

## Core balance transformer



### Benefits

- High sensitivity.
- Wide range.
- Easy installation.

### Description

CTG is a family of "core balance transformers". These devices detect the difference in the current flow on the lines running through the coil. They work on either single phase or three-phase mains.

When the vectorial sum of the current flowing to the load and the one flowing on the NEUTRAL cable (if present) is different from "0" (zero), a current on the CT secondary circuit is generated.

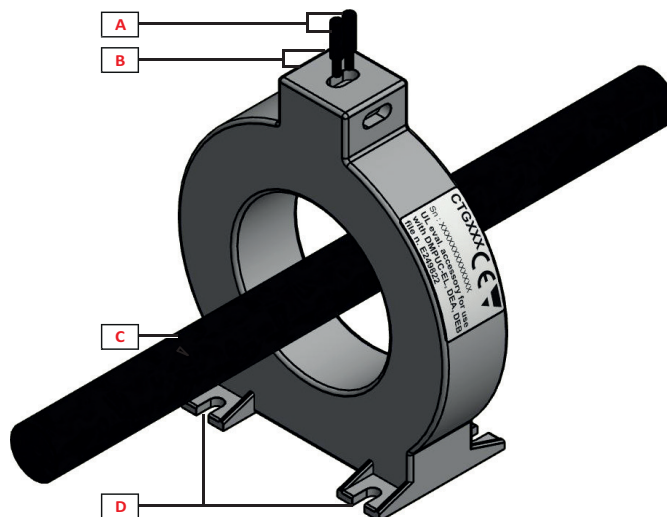
The current difference is usually caused by a leak which may cause an hazard.

The output signal can be used by a residual current monitoring device which will disconnect the monitored load or send an alarm signal.

### Applications

CTGs are used for detecting current leaks, potentially hazardous, on electric loads. Typically on electric motors, pumps or devices installed in metallic structures. They are approved to be used in conjunction with Carlo Gavazzi DEA71 and DEB71 earth leakage monitoring relays.

## Structure

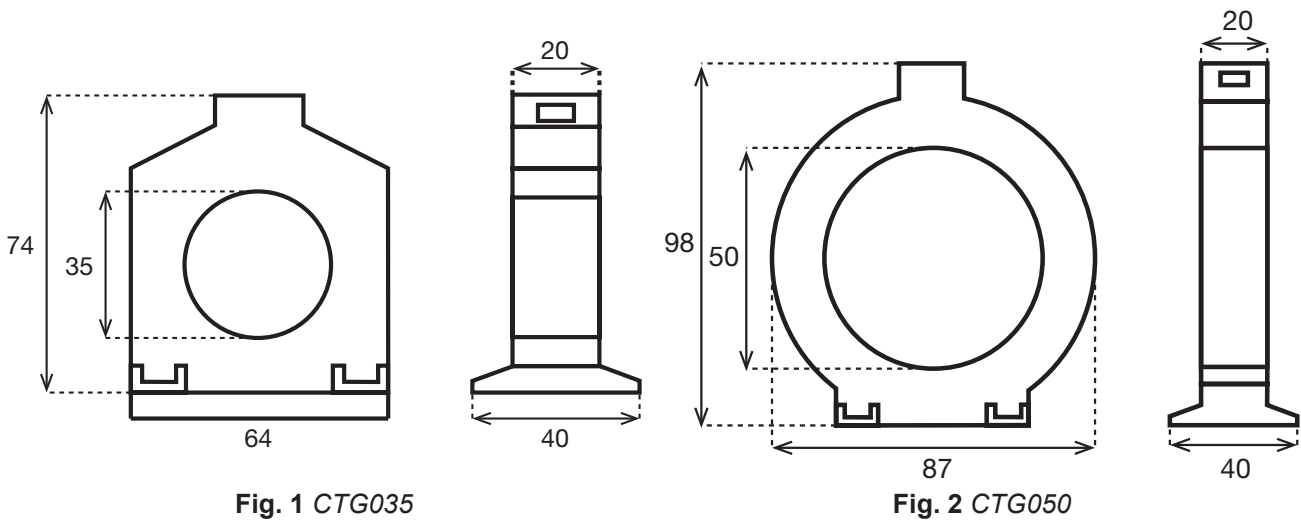


Element	Component	Function
A	Terminals	CT secondary, connection cables
B	Terminals screws	CT secondary, tightening screws
C	Monitored line	Monitored mains line Multi wire cable: - Single phase: Line + Neutral - Three Phase: L1, L2, L3 or L1, L2, L3 +N Important Note: Do not route earth wire through the CTG
D	Fixing flange	Panel mount fixing flange (CTG035 also with DIN rail adapter)

# Features

**General**

<b>Protection degree</b>	IP20
<b>Weight (packaging included)</b>	CTG035: Approx. 80 g CTG050: Approx. 100 g CTG070: Approx. 125 g CTG120: Approx. 235 g CTG160: Approx. 1220 g CTG210: Approx. 1860 g
<b>Dimensions (mm) (WxHxD)</b>	CTG035: 64 x 74 x 20 mm CTG050: 87 x 98 x 20 mm CTG070: 105 x 117 x 20 mm CTG120: 155 x 170 x 20 mm CTG160: 241 x 254 x 33 mm CTG210: 290 x 304 x 33 mm
<b>Internal diameter</b>	CTG035: 35mm CTG050: 50mm CTG070: 70mm CTG120: 120mm CTG160: 161mm CTG210: 210mm



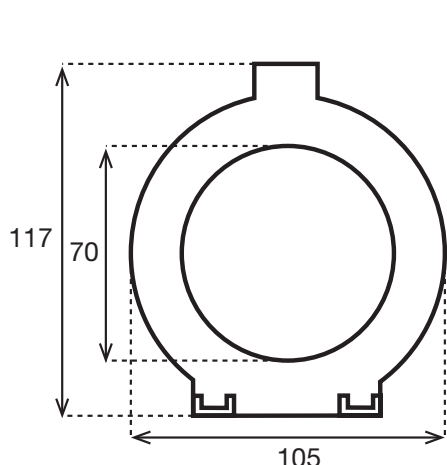


Fig. 3 CTG070

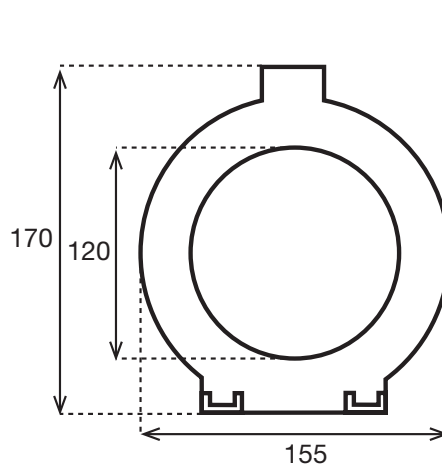


Fig. 4 CTG120

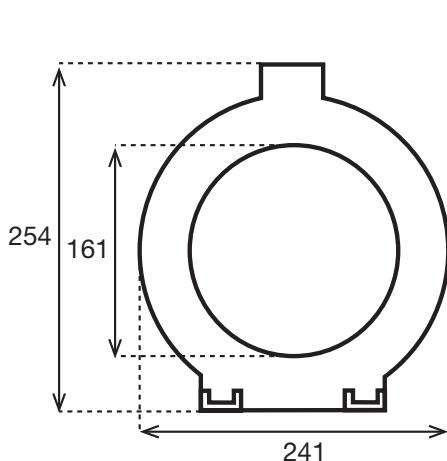


Fig. 5 CTG160

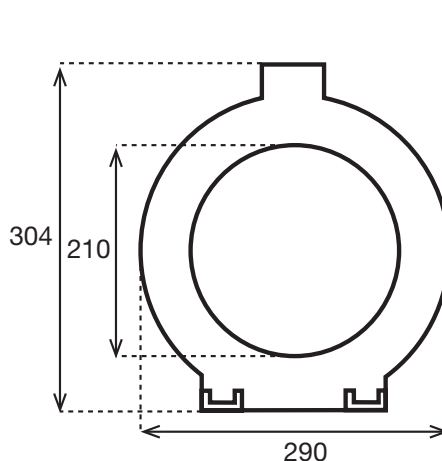


Fig. 6 CTG210

**Environmental**

Operating temperature	-5°C to +50°C (+23°F to 122°F)
Storage temperature	-5°C to +50°C (+23°F to 122°F)
Relative humidity	<95%

**Compatibility and conformity**

Standard compliance	According to IEC 61869-2
Approvals	cUL (when used in conjunction with Carlo Gavazzi devices: DEA71, DEB71 or DMPUC-EL)
CE-marking	Complies to European Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU

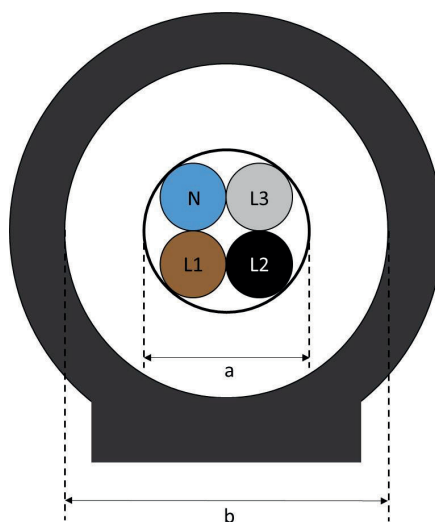
## Input/Output

<b>Current transformer ratio</b>	1000/1
<b>Operating frequency</b>	50-60 Hz
<b>Max. system voltage</b>	720 VAC
<b>Rated insulation level</b>	3 kV AC
<b>Nominal current (In)</b>	80A (CTG035) 100A (CTG050) 160A (CTG070) 250A (CTG120) 320A (CTG160) 400A (CTG210)
<b>Short-term thermal current (I<sub>th</sub>)</b>	50 x I <sub>n</sub>
<b>Dynamic current (I<sub>dyn</sub>)</b>	2.5 x I <sub>th</sub>
<b>Overload current</b>	480A (CTG035) 600A (CTG050) 960A (CTG070) 1500A (CTG120) 1920A (CTG160) 2400A (CTG210)

## Connections

<b>Primary connection</b>	Single phase or 3 phase mains, pass through
<b>Secondary connection</b>	Screw type 2 x 2.5mm <sup>2</sup>

## Type selection



**Fig. 7 Selection**

Select the correct CTG size according to mains cable dimension: referring to fig. 7 the dimension of CTG shall be:  $b \geq 1.5 * a$ .

## References

### Further reading

Information	Document	Where to find it
DEA71 Datasheet	dea71_ds.pdf	<a href="http://www.productselection.net/PDF/UK/dea71_ds.pdf">http://www.productselection.net/PDF/UK/dea71_ds.pdf</a>
DEB71 Datasheet	deb71_ds.pdf	<a href="http://www.productselection.net/PDF/UK/deb71_ds.pdf">http://www.productselection.net/PDF/UK/deb71_ds.pdf</a>
DEA/DEB/CTG Instruction manual	dea_deb_im.pdf	<a href="http://www.productselection.net/manuals/UK/dea_deb_im.pdf">http://www.productselection.net/manuals/UK/dea_deb_im.pdf</a>
2D drawings	2D_CTG.zip	<a href="http://www.productselection.net/dxf/2D_ctg.zip">http://www.productselection.net/dxf/2D_ctg.zip</a>
3D drawings	3D_CTG.zip	<a href="http://www.productselection.net/dxf/3D_ctg.zip">http://www.productselection.net/dxf/3D_ctg.zip</a>

### Order code

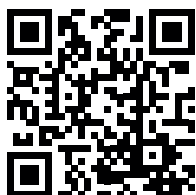


CTG



Complete the code entering the corresponding option instead of

Code	Option	Description
CTG	-	Core balance transformer
<input type="checkbox"/>	035	35 mm Internal diameter
	050	50 mm Internal diameter
	070	70 mm Internal diameter
	120	120 mm Internal diameter
	160	160 mm Internal diameter
	210	210 mm Internal diameter



COPYRIGHT ©2016  
Content subject to change. Download the PDF: [www.productselection.net](http://www.productselection.net)