

# Type: BZCT035, 050, 070, 120, 160 & 210

## Circular Toroids

- ❑ For use in conjunction with Broyce "Type A" Earth Leakage Relays
- ❑ Designed to detect leakage current and transmit a proportional signal to an Earth Leakage Relay
- ❑ Surface mounting with 4 fixing slots (BZCT160 and 210 supplied with separate mounting feet)
- ❑ Slim design



### INSTALLATION NOTE



Installation work must be carried out by qualified personnel.

- BEFORE INSTALLATION, ISOLATE THE SUPPLY TO THE CABLES THAT ARE TO BE PASSED THROUGH THE TOROID.
- Installation of the toroid, along with the Earth Leakage Relay must be carried out in accordance with the latest wiring practices and regulations.

### TECHNICAL SPECIFICATION

Size availability* and part number:	35mm Ø (BZCT035)	120mm Ø (BZCT120)
	50mm Ø (BZCT050)	160mm Ø (BZCT160)
	70mm Ø (BZCT070)	210mm Ø (BZCT210)

* internal diameter	
Rated system voltage:	720VAC
Insulation level:	3kVAC
Current ratio:	1/1000
Maximum permissible current:	1kA continuous 5kA for 1.5Sec. 100kA for 0.05Sec.

Minimum IΔn setting on Earth Leakage Relay for each type of toroid:	0.03A – 35, 50 and 70mm Ø 0.1A – 120mm Ø 0.3A – 160 and 210mm Ø
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Distance between toroid and relay:	50 metres (max.)
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Ambient temp:	-20 to +60°C
Relative humidity:	+95%

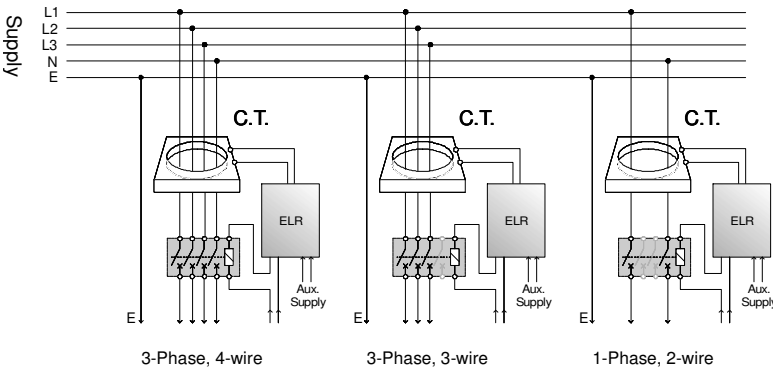
Housing:	Grey ABS
Mounting option:	Surface mount only using fixing slots provided (BZCT160 and 210 require separate mounting feet which are included)

Terminal conductor size:	≤ 2.5mm <sup>2</sup> solid ≤ 1.5mm <sup>2</sup> stranded
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Approvals:	CE Compliant. Conforms to: IEC44-1, IEC185 & BS7676
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### FUNCTION DIAGRAM

Typical connection examples are shown below.



### INSTALLATION DO's and DONT's

- Correct installation of the Earth Leakage Relay and toroid should ensure trouble free operation, in particular, if this document is followed.

1. Always ensure the Earth conductor DOES NOT pass through the toroid. If it is unavoidable, the Earth must be routed back through the toroid again and around, as shown in Fig.2 below.
2. As a rule, select a toroid that has an inside diameter which is twice that or greater than the outsider diameter of the cable(s) to be passed through.
3. Ensure the cable is central in the toroid.
4. Place the toroid on a straight section of cable, not near a bend.
5. Keep the cable and toroid away from intense magnetic fields from nearby equipment.
6. DO NOT pass individual conductors through separate toroids, as shown in Fig. 3.

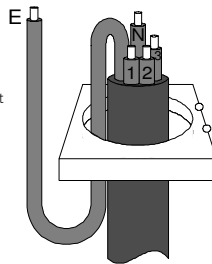


Fig. 1

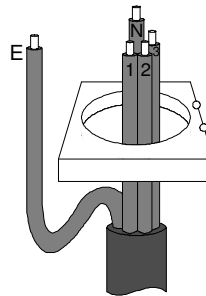


Fig.2

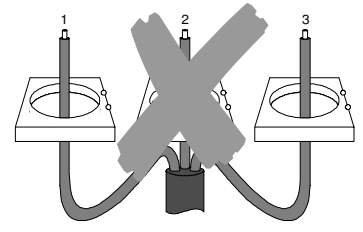
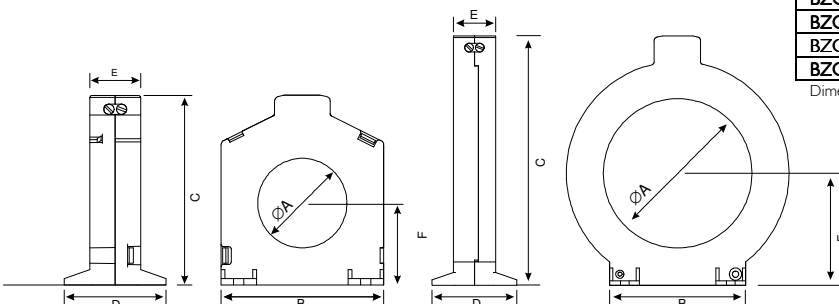


Fig.3

### DIMENSIONS



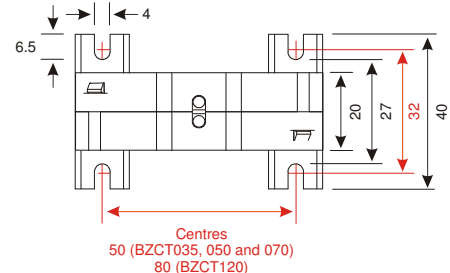
BZCT035

BZCT050, 070, 120, 160 & 210mm

Toroid Type:	AØ	B	C	D	E	F	Weight
BZCT035	35	64	74	40	20	32	77g
BZCT050	50	63	98	40	20	42	88g
BZCT070	70	105	117	40	20	53	135g
BZCT120	120	155	170	40	20	80	265g
BZCT160	160	150	253	60 <sup>^</sup>	33	120	1075g
BZCT210	210	149	304	60 <sup>^</sup>	33	145	1300g

Dimensions in mm

<sup>^</sup>exc. mounting feet



Centres  
50 (BZCT035, 050 and 070)  
80 (BZCT120)