

CROMPTON INSTRUMENTS CORE BALANCE CURRENT TRANSFORMER

5 APERTURE SIZES



DESIGNED TO DETECT EARTH LEAKAGE
CURRENT & TRANSMIT PROPORTIONAL SIGNAL
TO AN EARTH LEAKAGE RELAY

APPLICATIONS

- Switchgear
- Distribution systems
- Generator sets
- Control panels
- Motor protection
- Transformer protection
- Overload protection

RELEVANT STANDARDS AND TEST REPORTS

- Conformity to Standard IEC 61869-1

KEY FEATURES

- Compact design, reliable & accurate
- Common wall mounting clamp for all sizes
- Sealable cap for secondary terminal connections
- Protective cap for connectors
- Side & vertical mounting provision
- Cable tie for holding Busbar/ Cables

The XLCBCT series of core balanced current transformers are exclusively for use with our ELR earth leakage protection relay. The extremely sensitive toroidal core and secondary winding are encapsulated by a self extinguishing case providing excellent mechanical strength, protection from damage, and electrical insulation.

Description

Residual current devices are used to detect potentially dangerous earth fault currents before damage is caused. An undetected fault current may lead to cables overheating, which could start a fire. If high fault currents are involved, hazardous voltages may also appear on earthed equipment, putting lives at risk. An earth leakage protection relay is intended to provide a high degree of protection and monitoring for any electrical equipment, specifically motors and their control gear, generator sets and transformers. The leakage current is determined by passing the phase conductors (and neutral if present) through a core balanced current transformer.

Operation

Primary conductors should be grouped together and fed through the current transformer aperture. It is essential that each conductor passes through the device in the same direction. Each phase conductor (and neutral if present) must pass through the current transformer. The current transformers sum the currents flowing into and back from the load. Ideally, the load will have no leakage current, so current flow through the CT will completely cancel out. For example, 100 Amps flowing into load and 97 Amps flowing back provides an output of 3 Amps.

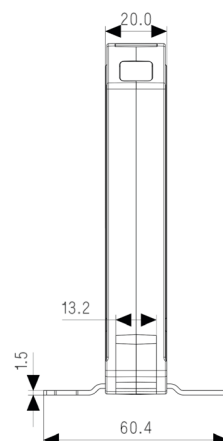
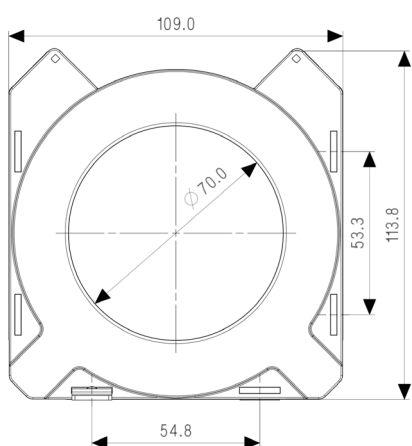
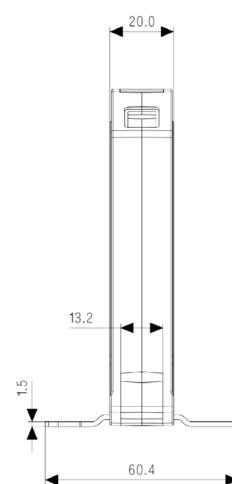
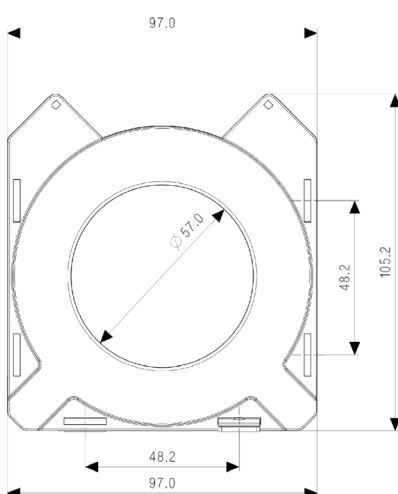
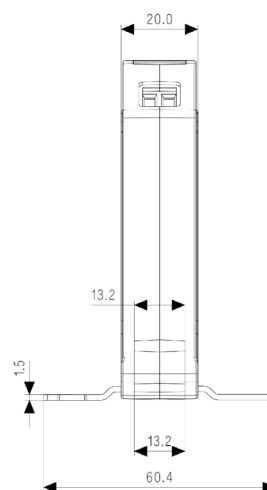
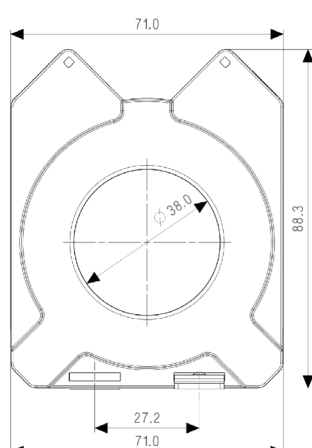
The equipment grounding conductor must always bypass the current transformer.

The connections between the current transformer and protector should be kept as short as possible to minimise signal noise. For best results, use screened cable, with the screen grounded at the protector.

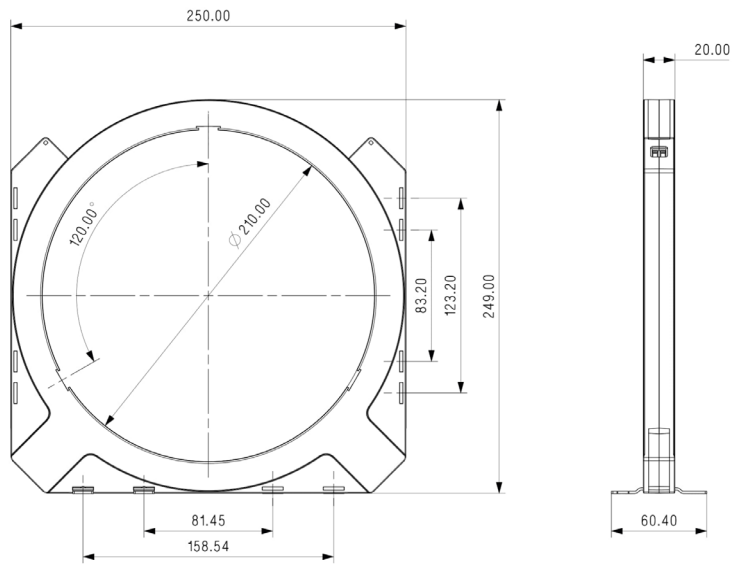
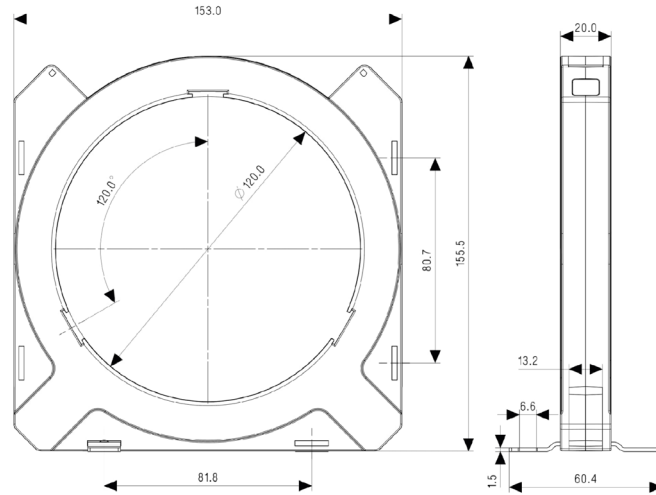
ORDERING INFORMATION

Model	Size	Weight
XLCBCT-038	38-71 (20)	0.12 Kg
XLCBCT-057	57-97 (20)	0.15 Kg
XLCBCT-070	70-109 (20)	0.18 Kg
XLCBCT-120	120-153 (20)	0.29 Kg
XLCBCT-210	210-250 (20)	0.51 Kg

DIMENSIONAL INFORMATION & CONNECTION DIAGRAM



DIMENSIONAL INFORMATION & CONNECTION DIAGRAM



TECHNICAL SPECIFICATIONS

Parameters	
Insulation Coordination	According to IEC 60664 - 1
Case	Nylon 6, 20% GF, FR (30) Black
Connection	Screw type terminal connection
a) Value b) Wire Range	M2.5, 0.4Nm 0.5 ~ 2.5mm ² (suitable for pin type lug)
CT Ratio	500:1
Maximum Operating Voltage (Um)	0.72 kV Maximum
Test Voltage	3kV, 50 Hz for 1 minute
Operating Frequency	50/60 Hz
Rated Primary Current (Ipr)	30 mA - 30 A
Rated Continuous Thermal Current (Icth)	100 A
Thermal Short Circuit Current (Ith)	60 x Ipr
Dynamic Short Circuit Current (Idyn)	2.5 x Ith
Ambient Temperature	-25°C to 55°C
Storage Temperature	-50°C to 80°C
Distance between ELR & CBCT	< 1 meter
Accuracy Class	3
Secondary Terminal	Protected to IP20

Model	MOUNTING CLAMP (VERTICAL MOUNTING)	MOUNTING CLAMP (HORIZONTAL MOUNTING)	CABLE TIE (VERTICAL MOUNTING)	CABLE TIE CLIP (BUSBAR MOUNTING)	TERMINAL CAP
XLCBCT-038	✓	X	✓	X	✓
XLCBCT-057	✓	✓	✓	X	✓
XLCBCT-070	✓	✓	✓	X	✓
XLCBCT-120	✓	✓	✓	✓	✓
XLCBCT-210	✓	✓	✓	✓	✓