

CTB-2

Toroidal current transformers compatible
with Type-B earth leakage relays

WARNING!!!

- Carefully read the manual before the installation or use.
- This device is to be installed by qualified personnel, complying to current standards, to avoid damages.
- Before any maintenance operation on the device, remove supply inputs.
- The manufacturer cannot be held responsible for electrical safety in case of improper use of the equipment.
- Products illustrated herein are subject to alteration and changes without prior notice.

Introduction

The residual current transformers of the **CTB-2** range are especially designed to protect and monitor Type-B loads (**IEC 60755**) and are suitable for measuring AC, DC and pulsating leakage currents.

The range of **CTB-2** differential transformers is designed for use with the **ELR-3BN** electronic relays, which give it the associated trip current (sensitivity).

Note: For the executions with Ø 22 mm section, two toroids are required (CTB-2/22A, CTB-2/22B).

Applications

Residual current protection or monitoring of single-phase or three-phase electric loads in alternating current with direct current components, with frequencies of up to 1kHz, such as:

- Electrical vehicle charging
- Variable speed drives
- UPS
- Photovoltaic plants
- Active filters

CTB-2 transformers range:

Type	Code	Useful section	Weight
CTB-2/22A	3CTB200AME	Ø 22 mm	110 g
CTB-2/22B	3CTB200BME	Ø 22 mm	110 g
CTB-2/35	3CTB201ME	Ø 35 mm	255 g
CTB-2/60	3CTB202ME	Ø 60 mm	360 g
CTB-2/80	3CTB203ME	Ø 80 mm	550 g
CTB-2/110	3CTB204ME	Ø 110 mm	610 g
CTB-2/210	3CTB206ME	Ø 210 mm	950 g

They must be crossed by the cables of the line to be controlled; insert the phases and neutral if present. The earth cable must NOT cross the current transformer.

Note: Twist the connection wires between toroid and the relay, keep away from the power cables and in the presence of strong electromagnetic fields use a shielded lead. Reduce the distance between the toroid and the relay to the minimum.

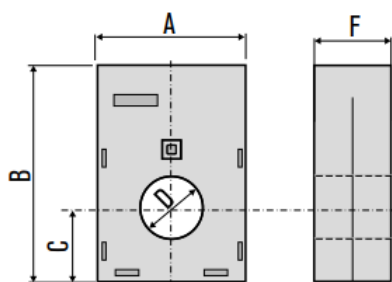
Toroidal current transformer type according to current

Current	Toroidal transformer
30mA	CTB-2/22A, CTB-2/22B, CTB-2/35, CTB-2/60
>= 100mA	CTB-2/80, CTB-2/110
>= 500mA	CTB-2/210

Note: Versions of CTB-2 with special sensitivity level are available.

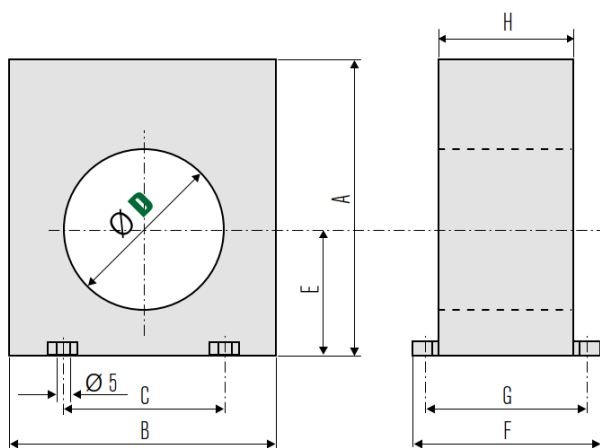
Mechanical dimensions (mm)

CTB-2/22A, CTB-22/B



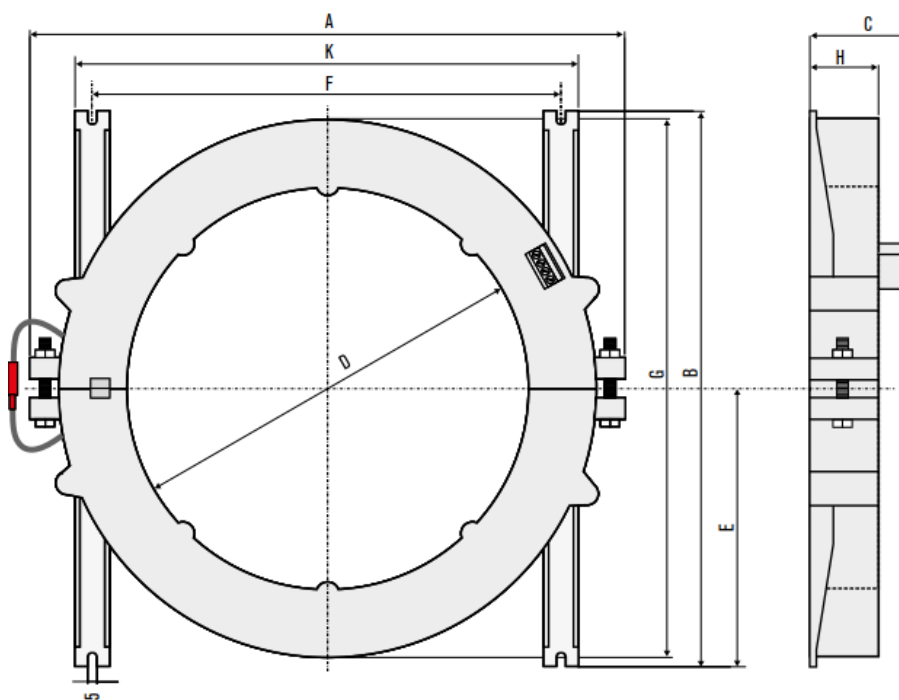
TIPO/TYPE	A	B	C	D	F
CTB-2/22A	52	65	26	22	27
CTB-2/22B	52	65	26	22	27

CTB-2/35, CTB-2/60, CTB-2/80, CTB-2/110



TIPO/TYPE	A	B	C	D	E	F	G	H
CTB-2/35	100	110	50	35	47	60	43	30
CTB-2/60	100	110	50	60	47	60	43	30
CTB-2/80	150	160	50	80	70	110	43	30
CTB-2/110	150	160	50	110	70	110	43	30

CTB-2/210



TIPO/TYPE	A	B	C	D	E	F	G	H	K
CTB-2/210	310	290	54	210	145	240	280	36	258

Technical characteristics

Minimum rated current of the monitored circuit	
CTB-2/22A, CTB-22B	30 mA
CTB-2/35	30 mA
CTB-2/60	30 mA
CTB-2/80	100 mA
CTB-2/110	100 mA
CTB-2/210	500 mA
Measurement accuracy	
Accuracy	10 ... 15 %
Differential protection	
Type	Type B
Insulation	
Pulse test	2.5 kV
Connections	
Type of terminal	Screw (fixed)
N° of terminals	6
Conductor cross section (max)	2.5 mm ²
Housing	
Protection degree	IP20
Ambient conditions	
Operating temperature	-10 ... +60 °C
Storage temperature	-20 ... +80 °C
Relative humidity	10 ... 95%
Compliance	
Reference standards	IEC 62020 IEC 60755, IEC 60947-2-M IEC 61869-2

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