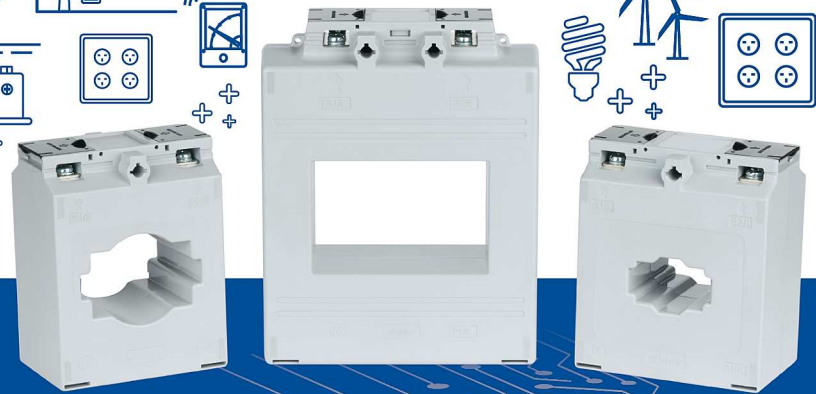




since 1963

Converging
Innovations  Expanding
Solutions



Solutions for
Metering & Protection

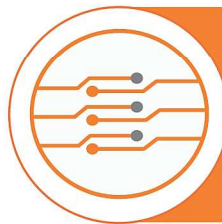


since 1963

Converging
Innovations  Expanding
Solutions



**Solutions For
Metering & Protection**



**Solutions For
Connectivity**



**Solutions For
Control & Instrumentation**



**Solutions For
Solar Photovoltaic**



**Solutions For
Oil & Gas Industry**

APPLICATIONS

'elmex' Current Transformers are available for various combinations of Burden and class of accuracy for various applications. The Insulating materials used are complying with requirements of IEC: 60085 for Insulation Class-E (or better).

Metering	Protection	Revenue	Core Balance
Indication	Summation	Differential Protection	Interposing
	Motor/Power Control Centre	Meters & UPS Manufacturers	

CONSTRUCTION

'elmex' Low Voltage Current Transformers are designed for supplying to Measuring Instruments and Protective Devices. These are suitable for System Voltage 415V/660V/1000 V and frequency 50/60 Hz. Basic construction is in three different Groups as under, meeting various application requirements.

POLYCARBONATE ENCAPSULATED

RESIN CAST

TAPE INSULATED

CONFIGURATION

Wound Primary Type (WPL)

(CT having Two or more number of Primary turns)

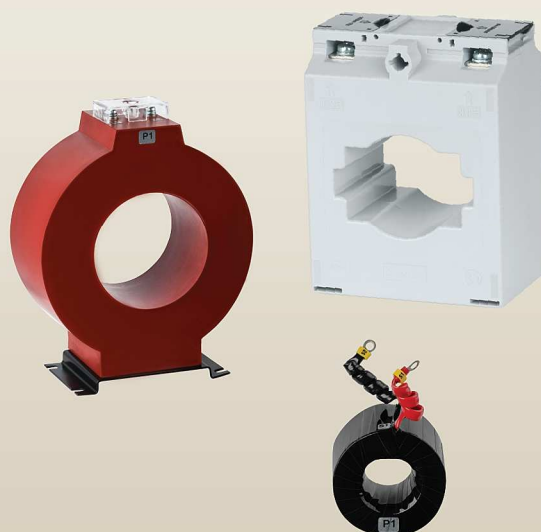
- ✓ Preferred for Rated Primary current below 100A.
- ✓ Offered for higher Accuracy with lower Burdens (viz. 5VA/Class-1.0 or 2.5VA/Class-0.5 for metering) for lower primary current.
- ✓ Available in Polycarbonate Encapsulated & Resin Cast.



Window/ Plug - In Type (BPL)

(CT having an opening of suitable size is provided in the centre for Primary conductor)

- ✓ Preferred for Rated Primary current of 100A and above.
- ✓ Economic design
- ✓ Available in Polycarbonate Encapsulated, Resin Cast and Tape Insulated.



GENERAL SPECIFICATIONS

Highest System Voltage: 720V (max.), 50/60 Hz.	Insulation Class: E (Offered B on request)
Basic Insulation Level: 0.72/4.0kV	Average Ambient: -20°C to +45 °C
Rated Primary Current: 1A to 7500A	Connections: (S1-S2) Two brass terminals of M5 size
Rated Secondary Current: 5A or 1A	Applicable Standard: IEC-61869-2 / IS-2705
Short - Time Thermal Current (Ith.): 60xIn	Standard Burden: 1.25, 2.5, 3.75, 5, 7.5, 10, 15, 20, 30, 40,60VA
Dynamic Current (Idyn.): 2.5 x Ith.	Instrument Security Factor: 5 or Less

CLASS OF ACCURACY

0.2S, 0.5S for Tariff (Revenue)	3.0, 5.0 for Indication Purpose
0.2, 0.5 for Precise Measurement	5P/10P for Protection and PS for Special Purpose Protection
1.0 for General Metering	

CHARACTERISTIC

A Current Transformer converts an alternating current generally very high in a proportion to its transformation ratio. Measuring CT's convert the primary current, at the class of accuracy, as designed over a current range from 1 to 120 % (as the case may be) of its rated primary current. The design of Measuring CT requires CT to perform within the limits of error as given by the standard specifications, when connected to its rated burden. Measuring CT advantageously saturates above the normal working range to protect an instrument connected against damages by limiting the secondary current during the fault that may appear in the system.

GUIDELINES FOR RATED BURDEN AND LIMITS OF PERMISSIBLE ERROR

INSTRUMENT BURDEN*		Limits of ratio error & phase displacement as per IEC: 61869-2**											
Type of Instrument	VA	Accuracy Class	± Percentage Current (Ratio) Error at % of Rated Current shown below						± Phase displacement - Minutes at % of Rated Current shown below				
			1	5	20	50	100	120	1	5	20	100	120
Moving iron ammeter	1.0												
Bimetal instruments (.../5A)	3.0	0.2		0.75	0.35		0.2	0.2		30	15	10	10
Wattmeter	5.5	0.5		1.5	0.75		0.5	0.5		90	45	30	30
Power factor meter	4.0	1.0		3.0	1.5		1.0	1.0		180	90	60	60
Current transducer	0.5	0.2S	0.75	0.35	0.2		0.2	0.2	30	15	10	10	10
Power transducer	0.5	0.5S	1.5	0.75	0.5		0.5	0.5	90	45	30	30	30
kWh-meter	2.5	3.0				3.0		3.0					
Trivector meter	5.0	5.0				5.0		5.0					

Lead Burden of a respective wire size used for connection [VA] **

Cross Section mm ²	For CT having Secondary Current 1 Amp							For CT having Secondary Current 5 Amp				
	Distance between CT and Measuring Instrument / Device in meters											
	2 x 2	2 x 4	2 x 6	2 x 8	2 x 10	2 x 15	2 x 20	2 x 2	2 x 4	2 x 6	2 x 8	2 x 10
1.5	0.053	0.106	0.159	0.213	0.266	0.399	0.532	1.33	2.66	3.99	5.32	6.65
2.5	0.032	0.064	0.095	0.12	0.16	0.24	0.32	0.79	1.59	2.40	3.19	3.99
4.0	0.02	0.039	0.059	0.079	0.099	0.148	0.19	0.495	0.99	1.485	1.98	2.48
6.0	0.013	0.026	0.04	0.053	0.066	0.099	0.132	0.33	0.66	0.99	1.32	1.65

*The actual burden is normally declared by the manufacturer

**Given data are for guidelines only

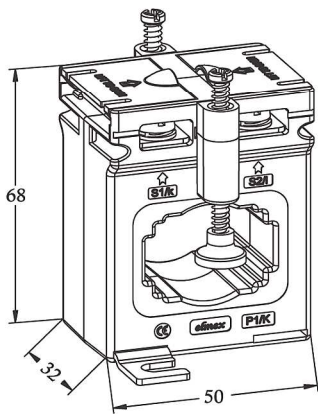


Advantages of 'elmex' Polycarbonate Encapsulated CTs

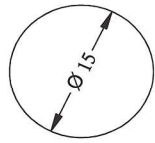


- Superior Aesthetics and Consistency of Dimensions
- Multiple Conductor Compatibility: Suitable for different size of Bus bars/conductors in the same CT
- Multiple Mounting Options: Suitable For Bus-Bar Mounting as well as Panel Mounting
- Fire Retardant
- Embossed terminal Markings: Eliminates the risk of marking stickers peeling off
- Robust Construction: High Mechanical strength resulting in increased safety during transit
- Option of Terminal sealing: Provides protection from power theft
- Manufactured with State-of-Art processes complying to ISO:14001 and RoHS directive
- Ease of traceability

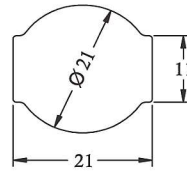




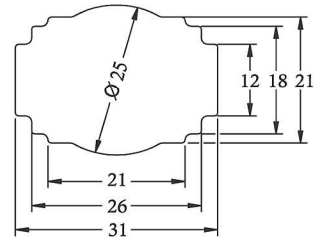
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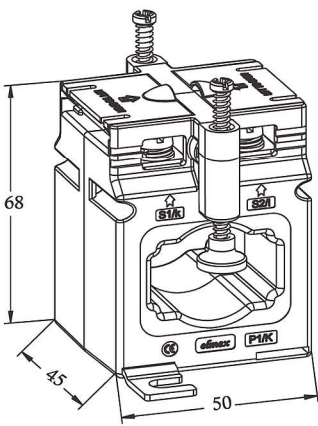
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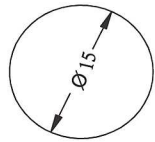
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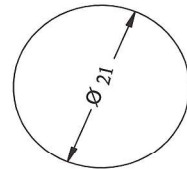
TYPE	ELP		
CAT. NO.	ELP1 (E1 15.4)	ELP2 (E2 21.4)	ELP3 (E3 31.4)
RATING	30 - 300 A	30 - 500 A	75 - 500 A
BUS SIZE	15 Ø	20x10	30x10 / 25x10



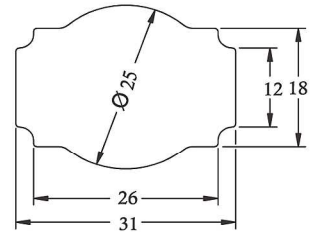
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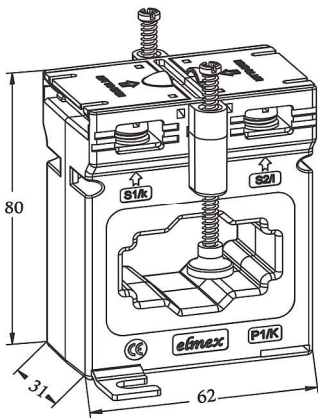
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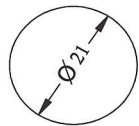
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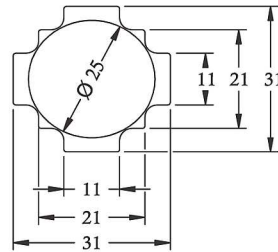
TYPE	ELPG		
CAT. NO.	ELPG1 (EG 15.4)	ELPG2 (EG 21.4)	ELPG3 (EG 31.4)
RATING	25 - 150 A	25 - 600 A	50 - 600 A
BUS SIZE	15 Ø	21 Ø	30x10 / 25x10



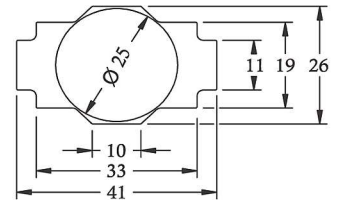
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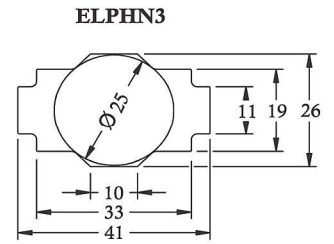
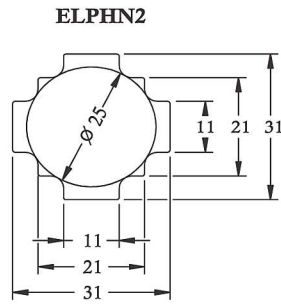
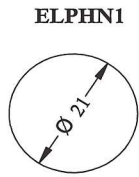
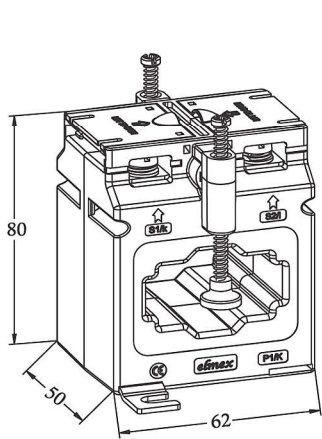
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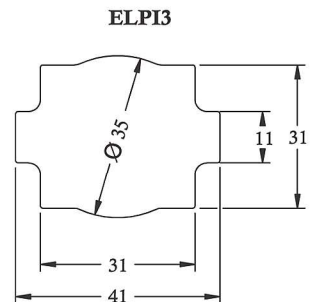
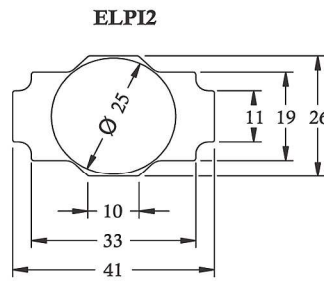
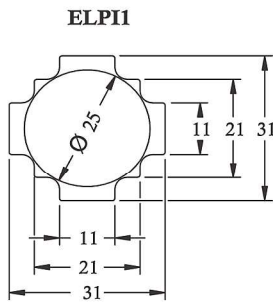
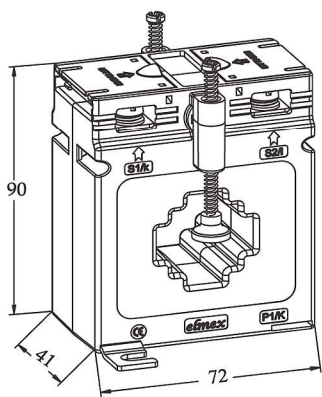
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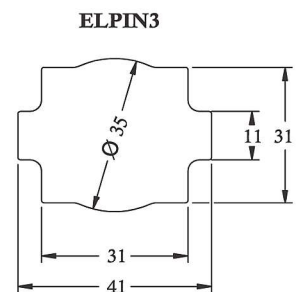
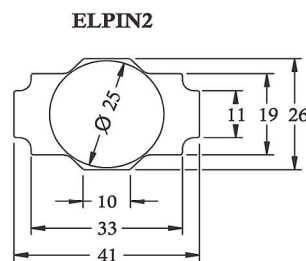
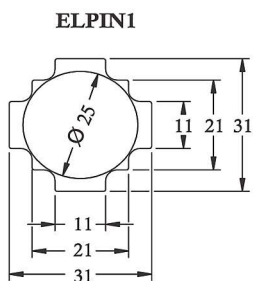
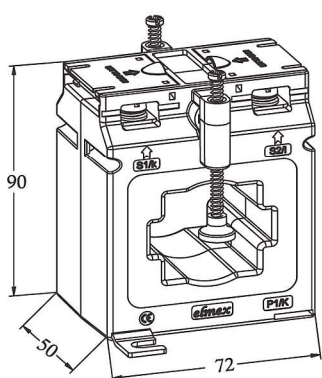
TYPE	ELPH		
CAT. NO.	ELPH1 (EH 21.3)	ELPH2 (EH 31.3)	ELPH3 (EH 41.3)
RATING	30 - 600 A	40 - 600 A	100 - 800 A
BUS SIZE	21 Ø	30x10 / 20x20	40x10 / 30x15



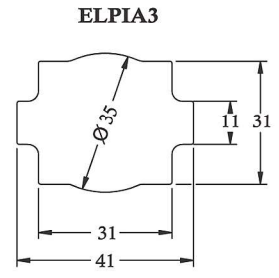
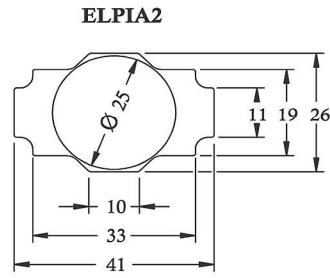
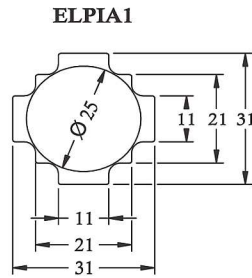
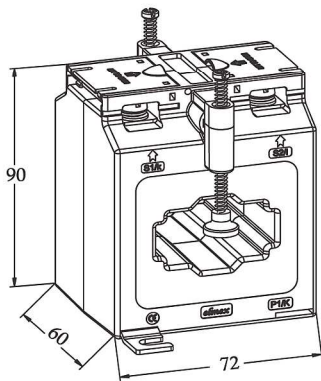
TYPE	ELPHN		
CAT. NO.	ELPHN1 (EHN 21.5)	ELPHN2 (EHN 31.5)	ELPHN3 (EHN 41.5)
RATING	25 - 600 A	30 - 800 A	75 - 800 A
BUS SIZE	21 Ø	30x10 / 20x20	40x10 / 30x15



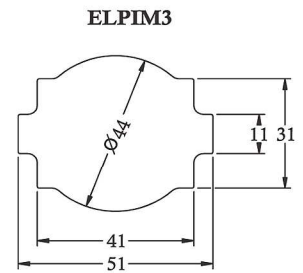
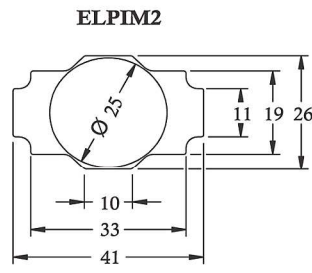
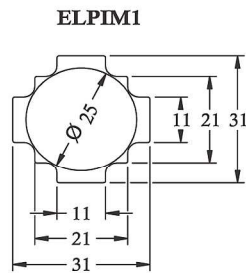
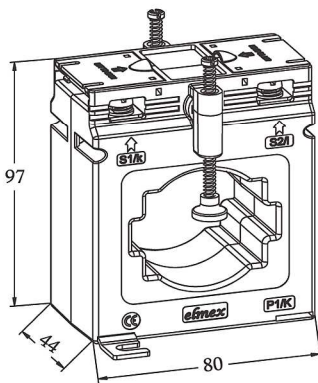
TYPE	ELPI		
CAT. NO.	ELPI1 (EI 31.4)	ELPI2 (EI 41.4)	ELPI3 (EI 41.4N)
RATING	50 - 800 A	50 - 800 A	150 - 500 A
BUS SIZE	30x10 / 20x20	40x10 / 30x15	40x10 / 2(30x10)



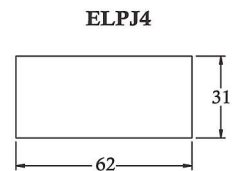
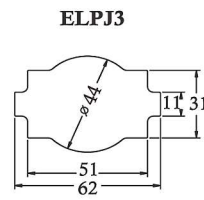
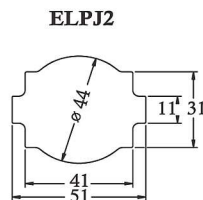
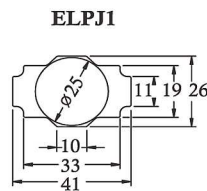
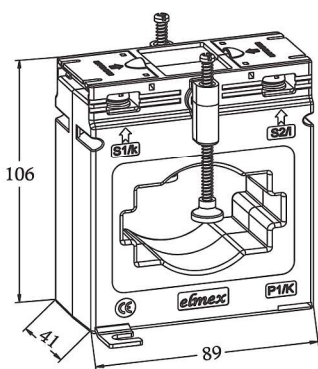
TYPE	ELPIN		
CAT. NO.	ELPIN1 (EIN 31.5)	ELPIN2 (EIN 41.5)	ELPIN3 (EIN 41.5N)
RATING	30 - 800 A	50 - 1000 A	125 - 500 A
BUS SIZE	30x10 / 20x20	40x10 / 30x15	40x10 / 2(30x10)



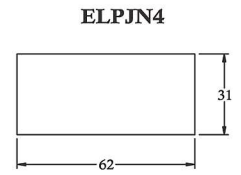
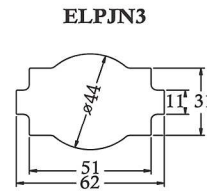
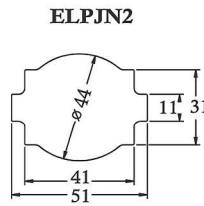
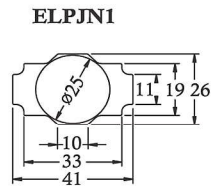
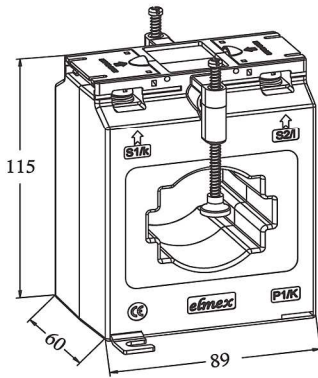
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CAT. NO.	ELPIA1 (EIA 31.6)	ELPIA2 (EIA 41.6)	ELPIA3 (EIA 41.6N)
RATING	50 - 800 A	50 - 800 A	125 - 500 A
BUS SIZE	30x10 / 20x20	40x10 / 30x15	40x10 / 2(30x10)



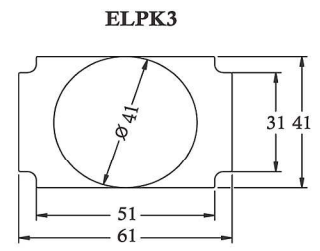
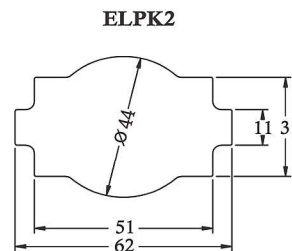
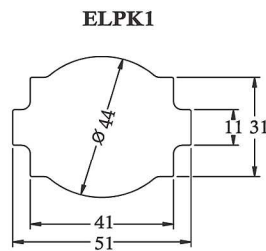
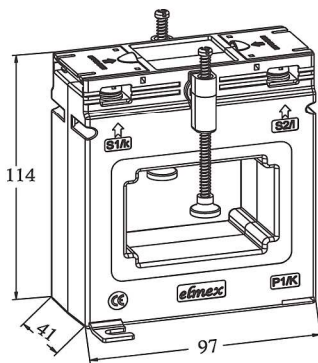
TYPE	ELPIM		
CAT. NO.	ELPIM1 (EIM 31.4)	ELPIM2 (EIM 41.4)	ELPIM3 (EIM 51.4)
RATING	50 - 600 A	75 - 1000 A	100 - 1000 A
BUS SIZE	30x10 / 20x20	40x10 / 30x15	50x10 / 2(40x10)



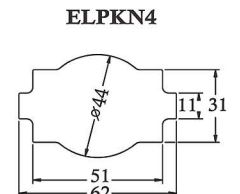
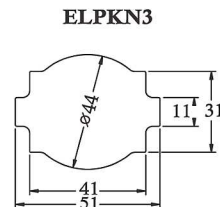
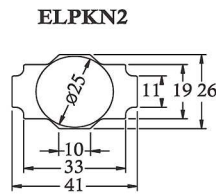
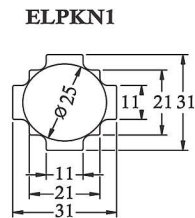
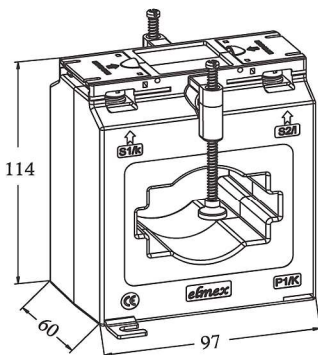
TYPE	ELPJ			
CAT. NO.	ELPJ1 (EJ 41.4)	ELPJ2 (EJ 51.4)	ELPJ3 (EJ 62.4)	ELPJ4 (EJ 62*2.4)
RATING	50 - 1000 A	100 - 1250 A	200 - 1250 A	200 - 2000 A
BUS SIZE	40x10 / 30x15	50x10 / 2(40x10)	60x10 / 2(50x10)	2(60x10)



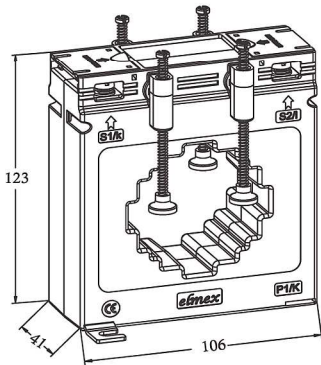
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CAT. NO.	ELPJN1 (EJN 41.6)	ELPJN2 (EJN 51.6)	ELPJN3 (EJN 62.6)	ELPJN4 (EJN 62*2.6)
RATING	100 - 1000 A	100 - 1250 A	200 - 1500 A	200 - 2000 A
BUS SIZE	40x10 / 30x15	50x10 / 2(40x10)	60x10 / 2(50x10)	2(60x10)



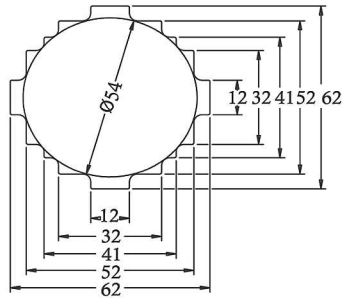
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RATING	100 - 1250 A	100 - 1600 A	150 - 1600 A
BUS SIZE	50x10 / 2(40x10)	60x10 / 2(50x10)	2(60x10) / 2(50x15)



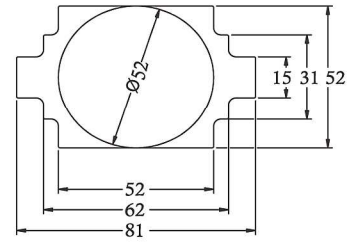
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CAT. NO.	ELPKN1 (EKN 31.6)	ELPKN2 (EKN 41.6)	ELPKN3 (EKN 51.6)	ELPKN4 (EKN 62.6)
RATING	50 - 600 A	50 - 1000 A	100 - 1250 A	100 - 1600 A
BUS SIZE	30x10 / 20x20	40x10 / 30x15	50x10 / 2(40x10)	60x10 / 2(50x10)



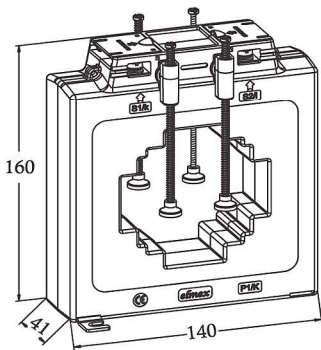
ELPL1



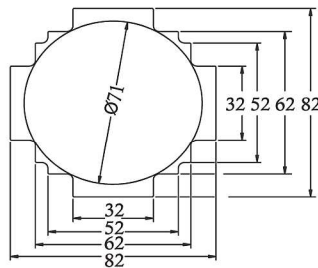
ELPL2



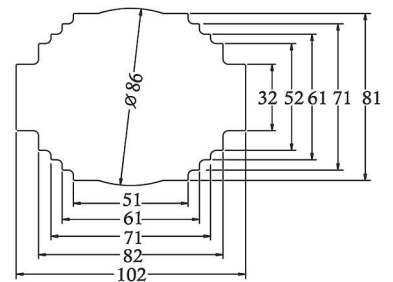
TYPE	ELPL	
CAT. NO.	ELPL1 (EL 62.4)	ELPL2 (EL 80.4)
RATING	200 - 2000 A	200 - 2000 A
BUS SIZE	60x10 / 2(50x10) / 2(40x15)	80x12 / 2(60x10) / 3(50x10)



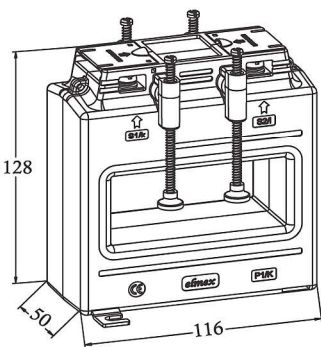
ELPM1



ELPM2



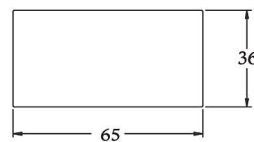
TYPE	ELPM	
CAT. NO.	ELPM1 (EM 82*2.4)	ELPM2 (EM 102*2.4)
RATING	200 - 2500 A	300 - 3200 A
BUS SIZE	2(80x10) / 3(60x12) / 3(50x10)	2(100x10) / 3(80x10) / 3(70x12) / 4(60x10)



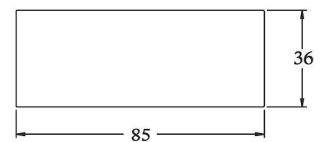
ELPN1



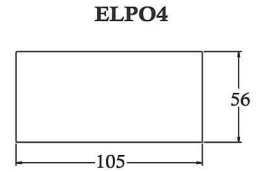
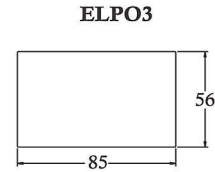
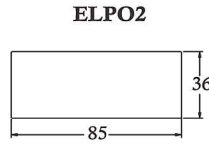
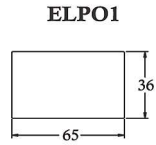
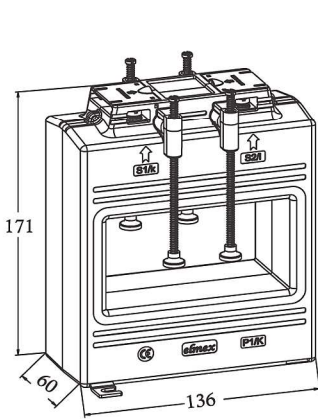
ELPN2



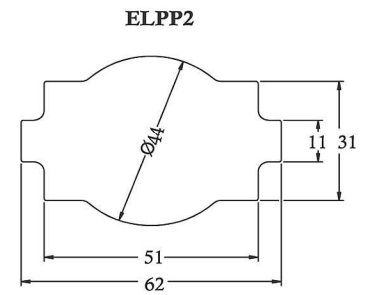
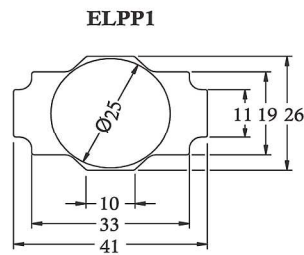
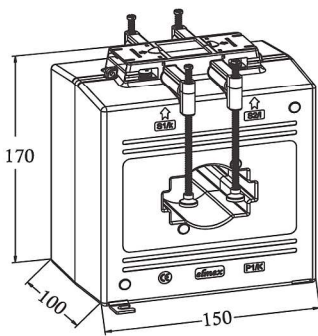
ELPN3



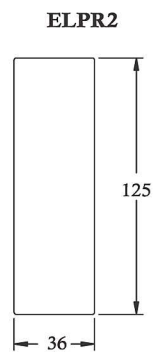
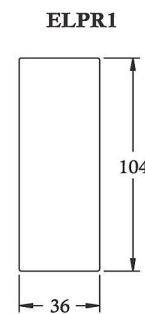
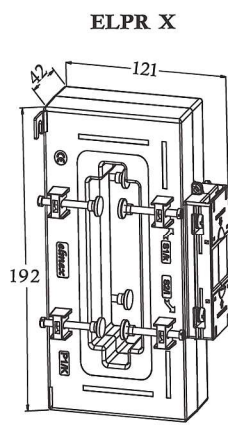
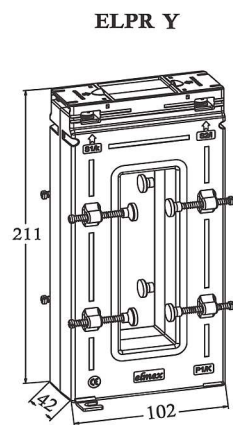
TYPE	ELPN		
CAT. NO.	ELPN1 (EN 55*2.5)	ELPN2 (EN 65*2.5)	ELPN3 (EN 85*2.5)
RATING	300 - 1500 A	300 - 2000 A	300 - 2500 A
BUS SIZE	2(50x10)	2(60x10)	2(80x10)



TYPE	ELPO			
CAT. NO.	ELPO1 (EO 65*2.6)	ELPO2 (EO 85*2.6)	ELPO3 (EO 85*3.6)	ELPO4 (EO 105*3.6)
RATING	250 - 1500 A	300 - 3000 A	300 - 3200 A	400 - 5000 A
BUS SIZE	2(60x10)	2(80x10)	3(80x10)	3(100x10)

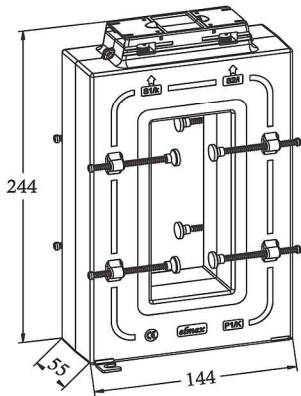


TYPE	ELPP	
CAT. NO.	ELPP1 (EP 41.10)	ELPP2 (EP 62.10)
RATING	60 - 800 A	100 - 2000 A
BUS SIZE	40x10 / 30x15	60x10 / 2(50x10)

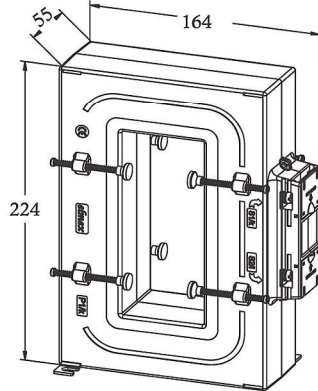


TYPE	ELPR	
CAT. NO.	ELPR1 (ER 105*2.4)	ELPR2 (ER 125*2.4)
RATING	300 - 2500 A	300 - 4000 A
BUS SIZE	2(100x10)	2(120x10)

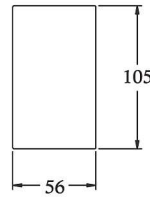
ELPS Y



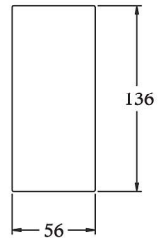
ELPS X



ELPS1

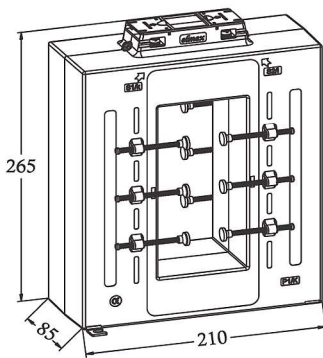


ELPS2

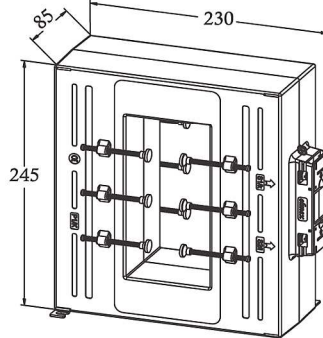


TYPE	ELPS	
CAT. NO.	ELPS1 X/Y (ES 105*3.5)	ELPS2 X/Y (ES 136*2.5)
RATING	250 - 5000 A	250 - 5000 A
BUS SIZE	3(100x10)	3(130x10)

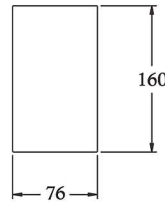
ELPT Y



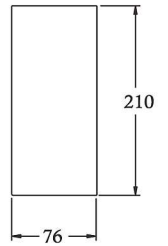
ELPT X



ELPT1

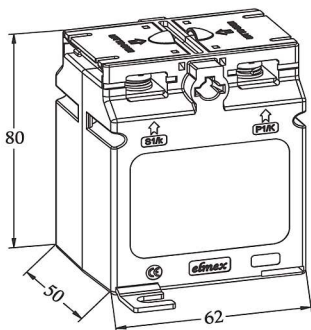


ELPT2

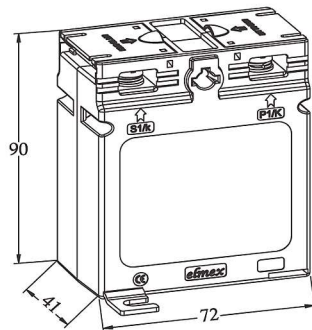


TYPE	ELPT	
CAT. NO.	ELPT1 X/Y (ET 160*4.8)	ELPT2 X/Y (ET 210*4.8)
RATING	600 - 7500 A	600 - 7500 A
BUS SIZE	4(150x10)	4(200x10)

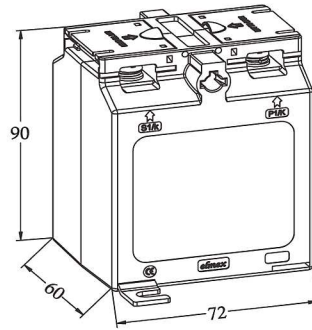
EWPHN



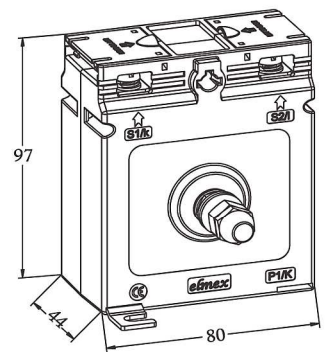
EWPA



EWPIA



EWPB



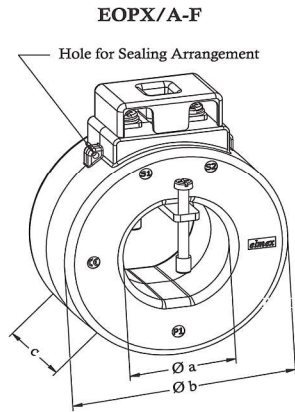
TYPE	EWPHN
CAT. NO.	EWPHN (EAW 62/5)
RATING	1 - 30 A

TYPE	EWPA
CAT. NO.	EWPA (EAW 72/4)
RATING	1 - 30 A

TYPE	EWPIA
CAT. NO.	EWPIA (EAW 72/6)
RATING	1 - 30 A

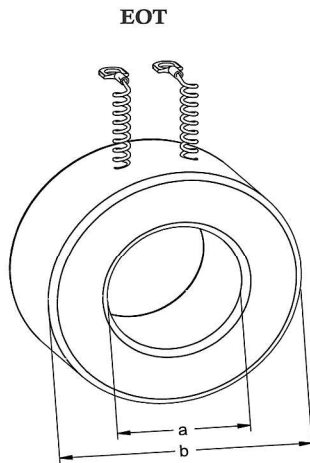
TYPE	EWPB
CAT. NO.	EWPB (EBW 80/44)
RATING	40 - 150 A

POLYCARBONATE ENCAPSULATED CURRENT TRANSFORMERS



TYPE	EOP			
CAT. NO.	Rating	a	b	c
EOPX	30 TO 150 A	25	75	42
EOPA	50 TO 200 A	30	80	42
EOPB	150 TO 400 A	40	90	45
EOPC	300 TO 600 A	55	105	45
EOPD	600 TO 1000 A	70	110	40
EOPE	800 TO 2000 A	90	142	42
EOPF	800 TO 3200 A	110	160	42

TAPE INSULATED RING TYPE CURRENT TRANSFORMERS

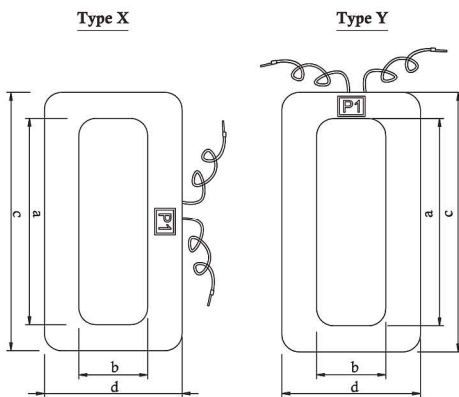


TYPE	EOT		
CAT. NO.	Rating	a	b
EOT30	25 TO 200 A	30	70
EOT40	100 TO 400 A	40	80
EOT55	300 TO 800 A	55	90
EOT70	600 TO 800 A	70	100
EOT90	800 TO 1250A	90	120
EOT110	1000 TO 2000 A	110	150
EOT130	1000 TO 3500A	130	170

TOLERANCE ± 3.00 mm

- Note:
1. Actual dimensions shall be as per relevant offer.
 2. Standard Lead length shall be 100 mm with 2.5 sq.mm. Ring type lug.
 3. Mounting clamp can be provided on request.

TAPE INSULATED RECTANGULAR TYPE CURRENT TRANSFORMERS



TYPE	ELT				
CAT. NO.	RATIO RECOMMENDED	a	b	c	d
ELTG	600A	85	60	115	115
ELTG	800A	85	60	115	115
ELTA		105	60	140	105
ELTA	1000A	105	60	140	105
ELTI	1250A	105	60	150	110
ELTP	1500A	85	60	125	105
ELTI		105	60	150	110
ELTP	1600A	85	60	125	105
ELTI		105	60	150	110
ELTI	2000 A	105	60	150	110
ELTB		130	60	170	110
ELTB	2500A	130	60	170	110
ELTM		160	60	200	110
ELTJ	3000A	130	60	180	120
ELTK		130	85	180	140
ELTJ	3200A	130	60	180	120
ELTQ		130	85	200	145
ELTQ	4000A	130	85	200	145
ELTN		170	85	245	145
ELTQ	5000A	130	85	200	145
ELTN		170	85	245	145

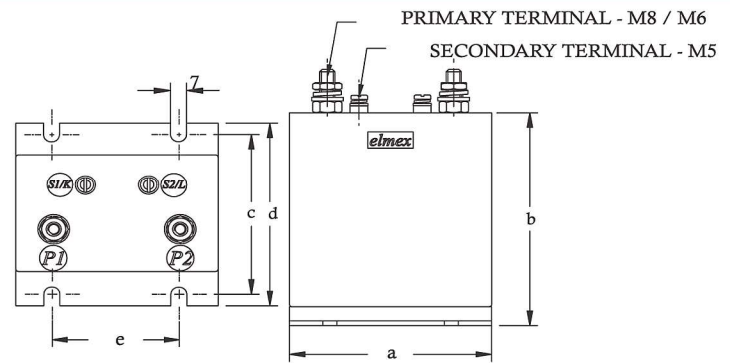
TOLERANCE ± 3.00 mm

- Note:
1. Terminal arrangement shall be "Y" type if not mentioned in the order.
 2. Axial depth will be as per relevant offer.
 3. Standard Lead length shall be 100 mm with 2.5 sq.mm. Ring type lug.

RESIN CAST CURRENT TRANSFORMERS

TYPE	EWR						
CAT. NO.	RATIO	VA/CLASS	a	b	c	d	e
EWRA	5/5 TO 125/5	5/0.5 OR 5/1.0	80	100	80	90	60
EWRB		7.5/0.5 OR 10/1.0	100	120	80	90	60
EWRC		10/0.5 OR 15/1.0	120	140	80	90	80
EWRD	5/5 TO 150/5	10/5P10	120	140	110	120	80
EWRE		15/5P10	120	140	110	140	80

TOLERANCE ± 3.00 mm

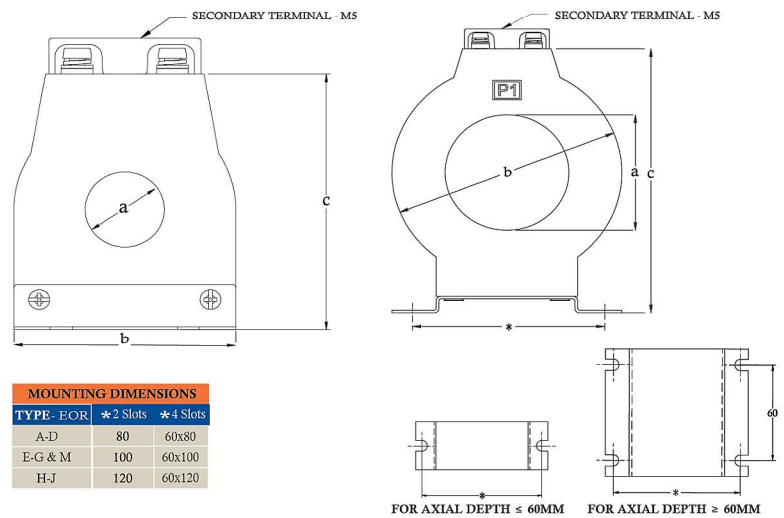


RESIN CAST RING TYPE CURRENT TRANSFORMERS

TYPE	EOR			
CAT. NO.	RATIO RECOMMENDED	a	b	c
EORN	100 TO 300 A	25/30	70	85
EOR	100 TO 400 A	30/40	80	92
EORA	100 TO 400 A	30/40	80	110
EORB	150 TO 500 A	30/40	100	130
EORC	200 TO 600 A	40/50	110	140
EORD	200 TO 600 A	50/55	120	150
EORE	300 TO 800 A	70/75	130	160
EORM	300 TO 800 A	80/85	140	170
EORF	400 TO 1000 A	85/90	150	180
EORG	400 TO 1250 A	100	160	190
EORH	500 TO 1600 A	115	180	210
EORI	600 TO 2000 A	140	210	240
EORJ	800 TO 3200 A	200	270	300

Axial depth will be as per relevant offer.

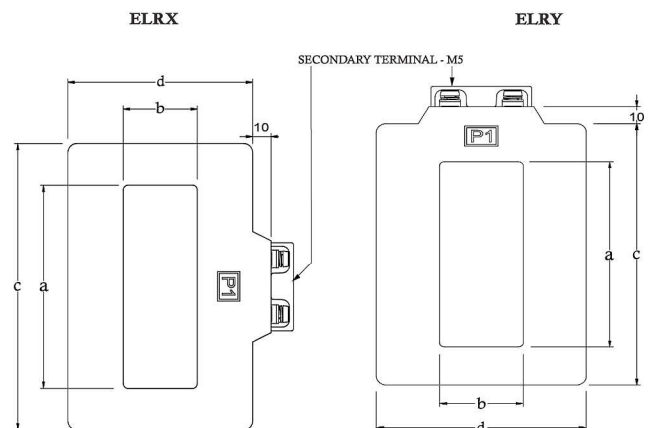
TOLERANCE ± 3.00 mm



RESIN CAST RECTANGULAR TYPE CURRENT TRANSFORMERS

TYPE	ELR				
CAT. NO.	RATIO RECOMMENDED	a	b	c	d
ELRV3	150 TO 250 A	25	20	55	55
ELRV2	200 TO 300 A	35	20	65	65
ELRV	300 TO 600 A	65	30	90	90
ELRO	400 TO 800 A	85	45	125	85
ELRP	500 TO 1000 A	85	60	125	105
ELRH	600 TO 1000 A	55	45	125	115
ELRA	800 TO 1600 A	80	45	140	105
ELRI	800 TO 1600 A	85	45	150	110
ELRB	1000 TO 2000 A	130	60	170	110
ELRC	1000 TO 3200 A	130	85	170	130
ELRJ	1000 TO 3200 A	130	60	180	120
ELRK	1000 TO 3200 A	130	85	180	140
ELRD	1200 TO 4000 A	130	85	195	150
ELRQ	1200 TO 4000 A	130	85	200	145
ELRM	1600 TO 4000 A	160	60	210	115
ELRL	2000 TO 5000 A	130	85	210	145
ELRN	2000 TO 5500 A	170	85	245	145
ELRE	2000 TO 5500 A	170	85	245	160
ELRF	2000 TO 6300 A	210	85	285	160

TOLERANCE ± 3.00 mm



- Note: 1. Terminal arrangement shall be "Y" type if not mentioned in the order.
2. Axial depth will be as per relevant offer.

'elmex' RANGE OF CURRENT TRANSFORMERS

Window / Plug In Type Polycarbonate Encapsulated: (Bar/Cable through) - (BPL)

Application	RING TYPE		RECTANGULAR TYPE	
	CT Ratio	Type	CT Ratio	Type
Metering	100/5 TO 3200/5	EOPX/A - F	25/5 TO 7500/5	ELP - ELPT
Protection				

Wound Primary Type: (WPL)

POLYCARBONATE ENCAPSULATED (Metering)			RESIN CAST (Metering & Protection)		
CT Ratio	VA/Class	CAT. No.	CT Ratio	VA/Class	CAT. No.
5/5 TO 30/5	5 / 0.5 OR 10 / 1.0	EWPHN	5/5 TO 125/5	5 / 0.5 OR 5 / 1.0	EWRA
	7.5 / 0.5 OR 15 / 1.0	EWPA		7.5 / 0.5 OR 10 / 1.0	EWRB
	10 / 0.5 OR 20 / 1.0	EWPIA		10 / 0.5 OR 15 / 1.0	EWRC
40/5 TO 150/5	7.5 / 0.5 OR 15 / 1.0	EWPB	5/5 TO 150/5	10 / 5P10	EWRD
				15 / 5P10	EWRE

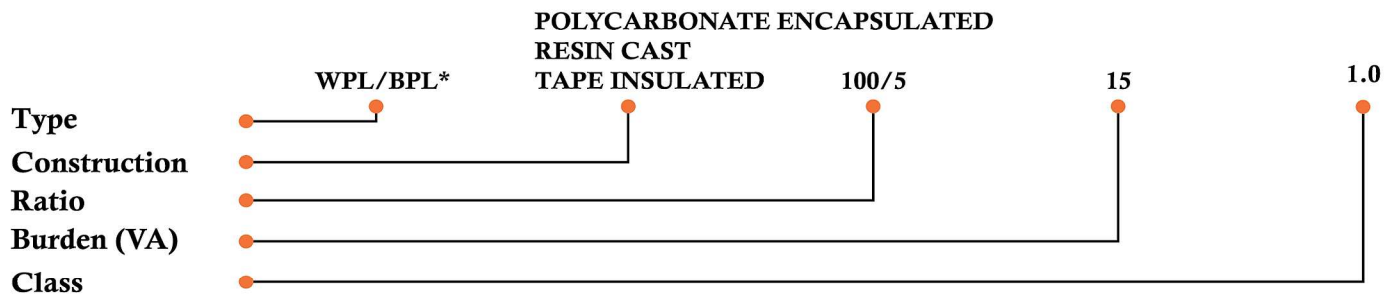
Window / Plug In Type Tape Insulated / Resin Cast: (Bar/Cable through) - (BPL)

Application	RING TYPE			RECTANGULAR TYPE		
	CT Ratio	Tape	Resin	CT Ratio	Tape	Resin
Metering	100/5 TO 3200/5	EOT 30 - 130	EORA - J	600/5 TO 5000/5	ELTA - N	ELRA - N
Protection	150/5 TO 6000/5	EOT 30 - 130	EORD - J			

Salient Features



HOW TO ORDER:



* In case of BPL inner dimensions are essential for correct offer.

For Differential Protection CT (Class-PS), please specify Minimum Knee Point Voltage (Vk), Maximum Winding Resistance corrected at 75 °C (RCT) and Permissible Exciting Current (Iex) at Vk or part thereof. Alternatively formula for Vk may be given.

- Mounting clamp and Terminal block for Tape Insulated CT can be offered on request.
- Third party Type Test Reports can be furnished on request.
- Terminal sealing arrangement for Resin CT can be offered on request



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