EGCT

Encapsulated Bushing-Type Generator Current Transformer

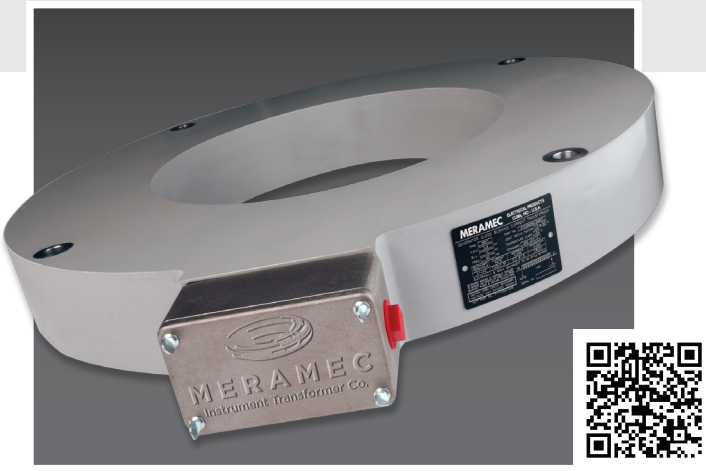
MERAMEC
Instrument Transformer Co.

Offerings:

- **Insulation Class:** 0.6kV / 10kV BIL / 130°C
- **Inner diameter:** 6" [152mm] to 36" [915mm]
- **Outer diameter:** 10" [254mm] to 48" [1220mm]
- **Primary currents:** up to 50,000 Amps
- **Secondary current:** 1 & 5 Amps typ, others avail.
- **Frequency:** 50 and 60 Hz
- **Rating Factors:** Up to 1.0 @ 55°C Ambient.
- **Temperature Rise:** 75°C max. for 130°C total temperature
- **Relaying class:** Up to C800 (IEEE) / 5P20-200VA (IEC) standard. Higher ratings available, also transient classes TPS, TPX & TPY
- **Metering class:** 0.15S thru 0.6 (IEEE) / 0.2S thru 0.5 (IEC)
- **Burdens:** B0.1 thru B1.8 / 2.5 – 45 VA
- **NOTE:** Sizes and accuracy class are dependent on current ratio. Available in Single Ratio (SR) only

Options:

- Other conduit openings are available – threaded up to 1.5" NPT or non-threaded holes up to 52mm.
- Designs can be made to match existing CT characteristics.
- Gapped cores for remanence control and transient response.
- Windings may be provided with special test taps.



Application: The Encapsulated Bushing-type Generator CT is designed to be mounted over the high voltage terminal bushing of power generators. When properly installed, the EGCT can be used in Isolated Phase Bus (IPB) enclosures on higher system voltage levels while maintaining its own mere 600 Volt class rating. Its simple construction provides a low leakage product with extremely high short circuit capabilities. Because the coil is totally encapsulated it is ideal for harsh and heavy duty environments.

Construction: The toroidal core is continuously tape wound using cold rolled grain oriented electrical grade silicon steel, which receives a full stress relief anneal after it is wound to its specified dimensions. The insulation used provides a durable 130°C (Class B) system throughout the entire coil assembly. The secondary winding is wound of insulated copper magnet wire over the fully insulated core with the turns equally spaced around the core periphery. Specially engineered shield windings which are strategically integrated into the main secondary winding to minimize the affects of stray magnetic flux from adjacent high current conductors. The outer insulation is a molded resin rated for outdoor use. All mounting hole features are cast-in aluminum hubs which prevents mounting hardware from coming in direct contact with the resin surface. It will endure rigorous vibration and is impervious to moisture.

Connections: The primary polarity H1/P1 is an embossed dot into the resin surface. The secondary terminals are ¼-20 silicone bronze studs provided with hex nuts and cupped washers for positive compression to assure long lasting connections. Terminal identification is permanently engraved with dual designations "X" and "S" for compatibility in the global market. The X1/S1 terminal represents the instantaneous polarity reference with respect to H1/P1 and will be identified by a colored dot. A cast aluminum conduit box with (2) 1" NPT hubs and blanking plugs is provided with a removable cover. The size of the box allows for adequate passing of wires from adjacent phases. Other hub openings are available.

Nameplate: Adhered to each unit is a durable aluminum nameplate that has all required information and ratings, along with serial number and connection diagram

Installation: The EGCT is custom designed to fit over any terminal bushing. The mounting holes encased in the resin body are located to specifically align with the all-thread rods suspended from the generator or lead box frame. The EGCT can be installed onto the bushing terminal one at a time, and locked in place with the appropriate hardware.

Size Selection: In addition to the current ratio, accuracy class and power frequency, some information regarding the equipment must be provided. Terminal mounted units are custom designed to fit over the bushing with a specific bolt-hole pattern. That configuration must be presented to Meramec Engineering at time of request. In addition, the stack height and CT configuration must also be provided. Once the design is verified, a formal outline drawing will be prepared for customer approval.

Handling and Storage: For domestic shipments the EGCT is packaged in a crate. When more than one unit is shipped, they are stacked and secured together. Ideally they should be lifted using endless slings in a 2-point or 3-point arrangement, lifting by fork lift or overhead hoist, one unit at a time. Caution should be employed while moving to avoid damaging or chipping the insulation, and any sudden impacts to the unit or the conduit box. The unit is outdoor rated but it is recommended to be left in its original crate until ready for use.

MADE IN U.S.A.

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