

cross currents

FOR PRIVATE CIRCULATION ONLY

'elmex' Adds Instrument Transformers To Its Range Of Products

elmex has been serving electrical industry and providing termination solutions for the last five decades and now to serve larger segment of this industry, we are adding instrument transformers, both Current Transformers (CT) and Voltage /Potential Transformers (VT or PT) to our range of products.

In this issue, we are presenting details of *elmex* range of Current Transformers (CT) designed and constructed in compliance with requirements of the following standards

- IS 2705 (Part 1): 1992-Current Transformers- Specification Part 1 General Requirements
- IS 2705 (Part 2): 1992-Current Transformers- Specification Part 2 Measuring Current Transformers
- IS 2705 (Part 3): 1992-Current Transformers- Specification Part 3 Protective Current Transformers
- IS 2705 (Part 4): 1992-Current Transformers- Specification Part 3 Protective Current Transformers for Special Purpose Applications
- IEC 61869-2 Edition 1.0 2012-09 Instrument Transformers - Part 2 Additional Requirement for Current Transformers.

It may be noted that the first edition of IEC 61869-2 cancels and replaces the first edition of IEC 60044-1 published in 1996, and its Amendment 1 (2000) and Amendment 2 (2002), and the first edition of IEC 60044-6 published in 1992. Additionally it introduces technical innovations in the standardization and adaption of the requirements for current transformers for transient performance.

elmex Low Voltage Current Transformers are intended for supply to measuring instruments and protection devices of electrical switchgears and control gears installations. They are suitable for system voltage 415V/660V and frequency 50/60Hz. These Current Transformers are designed for Secondary currents of 1A or 5A and the Primary currents ranging from 5A to 6000A depending on the application of the System Load Current.

The current transformers are designed and available in different types of configurations, i.e. "Wound primary type", "Window /cable through type" and "Bar primary type" for meeting various applications.

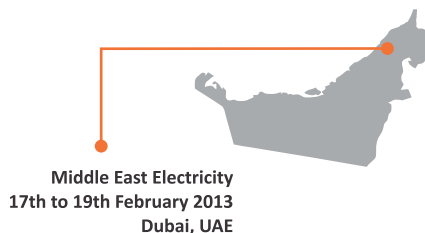
The manufacturing processes and practices adopted ensure inbuilt quality and compliance with design criteria.

elmex has set up all the test facilities in-house to conduct all routine tests as well as certain type test. Test facility includes microprocessor based comparator for measurement of ratio error, phase angle error and polarity check, standard CT, range of standard burdens ,power frequency dielectric test set up, inter turn overvoltage test, open circuit test, etc.

We are happy to state that *elmex* Instruments Transformers have been successfully tested at Test Laboratory ERDA, Vadodara for Type Tests as per Standard IEC: 61869-2.



Participation in International Exhibitions



DESIGN

“elmex” Low Voltage Current Transformers are designed for supplying to Measuring Instruments and Protective Devices. These are suitable for system Voltage 415V/660V and frequency 50/60 HZ. Basic construction is in three different Groups, meeting various application requirements as mentioned below.

- PVC TAPE INSULATED
- RESIN ENCAPSULATED
- COVERED IN PLASTIC CASING

Wound Primary Type (WPL)

(CT having Two or more number of Primary turns)

- ✓ Suitable for Rated Primary current below 100A.
- ✓ Generally used for higher Accuracy with lower Burdens (viz. 5VA/Class-1.0 or 2.5VA/Class-0.5 for metering).
- ✓ Available in Resin cast and Plastic casing.



Window/Opening Type (OPL)

Also known as Bar/Cable-through CT (CT having an opening of suitable size is provided in the centre for Primary conductor)

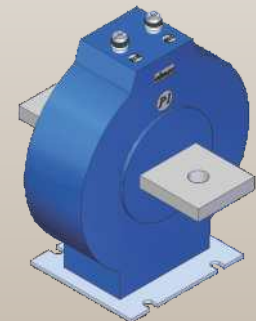
- ✓ Suitable for Rated Primary current above 100A.
- ✓ Economic design
- ✓ Round core CT is preferred over Rectangular core CT for better performance.
- ✓ Available in Resin cast and Plastic casing.



Bar Primary Type (BPL)

(CT having Single Primary turn with the Primary Conductor embedded)

- ✓ Suitable for Rated Primary current above 100A.
- ✓ Compact in size compared to OPL type.
- ✓ Used in case of space limitations.
- ✓ Available in Resin cast only.



APPLICATIONS

“elmex” Low Voltage Current Transformers are available for various Accuracy Class and Burden applications. The Insulating materials comply with requirements of IEC: 60085 for Insulation Class-E (or better on demand).

Metering	Protection	Revenue	Core Balance
Indication	Summation	Auxiliary	Interposing
Neutral Displacement	Differential Protection	Meters & UPS manufacturers	Motor/Power Control Center

“elmex” RANGE OF CURRENT TRANSFORMERS

Wound Primary Type: (WPL)					
RESIN ENCAPSULATED (Metering & Protection)			COVERED IN PLASTIC CASING (Metering)		
CT Ratio	VA/Class	Type	CT Ratio	VA/Class	Type
5/5 TO 150/5	2.5 / 0.5 OR 5 / 1.0	EWRA	5/5 TO 25/5	2.5 / 0.5 OR 5 / 1.0	EWPA
	5 / 0.5 OR 10 / 1.0	EWRB			
	7.5 / 0.5 OR 15 / 1.0	EWRC			
5/5 TO 150/5	10 / 5P10	EWRD	30/5 TO 150/5		EWPB
	15 / 5P10	EWRE			

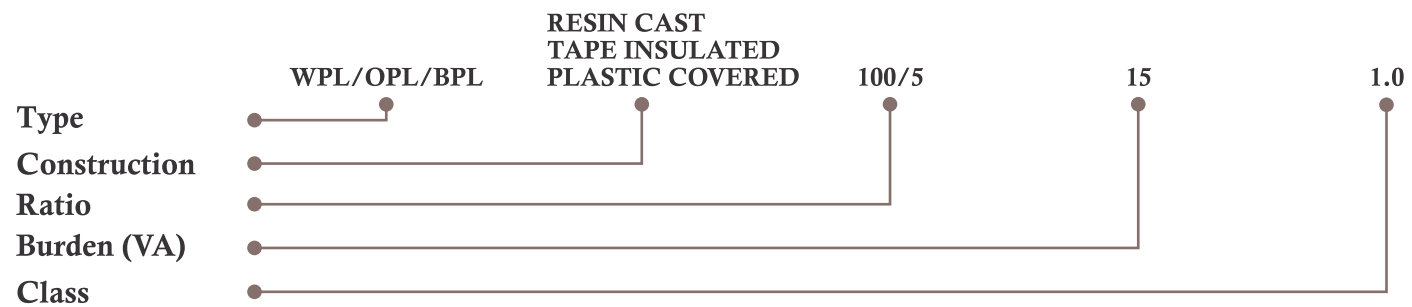
Window Opening Type: (Bar/Cable through) - (OPL)					
RING			RECTANGULAR		
CT Ratio	Type (Tape)	Type (Resin)	CT Ratio	Type (Tape)	Type (Resin)
75/5 TO 5000/5 (Metering)	EOTA - J	EORA - J	600/5 TO 6000/5 (Metering)	ELTA - L	ELRA - L
150/5 TO 5000/5 (Protection)	EOTD - J	EORD - J	600/5 TO 6000/5 (Protection)	ELTA - L	ELRA - L

Window Type Covered in Plastic Casing: (Bar/Cable through) - (OPL)						
Application	SQUARE (WITH ROUND CORE)		RECTANGULAR (FOR ALUMINUM BUSBAR)		RECTANGULAR (FOR COPPER BUSBAR)	
	CT Ratio	Type	CT Ratio	Type	CT Ratio	Type
Metering	100/5 TO 2000/5	EOPA - D	1200/5 TO 6000/5	ELPG - K	1200/5 TO 6000/5	ELPM - Q
Protection			1200/5 TO 6000/5	ELPG - K	1200/5 TO 6000/5	ELPM - Q

Salient Features	Electrical Parameters:
High Dielectric strength & Tracking index	Insulation Level – 0.72/4kV
Can withstand mechanical stresses in normal service condition	Rated Ratio, Burden & Class of Accuracy (As per customer specifications)
Non hygroscopic & Fire retardant	Primary Currents – 5A to 6000A
Maintenance Free except periodic cleaning	Secondary Currents – 5A, 1A (or 0.577A)
Can be mounted in any position	Lowest Instrument Security Factor For Metering
Suitable mounting arrangement is provided	Class of Insulation – E (or better on request)
Compact design	Thermal Current – 120% continuous

Product conforms to IS: 2705 & IEC: 60044-1

How to order:



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.

- 1A Secondary current is also available for all the types mentioned above.
- Resin cast Bar Primary CT (BPL) can be offered in case of space limitations.
- Third party Type Test Reports are available on request.
- Special Requirements other than above can also be offered on request.

Participation in National and International Exhibitions

In order to reach out to customers on a larger scale and with an objective of getting market feedback to serve the customer, we regularly participate in exhibitions held in India and abroad.

We participated in various national and international exhibitions from November, 2012 to March, 2013. In these exhibitions many new products were displayed in addition to existing range of **elmex** products and the response was overwhelming.

VIBRANT VCCI 2013 EXHIBITION - VADODARA, 14th to 18th February 2013.



- **Electrical & Electronic Trade Fair**
20th December to 22nd December, 2012
Kolkata

- **Engineering Expo**
22nd to 25th February, 2013
Aurangabad

- **Electric World 2013**
28th February to 3rd March, 2013
Kochi

Visit us at

INTEC 2013, to be held at Coimbatore from 6th to 10th June, 2013
Hall C, Stall No. 122, Codissia,
Codissia G.D.Naidu Tower, Hozur Road, Coimbatore - 641018.

For regular updates on technical advances on termination technology and activities at **elmex**, please follow us at



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