lbs., unfused

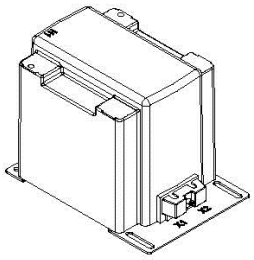


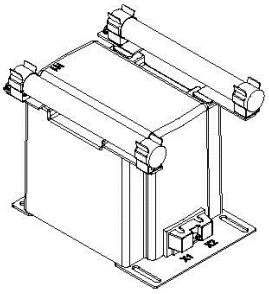
CERTIFICATIONS:

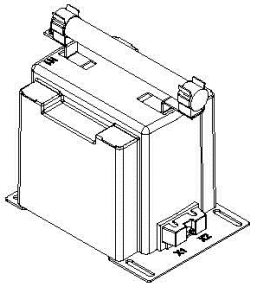
c UL us
E196364

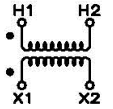
nqa.
ISO 9001
QUALITY MANAGEMENT

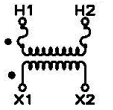
- Primary terminals that are unfused are ¼ - 20 brass screws with one flat washer and lockwasher, unless otherwise specified.
- Primary terminals that are fused are ¼ - 20 brass screws with one flat washer, lockwasher and two nuts.
- Secondary terminals are No. 10-32 brass screws with one flat washer and lockwasher.
- The core and coil assembly is vacuum encapsulated in polyurethane resin.
- Thermal burden rating is for 120 volt secondaries
- Plated steel mounting base.
- Fuses have 1.63" Dia Caps and 11.50" clip centers.
- Switchgear style is similar to fused style. No fuse or fuse clip is provided, but inserts for fuse clips are supplied.

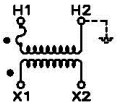












GROUP	ONE BUSHING (b)			RFR FR (c)	CATALOG NUMBERS		
					FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
4A	7200	60:1	120	65	PTW5-1-110-722F	PTW5-1-110-722C	PTW5-1-110-722S
4A	8400	70:1	120	65	PTW5-1-110-842F	PTW5-1-110-842C	PTW5-1-110-842S
4B	11000	100:1	110-50Hz	65	PTW5-1-110-113F	PTW5-1-110-113C	PTW5-1-110-113S
4B	12000	100:1	120	65	PTW5-1-110-123F	PTW5-1-110-123C	PTW5-1-110-123S
4B	13200	110:1	120	65	PTW5-1-110-1322F	PTW5-1-110-1322C	PTW5-1-110-1322S
4B	14400	120:1	120	65	PTW5-1-110-1442F	PTW5-1-110-1442C	PTW5-1-110-1442S

GROUP	TWO BUSHING (a)			CATALOG NUMBERS			
	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	UNFUSED	FUSES	FUSE CLIPS ONLY	SWITCHGEAR STYLE
1	7200	60:1	120	PTW5-2-110-722	PTW5-2-110-722FF	PTW5-2-110-722CC	PTW5-2-110-722SS
1	8400	70:1	120	PTW5-2-110-842	PTW5-2-110-842FF	PTW5-2-110-842CC	PTW5-2-110-842SS
2	11000	100:1	110-50Hz	PTW5-2-110-113	PTW5-2-110-113FF	PTW5-2-110-113CC	PTW5-2-110-113SS
2	12000	100:1	120	PTW5-2-110-123	PTW5-2-110-123FF	PTW5-2-110-123CC	PTW5-2-110-123SS
2	13200	110:1	120	PTW5-2-110-1322	PTW5-2-110-1322FF	PTW5-2-110-1322CC	PTW5-2-110-1322SS
2	14400	120:1	120	PTW5-2-110-1442	PTW5-2-110-1442FF	PTW5-2-110-1442CC	PTW5-2-110-1442SS

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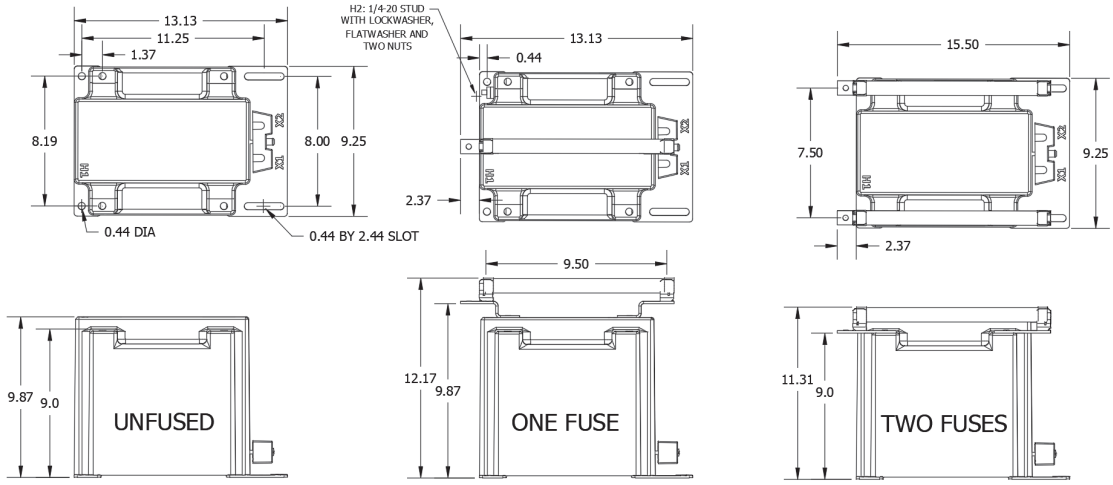
Indoor Voltage Transformer

Models PTW5-1-110
PTW5-2-110 rev 053123

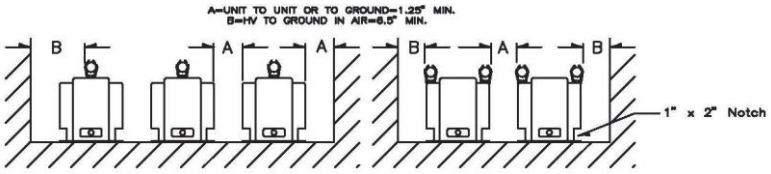
Manufactured to meet the requirements of ANSI/IEEE C57.13

(a) Two fuse transformers should not be used for Y connections. It is preferred practice to connect one lead from each voltage transformer directly to the neutral terminal using a fuse in the line side of the primary only. By using this connection. a transformer can never be made "live" from the line side by reason of a blown fuse in the neutral side. For continuous operation, the transformer primary voltage should not exceed 100% of rated value.
(b) Voltage transformers connected line-to-ground cannot be considered to be grounding transformers and must not be operated with the secondaries in closed delta because excessive currents may flow in the delta.
(c) Possibility of ferroresonance should be considered.

PTW5-1-110 **PTW5-2-110**



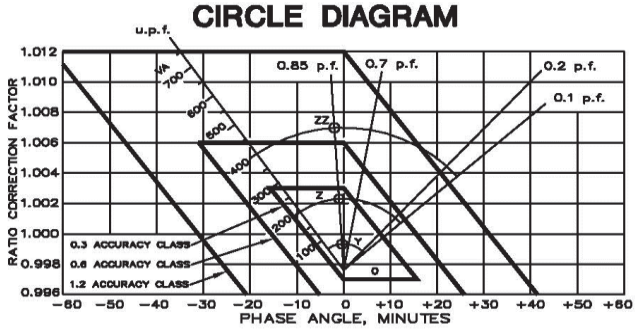
Recommended spacing is for guidance only. User needs to set appropriate values to assure performance for: high potential test; impulse test; high humidity; partial discharge, high altitude; and other considerations like configuration.



FUSE FOR MODEL PTW5 TRANSFORMER	RATING VOLTS	INTERRUPTING AMPERES (SYM)	SUGGESTED RATING * CONTINUOUS AMPERES	CAP DIA. INCHES	LENGTH INCHES	CLIP CENTERS INCHES
7200:120V	15.5kV	80,000	1.0E	1.63	13	11.50
8400:120V	15.5kV	80,000	1.0E	1.63	13	11.50
11000:110V	15.5kV	80,000	0.5E	1.63	13	11.50
12000:120V	15.5kV	80,000	0.5E	1.63	13	11.50
13200:120V	15.5kV	80,000	0.5E	1.63	13	11.50
14400:120V	15.5kV	80,000	0.5E	1.63	13	11.50

The circle diagram can be used to predict the performance of a transformer for various loads and power factors. A convenient scale of volt-amperes is shown on the unity power factor line (u.p.f.) and commences at the zero or no-load locus. To use the diagram, measure the known V.A. and scribe an arc about the "zero" locus of a length that contains the angle of the burden power factor. The point at which the arc terminates is the error locus in phase angle minutes and ratio correction factor.

CIRCLE DIAGRAM



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VOLTAGE TRANSFORMERS

For Metering and Instrumentation

VOLTAGE TRANSFORMERS

For Metering and Instrumentation

VOLTAGE TRANSFORMERS

For Metering and Instrumentation

Control Power Transformer

Model CPT3-45-0.3
rev 03182021

APPLICATION:
To provide control power in distribution equipment and motor starters. May also be used for indicating and recording voltmeters.

FREQUENCY:
See below.

ACCURACY:
± 1% at 25 VA.

INSULATION LEVEL:
5 kV, 45 kV BIL. full wave

THERMAL RATING:
At 30°C. amb., see below

APPROXIMATE WEIGHT:
18 lbs.

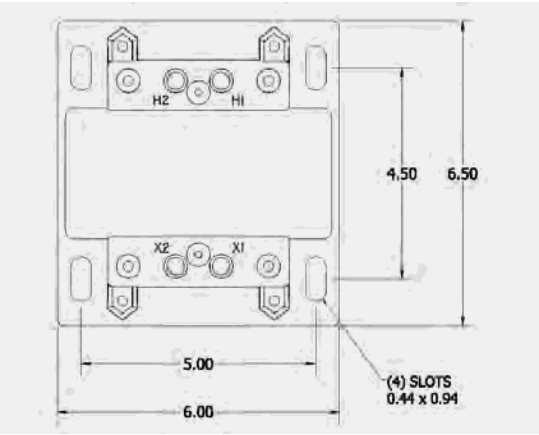
CERTIFICATIONS:

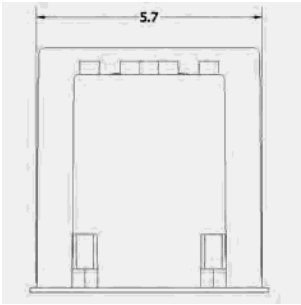
nqa.
ISO 9001
QUALITY MANAGEMENT

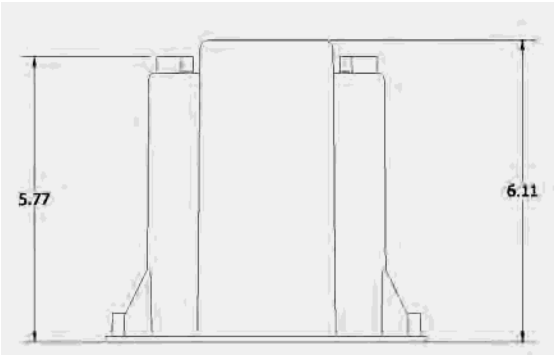
Model	CPT3-45-0.3
Width	6.00
Height	6.11
Depth	6.50

- Primary fuses are not supplied, but are recommended. Use a 5kV class 0.5E fuse for all ratings 4160V and above, and 1E fuse for all ratings 3300V and below.
- Primary and secondary terminals are brass screws No. 10-32 with on flat washer and lockwasher.
- The transformer winding is vacuum encapsulated in a polyurethane resin.
- Plated steel mounting base.
- For indoor use.

CATALOG NUMBER	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	THERMAL RATING
CPT3-45-0.3-841	840	7:1	120	300VA
CPT3-45-0.3-122	1200	10:1	120	300VA
CPT3-45-0.3-242	2400	20:1	120	300VA
CPT3-45-0.3-332	3300	20:1	120	200VA
CPT3-45-0.3-4161	4160	34.7:1	110	200VA
CPT3-45-0.3-482	4800	40:1	120	200VA







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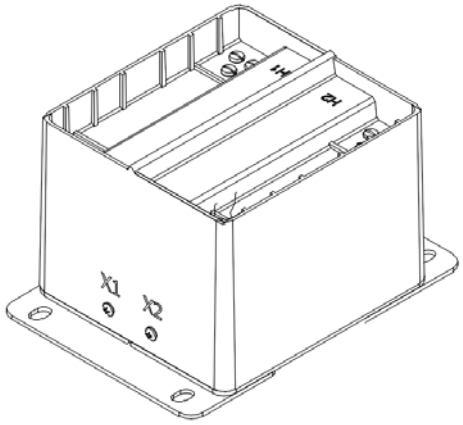
Control Power Transformer

Model CPT3-60-0.5
rev 03182021



CERTIFICATIONS:

nqa.
ISO 9001
QUALITY MANAGEMENT

APPLICATION:
To provide control power in distribution equipment and motor starters. May also be used for indicating and recording voltmeters.

FREQUENCY:
60 Hz.

ACCURACY:
± 1% at 100 VA.

INSULATION LEVEL:
5 kV, 60 kV BIL. full wave

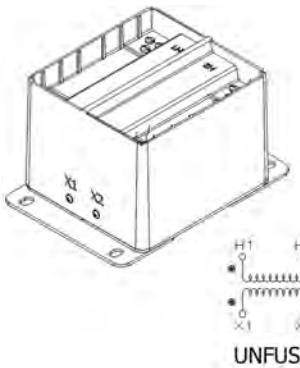
THERMAL RATING:
At 30°C. amb., see below

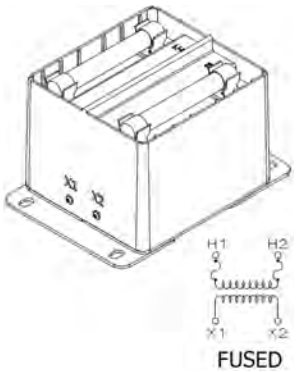
APPROXIMATE WEIGHT:
22 lbs.

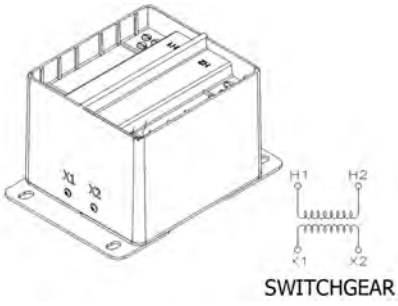
- Suggested fuse rating: See below, 50kA RMS Symmetrical. Fuse diameter is 0.81 inches. Higher fuse ratings available at users option.
- Primary and secondary terminals are brass screws No. 10-32 with on flat washer and lockwasher.
- The transformer winding is vacuum encapsulated in a polyurethane resin.
- Plated steel mounting base is removable. CPT can be mounted with base as shown, with base rotated 90 degrees, or without a base.
- For indoor use.

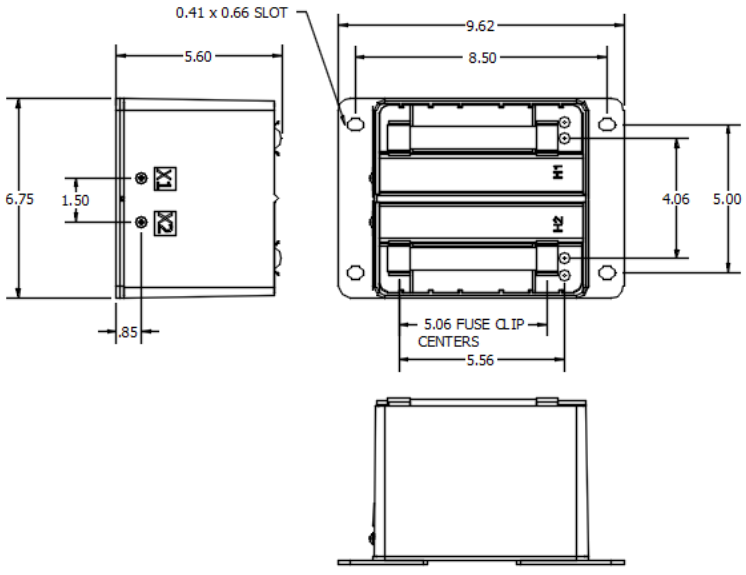
PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	THERMAL RATING	CATALOG NUMBERS				SUGGESTED FUSE RATING CONTINUOUS AMPERES
				UNFUSED (a)	FUSED	FUSE CLIPS ONLY	SWITCHGEAR	
2400	20:1	120	500VA	CPT3-60-0.5-242	CPT3-60-0.5-242FF	CPT3-60-0.5-242CC	CPT3-60-0.5-242SS	2.0E
3300	30:1	110-50Hz	450VA	CPT3-60-0.5-332	CPT3-60-0.5-332FF	CPT3-60-0.5-332CC	CPT3-60-0.5-332SS	1.0E
4200	35:1	120	500VA	CPT3-60-0.5-422	CPT3-60-0.5-422FF	CPT3-60-0.5-422CC	CPT3-60-0.5-422SS	1.0E
4800	40:1	120	450VA	CPT3-60-0.5-482	CPT3-60-0.5-482FF	CPT3-60-0.5-482CC	CPT3-60-0.5-482SS	1.0E
6600	60:1	110-50Hz	300VA	CPT3-60-0.5-662	CPT3-60-0.5-662FF	CPT3-60-0.5-662CC	CPT3-60-0.5-662SS	0.5E
7200	60:1	120	300VA	CPT3-60-0.5-722	CPT3-60-0.5-722FF	CPT3-60-0.5-722CC	CPT3-60-0.5-722SS	0.5E

(a) FUSES MUST BE MOUNTED SEPARATELY





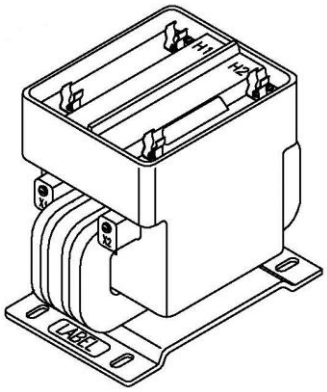




Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPT3-60-1.0



CERTIFICATIONS:

nqa.
ISO 9001
QUALITY MANAGEMENT

APPLICATION:
To provide control power in distribution equipment and motor starters.

FREQUENCY:
See below

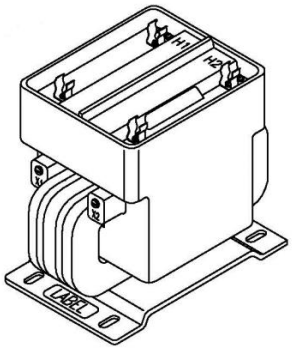
INSULATION LEVEL:
5 kV, 60 kV BIL. full wave

THERMAL RATING:
At 30°C. amb., see below.

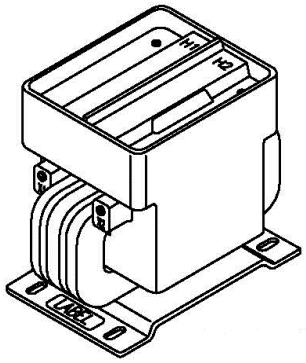
APPROXIMATE WEIGHT:
40 lbs.

- An optional clear molded cover is available for added safety when desired.
- Primary and secondary terminals are brass screws No. 10-32 with one flat washer and lockwasher.
- The transformer winding is vacuum encapsulated in polyurethane resin.
- Plated steel mounting base.
- For indoor use.

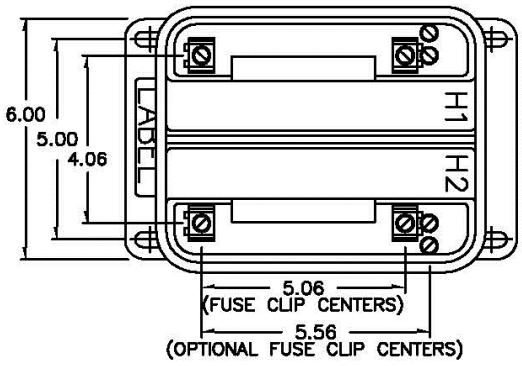
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	FREQUENCY	THERMAL RATING	PRIMARY FUSE
CPT3-60-1.0-242FF	2400V	20:1	120V	60Hz	1.0kVA	2E
CPT3-60-1.0-332FF	3300V	30:1	110V	50Hz	0.8kVA	2E
CPT3-60-1.0-4161FF	4160V	34.7:1	120V	60Hz	1.0kVA	2E
CPT3-60-1.0-482FF	4800V	40.1	120V	60Hz	1.0kVA	2E
CPT3-60-1.0-662FF	6600V	60:1	110V	50Hz	0.6kVA	1E
CPT3-60-1.0-722FF	7200V	60:1	120V	60Hz	0.6kVA	1E
***For fuse clips only, change FF to CC**						

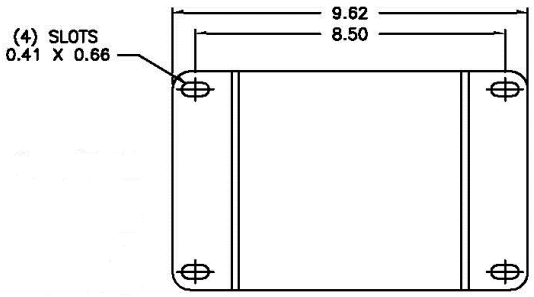


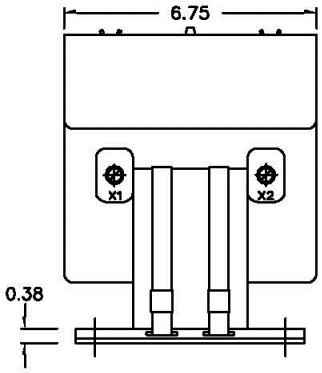
FUSED STYLE

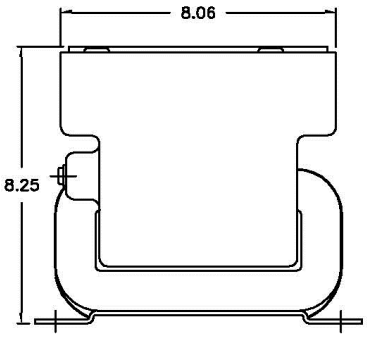


UNFUSED STYLE







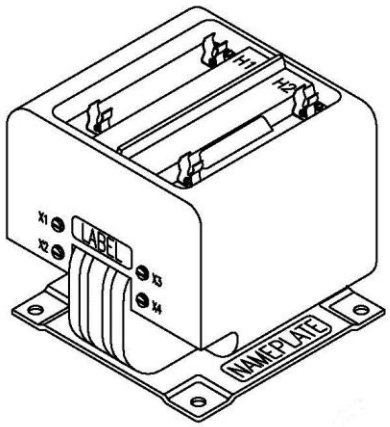


BASE PLATE

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPT3-60-1.5



APPLICATION:
To provide control power in distribution equipment and motor starters

FREQUENCY:
See below

INSULATION LEVEL:
5 kV, 60 kV BIL. full wave

THERMAL RATING:
1.5 kVA at 30°C. amb.

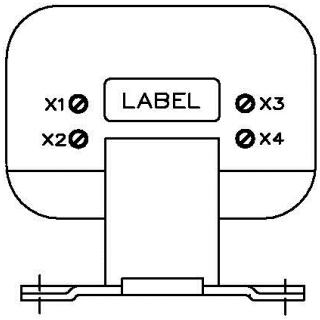
APPROXIMATE WEIGHT:
54 lbs.

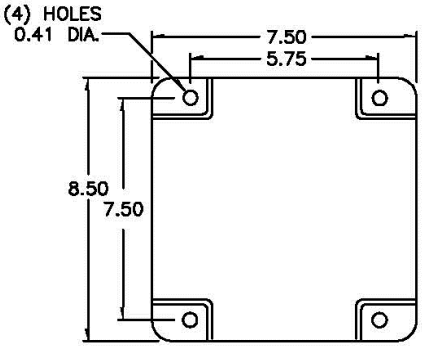
CERTIFICATIONS:

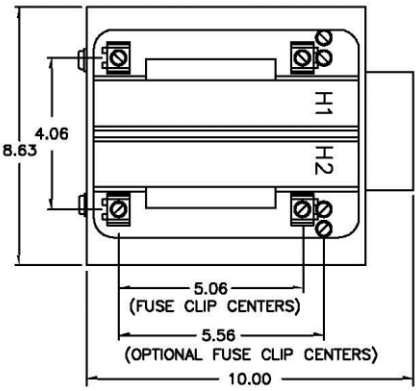
nqa. ISO 9001 QUALITY MANAGEMENT

- Primary terminals are brass screws No. 10-32 with one flat washer and lockwasher.
- Secondary terminals are brass screws No. 10-32 with one flat washer and lockwasher.
- The transformer winding is vacuum encapsulated in polyurethane resin.
- Plated steel mounting base
- For indoor use.

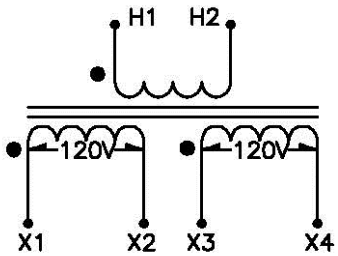
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	FREQUENCY	PRIMARY FUSE
CPT3-60-1.5-242FF	2400V	20:1	120/240V	60Hz	3E
CPT3-60-1.5-332FF	3300V	30:1	110/220V	50Hz	2E
CPT3-60-1.5-4161FF	4160V	34.7:1	120/240V	60Hz	2E
CPT3-60-1.5-482FF	4800V	40.1	120/240V	60Hz	2E
*For fuse clips only, change FF to CC					

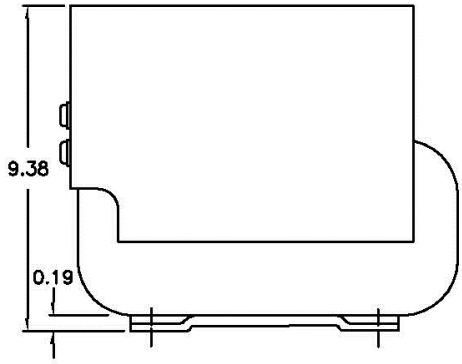






CONNECTION DIAGRAM

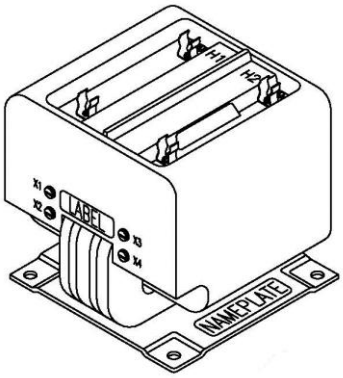




Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPT3-60-2
rev 10152024



CERTIFICATIONS:

nqa.
ISO 9001
QUALITY MANAGEMENT

APPLICATION:
To provide control power in distribution equipment and motor starters

FREQUENCY:
See below

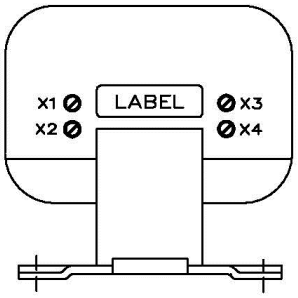
INSULATION LEVEL:
5 kV, 60 kV BIL. full wave

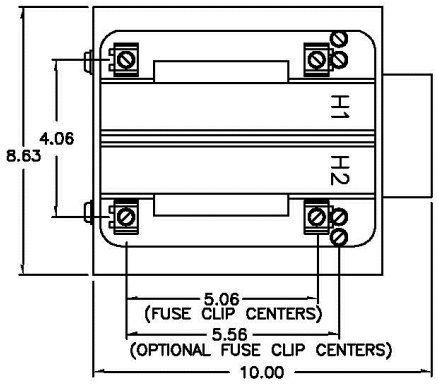
THERMAL RATING:
At 30°C. amb., see below

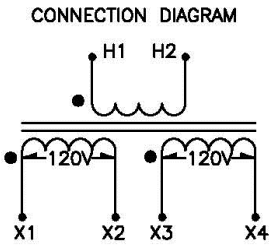
APPROXIMATE WEIGHT:
63 lbs.

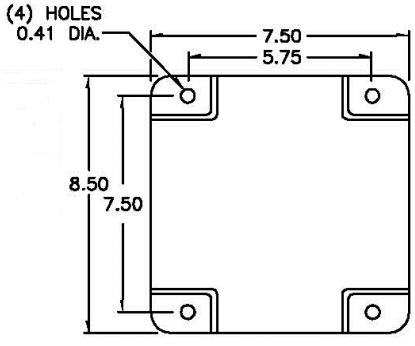
- Primary terminals are brass screws No. 10-32 with one flat washer and lockwasher.
- Secondary terminals are brass screws No. 10-32 with one flat washer and lockwasher.
- The transformer winding is vacuum encapsulated in polyurethane resin
- Plated steel mounting base
- For indoor use

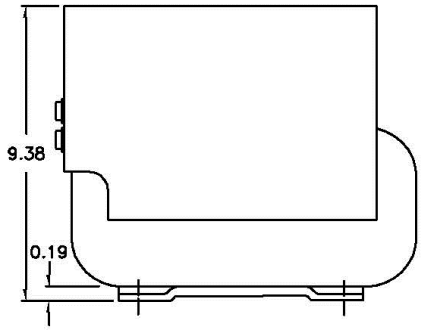
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	FREQUENCY	THERMAL RATING	PRIMARY FUSE
CPT3-60-2-242FF	2400V	20:1	120/240V	60Hz	2.0kVA	3E
CPT3-60-2-332FF	3300V	30:1	110/220V	50Hz	1.8kVA	2E
CPT3-60-2-4161FF	4160V	34.7:1	120/240V	60Hz	2.0kVA	2E
CPT3-60-2-482FF	4800V	40.1	120/240V	60Hz	2.0kVA	2E
CPT3-60-2-662FF	6600V	60:1	110/220V	60Hz	2.0kVA	1E
CPT3-60-2-722FF	6900V	60.1	120/240V	60Hz	2.0kVA	1E
*For fuse clips only, change FF to CC						











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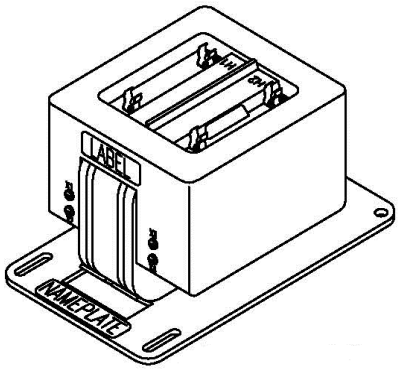
Control Power Transformer

Model CPT3-60-3



CERTIFICATIONS:

nqa.
ISO 9001
QUALITY MANAGEMENT

APPLICATION:
To provide control power in distribution equipment and motor starters

FREQUENCY:
60 Hz.

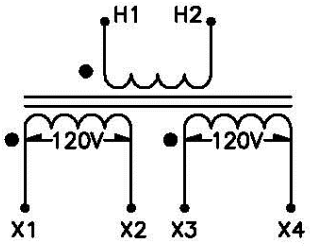
INSULATION LEVEL:
5 kV, 60 kV BIL. full wave

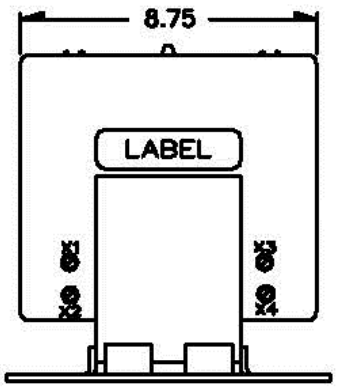
THERMAL RATING:
3 kVA at 30°C. amb.

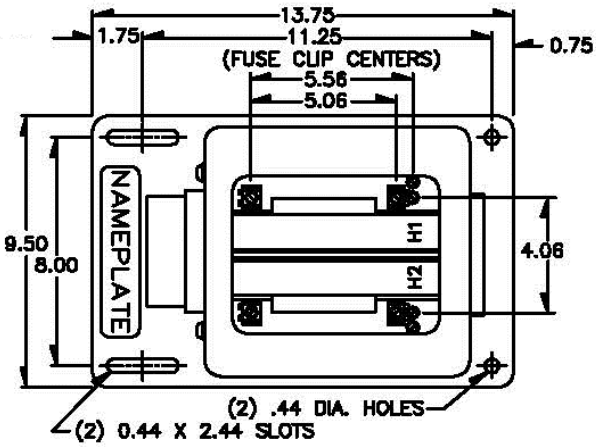
APPROXIMATE WEIGHT:
85 lbs.

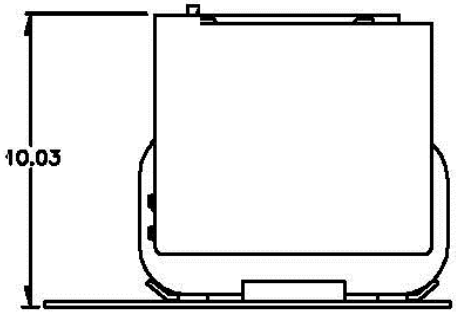
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO AT 120 V	SECONDARY VOLTAGE	CATALOG NUMBER	PRIMARY FUSE
CPT3-60-3-242-XXX	2400	20:1	120/240	CPT3-60-3-242FF	5E
CPT3-60-3-4161-XXX	4160	34.7:1	120/240	CPT3-60-3-4161FF	3E
CPT3-60-3-482-XXX	4800	40:1	120/240	CPT3-60-3-482FF	3E

- Primary terminals are brass screws No. 10-32 with one flat washer and lockwasher or HV lead kit shown below.
- Secondary terminals are brass screws No. ¼ - 20 with one flat washer and lockwasher.
- The transformer winding is vacuum encapsulated in polyurethane resin.
- Plated steel mounting base
- For indoor use









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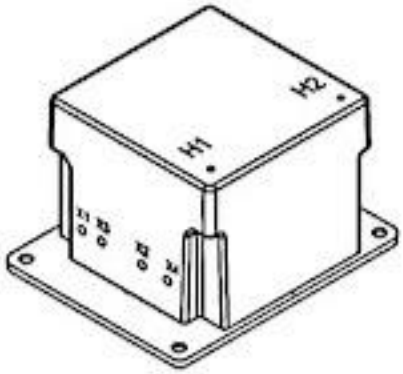
Control Power Transformer

Model CPT3-60-05-6



CERTIFICATIONS:

nqa.
ISO 9001
QUALITY MANAGEMENT

APPLICATION:
To provide power in Motor Control centers and Distribution Switchgear

FREQUENCY:
50/60 Hz.

INSULATION LEVEL:
6.9 kV, 60 kV BIL. full wave

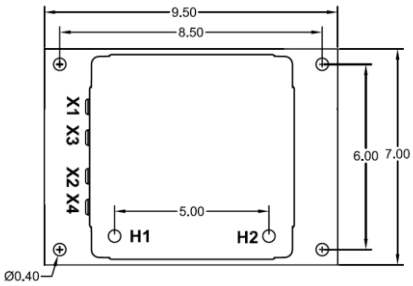
THERMAL RATING:
At 30°C. amb.

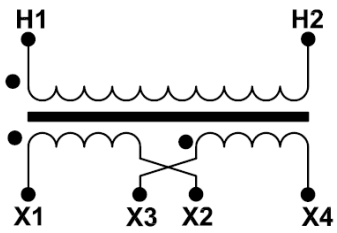
APPROXIMATE WEIGHT:
25 lbs.

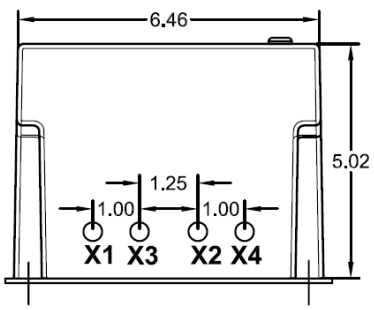
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO AT 120 V	SECONDARY VOLTAGE	FREQUENCY Hz	THERMAL RATING
CPT3 60 05 2400 – 6	2400	20.00	120/240	50/60	0.5 kVA
CPT3 60 05 3300 – 6	3300	27.50	120/240	50/60	0.5 kVA
CPT3 60 05 4160 – 6	4160	34.66	120/240	50/60	0.5 kVA
CPT3 60 05 4800 – 6	4800	40.00	120/240	50/60	0.5 kVA
CPT3 60 05 5000 – 6	5000	41.66	120/240	50/60	0.5 kVA
CPT3 60 05 5500 – 6	5500	45.83	120/240	50/60	0.5 kVA
CPT3 60 05 6000 – 6	6000	50.00	120/240	50/60	0.5 kVA
CPT3 60 05 6600 – 6	6600	55.00	120/240	50/60	0.5 kVA
CPT3 60 05 6900 - 6	6900	57.50	120/240	50/60	0.5 kVA

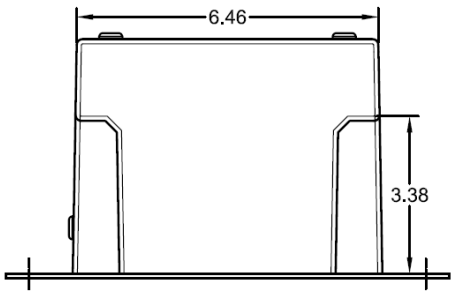
- Primary and secondary terminal are brass screws No. 10-32 with one flat washer and lockwasher.
- Transformer winding is vacuum encapsulated in polyurethane resin with temperature insulation class of 105°C
- Plated steel mounting base
- For indoor use

CONNECTION DIAGRAM









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TTL Transformer Technologies Ltd.

Control Power Transformer

Model CPT3-60-05-5

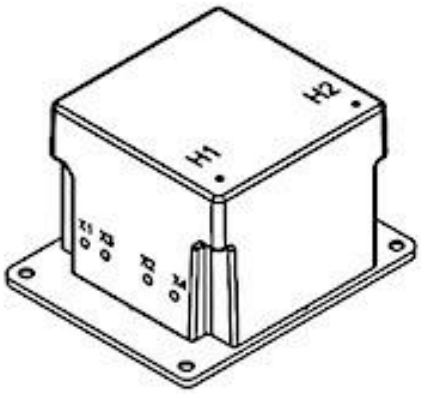
APPLICATION:
To provide power in Motor Control centers and Distribution Switchgear

FREQUENCY:
50/60 Hz.

INSULATION LEVEL:
6.9 kV, 60 kV BIL. full wave

THERMAL RATING:
At 30°C. amb.

APPROXIMATE WEIGHT:
25 lbs.

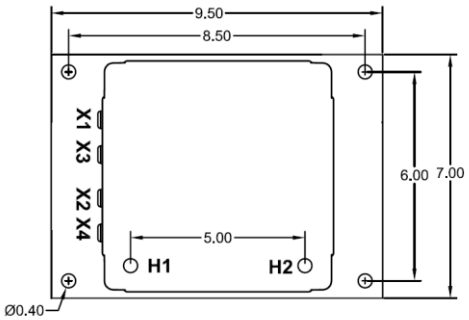


CERTIFICATIONS:

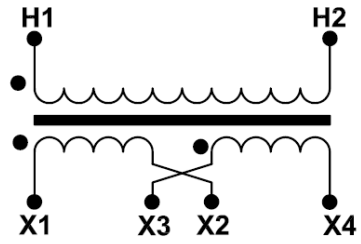
nqa.
ISO 9001
QUALITY MANAGEMENT

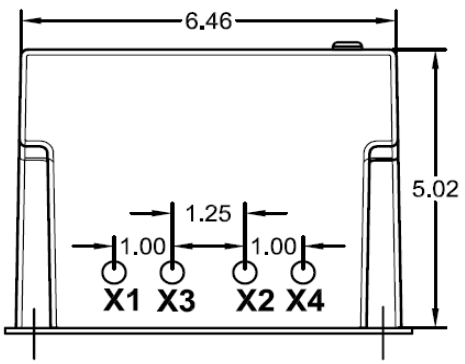
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO AT 110 V	SECONDARY VOLTAGE	FREQUENCY Hz	THERMAL RATING
CPT3 60 05 2400 – 5	2400	21.81	110/220	50/60	0.5 kVA
CPT3 60 05 3300 – 5	3300	30.00	110/220	50/60	0.5 kVA
CPT3 60 05 4160 – 5	4160	37.81	110/220	50/60	0.5 kVA
CPT3 60 05 4800 – 5	4800	43.63	110/220	50/60	0.5 kVA
CPT3 60 05 5000 – 5	5000	45.45	110/220	50/60	0.5 kVA
CPT3 60 05 5500 – 5	5500	50.00	110/220	50/60	0.5 kVA
CPT3 60 05 6000 – 5	6000	54.54	110/220	50/60	0.5 kVA
CPT3 60 05 6600 – 5	6600	60.00	110/220	50/60	0.5 kVA
CPT3 60 05 6900 - 5	6900	62.72	110/220	50/60	0.5 kVA

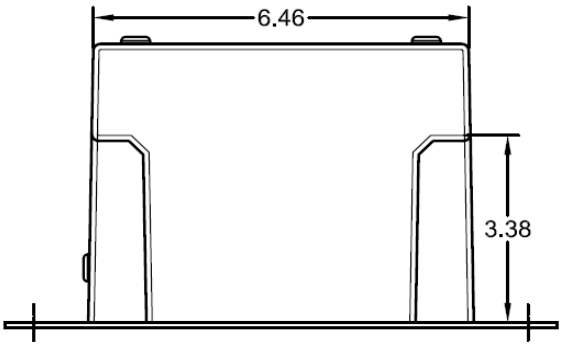
- Primary and secondary terminal are brass screws No. 10-32 with one flat washer and lockwasher.
- Transformer winding is vacuum encapsulated in polyurethane resin with temperature insulation class of 105°C
- Plated steel mounting base
- For indoor use



CONNECTION DIAGRAM







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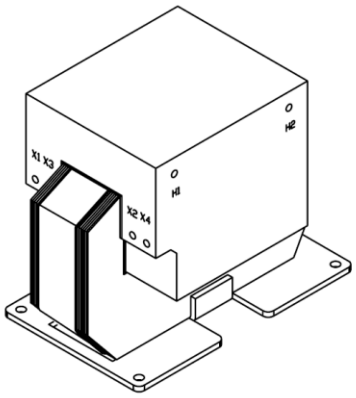
TTL Transformer Technologies Ltd.

Control Power Transformer

Model CPT3-60-075-6



APPLICATION:
To provide power in Motor Control centers and Distribution Switchgear

FREQUENCY:
50/60 Hz.

INSULATION LEVEL:
6.9 kV, 60 kV BIL. full wave

THERMAL RATING:
At 30°C. amb.

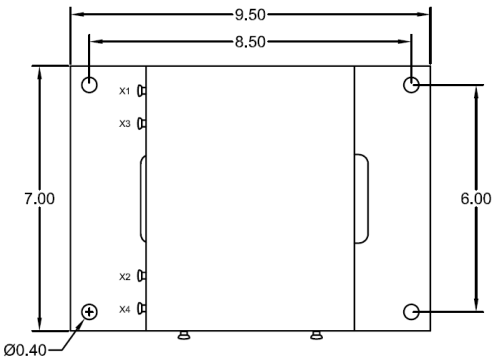
APPROXIMATE WEIGHT:
25 lbs.

CERTIFICATIONS:

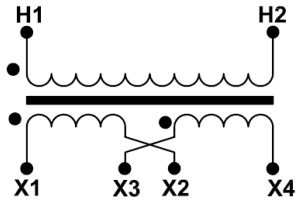
nqa. ISO 9001 QUALITY MANAGEMENT

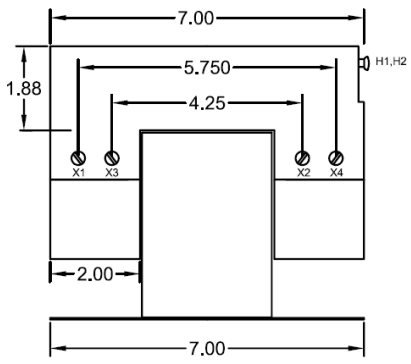
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO AT 120 V	SECONDARY VOLTAGE	FREQUENCY Hz	THERMAL RATING
CPT3 60 075 2400 – 6	2400	20.00	120/240	50/60	0.75 kVA
CPT3 60 075 3300 – 6	3300	27.50	120/240	50/60	0.75 kVA
CPT3 60 075 4160 – 6	4160	34.66	120/240	50/60	0.75 kVA
CPT3 60 075 4800 – 6	4800	40.00	120/240	50/60	0.75 kVA
CPT3 60 075 5000 – 6	5000	41.66	120/240	50/60	0.75 kVA
CPT3 60 075 5500 – 6	5500	45.83	120/240	50/60	0.75 kVA
CPT3 60 075 6000 – 6	6000	50.00	120/240	50/60	0.75 kVA
CPT3 60 075 6600 – 6	6600	55.00	120/240	50/60	0.75 kVA
CPT3 60 075 6900 – 6	6900	57.50	120/240	50/60	0.75 kVA

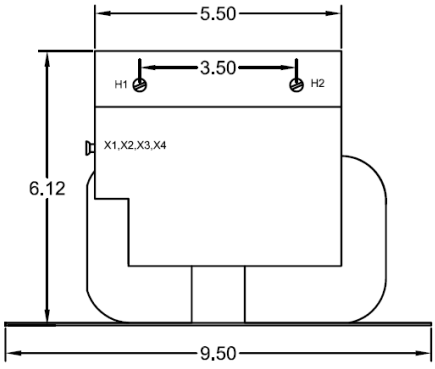
- Primary and secondary terminal are brass screws No. 10-32 with one flat washer and lockwasher.
- Transformer winding is vacuum encapsulated in polyurethane resin with temperature insulation class of 105°C
- Plated steel mounting base
- For indoor use



CONNECTION DIAGRAM







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Control Power Transformer

Model CPT3-60-075-5

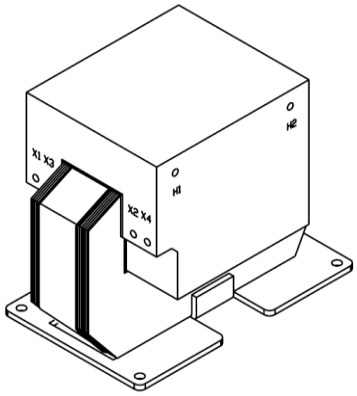
APPLICATION:
To provide power in Motor Control centers and Distribution Switchgear

FREQUENCY:
50/60 Hz.

INSULATION LEVEL:
6.9 kV, 60 kV BIL. full wave

THERMAL RATING:
At 30°C. amb.

APPROXIMATE WEIGHT:
27 lbs.

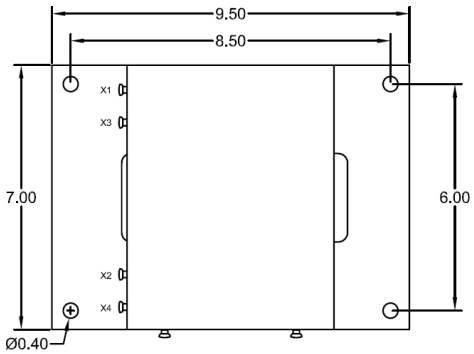


CERTIFICATIONS:

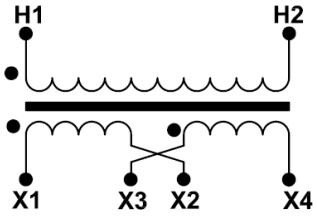
nqa.
ISO 9001
QUALITY MANAGEMENT

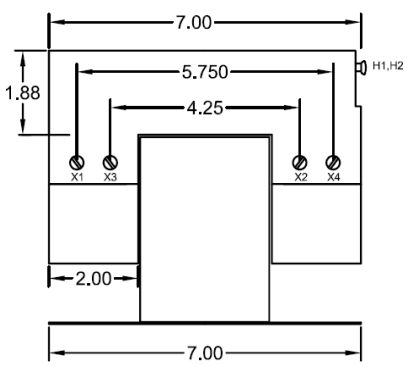
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO AT 110 V	SECONDARY VOLTAGE	FREQUENCY Hz	THERMAL RATING
CPT3 60 075 2400 – 5	2400	21.81	110/220	50/60	0.75 kVA
CPT3 60 075 3300 – 5	3300	30.00	110/220	50/60	0.75 kVA
CPT3 60 075 4160 – 5	4160	37.81	110/220	50/60	0.75 kVA
CPT3 60 075 4800 – 5	4800	43.63	110/220	50/60	0.75 kVA
CPT3 60 075 5000 – 5	5000	45.45	110/220	50/60	0.75 kVA
CPT3 60 075 5500 – 5	5500	50.00	110/220	50/60	0.75 kVA
CPT3 60 075 6000 – 5	6000	54.54	110/220	50/60	0.75 kVA
CPT3 60 075 6600 – 5	6600	60.00	110/220	50/60	0.75 kVA
CPT3 60 075 6900 – 5	6900	62.72	110/220	50/60	0.75 kVA

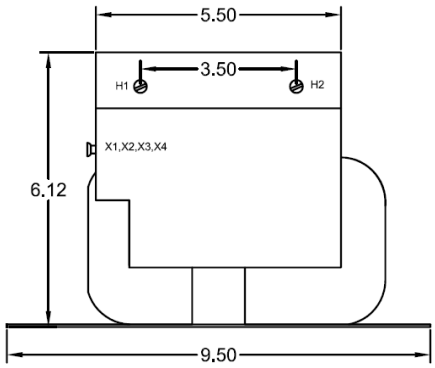
- Primary and secondary terminal are brass screws No. 10-32 with one flat washer and lockwasher.
- Transformer winding is vacuum encapsulated in polyurethane resin with temperature insulation class of 105°C
- Plated steel mounting base
- For indoor use



CONNECTION DIAGRAM







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TTL Transformer Technologies Ltd.

Control Power Transformer

Model CPT3-60-2-6

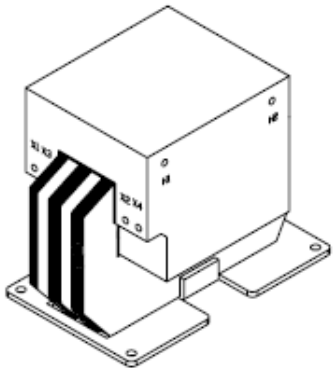
APPLICATION:
To provide power in Motor Control centers and Distribution Switchgear

FREQUENCY:
50/60 Hz.

INSULATION LEVEL:
6.9 kV, 60 kV BIL. full wave

THERMAL RATING:
At 30°C. amb.

APPROXIMATE WEIGHT:
57 lbs.

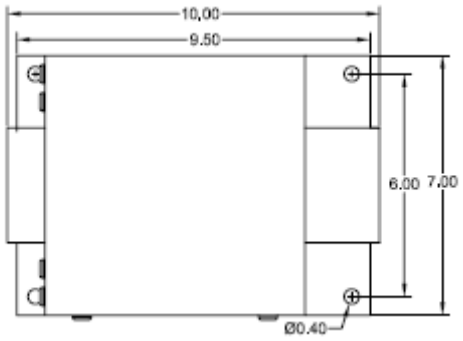


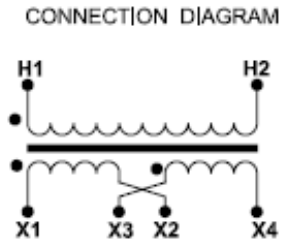
CERTIFICATIONS:

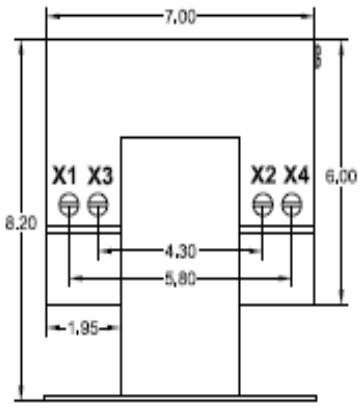
nqa. ISO 9001 QUALITY MANAGEMENT

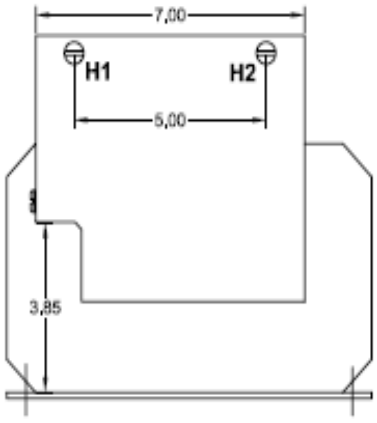
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO AT 120 V	SECONDARY VOLTAGE	FREQUENCY Hz	THERMAL RATING
CPT3 60 2 2400 - 6	2400	20.00	120/240	50/60	2.0 kVA
CPT3 60 2 3300 - 6	3300	27.50	120/240	50/60	2.0 kVA
CPT3 60 2 4160 - 6	4160	34.66	120/240	50/60	2.0 kVA
CPT3 60 2 4800 - 6	4800	40.00	120/240	50/60	2.0 kVA
CPT3 60 2 5000 – 6	5000	41.66	120/240	50/60	2.0 kVA
CPT3 60 2 5500 – 6	5500	45.83	120/240	50/60	2.0 kVA
CPT3 60 2 6000 – 6	6000	50.00	120/240	50/60	2.0 kVA
CPT3 60 2 6600 – 6	6600	55.00	120/240	50/60	2.0 kVA
CPT3 60 2 6900 - 6	6900	57.50	120/240	50/60	2.0 kVA

- Primary and secondary terminal are brass screws No. 10-32 with one flat washer and lockwasher.
- Transformer winding is vacuum encapsulated in polyurethane resin with temperature insulation class of 105°C
- Plated steel mounting base
- For indoor use







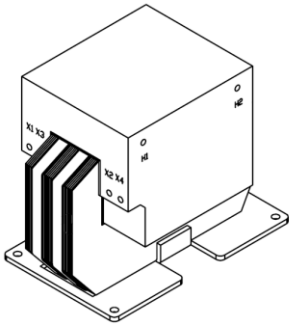


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

TTL Transformer Technologies Ltd.

Control Power Transformer

Model CPT3-60-2-5



CERTIFICATIONS:

nqa. ISO 9001 QUALITY MANAGEMENT

APPLICATION:
To provide power in Motor Control centers and Distribution Switchgear

FREQUENCY:
50/60 Hz.

INSULATION LEVEL:
6.9 kV, 60 kV BIL. full wave

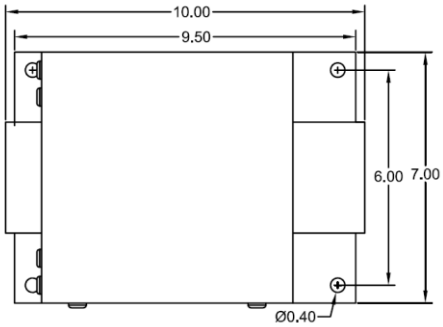
THERMAL RATING:
At 30°C. amb.

CONNECTIONS:

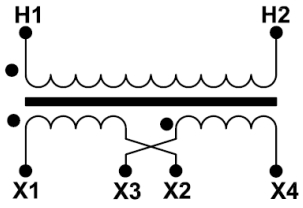
APPROXIMATE WEIGHT:
57 lbs.

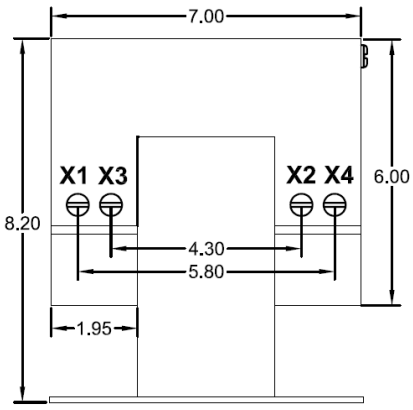
CATALOG NUMBER	PRIMARY VOLTAGE	RATIO AT 110 V	SECONDARY VOLTAGE	FREQUENCY Hz	THERMAL RATING
CPT3 60 2 2400 – 5	2400	21.81	110/220	50/60	2.0 kVA
CPT3 60 2 3300 – 5	3300	30.00	110/220	50/60	2.0 kVA
CPT3 60 2 4160 – 5	4160	37.81	110/220	50/60	2.0 kVA
CPT3 60 2 4800 – 5	4800	43.63	110/220	50/60	2.0 kVA
CPT3 60 2 5000 – 5	5000	45.45	110/220	50/60	2.0 kVA
CPT3 60 2 5500 – 5	5500	50.00	110/220	50/60	2.0 kVA
CPT3 60 2 6000 – 5	6000	54.54	110/220	50/60	2.0 kVA
CPT3 60 2 6600 – 5	6600	60.00	110/220	50/60	2.0 kVA
CPT3 60 2 6900 - 5	6900	62.72	110/220	50/60	2.0 kVA

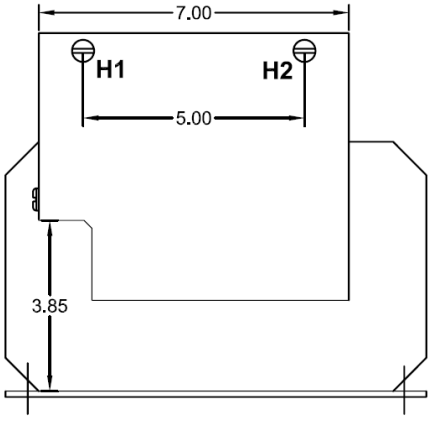
- Primary and secondary terminal are brass screws No. 10-32 with one flat washer and lockwasher.
- Transformer winding is vacuum encapsulated in polyurethane resin with temperature insulation class of 105°C
- Plated steel mounting base
- For indoor use



CONNECTION DIAGRAM







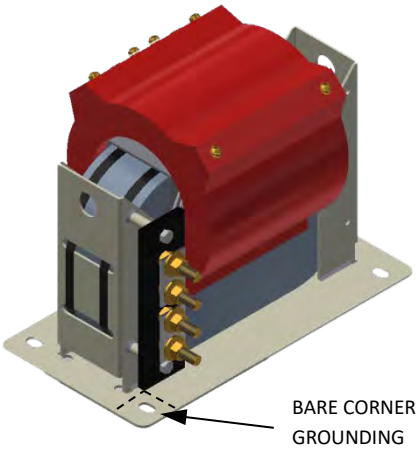
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPT3-60-5
CPT5-95-5 rev 050919

CERTIFICATIONS:

FREQUENCY:
60 Hz.
THERMAL RATING:
5 kVA at 30°C. ambient
4.3 kVA at 55°C. ambient
STANDARD SECONDARY VOLTAGE:
120 volts
INSULATION LEVEL:
CPT3:
5 kV, 60 kV BIL full wave.
CPT5:
15 kV, 95 kV BIL full wave.
APPROXIMATE WEIGHT:
165 lbs.

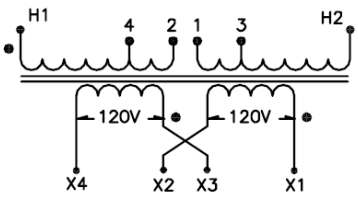


- Primary terminals are ¼ - 20 brass screws with one flat washer and star washer.
- Secondary terminals are brass studs 3/8-16 with one flat washer, lock washer and two nuts, plus series/parallel links.
- The transformer High Voltage winding is vacuum encapsulated in epoxy resin.
- Supplied with 1±7-1/2% or 2±2-1/2% taps above & below nominal voltage on the primary winding.
- Available as unfused only.
- Self cooled.
- Steel mounting base.
- For indoor use.

***CATALOG NO.	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	**FUSE RATING
CPT3-60-5-242	2400	20:1	120/240	7E
CPT3-60-5-4161	4160	34.7:1	120/240	5E
CPT3-60-5-482	4800	40:1	120/240	5E
CPT5-95-5-722	7200	60:1	120/240	3E
CPT5-95-5-842	8400	70:1	120/240	3E
CPT5-95-5-123	12000	100:1	120/240	2E
CPT5-95-5-1242	12470	104:1	120/240	2E
CPT5-95-5-1322	13200	110:1	120/240	2E
CPT5-95-5-1382	13800	115:1	120/240	2E
CPT5-95-5-1442*	14400	120:1	120/240	2E

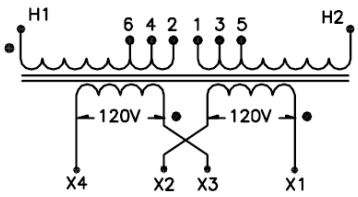
*Not available with primary taps.
**Note all fuse ratings are based upon NEC transformer overcurrent protection recommendations. Specific applications may require other ratings.
***For 1±7-1/2% taps use suffix "A" after Catalog No.
***For 2±2-1/2% taps use suffix "B" after Catalog No.

CONNECTION DIAGRAMS



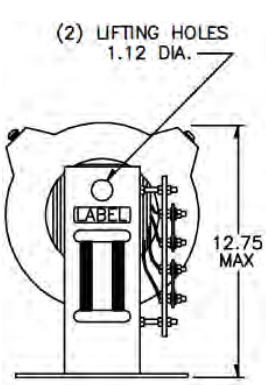
±7-1/2% PRIMARY TAPS

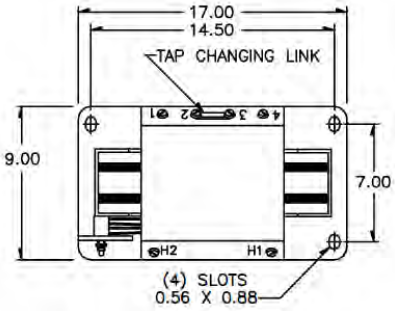
% RATED VOLTAGE	CONNECT HV LINK
107.5	1–2
100	2–3
92.5	3–4

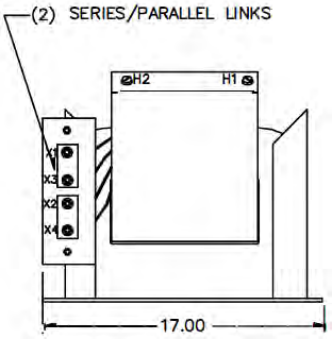


2 ±2-1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
105	1–2
102.5	2–3
100	3–4
97.5	4–5
95	5–6





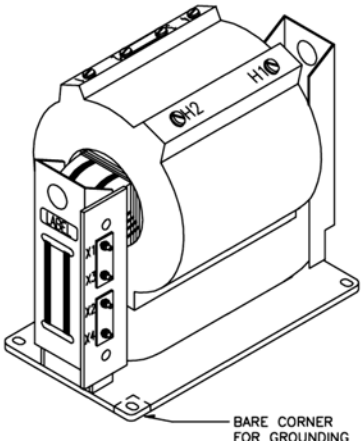


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPT3-60-10
CPT5-95-10 rev 050919

FREQUENCY:
60 Hz.
THERMAL RATING:
10 kVA at 30°C. ambient
8.6 kVA at 55°C. ambient
STANDARD SECONDARY VOLTAGE:
120 volts
INSULATION LEVEL:
CPT3:
5 kV, 60 kV BIL full wave.
CPT5:
15 kV, 95 kV BIL full wave.
APPROXIMATE WEIGHT:
250 lbs.



CERTIFICATIONS:

c UL us

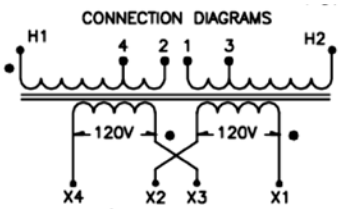
nqa.
ISO 9001
QUALITY MANAGEMENT

- Primary terminals are ¼-20 brass screws with one flat washer and star washer.
- Secondary terminals are brass studs ½-13 with one flat washer, lock washer and two nuts, plus series/parallel links.
- The transformer High Voltage winding is vacuum encapsulated in epoxy resin.
- Supplied with 1±7-1/2% or 2±2-1/2% taps above & below nominal voltage on the primary winding.
- Available as unfused only.
- Self cooled.
- Steel mounting base.
- For indoor use.

***CATALOG NO.	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	**FUSE RATING
CPT3-60-10-242	2400	20:1	120/240	15E
CPT3-60-10-4161	4160	34.7:1	120/240	7E
CPT3-60-10-482	4800	40:1	120/240	7E
CPT5-95-10-722	7200	60:1	120/240	5E
CPT5-95-10-842	8400	70:1	120/240	5E
CPT5-95-10-123	12000	100:1	120/240	3E
CPT5-95-10-1242	12470	104:1	120/240	3E
CPT5-95-10-1322	13200	110:1	120/240	3E
CPT5-95-10-1382	13800	115:1	120/240	3E
CPT5-95-10-1442*	14400	120:1	120/240	3E

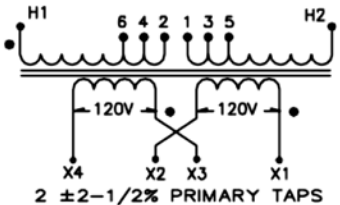
*Not available with primary taps.
**Note all fuse ratings are based upon NEC transformer overcurrent protection recommendations. Specific applications may require other ratings.
***For 1±7-1/2% taps use suffix "A" after Catalog No.
***For 2±2-1/2% taps use suffix "B" after Catalog No.

CONNECTION DIAGRAMS



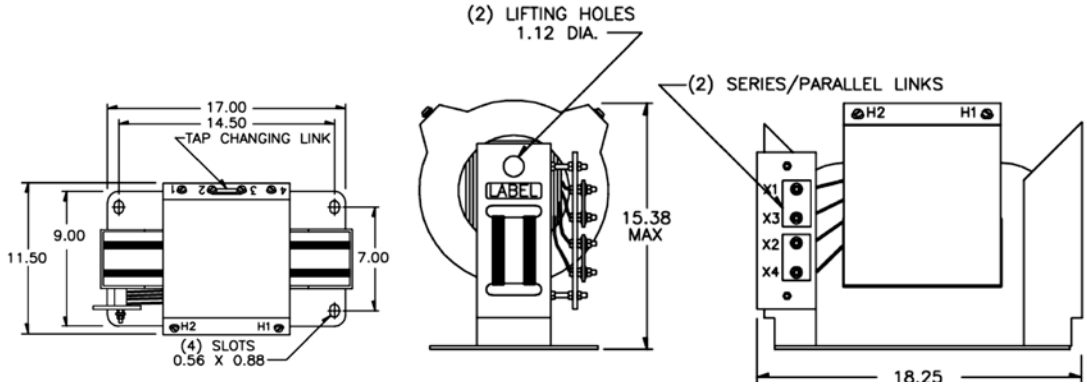
±7-1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
107.5	1–2
100	2–3
92.5	3–4



2 ±2-1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
105	1–2
102.5	2–3
100	3–4
97.5	4–5
95	5–6



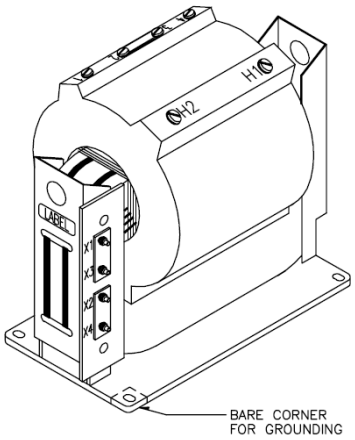
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPT3-60-15
CPT5-95-15 rev 050919

CERTIFICATIONS:

FREQUENCY:
60 Hz.
THERMAL RATING:
15 kVA at 30°C. ambient
12.9 kVA at 55°C. ambient
STANDARD SECONDARY VOLTAGE:
120 volts
INSULATION LEVEL:
CPT3:
5 kV, 60 kV BIL full wave.
CPT5:
15 kV, 95 kV BIL full wave.
APPROXIMATE WEIGHT:
290 lbs.

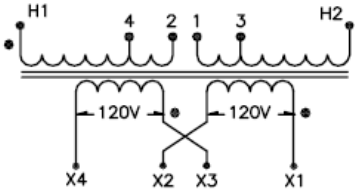


- Primary terminals are ¼-20 brass screws with one flat washer and star washer.
- Secondary terminals are brass studs ½-13 with one flat washer, lock washer and two nuts, plus series/parallel links.
- The transformer High Voltage winding is vacuum encapsulated in epoxy resin.
- Supplied with 1±7-1/2% or 2±2-1/2% taps above & below nominal voltage on the primary winding.
- Available as unfused only.
- Self cooled.
- Steel mounting base.
- For indoor use.

***CATALOG NO.	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	**FUSE RATING
CPT3-60-15-242	2400	20:1	120/240	15E
CPT3-60-15-4161	4160	34.7:1	120/240	10E
CPT3-60-15-482	4800	40:1	120/240	10E
CPT5-95-15-722	7200	60:1	120/240	7E
CPT5-95-15-842	8400	70:1	120/240	7E
CPT5-95-15-123	12000	100:1	120/240	5E
CPT5-95-15-1242	12470	104:1	120/240	5E
CPT5-95-15-1322	13200	110:1	120/240	5E
CPT5-95-15-1382	13800	115:1	120/240	5E
CPT5-95-15-1442*	14400	120:1	120/240	5E

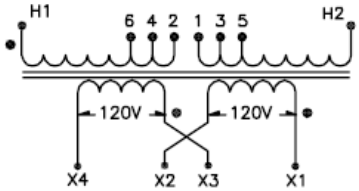
*Not available with primary taps.
**Note all fuse ratings are based upon NEC transformer overcurrent protection recommendations. Specific applications may require other ratings.
***For 1±7-1/2% taps use suffix "A" after Catalog No.
***For 2±2-1/2% taps use suffix "B" after Catalog No.

CONNECTION DIAGRAMS



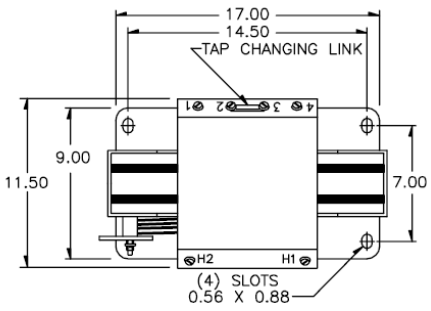
±7–1/2% PRIMARY TAPS

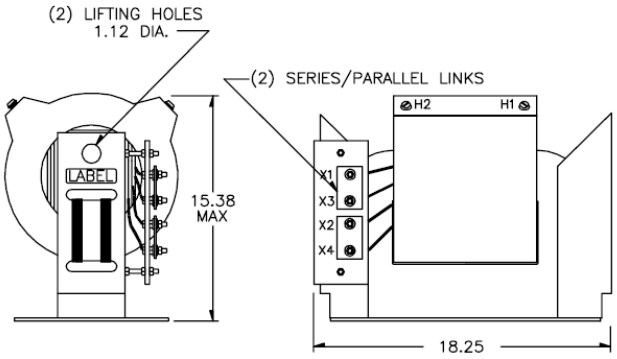
% RATED VOLTAGE	CONNECT HV LINK
107.5	1–2
100	2–3
92.5	3–4



2 ±2–1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
105	1–2
102.5	2–3
100	3–4
97.5	4–5
95	5–6



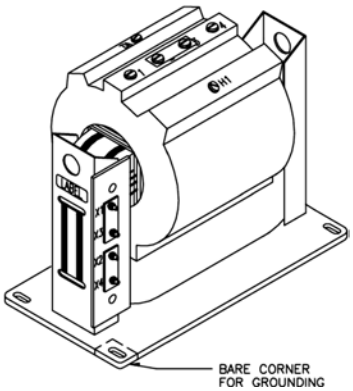


Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPTS3-60-5
CPTS5-95-5 rev 050919

FREQUENCY:
60 Hz.
THERMAL RATING:
5 kVA at 30°C. ambient
4.3 kVA at 55°C. ambient
STANDARD SECONDARY VOLTAGE:
120 volts
INSULATION LEVEL:
CPT3:
5 kV, 60 kV BIL full wave.
CPT5:
15 kV, 95 kV BIL full wave.
APPROXIMATE WEIGHT:
165 lbs.



CERTIFICATIONS:

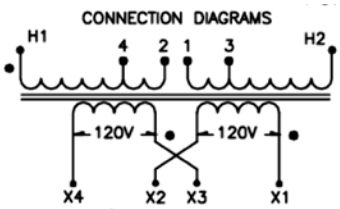
ISO 9001
QUALITY MANAGEMENT

- Primary terminals are ¼-20 brass screws with one flat washer and star washer.
- Secondary terminals are brass studs ½-13 with one flat washer, lock washer and two nuts, plus series/parallel links.
- The transformer High Voltage winding is vacuum encapsulated in epoxy resin.
- Supplied with 1±7-1/2% or 2±2-1/2% taps above & below nominal voltage on the primary winding.
- Available as unfused only.
- Self cooled.
- Steel mounting base.
- For indoor use.

***CATALOG NO.	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	**FUSE RATING
CPTS3-60-5-242	2400	20:1	120/240	7E
CPTS3-60-5-4161	4160	34.7:1	120/240	5E
CPTS3-60-5-482	4800	40:1	120/240	5E
CPTS5-95-5-722	7200	60:1	120/240	3E
CPTS5-95-5-842	8400	70:1	120/240	3E
CPTS5-95-5-123	12000	100:1	120/240	2E
CPTS5-95-5-1242	12470	104:1	120/240	2E
CPTS5-95-5-1322	13200	110:1	120/240	2E
CPTS5-95-5-1382	13800	115:1	120/240	2E
CPTS5-95-5-1442*	14400	120:1	120/240	2E

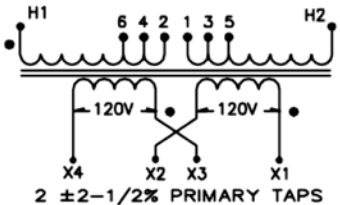
*Not available with primary taps.
**Note all fuse ratings are based upon NEC transformer overcurrent protection recommendations. Specific applications may require other ratings.
***For 1±7-1/2% taps use suffix "A" after Catalog No.
***For 2±2-1/2% taps use suffix "B" after Catalog No.

CONNECTION DIAGRAMS



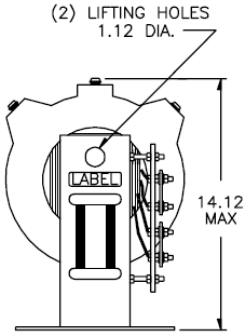
±7-1/2% PRIMARY TAPS

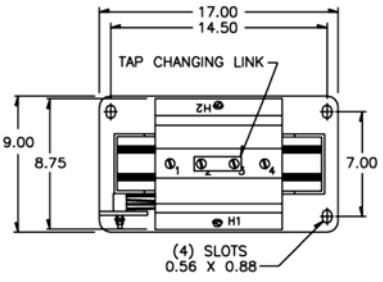
% RATED VOLTAGE	CONNECT HV LINK
107.5	1–2
100	2–3
92.5	3–4

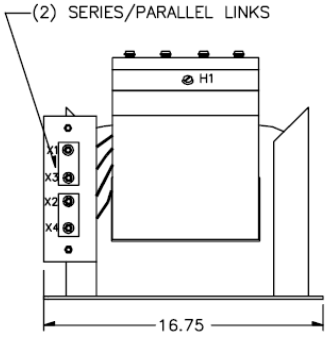


2 ±2-1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
105	1–2
102.5	2–3
100	3–4
97.5	4–5
95	5–6







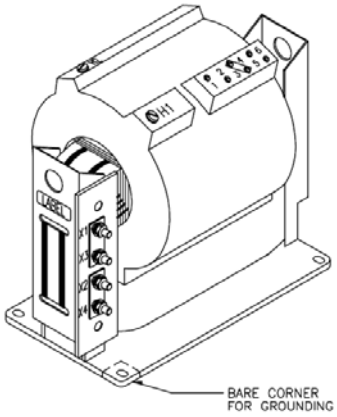
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPTS3-60-10
CPTS5-95-10 rev 050919

CERTIFICATIONS:

FREQUENCY:
60 Hz.
THERMAL RATING:
10 kVA at 30°C. ambient
8.6 kVA at 55°C. ambient
STANDARD SECONDARY VOLTAGE:
120 volts
INSULATION LEVEL:
CPT3:
5 kV, 60 kV BIL full wave.
CPT5:
15 kV, 95 kV BIL full wave.
APPROXIMATE WEIGHT:
250 lbs.

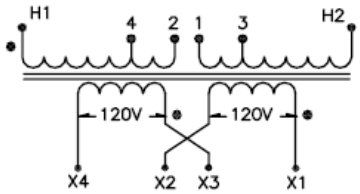


- Primary terminals are ¼-20 brass screws with one flat washer and star washer.
- Secondary terminals are brass studs ½-13 with one flat washer, lock washer and two nuts, plus series/parallel links.
- The transformer High Voltage winding is vacuum encapsulated in epoxy resin.
- Supplied with 1±7-1/2% or 2±2-1/2% taps above & below nominal voltage on the primary winding.
- Available as unfused only.
- Self cooled.
- Steel mounting base.
- For indoor use.

***CATALOG NO.	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	**FUSE RATING
CPTS3-60-10-242	2400	20:1	120/240	15E
CPTS3-60-10-4161	4160	34.7:1	120/240	7E
CPTS3-60-10-482	4800	40:1	120/240	7E
CPTS5-95-10-722	7200	60:1	120/240	5E
CPTS5-95-10-842	8400	70:1	120/240	5E
CPTS5-95-10-123	12000	100:1	120/240	3E
CPTS5-95-10-1242	12470	104:1	120/240	3E
CPTS5-95-10-1322	13200	110:1	120/240	3E
CPTS5-95-10-1382	13800	115:1	120/240	3E
CPTS5-95-10-1442*	14400	120:1	120/240	3E

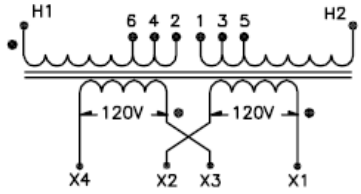
*Not available with primary taps.
**Note all fuse ratings are based upon NEC transformer overcurrent protection recommendations. Specific applications may require other ratings.
***For 1±7-1/2% taps use suffix "A" after Catalog No.
***For 2±2-1/2% taps use suffix "B" after Catalog No.

CONNECTION DIAGRAMS



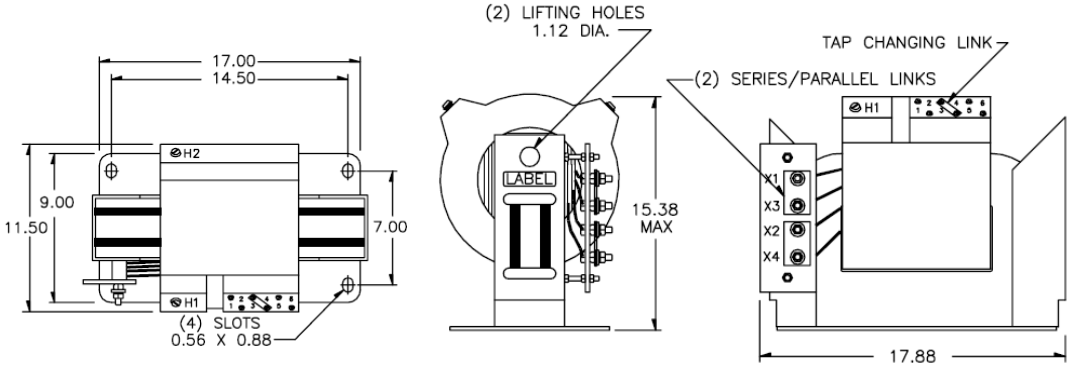
±7–1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
107.5	1–2
100	2–3
92.5	3–4



2 ±2–1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
105	1–2
102.5	2–3
100	3–4
97.5	4–5
95	5–6



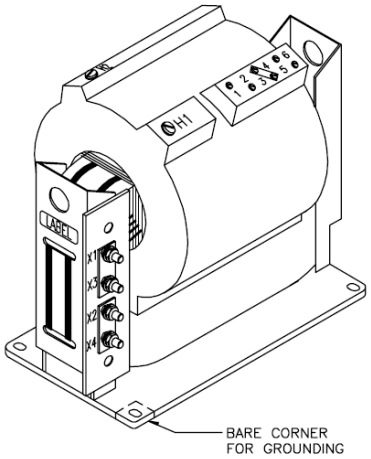
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model CPTS3-60-15
CPTS5-95-15 rev 050919

CERTIFICATIONS:

FREQUENCY:
60 Hz.
THERMAL RATING:
15 kVA at 30°C. ambient
12.9 kVA at 55°C. ambient
STANDARD SECONDARY VOLTAGE:
120 volts
INSULATION LEVEL:
CPT3:
5 kV, 60 kV BIL full wave.
CPT5:
15 kV, 95 kV BIL full wave.
APPROXIMATE WEIGHT:
290 lbs.

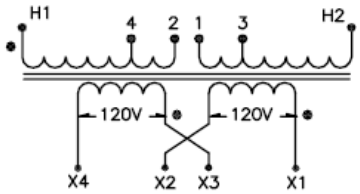


- Primary terminals are ¼-20 brass screws with one flat washer and star washer.
- Secondary terminals are brass studs ½-13 with one flat washer, lock washer and two nuts, plus series/parallel links.
- The transformer High Voltage winding is vacuum encapsulated in epoxy resin.
- Supplied with 1±7-1/2% or 2±2-1/2% taps above & below nominal voltage on the primary winding.
- Available as unfused only.
- Self cooled.
- Steel mounting base.
- For indoor use.

***CATALOG NO.	PRIMARY VOLTAGE	RATIO	SECONDARY VOLTAGE	**FUSE RATING
CPTS3-60-15-242	2400	20:1	120/240	15E
CPTS3-60-15-4161	4160	34.7:1	120/240	10E
CPTS3-60-15-482	4800	40:1	120/240	10E
CPTS5-95-15-722	7200	60:1	120/240	7E
CPTS5-95-15-842	8400	70:1	120/240	7E
CPTS5-95-15-123	12000	100:1	120/240	5E
CPTS5-95-15-1242	12470	104:1	120/240	5E
CPTS5-95-15-1322	13200	110:1	120/240	5E
CPTS5-95-15-1382	13800	115:1	120/240	5E
CPTS5-95-15-1442*	14400	120:1	120/240	5E

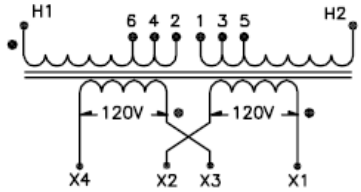
*Not available with primary taps.
**Note all fuse ratings are based upon NEC transformer overcurrent protection recommendations. Specific applications may require other ratings.
***For 1±7-1/2% taps use suffix "A" after Catalog No.
***For 2±2-1/2% taps use suffix "B" after Catalog No.

CONNECTION DIAGRAMS



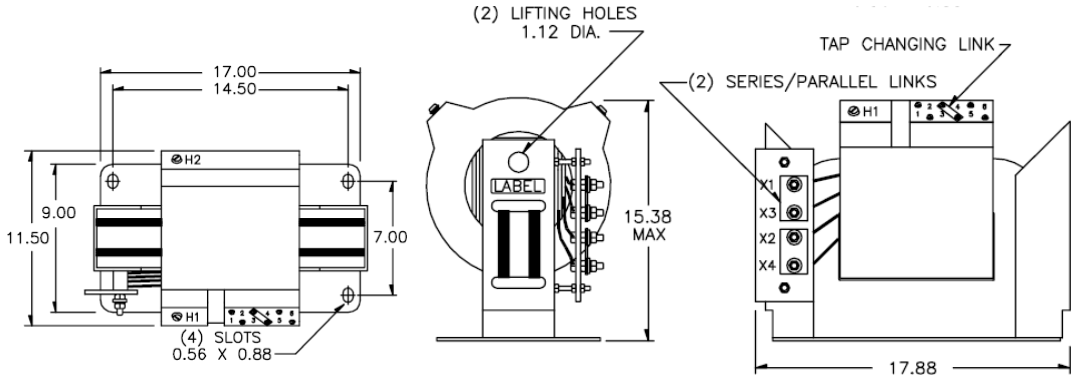
±7–1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
107.5	1–2
100	2–3
92.5	3–4



2 ±2–1/2% PRIMARY TAPS

% RATED VOLTAGE	CONNECT HV LINK
105	1–2
102.5	2–3
100	3–4
97.5	4–5
95	5–6



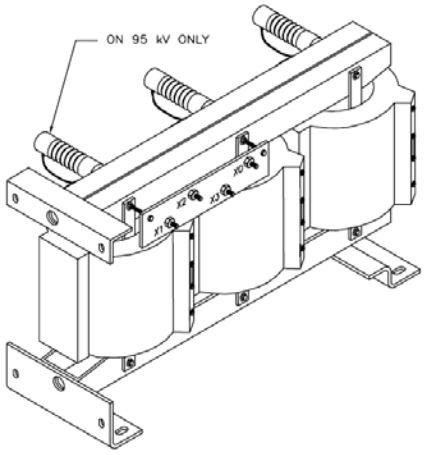
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Control Power Transformer

Model 3CPT3-60-15
3CPT5-95-15 rev 050919

CERTIFICATIONS:

FREQUENCY:
60 Hz.
THERMAL RATING:
15 kVA at 30°C. ambient
13 kVA at 55°C. ambient
80°C rise.
STANDARD SECONDARY VOLTAGE:
120 volts
INSULATION LEVEL:
CPT3: 5kV
60 kV, 60 kV BIL full wave. 130°C
CPT5: 15kV,
95 kV, 95 kV BIL full wave. 130°C
APPROXIMATE WEIGHT:
650 lbs.



- Primary terminals are copper compression type lugs.
- Secondary terminals are brass studs ½-13 with one flat washer, star washer and two regular nuts.
- The high voltage coils are vacuum encapsulated in epoxy resin. Complete unit is varnish dipped.
- Supplied with taps on the primary side:
  Cat. Suffix A –(1) ± 7-1/2% taps or
  Cat. Suffix B –(2) ± 2-1/2% taps.
- Secondary typically 120/240 V operation.
- Available as unfused only.
- Vertical or horizontal mounting.
- Mounting base and frame is 7 ga. (0.188" thk) steel, with (8) 0.56 x 0.875 slots.
- For indoor use.

***CATALOG NO.	PRIMARY VOLTAGE	SECONDARY VOLTAGE	**FUSE RATING
3CPT3-60-15-242	2400	208Y/120	10E
3CPT3-60-15-4161	4160	208Y/120	7E
3CPT3-60-15-482	4800	208Y/120	5E
3CPT5-95-15-722	7200	208Y/120	5E
3CPT5-95-15-842	8400	208Y/120	5E
3CPT5-95-15-123	12000	208Y/120	3E
3CPT5-95-15-1242	12470	208Y/120	3E
3CPT5-95-15-1322	13200	208Y/120	3E
3CPT5-95-15-1382	13800	208Y/120	3E

*Note all fuse ratings are based upon NEC transformer overcurrent protection recommendations. Specific applications may require other ratings.

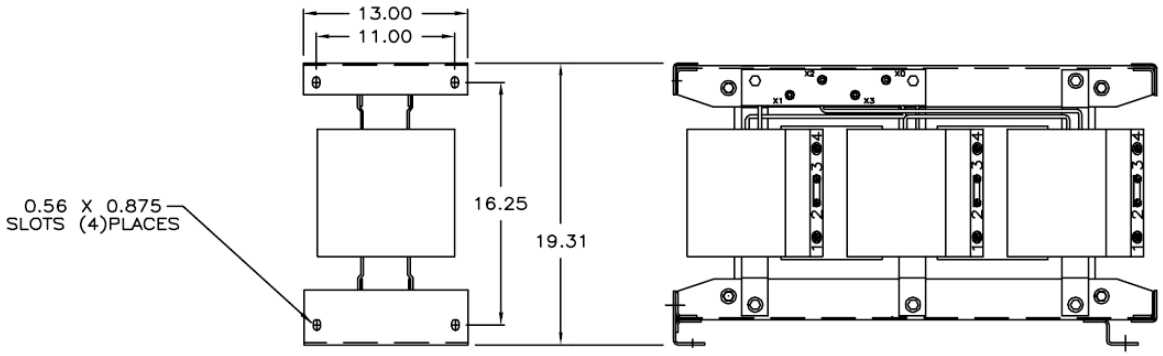
PRIMARY VOLTS	CONNECT
107.5%	1 – 2
100%	2 – 3
92.5%	3 – 4

1 ± 7-1/2% PRIMARY TAPS – SUFFIX "A"

PRIMARY VOLTS	CONNECT
105%	1 – 2
102.5%	2 – 3
100%	3 – 4
97.5%	4 – 5
92.5%	5 – 6

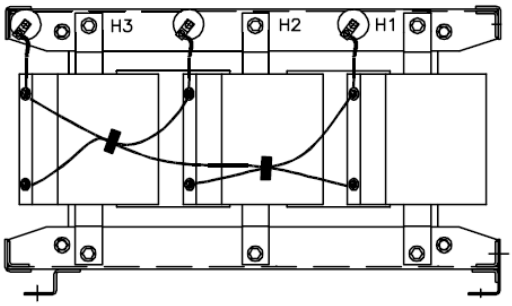
2 ± 2-1/2% PRIMARY TAPS – SUFFIX "B"

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

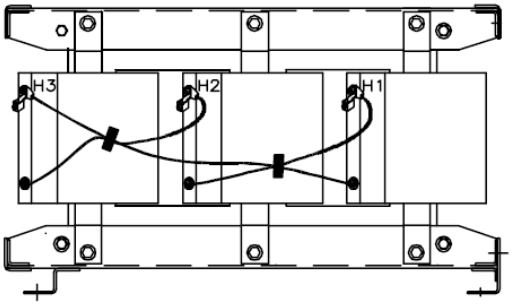


LEFT END VIEW, (BOTTOM IN VERTICAL MODE)

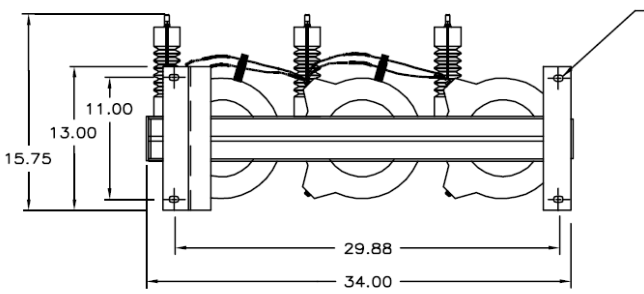
LOW VOLTAGE SIDE



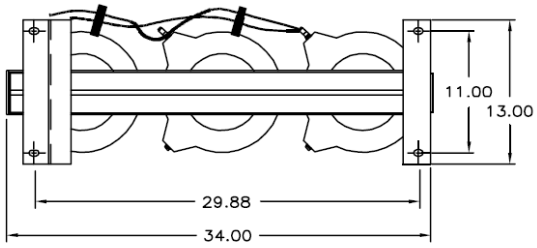
HIGH VOLTAGE SIDE



HIGH VOLTAGE SIDE

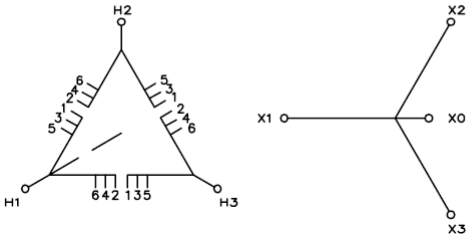


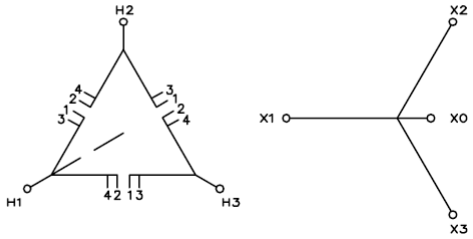
BOTTOM VIEW (95kV BIL)



BOTTOM VIEW (60kV BIL)

FOR HORIZONTAL OR VERTICAL MOUNTING





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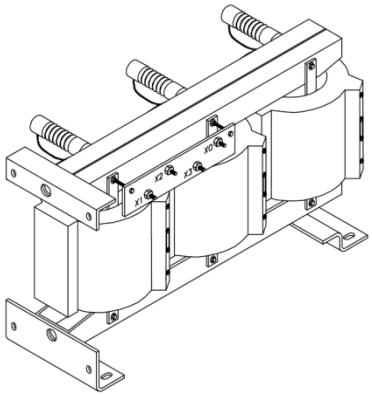
Control Power Transformer

Model 3CPT3-60-30, 3CPT5-95-30, 3CPT3-60-45, 3CPT5-95-45 rev 050919

FREQUENCY:
60 Hz.
THERMAL RATING:
30 kVA at 30°C. ambient
25.7 kVA at 55°C. ambient
80°C rise.
45 kVA at 30°C ambient
38.6 kVA at 55° ambient.
80°C rise.
STANDARD SECONDARY VOLTAGE:
120 volts
INSULATION LEVEL:
3CPT3: 5kV
60 kV, 60 kV BIL full wave. 130°C
3CPT5: 15kV,
95 kV, 95 kV BIL full wave. 130°C
APPROXIMATE WEIGHT:
730 lbs.



CERTIFICATIONS:

- Primary terminals are copper compression type lugs.
- Secondary terminals are brass studs ½-13 with one flat washer, star washer and two regular nuts.
- The high voltage coils are vacuum encapsulated in epoxy resin. Complete unit is varnish dipped.
- Supplied with taps on the primary side:
  Cat. Suffix A –(1) ± 7-1/2% taps or
  Cat. Suffix B –(2) ± 2-1/2% taps.
- Secondary typically 120/240 V operation.
- Available as unfused only.
- Vertical or horizontal mounting.
- Mounting base and frame is 7 ga. (0.188" thk) steel, with (8) 0.56 x 0.875 slots.
- For indoor use.

***CATALOG NO.	PRIMARY VOLTAGE	SECONDARY VOLTAGE	**FUSE RATING	***CATALOG NO.	PRIMARY VOLTAGE	SECONDARY VOLTAGE	**FUSE RATING
3CPT3-60-15-242	2400	208Y/120	10E	3CPT3-60-45-242	2400	208Y/120	25E
3CPT3-60-15-4161	4160	208Y/120	7E	3CPT3-60-45-4161	4160	208Y/120	15E
3CPT3-60-15-482	4800	208Y/120	5E	3CPT3-60-45-482	4800	208Y/120	15E
3CPT5-95-15-722	7200	208Y/120	5E	3CPT5-95-45-722	7200	208Y/120	15E
3CPT5-95-15-842	8400	208Y/120	5E	3CPT5-95-45-842	8400	208Y/120	15E
3CPT5-95-15-123	12000	208Y/120	3E	3CPT5-95-45-123	12000	208Y/120	7E
3CPT5-95-15-1242	12470	208Y/120	3E	3CPT5-95-45-1242	12470	208Y/120	7E
3CPT5-95-15-1322	13200	208Y/120	3E	3CPT5-95-45-1322	13200	208Y/120	7E
3CPT5-95-15-1382	13800	208Y/120	3E	3CPT5-95-45-1382	13800	208Y/120	7E

*Note all fuse ratings are based upon NEC transformer overcurrent protection recommendations. Specific applications may require other ratings.

PRIMARY VOLTS	CONNECT
107.5%	1 – 2
100%	2 – 3
92.5%	3 – 4

1 ± 7-1/2% PRIMARY TAPS – SUFFIX "A"

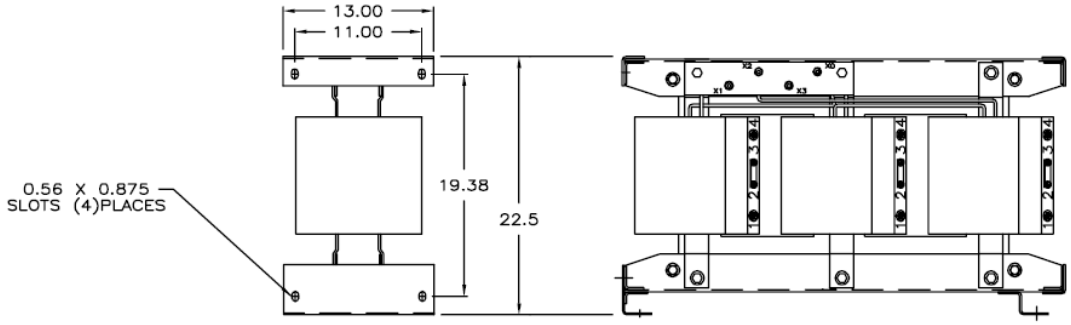
PRIMARY VOLTS	CONNECT
105%	1 – 2
102.5%	2 – 3
100%	3 – 4
97.5%	4 – 5
92.5%	5 – 6

2 ± 2-1/2% PRIMARY TAPS – SUFFIX "B"

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

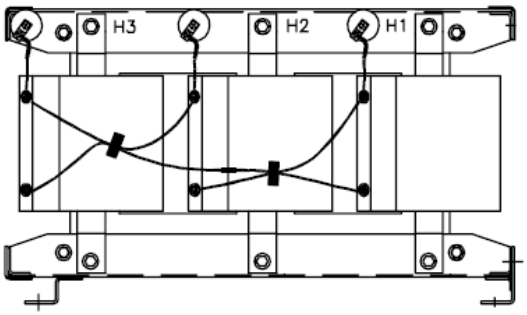
Control Power Transformer

Model 3CPT3-60-30, 3CPT5-95-30, 3CPT3-60-45, 3CPT5-95-45 rev 050919

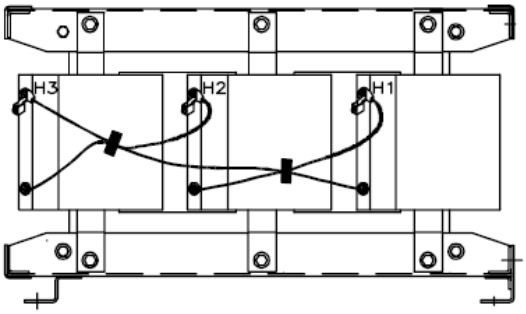


LEFT END VIEW, (BOTTOM IN VERTICAL MODE)

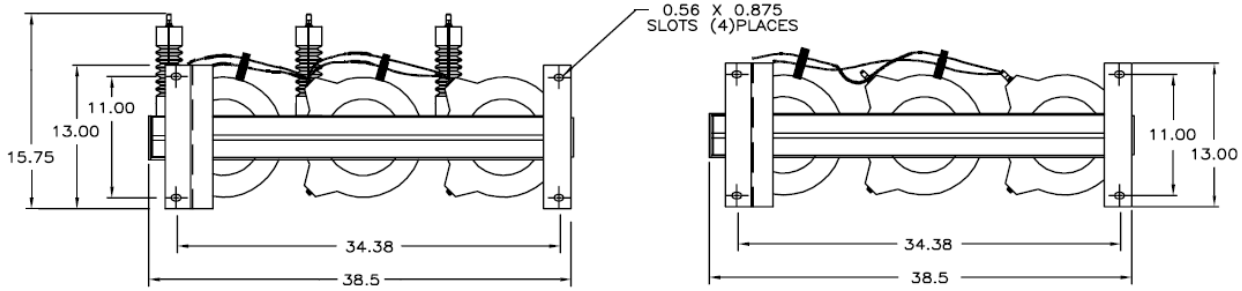
LOW VOLTAGE SIDE



HIGH VOLTAGE SIDE



HIGH VOLTAGE SIDE



BOTTOM VIEW (95kV BIL)

BOTTOM VIEW (60kV BIL)

FOR HORIZONTAL OR VERTICAL MOUNTING

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CURRENT TRANSFORMERS

For Metering and Instrumentation

Wound Primary Indoor Current Transformer

Model CTW3-60-T50
CTWH3-60-T50 rev 070124

CERTIFICATIONS:

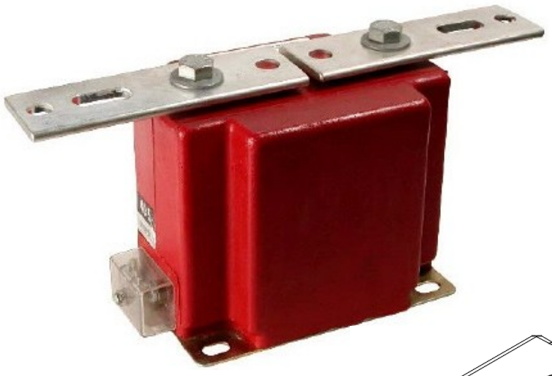
E196364

ISO 9001 QUALITY MANAGEMENT

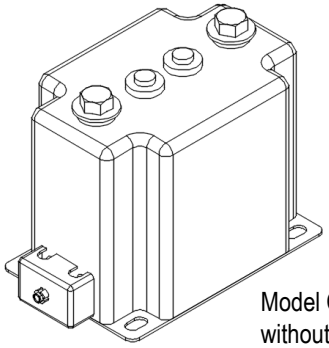
APPLICATION:
Relaying and metering
FREQUENCY:
50-400 Hz.
MAXIMUM SYSTEM VOLTAGE:
5.6Kv, BIL 60kV
APPROXIMATE WEIGHT:
20 lbs.
CONTINUOUS THERMAL RATING FACTOR:
1.5 at 30°C., 1.33 at 55°C.
150:5 and 600:5- 1.33 at 30°C., 1.00 at 55°C.
250:5- 1.00 at 30°C., 0.85 at 55°C.

Primary terminals are ½ - 13 bolts with one Belleville washer.
Secondary terminals are brass studs No. 10-32 with one flatwasher, lockwasher and regular nut.

Supplied with short circuit secondary terminal cover. Vacuum cast polyurethane resin. Other ratios, secondary currents and dual ratios are available. Refer to factory.



Model CTWH3
with primary Bars



Model CTW3
without primary Bars

MODEL CTW3-60-T50 & CTWH3-60-T50

Approximate weight: 20 lbs.

CAUTION: Use only the Belleville washers supplied. Tighten to between 25 to 30 foot-pounds. DO NOT OVERTIGHTEN

Catalog Number	Current Ratio	Relay Class	ANSI Metering Class at 60 Hz					**Thermal current Rating 1 Second RMS Amps
			BO.1	BO.2	BO.5	BO.9	B1.8	
CTW3-60-T50-050	5:5	T50	0.3	0.3	0.3	0.6	1.2	375
CTW3-60-T50-100	10:5	T50	0.3	0.3	0.3	0.6	1.2	1,000
CTW3-60-T50-150	15:5	T50	0.3	0.3	0.3	0.6	1.2	1,690
CTW3-60-T50-200	20:5	T50	0.3	0.3	0.3	0.6	1.2	1,900
CTW3-60-T50-250	25:5	T50	0.3	0.3	0.3	0.6	1.2	2,700
CTW3-60-T50-300	30:5	T50	0.3	0.3	0.3	0.6	1.2	2,700
CTW3-60-T50-400	40:5	T50	0.3	0.3	0.3	0.6	1.2	4,720
CTW3-60-T50-500	50:5	T50	0.3	0.3	0.3	0.6	1.2	4,720
CTW3-60-T50-750	75:5	T50	0.3	0.3	0.3	0.6	1.2	8,630
CTW3-60-T50-101	100:5	T50	0.3	0.3	0.3	0.6	1.2	8,630
CTW3-60-T50-151	150:5	T50	0.3	0.3	0.3	0.6	1.2	14,380
CTW3-60-T50-201	200:5	T50	0.3	0.3	0.3	0.6	1.2	17,250
CTW3-60-T50-251	250:5	T50	0.3	0.3	0.3	0.6	1.2	17,250
CTW3-60-T50-301	300:5	T50	0.3	0.3	0.3	0.6	1.2	37,800
CTW3-60-T50-401	400:5	T50	0.3	0.3	0.3	0.6	1.2	37,800
CTW3-60-T50-501	500:5	T50	0.3	0.3	0.3	0.6	1.2	37,800
CTW3-60-T50-601	600:5	T50	0.3	0.3	0.3	0.6	1.2	37,800

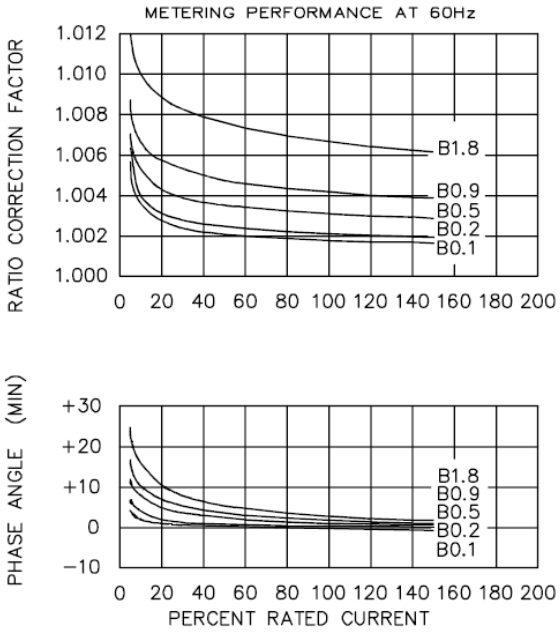
**For ordering with primary bars, change model number to CTWH3.*

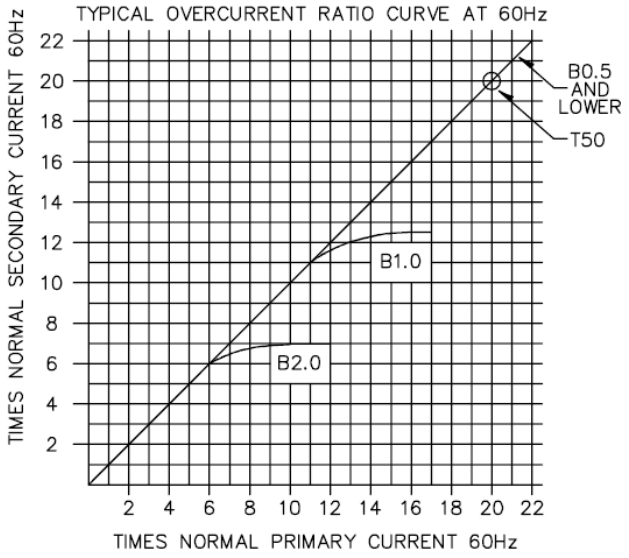
***With a burden of B0.1 or greater connected to the secondary.*

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

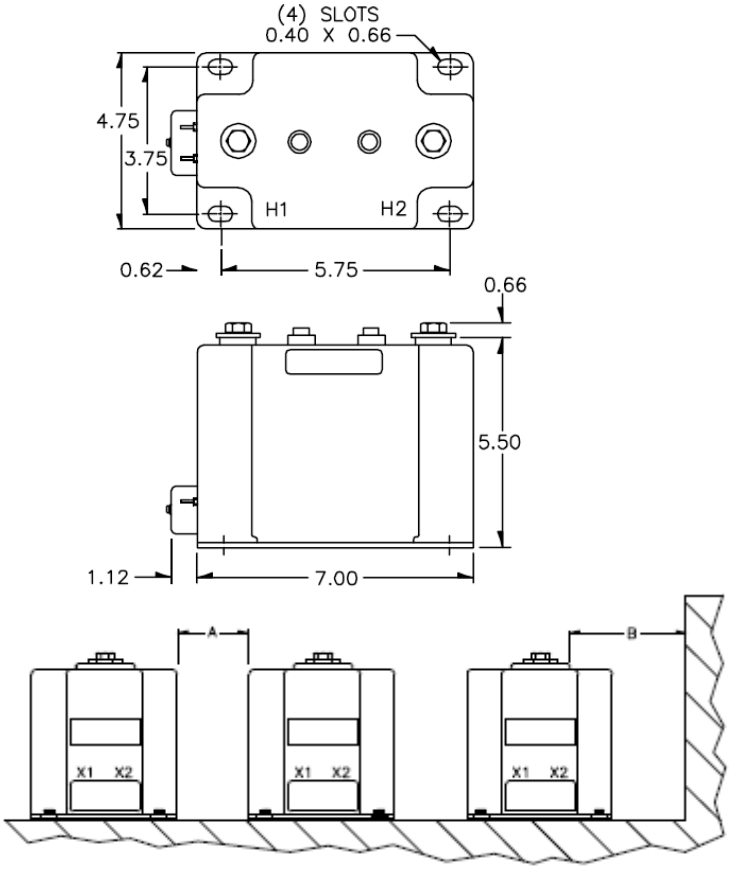
Wound Primary Indoor Current Transformer

Model CTW3-60-T50
CTWH3-60-T50 rev 070124



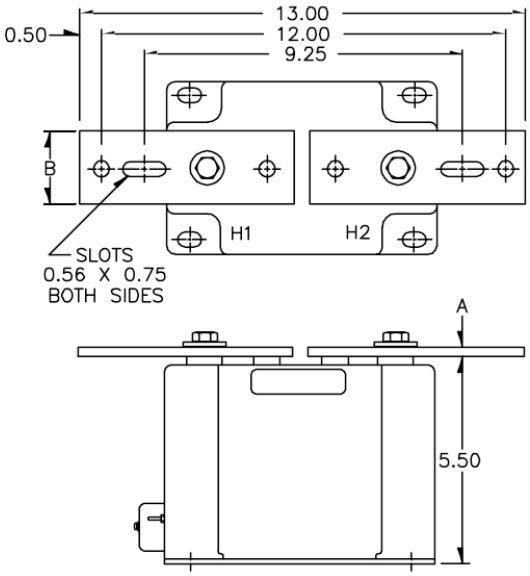


WITHOUT PRIMARY BAR



WITH PRIMARY BAR

BAR SIZES		
PRIMARY CURRENT	DIMENSIONS A	B
5 TO 150A	0.19	1.50
200 TO 600A	0.25	2.00



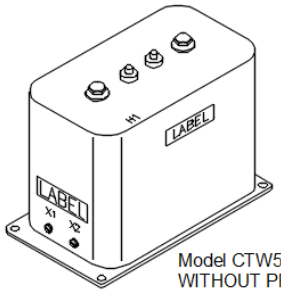
RECOMMENDED MINIMUM SPACINGS
***A** = Unit to Unit = 0.75" minimum.*
***B** = HV to Ground in Air = 3.00" minimum.*
Recommended spacing are for guidance only. User needs to set appropriate values to assure performance for high potential test, impulse test, high humidity, partial discharge, high altitude, and other considerations like configuration.

Wound Primary Indoor Current Transformer

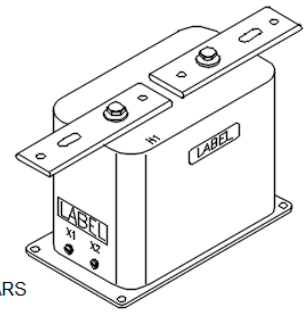
Model CTW5-L-110
CTWH5-L-110 rev 070124

APPLICATION:
Relaying and metering
FREQUENCY:
50-400 Hz.
CONTINUOUS THERMAL RATING FACTOR:
1.00 at 30°C., 0.85 at 55°C
APPROXIMATE WEIGHT:
34 lbs.
CONNECTIONS:
Primary terminals are ½ - 13 bolts with one Belleville washer.
Secondary terminals are brass screws No. 10-32 with one flatwasher, lockwasher.

Vacuum cast in polyurethane resin.
Other ratios, secondary currents and dual ratios are available. Refer to factory.



Model CTW5-L
WITHOUT PRIMARY BARS



Model CTWH5-L
WITH PRIMARY BARS

CERTIFICATIONS:

c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL 1CTW5-L-110 & CTWH5-6-110
Window Diameter 6.00"
Approximate weight: 34 lbs.

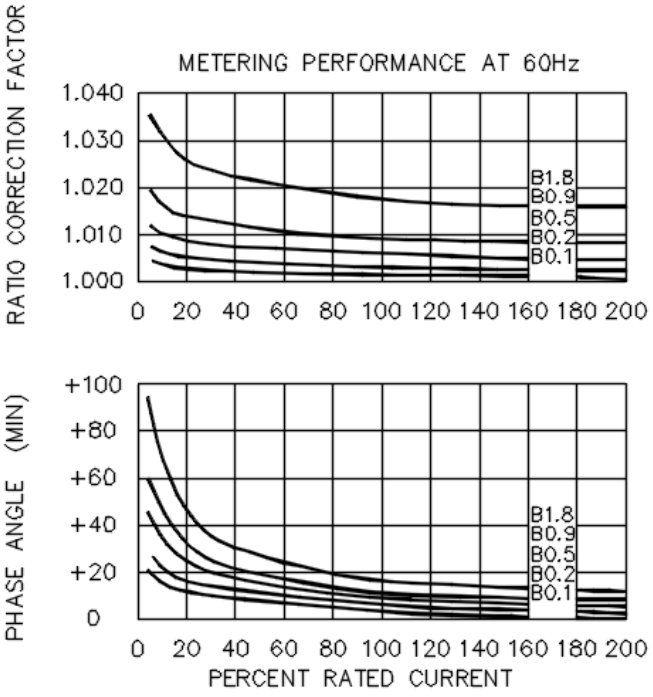
Catalog Number	Current Ratio	Relay Class	ANSI Metering Class at 60 Hz					**Thermal current Rating 1 Second RMS Amps
			BO.1	BO.2	BO.5	BO.9	B1.8	
CTW5-L-110-T20-050	5:5	T20	0.3	0.3	0.6	1.2	2.4	375
CTW5-L-110-T20-100	10:5	T20	0.3	0.3	0.6	1.2	2.4	590
CTW5-L-110-T20-150	15:5	T20	0.3	0.3	0.6	1.2	2.4	1,200
CTW5-L-110-T20-250	25:5	T20	0.3	0.3	0.6	1.2	2.4	1,700
CTW5-L-110-T20-300	30:5	T20	0.3	0.3	0.6	1.2	2.4	1,700
CTW5-L-110-T20-400	40:5	T20	0.3	0.3	0.6	1.2	2.4	2,400
CTW5-L-100-T20-500	50:5	T20	0.3	0.3	0.6	1.2	2.4	4,715
CTW5-L-110-T20-750	75:5	T25	0.3	0.3	0.6	1.2	2.4	4,715
CTW5-L-110-T20-101	100:5	T25	0.3	0.3	0.6	1.2	2.4	8,625
CTW5-L-110-T20-151	150:5	T25	0.3	0.3	0.6	1.2	2.4	11,500
CTW5-L-110-T20-201	200:5	T30	0.3	0.3	0.6	1.2	2.4	11,500
CTW5-L-110-T20-251	250:5	T20	0.3	0.3	0.6	1.2	2.4	21,700
CTW5-L-110-T20-301	300:5	T25	0.3	0.3	0.6	1.2	2.4	21,700
CTW5-L-110-T20-401	400:5	T30	0.3	0.3	0.6	1.2	2.4	44,700
CTW5-L-110-T20-501	500:5	T35	0.3	0.3	0.3	0.6	1.2	44,700
CTW5-L-110-T20-601	600:5	T40	0.3	0.3	0.3	0.6	1.2	44,700

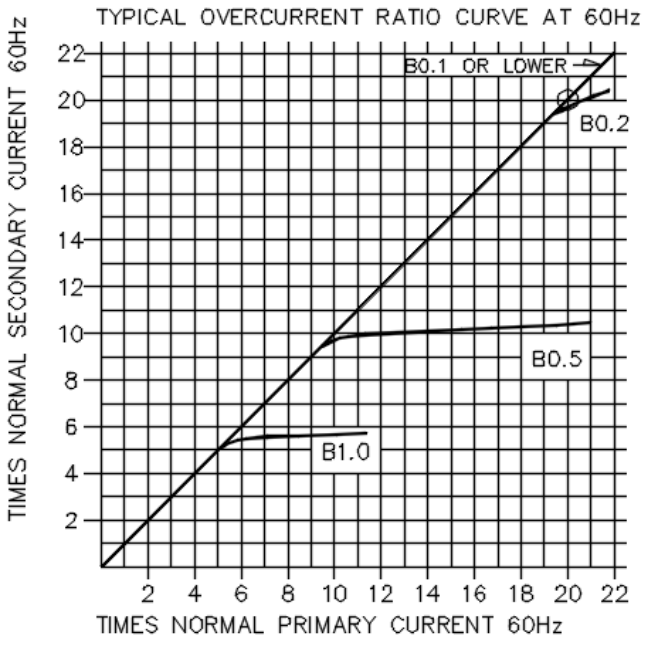
**For ordering with primary bars, change model number to CTWH5-L*
A test card is provided with each unit.

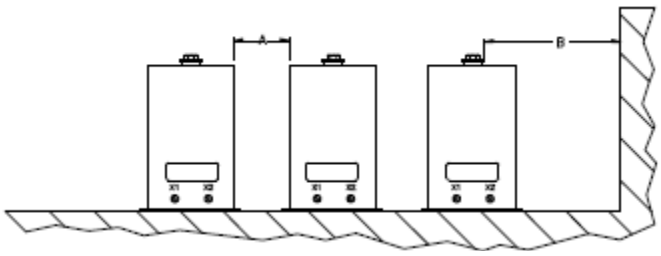
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Wound Primary Indoor Current Transformer

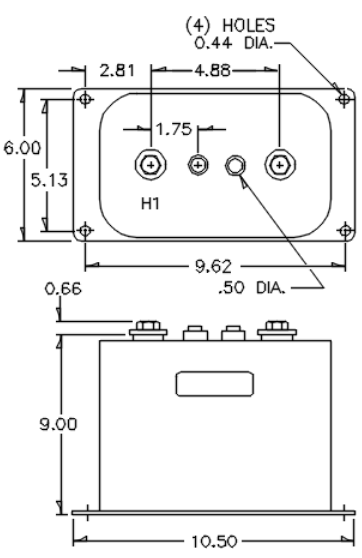
Model CTW5-L-110
CTWH5-L-110 rev 070124



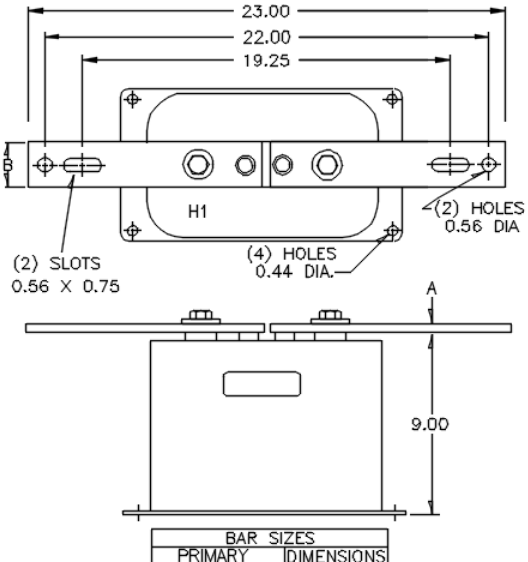




RECOMMENDED MINIMUM SPACINGS
A *= Unit to Unit = 2.00" minimum.*
B *= HV to Ground in Air = 6.50" minimum.*
Recommended spacing are for guidance only. User needs to set appropriate values to assure performance for high potential test, impulse test, high humidity, partial discharge, high altitude, and other considerations like configuration.



WITHOUT PRIMARY BARS



BAR SIZES		
PRIMARY CURRENT	DIMENSIONS A	B
5 TO 200A	0.25	1.50
300 TO 600A	0.38	2.00

WITH PRIMARY BARS

Wound Primary Indoor Current Transformer

Model CTWH3-60-T100

rev 051223

APPLICATION:
Relaying and metering
FREQUENCY:
50-400 Hz.
MAXIMUM SYSTEM VOLTAGE:
5.6Kv, BIL 60kV
APPROXIMATE WEIGHT:
41 lbs.
CONTINUOUS THERMAL RATING FACTOR:
1.5 at 30°C., 1.33 at 55°C.
250:5, 1000:5 AND 1,200:5-
1.10 at 30°C., 0.85 at 55°C.

Primary terminals are copper bars. See chart next pages for sizes.
Secondary terminals are brass screws No. 10-32 with one flatwasher, lockwasher.

Vacuum cast polyurethane resin. Other ratios, secondary currents and dual ratios are available. Refer to factory.

CERTIFICATIONS:

c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

MODEL CTWH3-60-T100
Approximate weight: 41 lbs.

Catalog Number	Current Ratio	Relay Class	ANSI Metering Class at 60 Hz					**Thermal current Rating 1 Second RMS Amps
			BO.1	BO.2	BO.5	BO.9	B1.8	
CTWH3-60-T100-050	5:5	T100	0.3	0.3	0.3	0.3	0.3	470
CTWH3-60-T100-100	10:5	T100	0.3	0.3	0.3	0.3	0.3	900
CTWH3-60-T100-150	15:5	T100	0.3	0.3	0.3	0.3	0.3	1,600
CTWH3-60-T100-200	20:5	T100	0.3	0.3	0.3	0.3	0.3	1,900
CTWH3-60-T100-250	25:5	T100	0.3	0.3	0.3	0.3	0.3	2,600
CTWH3-60-T100-300	30:5	T100	0.3	0.3	0.3	0.3	0.3	2,900
CTWH3-60-T100-400	40:5	T100	0.3	0.3	0.3	0.3	0.3	3,800
CTWH3-60-T600-500	50:5	T100	0.3	0.3	0.3	0.3	0.3	4,700
CTWH3-60-T100-750	75:5	T100	0.3	0.3	0.3	0.3	0.3	5,900
CTWH3-60-T100-101	100:5	T100	0.3	0.3	0.3	0.3	0.3	8,600
CTWH3-60-T100-151	150:5	T100	0.3	0.3	0.3	0.3	0.3	12,900
CTWH3-60-T100-201	200:5	T100	0.3	0.3	0.3	0.3	0.3	17,200
CTWH3-60-T100-251	250:5	T100	0.3	0.3	0.3	0.3	0.3	17,200
CTWH3-60-T100-301	300:5	T100	0.3	0.3	0.3	0.3	0.3	34,500
CTWH3-60-T100-401	400:5	T100	0.3	0.3	0.3	0.3	0.3	34,500
CTWH3-60-T100-601	600:5	T100	0.3	0.3	0.3	0.3	0.3	66,200
CTWH3-60-T100-801	800:5	T100	0.3	0.3	0.3	0.3	0.3	66,200
CTWH3-60-T100-102	1,000:5	T100	0.3	0.3	0.3	0.3	0.3	66,200
CTWH3-600-T100-122	1,200:5	T100	0.3	0.3	0.3	0.3	0.3	66,200

***With a burden of B0.1 or greater connected to the secondary.*

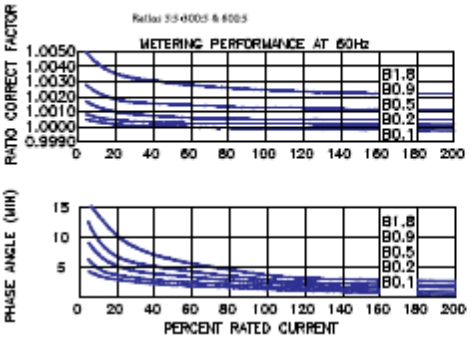
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

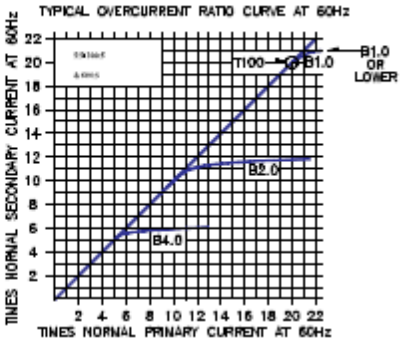
Wound Primary Indoor Current Transformer

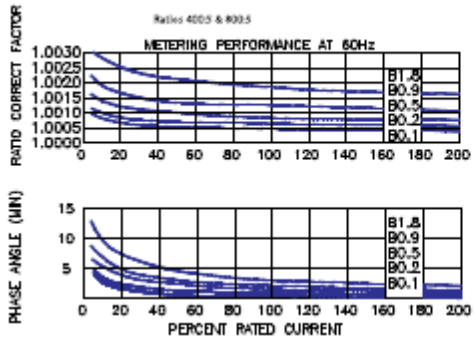
Model CTWH3-60-T100

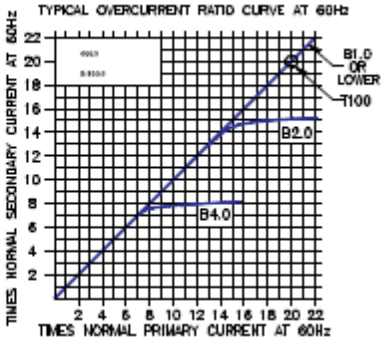
Bar Sizes

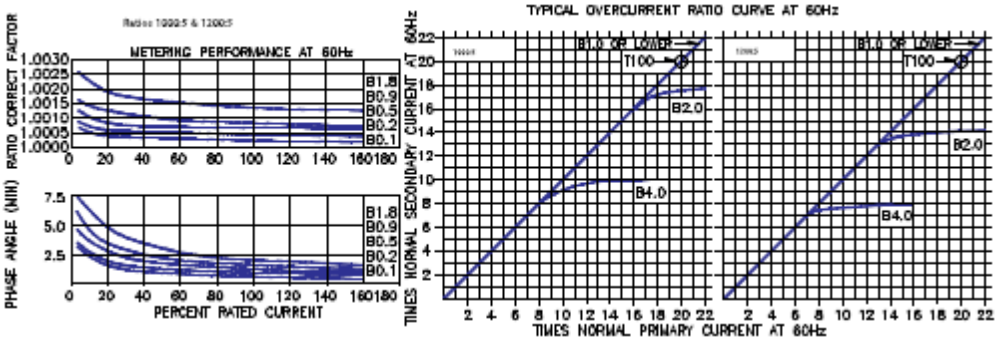
Primary Current	Dimensions	
	A	B
5 to 250 A	0.25	1.50
300 to 1,200 A	0.38	2.00









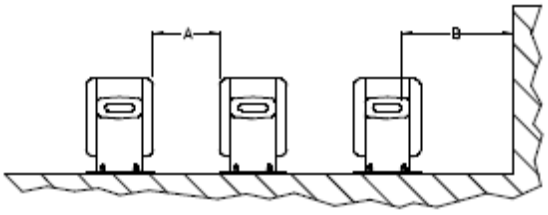


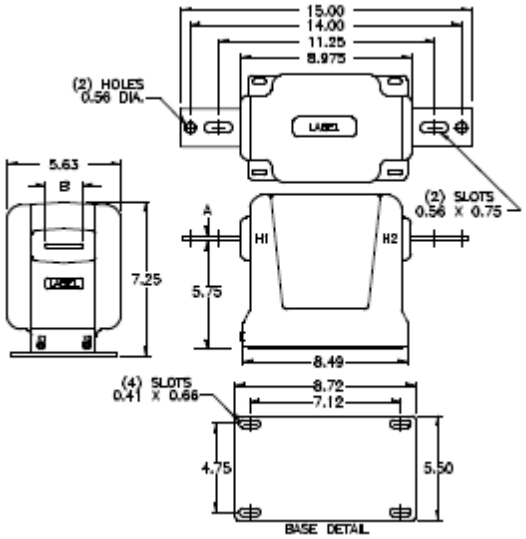
RECOMMENDED MINIMUM SPACINGS

A *= Unit to Unit = 0.75" minimum.*

B *= HV to Ground in Air = 3.00" minimum.*

Recommended spacing are for guidance only. User needs to set appropriate values to assure performance for high potential test, impulse test, high humidity, partial discharge, high altitude, and other considerations like configuration.





Wound Primary Indoor Current Transformer

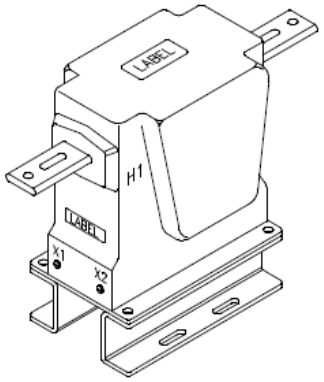
Model CTWH4-75-T100

rev 051223

APPLICATION:
Relaying and metering
FREQUENCY:
50-400 Hz.
MAXIMUM SYSTEM VOLTAGE:
9.52 kV, BIL 75 kV
APPROXIMATE WEIGHT:
42 lbs.
CONTINUOUS THERMAL RATING FACTOR:
1.50 at 30°C., 1.33 at 55°C.
250:5 and 1000:5
1.10 at 30°C., 0.85 at 55°C.
1,000:5-
1.0 at 30°C., 0.75 at 55°C.

Primary terminals are plated copper bars. See chart next pages for sizes.
Secondary terminals are brass screws No. 10-32 with one flatwasher, lockwasher.

Vacuum cast polyurethane resin. Other ratios, secondary currents and dual ratios are available. Refer to factory.



MODEL CTWH4-75-T100
Approximate weight: 42 lbs.

CERTIFICATIONS:

c UL us
E196364

nqa.
ISO 9001
QUALITY MANAGEMENT

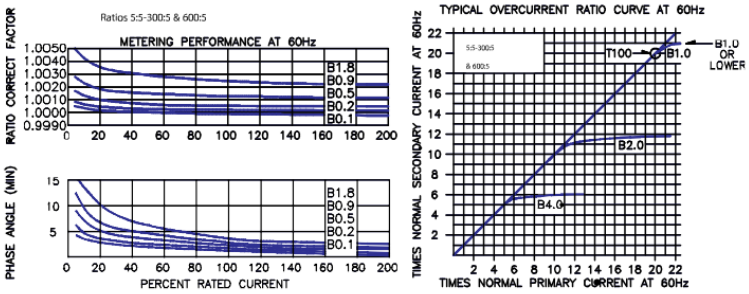
Catalog Number	Current Ratio	Relay Class	ANSI Metering Class at 60 Hz					**Thermal current Rating 1 Second RMS Amps
			BO.1	BO.2	BO.5	BO.9	B1.8	
CTWH4-75-T100-050	5:5	T100	0.3	0.3	0.3	0.3	0.3	470
CTWH4-75-T100-100	10:5	T100	0.3	0.3	0.3	0.3	0.3	900
CTWH4-75-T100-150	15:5	T100	0.3	0.3	0.3	0.3	0.3	1,600
CTWH4-75-T100-200	20:5	T100	0.3	0.3	0.3	0.3	0.3	1,900
CTWH4-75-T100-250	25:5	T100	0.3	0.3	0.3	0.3	0.3	2,600
CTWH4-75-T100-300	30:5	T100	0.3	0.3	0.3	0.3	0.3	2,900
CTWH4-75-T100-400	40:5	T100	0.3	0.3	0.3	0.3	0.3	3,800
CTWH4-75-T100-500	50:5	T100	0.3	0.3	0.3	0.3	0.3	4,700
CTWH4-75-T100-750	75:5	T100	0.3	0.3	0.3	0.3	0.3	5,900
CTWH4-75-T100-101	100:5	T100	0.3	0.3	0.3	0.3	0.3	8,600
CTWH4-75-T100-151	150:5	T100	0.3	0.3	0.3	0.3	0.3	12,900
CTWH4-75-T100-201	200:5	T100	0.3	0.3	0.3	0.3	0.3	17,200
CTWH4-75-T100-251	250:5	T100	0.3	0.3	0.3	0.3	0.3	17,200
CTWH4-75-T100-301	300:5	T100	0.3	0.3	0.3	0.3	0.3	34,500
CTWH4-75-T100-401	400:5	T100	0.3	0.3	0.3	0.3	0.3	34,500
CTWH4-75-T100-601	600:5	T100	0.3	0.3	0.3	0.3	0.3	66,200
CTWH4-75-T100-801	800:5	T100	0.3	0.3	0.3	0.3	0.3	66,200
CTWH4-75-T100-102	1,000:5	T100	0.3	0.3	0.3	0.3	0.3	66,200
CTWH4-75-T100-122	1,200:5	T100	0.3	0.3	0.3	0.3	0.3	66,200

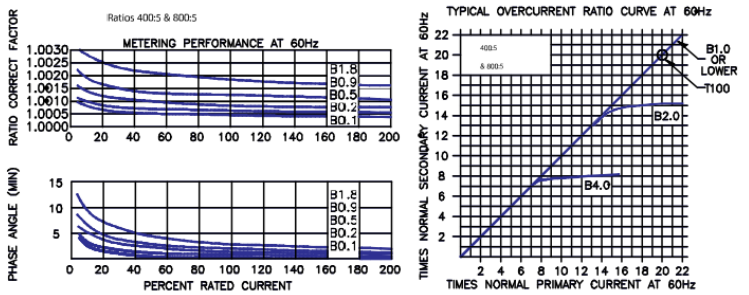
***With a burden of B0.1 or greater connected to the secondary.*

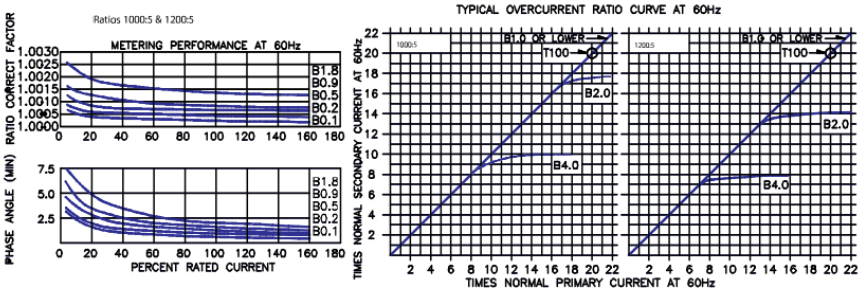
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

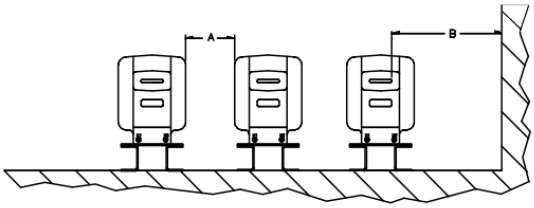
Wound Primary Indoor Current Transformer

Model CTWH4-75-T100







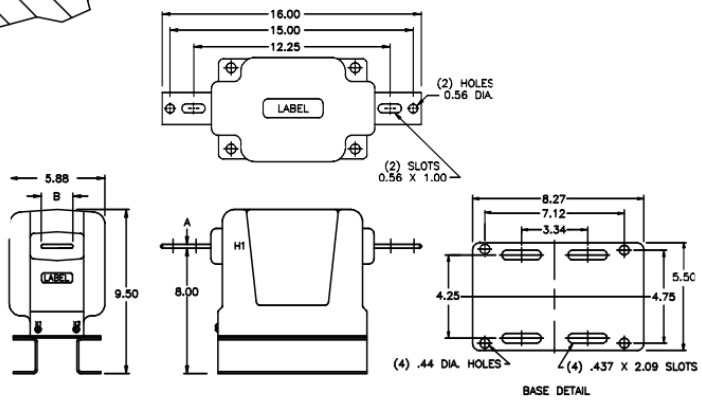


RECOMMENDED MINIMUM SPACINGS

A = Unit to Unit = 1.00" minimum.

B = HV to Ground in Air =4.50" minimum.

Recommended spacing are for guidance only. User needs to set appropriate values to assure performance for high potential test, impulse test, high humidity, partial discharge, high altitude, and other considerations like configuration.



Bar Sizes

Primary Current	Dimensions	
	A	B
5 to 200 A	0.25	1.50
250 to 1,200 A	0.38	2.00

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Wound Primary Indoor Current Transformer

Model CTWH5-B-110-T200**
rev 051223

CERTIFICATIONS:

APPLICATION:
Metering and relaying.
FREQUENCY:
50-400 Hz.
MAXIMUM SYSTEM VOLTAGE:
15.5 kV, BIL 110 kV
APPROXIMATE WEIGHT:
76 lbs.
CONTINUOUS THERMAL RATING FACTOR:
5:5 thru 600:5-
1.50 at 30°C., 1.33 at 55°C.
800:5 and over-
1.0 at 30°C., 0.8 at 55°C.

E196364

ISO 9001
QUALITY MANAGEMENT

Primary terminals are plated copper bars. See chart next pages for sizes.
Secondary terminals are brass screws No. 10-32 with one flatwasher, lockwasher.

Vacuum cast polyurethane resin. Other ratios, secondary currents and dual ratios are available. Refer to factory.

MODEL CTWH5-B-110-T200**
Approximate weight: 76 lbs.

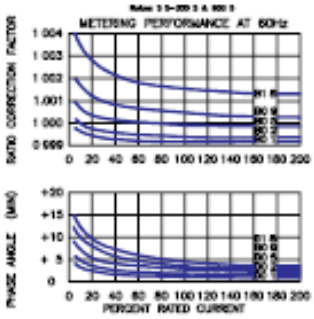
Catalog Number	Current Ratio	Relay Class	ANSI Metering Class at 60 Hz					**Thermal current Rating 1 Second RMS Amps
			BO.1	BO.2	BO.5	BO.9	B1.8	
CTWH5-B-110-T200-050	5:5	T200	0.3	0.3	0.3	0.3	0.3	470
CTWH5-B-110-T200-100	*10:5	T200	0.3	0.3	0.3	0.3	0.3	950
CTWH5-B-110-T200-150	*15:5	T200	0.3	0.3	0.3	0.3	0.3	1440
CTWH5-B-110-T200-200	*20:5	T200	0.3	0.3	0.3	0.3	0.3	1840
CTWH5-B-110-T200-250	*25:5	T200	0.3	0.3	0.3	0.3	0.3	2670
CTWH5-B-110-T200-300	*30:5	T200	0.3	0.3	0.3	0.3	0.3	2920
CTWH5-B-110-T200-400	*40:5	T200	0.3	0.3	0.3	0.3	0.3	3700
CTWH5-B-110-T200-500	*50:5	T200	0.3	0.3	0.3	0.3	0.3	4700
CTWH5-B-110-T200-750	*75:5	T200	0.3	0.3	0.3	0.3	0.3	7575
CTWH5-B-110-T200-101	*100:5	T200	0.3	0.3	0.3	0.3	0.3	12,940
CTWH5-B-110-T200-151	*150:5	T200	0.3	0.3	0.3	0.3	0.3	14,375
CTWH5-B-110-T200-201	*200:5	T200	0.3	0.3	0.3	0.3	0.3	25,875
CTWH5-B-110-T200-301	*300:5	T200	0.3	0.3	0.3	0.3	0.3	27,520
CTWH5-B-110-T200-401	*400:5	T200	0.3	0.3	0.3	0.3	0.3	40,350
CTWH5-B-110-T200-601	*600:5	T200	0.3	0.3	0.3	0.3	0.3	66,225
CTWH5-B-110-T200-801	*800:5	T200	0.3	0.3	0.3	0.3	0.3	66,225
CTWH5-B-110-T200-102	*1,000:5	T200	0.3	0.3	0.3	0.3	0.3	66,225
CTWH5-B-110-T200-122	*1,200:5	T200	0.3	0.3	0.3	0.3	0.3	66,225

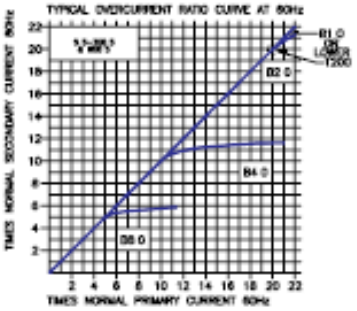
**All primary voltages marked with an (*) are approved for revenue metering in Canada by Industry Canada, Approval No. AE-0640 Rev.1.*
***Replaces Model CTWH5-110-T200. A test card is provided with each unit.*
****With a burden of B0.1 or greater connected to the secondary.*

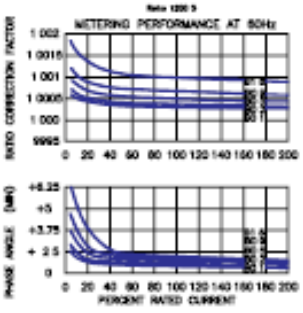
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

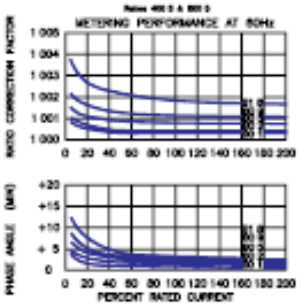
Wound Primary Indoor Current Transformer

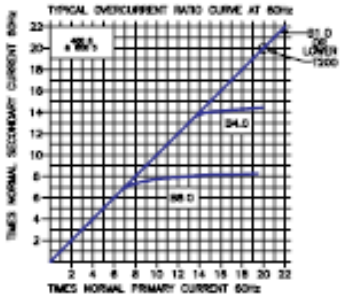
Model CTWH5-B-110-T200**

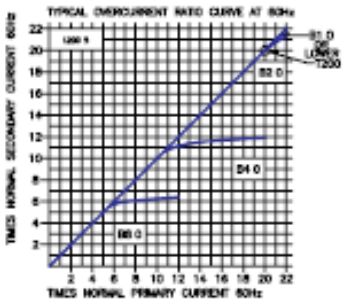


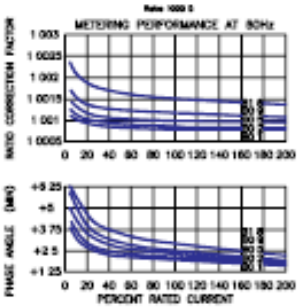


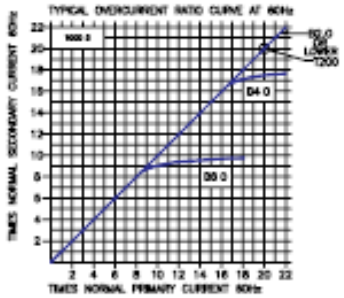






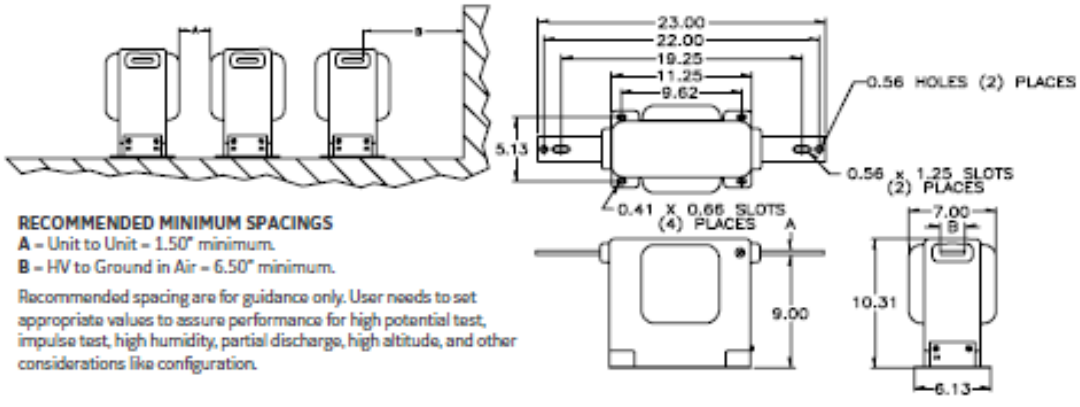






Bar Sizes

Primary Current	Dimensions	
	A	B
5 to 200A	0.25	1.50
300 to 600A	0.38	2.00



RECOMMENDED MINIMUM SPACINGS

A – Unit to Unit – 1.50" minimum.

B – HV to Ground in Air – 6.50" minimum.

Recommended spacing are for guidance only. User needs to set appropriate values to assure performance for high potential test, impulse test, high humidity, partial discharge, high altitude, and other considerations like configuration.

Wound Primary Indoor Current Transformer

Model JKM-3C
rev 051223

CERTIFICATIONS:

APPLICATION:
Designed for indoor service; Suitable for operating meters, instruments and control devices.

FREQUENCY:
50-60 Hz.

INSULATION LEVEL:
5 kV; BIL 60 kV full wave

APPROXIMATE WEIGHT:
30 lbs.

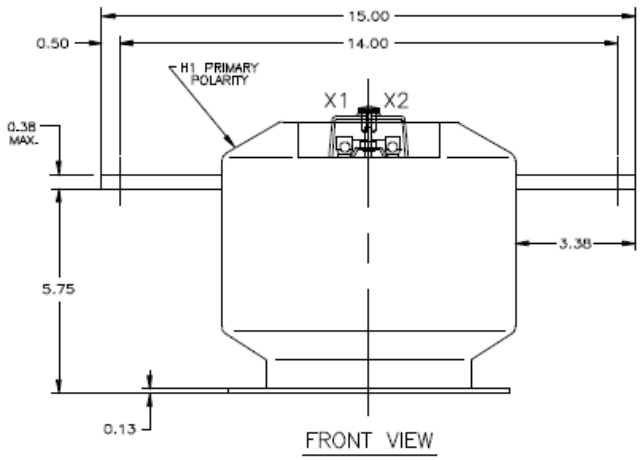
nqa.
ISO 9001
QUALITY MANAGEMENT

Current Ratio (Amps) Pri:Sec	ANSI Accuracy Class, 60 Hz			Continuous Thermal Current Rating Factor		Primary Bar Size		One Second Thermal Limit Amps	Mech. Limit Amps
	ANSI Meter Class Burden		Relay Class	@30°C Amb.	@55°C Amb.	Width ins.	Thick ins.		
	B0.1 to B0.5	B0.9 to 1.8							
Single Ratio									
5:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	465	550
10:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	930	1,100
15:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	1,470	1,620
20:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	1,850	2,200
25:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	2,300	2,750
30:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	2,450	3,300
40:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	3,700	4,400
50:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	4,600	5,500
75:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	6,400	8,250
100:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	8,600	11,000
150:5	0.3	0.3	T100	1.5	1.0	1.50	0.188	12,800	16,500
200:5	0.3	0.3	T100	1.5	1.0	2.00	0.25	17,300	22,000
300:5	0.3	0.3	T100	1.5	1.0	2.00	0.25	25,700	33,000
400:5	0.3	0.3	T100	1.5	1.0	2.00	0.25	36,000	44,000
500:5	0.3	0.3	T100	1.33	1.0	2.00	0.38	43,100	47,000
600:5	0.3	0.3	T100	1.5	1.0	2.00	0.38	51,500	66,000
800:5	0.3	0.3	T100	1.33	1.0	2.00	0.38	63,300	70,500
Tapped Secondary									
50/100:5	0.3	---	T50	2.0	1.5	1.50	0.188	4,300	11,000
	0.3	0.3	T100	1.5	1.0			8,600	
75/150:5	0.3	---	T50	2.0	1.5	1.50	0.188	6,400	16,500
	0.3	0.3	T100	1.5	1.0			12,800	
100/200:5	0.3	---	T50	2.0	1.5	2.00	0.25	8,650	22,000
	0.3	0.3	T100	1.5	1.0			17,300	
150/300:5	0.3	---	T50	2.0	1.5	2.00	.025	13,750	33,000
	0.3	0.3	T100	1.5	1.0			27,500	
200/400:5	0.3	---	T50	2.0	1.5	2.00	0.25	18,000	44,000
	0.3	0.3	T100	1.5	1.0			36,000	
300/600:5	0.3	---	T50	2.0	1.5	2.00	.038	25,750	66,000
	0.3	0.3	T100	1.5	1.0			51,500	
400/800:5	0.3	---	T50	2.0	1.5	2.00	0.38	31,650	70,500
	0.3	0.3	T100	1.33	1.0			63,300	

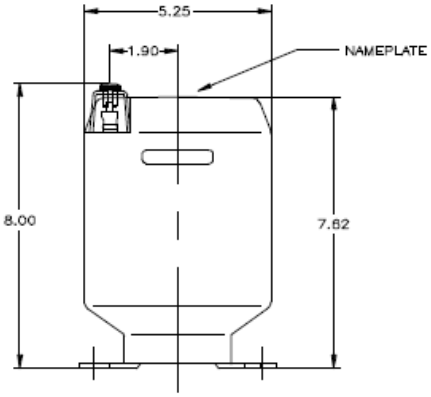
Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Wound Primary Indoor Current Transformer

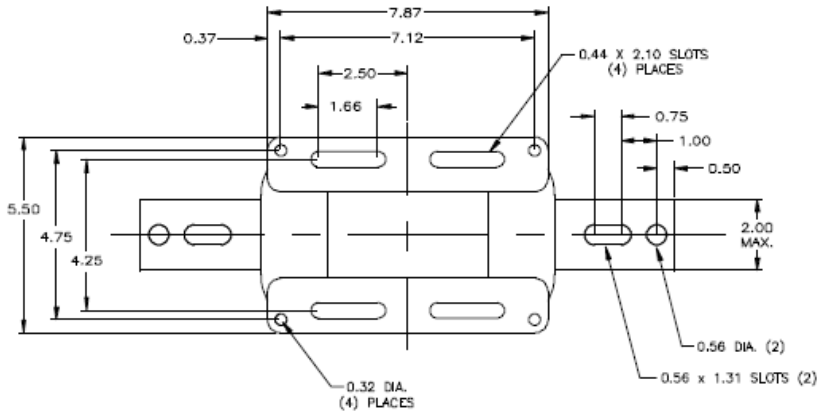
Model JKM-3C



FRONT VIEW



END VIEW



BOTTOM VIEW

Construction and Insulation
The core and coil assembly is encapsulated in vacuum cast polyurethane resin. This tough material has excellent electrical and mechanical properties over a wide temperature range, has low water absorption and is resistant to oil and a variety of chemicals.

Core and Coils
The core is made from high quality grain oriented silicon steel, annealed under rigidly controlled factory conditions. The primary winding consists of two coils in series, one around each leg of the core. This construction minimizes flux leakage thus improving the accuracy of the transformer. The secondary winding consists of two coils in parallel. Each coil is located inside the corresponding primary coil and surrounds one leg of the core.

Terminals
Secondary terminals are tin plated brass, compression type with a 0.275" diameter cross-hole for wiring and a ¼ - 28 clamp screw. A shorting device is provided and interlocked to the terminal cover. The terminal cover is made of a clear plastic. Provision is made for sealing the cover.

Primary Bars
The promary terminals are tin plated copper bars molded into the cast resin insulation. They have one hole and one slot at each end, suitable for ½" bolts.

Polarity
The primary and secondary polarity markers H1, X1, are molded in the insulation. They are thus permanent and integral parts of the transformer and cannot be readily obliterated. They are also marked white.

Base plate and mounting
The base plate is made of stainelss steel; it is provided with four slots for mounting. The transformer may be mounted in any orientation.

Maintenance
These transformers require no maintenance, other than occasional cleaning, if installed where air contamination is severe.

Wound Primary Indoor Current Transformer

Model JKM-5C

APPLICATION:
Designed for indoor service; Suitable for operating meters, instruments and control devices.

FREQUENCY:
50-60 Hz.

INSULATION LEVEL:
15.5 kV; BIL 110 kV full wave

APPROXIMATE WEIGHT:
53 lbs.

CERTIFICATIONS:

c UL us
E228202

CSA C US
223647

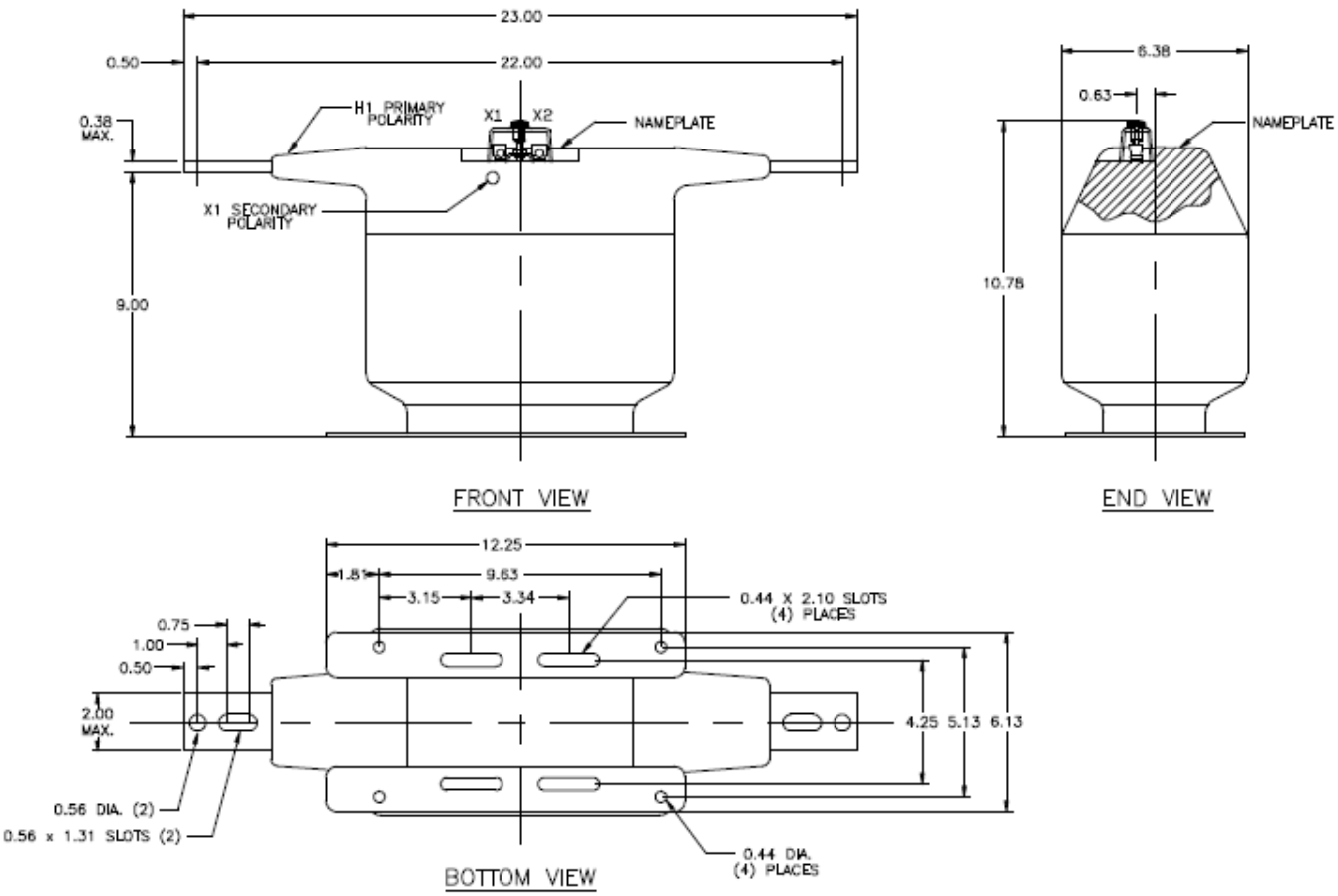
nqa.
ISO 9001
QUALITY MANAGEMENT

Current Ratio (Amps) Pri:Sec	ANSI Accuracy Class, 60 Hz			Continuous Thermal Current Rating Factor		Primary Bar Size		One Second Thermal Limit Amps	Mech. Limit Amps
	ANSI Meter Class Burden		Relay Class	@30°C Amb.	@55°C Amb.	Width ins.	Thick ins.		
	B0.1 to B0.5	B0.9 to 1.8							
					Single Ratio				
5:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	465	625
10:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	930	1,250
15:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	1,470	1,875
20:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	1,850	2,500
25:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	2,300	3,125
30:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	2,460	3,750
40:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	3,720	5,000
50:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	4,600	6,250
75:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	6,375	9,375
100:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	8,600	12, 500
150:5	0.3	0.3	T200	1.5	1.33	1.50	0.188	12,750	18,750
200:5	0.3	0.3	T200	1.5	1.33	2.00	0.25	17,200	25,000
300:5	0.3	0.3	T200	1.5	1.33	2.00	0.25	25,800	37,500
400:5	0.3	0.3	T200	1.5	1.33	2.00	0.25	36,000	50,000
500:5	0.3	0.3	T200	1.5	1.33	2.00	0.38	42,000	53,500
600:5	0.3	0.3	T200	1.5	1.33	2.00	0.38	51,600	75,000
800:5	0.3	0.3	T200	1.2	0.85	2.00	0.38	63,200	80,000
					Tapped Secondary				
50/100:5	0.3	---	T100	2.0	1.5	1.50	0.188	4,300	12,500
	0.3	0.3	T200	1.5	1.0			8,600	
75/150:5	0.3	---	T100	2.0	1.5	1.50	0.188	6,375	18,750
	0.3	0.3	T200	1.5	1.0			12,750	
100/200:5	0.3	---	T100	2.0	1.5	2.00	0.25	8,600	25,000
	0.3	0.3	T200	1.5	1.0			17,200	
150/300:5	0.3	---	T100	2.0	1.5	2.00	0.25	12,900	37,500
	0.3	0.3	T200	1.5	1.0			25,800	
200/400:5	0.3	---	T100	2.0	1.5	2.00	.25	18,000	50,000
	0.3	0.3	T200	1.5	1.0			36,000	
300/600:5	0.3	---	T100	2.0	1.5	2.00	0.38	25,800	75,000
	0.3	0.3	T200	1.5	1.0			51,600	
400/800:5	0.3	---	T100	2.0	1.5	2.00	0.38	31,600	80,000
	0.3	0.3	T200	1.2	0.85			63,200	

Products are manufactured in a plant whose quality management system has been certified to be in compliance with ISO 9001:2015 by NQA

Wound Primary Indoor Current Transformer

Model JKM-5C



Construction and Insulation
The core and coil assembly is encapsulated in vacuum cast polyurethane resin. This tough material has excellent electrical and mechanical properties over a wide temperature range, has low water absorption and is resistant to oil and a variety of chemicals.

Core and Coils
The core is made from high quality grain oriented silicon steel, annealed under rigidly controlled factory conditions. The primary winding consists of two coils in series, one around each leg of the core. This construction minimizes flux leakage thus improving the accuracy of the transformer. The secondary winding consists of two coils in parallel. Each coil is located inside the corresponding primary coil and surrounds one leg of the core.

Terminals
Secondary terminals are tin plated brass, compression type with a 0.275" diameter cross-hole for wiring and a ¼ - 28 clamp screw. A shorting device is provided and interlocked to the terminal cover. The terminal cover is made of a clear plastic. Provision is made for sealing the cover.

Primary Bars
The promary terminals are tin plated copper bars molded into the cast resin insulation. They have one hole and one slot at each end, suitable for ½" bolts.

Polarity
The primary and secondary polarity markers H1, X1, are molded in the insulation. They are thus permanent and integral parts of the transformer and cannot be readily obliterated. They are also marked white.

Base plate and mounting
The base plate is made of stainelss steel; it is provided with four slots for mounting. The transformer may be mounted in any orientation.

Maintenance
These transformers require no maintenance, other than occasional cleaning, if installed where air contamination is severe.

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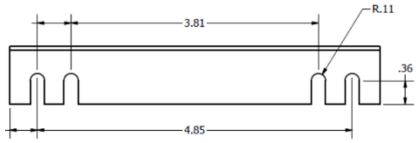
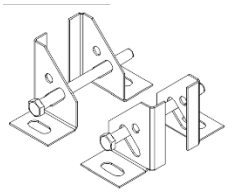


MODEL 8SHT-KIT

Page 10-3



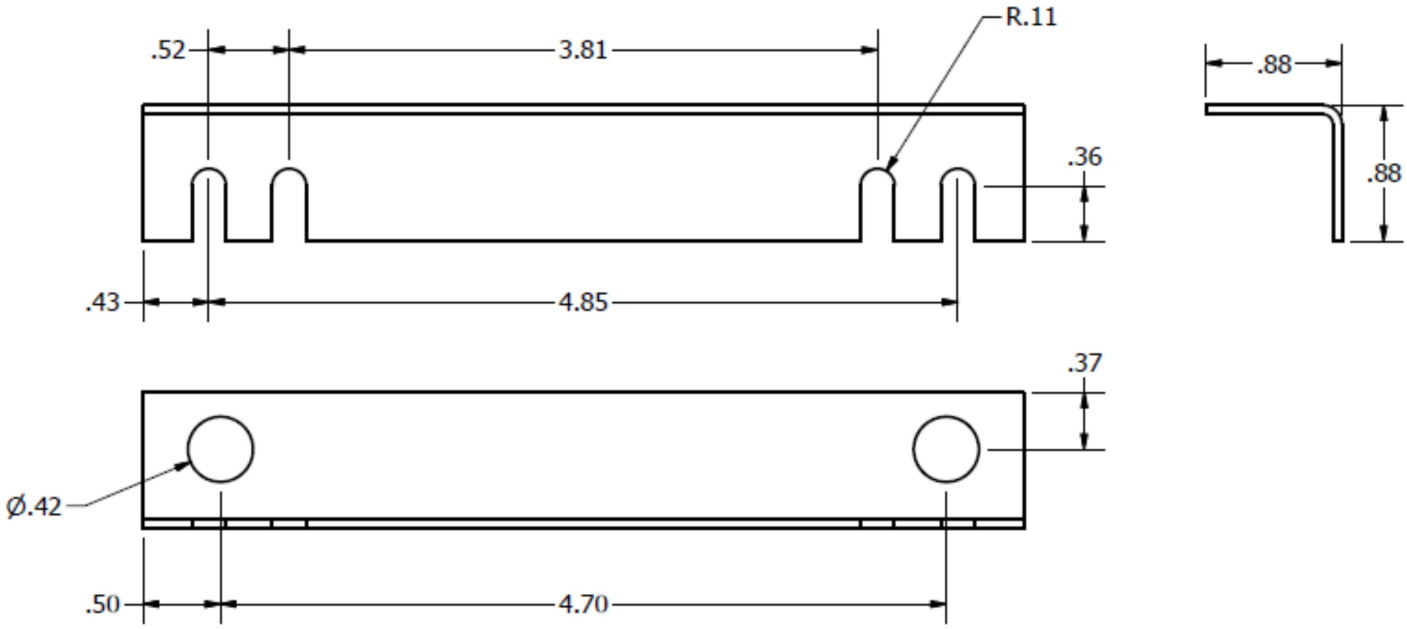
MODEL 115-KIT

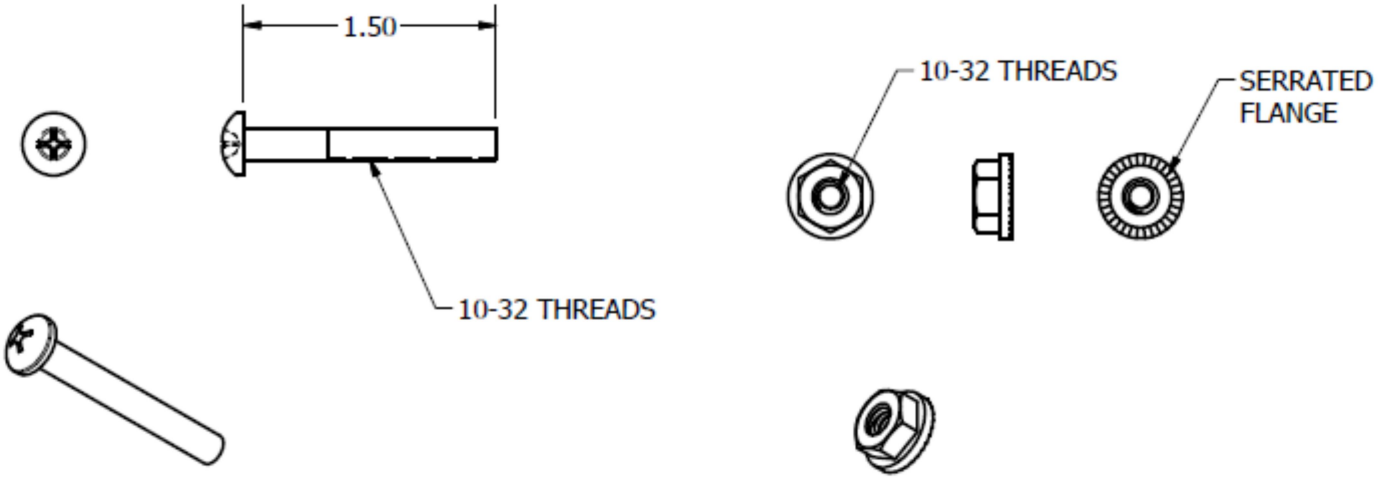
Current Transformer

Model 8SHT-KIT
rev 020518

APPLICATION:
Mounting kit for use with model 8SHT.

Each kit contains 2 brackets, 2 bolts and 2 nuts.



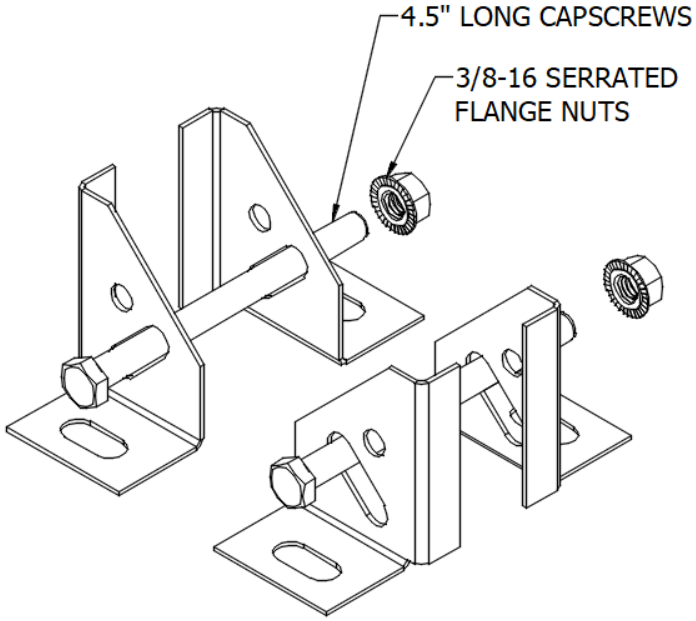


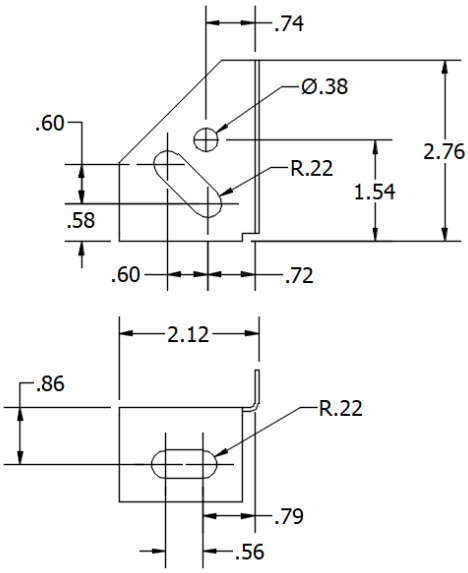
Current Transformer

Model 115-KIT
rev 042721

APPLICATION:
Mounting kit for use with model 115

Each kit contains 4 brackets, 2 bolts and 2 nuts.





TECHNICAL DATA

STANDARDS

I. Current Transformers
   a. I.E.E.E. / A.N.S.I. Publication I.E.E.E. Std. C57.13-2008
   b. I.E.C. Publication No. I.E.C. 61869-2

II. Voltage Transformers
   a. I.E.E.E. / A.N.S.I Publication I.E.E.E. Std. C57-13-2008
   b. I.E.C. Publication No. 61869-3

Standards listed are ones we most commonly use in the field. It should be understood that standards are not laws, but are suggested guidelines for users and manufacturers alike. The standards usually suggest test and testing procedures as well.

The following is based on U.S.A. standards (C57.13-2008) which is the standard of choice in the U.S.A.

I.E.C. (International Electro technical Commission) is the standard of choice of the international community.

CURRENT TRANSFORMERS

Accuracy & Burden – Accuracy is defined for two different types of applications (metering and relaying).

The following table defines metering accuracy classes.

The limits of transformer correction factor in standard shall be as shown in Table 1.

STANDARD ACCURACY CLASSES
TABLE 1

METERING ACCURACY CLASS	VOLTAGE TRANSFORMERS (at 100% rated voltage)		CURRENT TRANSFORMERS			
	RATIO CORRECTION FACTORS					
			*At 100% rated current		*At 100% rated current	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
0.3	0.997	1.003	0.997	1.003	0.994	1.006
0.6	0.994	1.006	0.994	1.006	0.988	1.012
1.2	0.998	1.012	0.988	1.012	0.976	1.024

***For current transformers the 100% rated current limit also applies to the current corresponding to the continuous thermal current rating factor.**

Accuracy statement (0.3, 0.6, 1.2) is not complete unless it is stated at a given burden. Table 2 defines the standard burdens for metering and relaying as well.

STANDARD BURDENS FOR CURRENT TRANSFORMERS WITH 5 SECONDARY WINDINGS

TABLE 2

BURDENS	BURDEN DESIGNATION**	RESISTANCE (Ω)	INDICTANCE (mH)	IMPEDANCE (Ω)	VOLTAMPERES (at 5 A)	POWER FACTOR
Metering Burdens	B-0.1	0.09	0.116	0.1	2.5	0.9
	B-0.2	0.18	0.232	0.2	5.0	0.9
	B-.05	0.45	0.580	0.5	12.5	0.9
	B-0.9	0.81	1.040	0.9	22.5	0.9
	B-1.8	1.62	2.080	1.8	45.0	0.9
Relaying Burdens	B-1	0.50	2.300	1.0	25.0	0.5
	B-2	1.00	4.600	2.0	50.0	0.5
	B-4	2.00	9.200	4.0	100.0	0.5
	B-8	4.00	18.400	8.0	200.0	0.5

***If a current transformer secondary winding is rated at other than 5 A, ohmic burdens for specification and rating shall be derived by multiplying the resistance and inductance of the table [5 / (ampere rating)] ², the VA at rated current, the power factor, and the burden designation remaining the same.**

****These standard burden designations have no significance at frequencies other than 60 Hz.**

There is another factor which must be considered, that is, phase error. Table 3 gives the maximum acceptable phase error associated with the standard accuracy classes.

TABLE 3

ACCURACY CLASSES	± PHASE ERROR AT 100% PRIMARY CURRENT	± PHASE ERROR AT 10% PRIMARY CURRENT
0.3	15.6 MINUTES	31.2 MINUTES
0.6	31.2 MINUTES	62.4 MINUTES
1.2	62.4 MINUTES	24.8 MINUTES

If you have a metering accuracy statement of “0.3 BO.5”, it indicates the following:

(0.3) maximum ratio error of 0.3% at 100% of rated primary current or ±0.6% ratio error at 10% of rated primary current. With a maximum phase error of ±15.6 minutes at 100% rated primary current or ±31.2 minutes maximum phase error at 10% of rated primary current. All of the above is based on a burden of (BO.5) 0.5 OHMS at power factor of 0.9.

TECHNICAL DATA

CURRENT TRANSFORMERS RELAYING ACCURACY

All relaying accuracies are ±10% maximum ratio error when there is 20 times current flowing in the CT secondary (20 x 5A=100A). There are two designations which are “C” and “T”. Designation “C” stands for “Calculate”. This type of CT’s performance can be very accurately calculated. The “T” designation stands for “Test”. This type of CT’s performance must be verified by testing. Table 4 gives the relaying accuracy designations:

TABLE 4

DESIGNATION	BURDEN	POWER FACTOR	SECONDARY VOLTAGE
C 10 or T10	0.1 Ω	0.5	10V
C 20 or T20	0.2 Ω	0.5	20V
C 50 or T50	0.5 Ω	0.5	50V
C 100 or T100	1.0 Ω	0.5	100V
C 200 or T200	2.0 Ω	0.5	200V
C 400 or T400	4.0 Ω	0.5	400V
C 800 or T800	8.0 Ω	0.5	800V

VOLTAGE TRANSFORMERS

Voltage transformers have the same accuracy classes as indicated in Table 1 (i.e. 0.3, 0.6 & 1.2). These accuracy classes must be given at a stated burden in order to be meaningful. Table 5 gives the standard burden data:

VOLTAGE TRANSFORMER BURDEN DATA
TABLE 5

BURDEN	VOLT AMPERES	POWER FACTOR	P.F. ANGLE
W	12.5	0.10	84.3”
X	25	0.70	45.6”
M	35	0.20	78.5”
Y	75	0.85	31.8”
Z	200	0.85	31.8”
ZZ	400	0.85	31.8”

If you have a “0.6Y” accuracy and burden statement, it indicates the following:

This means: (0.6) maximum ratio error of + 0.6% at a burden of 75VA with a power factor of 0.85.

CURRENT TRANSFORMERS RATIO MODIFICATION

Relatively large changes in ratio may be achieved through the use of primary turns. For example:

TABLE 6

CT RATIO	NUMBER OF PRIMARY TURNS	MODIFIED RATIO
100:5A	2	50:5A
200:5A	2	100:5A
300:5A	2	150:5A
100:5A	3	33.3:5A
200:5A	3	66.6:5A
300:5A	3	100:5A
100:5A	4	25:5A
200:5A	4	50:5A
300:5A	4	75:5A

A primary turn is the number of times the primary conductor passes through the CT's window. The main advantage of this ratio modification is maintaining the accuracy and burden capabilities of the higher ratio. The higher the primary rating the better the accuracy and burden rating.

Smaller ratio modification adjustments can be made by using additive or subtractive secondary turns. For example, if a CT with a ratio of 100:5A: By adding one additive secondary turn, the ratio modification is 105:5A; by adding on subtractive secondary turn, the ratio modification is 95:5A. Subtractive secondary turns are achieved by placing the "X1" lead through the window form the H1 side and out the H2 side. Additive secondary turns are achieved by placing the "X1" lead through the window from the H2 and out of the H1 side. So, when there is only one primary turn, each secondary turn modifies the primary rating by 5 amperes. If there is more than one primary turn, each secondary turn value is changes (i.e. 5A divided by 2 primary turns = 2.5A). Table 7 illustrates the effects of different combinations of primary and secondary turns:

TABLE 7

PRIMARY TURNS	SECONDARY TURNS	RATIO ADJUSTMENT
1	-0-	100:5A
1	1+	105:5A
1	1-	95:5A
2	-0-	50:5
2	1+	52.5:5A
2	2-	45.0:5A
3	-0-	33.3:5A
3	1+	34.97:5A
3	1-	31.63:5A

The use of primary/secondary turns makes it is possible to modify any CT ratio, since low ratio CT's generally have poorer performances characteristics and high ratio CT's have

better performance. By using added primary/secondary turns, you can modify a higher ratio CT to have a lower ratio and enjoy the better performance of the higher ratio.

***Use Table 8 to determine size window needed for number and primary conductor(s)**

TABLE 8

WINDOW DIAMETER		½"	¾"	1"	1 ½"	2"	1 ½"	3"	3 ½"	4"	5"	6"
INSULATION TYPE RHW	AWG MCM											
	14	3	6	10	25	41	58	90	121	155	-	-
	12	3	5	9	21	35	50	77	103	132	-	-
	10	2	4	7	18	29	41	64	86	110	-	-
	8	1	2	4	9	16	22	35	47	60	94	137
	6	1	1	2	6	11	15	24	32	41	64	93
	4	1	1	1	5	8	12	18	24	31	50	72
	3	1	1	1	4	7	10	16	22	38	44	63
	2	-	1	1	4	6	9	14	19	24	38	56
	1	-	1	1	3	5	7	11	14	18	29	42
	0	-	1	1	2	4	6	9	12	16	25	47
	00	-	-	1	1	3	5	8	11	14	22	32
	000	-	-	1	1	3	4	7	9	12	19	28
	0000	-	-	1	1	2	4	6	8	10	16	24
	250	-	-	-	1	1	3	5	6	8	13	19
	300	-	-	-	1	1	3	4	5	7	11	17
	350	-	-	-	1	1	2	4	5	6	10	15
	400	-	-	-	1	1	1	3	4	6	9	14
	500	-	-	-	1	1	1	3	4	5	8	11
	600	-	-	-	1	1	1	2	3	4	6	9
	700	-	-	-	1	1	1	1	3	3	6	8
	750	-	-	-	1	1	1	1	3	3	5	8

Burden is the opposition to the flow of current from the transformers secondary. Burden may be expressed in terms of resistance of volt-amperes. The following table may be used to convert volt-ampere values to resistance values for 5 amp secondary CT's:

TECHNICAL DATA

BURDEN

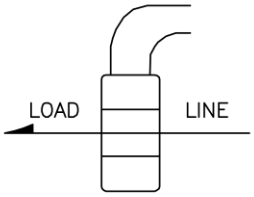
TABLE 9

VOLTAMPERE (VA)	RESISTANCE (OHMS) Ω
0.5	0.02
1.0	0.04
1.5	0.06
2.0	0.08
2.5	0.10
3.0	0.12
3.5	0.14
4.0	0.16
4.5	0.18
5.0	0.20
5.5	0.22
6.0	0.24
6.5	0.26
7.0	0.28
7.5	0.30
8.0	0.32
8.5	0.34
9.0	0.36
9.5	0.38
10.0	0.40
12.5	0.50
15.0	0.60
20.0	0.80
25.0	1.00
45.0	1.80
50.0	2.00
75.0	3.00
100.0	4.00

APPLICATION GUIDE

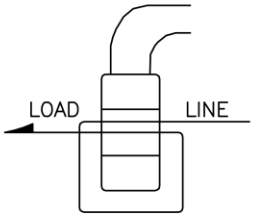
Primary Turn Ratio Modification

The nameplate of the current transformer is based on the condition that the primary conductor will be passed once through the transformer opening. The rating can be reduced in even multiples by looping this conductor two or more times through the opening. A transformer having a rating of 200 to 5 amperes will be changed to 50 to 5 amperes if four loops or turns are made with the primary cable as illustrated.



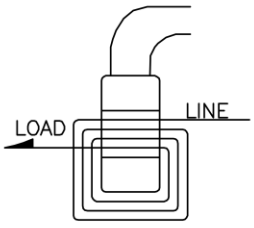
1 Primary Turn

NAMEPLATE RATIO	ACTUAL RATIO
100:5	100:5
150:5	150:5
200:5	200:5
300:5	300:5
400:5	400:5
500:5	500:5
600:5	600:5
800:5	800:5



2 Primary Turns

NAMEPLATE RATIO	ACTUAL RATIO
100:5	50:5
150:5	75:5
200:5	100:5
300:5	150:5
400:5	200:5
500:5	250:5
600:5	300:5
800:5	400:5



4 Primary Turns

NAMEPLATE RATIO	ACTUAL RATIO
100:5	25:5
150:5	37.5:5
200:5	50:5
300:5	75:5
400:5	100:5
500:5	125:5
600:5	150:5
800:5	200:5

Secondary Turn Ratio Modification

Formula: $\frac{Ip}{Is} = \frac{Ns}{Np}$

Where: Ip – Primary Amperage
Is – Secondary Amperage
Np – Number of Primary Turns
Ns – Number of Secondary Turns

Example: A 300:5 Current Transformer –

$$\frac{300\ p}{5\ s} = \frac{60\ s}{1\ p}$$

(In practicality one turn is dropped from the secondary as a ratio correction factor).

The ratio of the current transformer can be modified by altering the number of secondary turns by forward or backwinding the secondary lead through the window of the current transformer.

By adding secondary turns the same primary amperage will result in a decrease in secondary output. By subtracting secondary turns the same primary amperage will result in greater secondary output.

Again, using the 300:5 example adding five secondary turns will require 325 amps on the primary to maintain the 5 amp secondary output or:

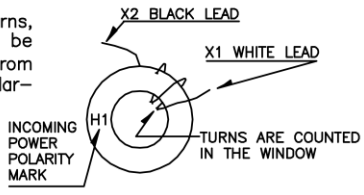
$$\frac{325\ p}{5\ s} = \frac{65\ s}{1\ p}$$

Deducting 5 secondary turns will only require 275 amps on the primary to maintain the 5 amp secondary output or:

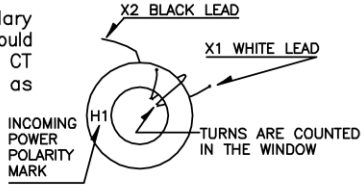
$$\frac{275\ p}{5\ s} = \frac{55\ s}{1\ p}$$

The above ratio modifications are achieved in the following manner:

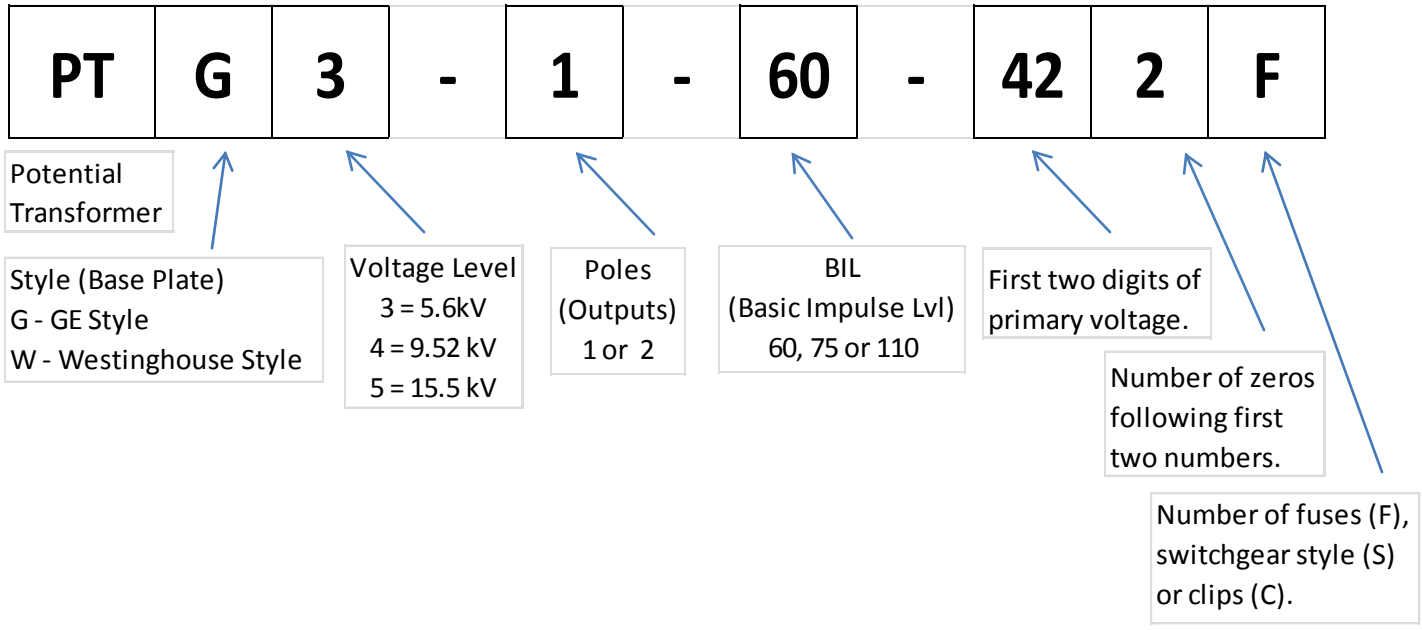
To add secondary turns, the white lead should be wound through the CT from the side opposite the polarity mark.



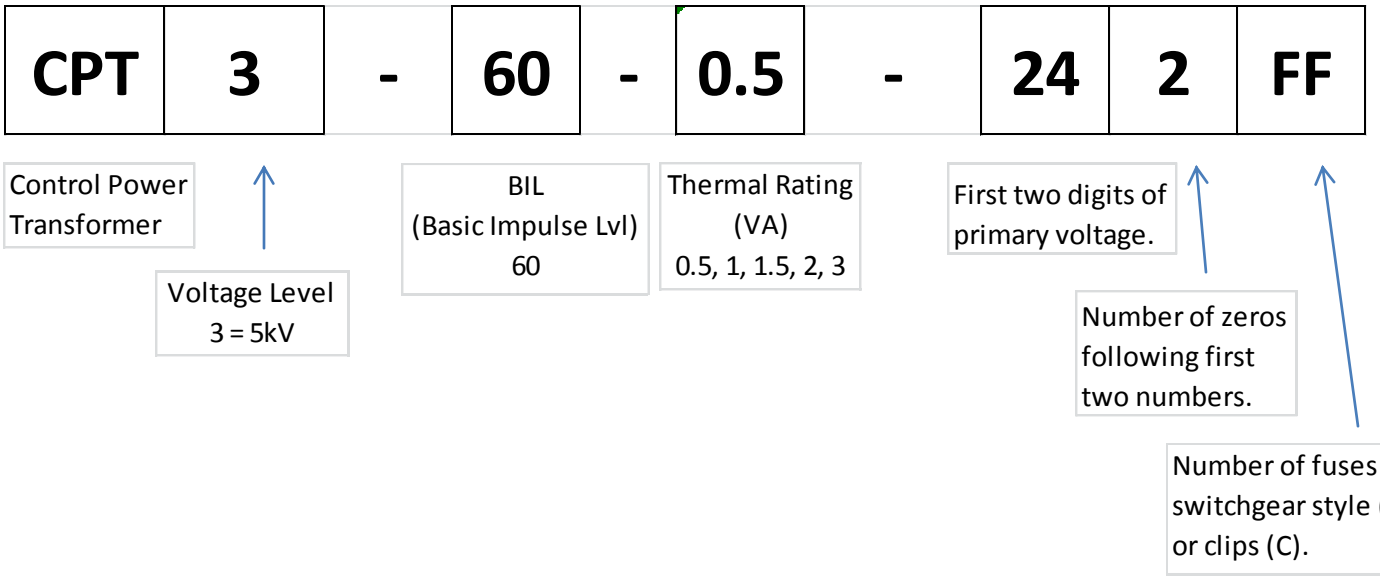
To subtract secondary turns the white lead should be wound through the CT from the same side as the polarity mark.



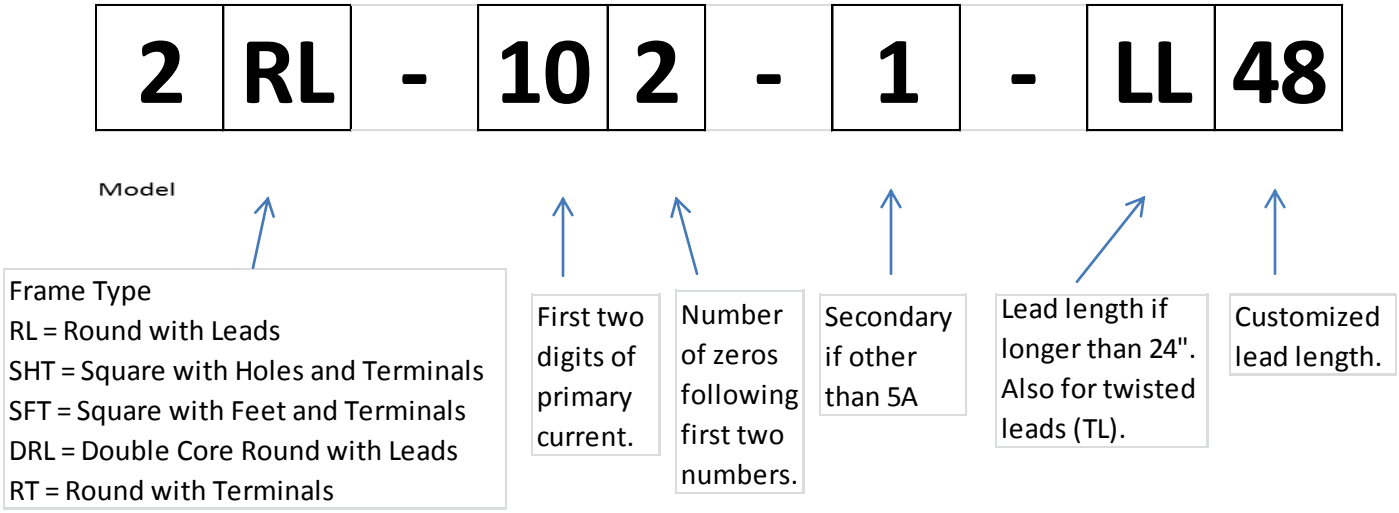
Medium Voltage PT Part Number



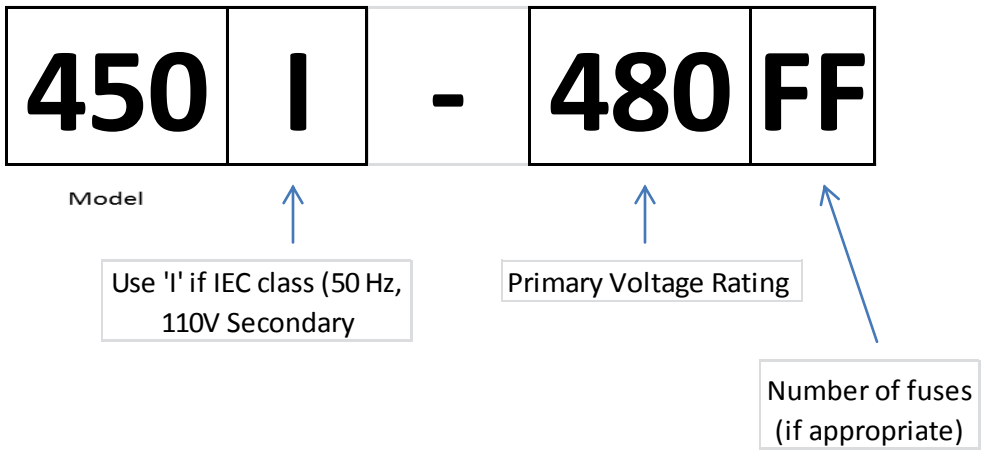
Control Power Transformer Part Number



Current Transformer Part Number



Low Voltage VT Part Number



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