Revalco®

Made in Italy

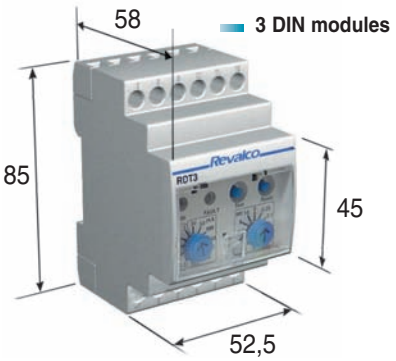
earth leakage relays
insulation control relay

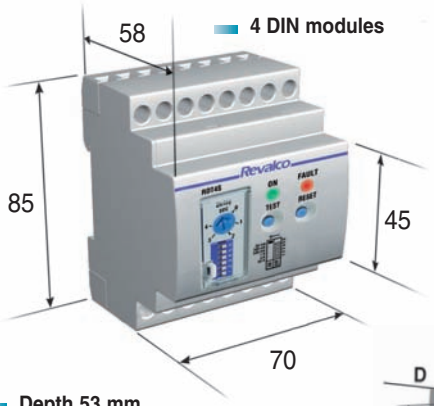
2011

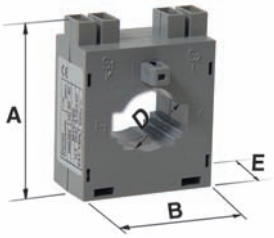
EARTH LEAKAGE RELAYS

INSULATION CONTROL RELAY

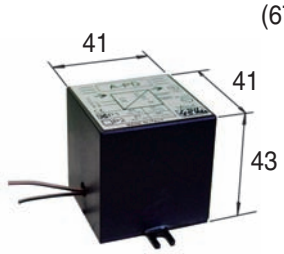
DIMENSIONS IN mm

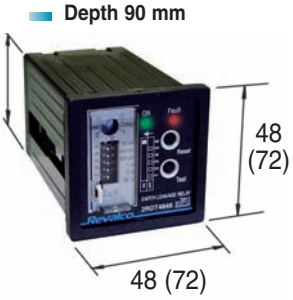


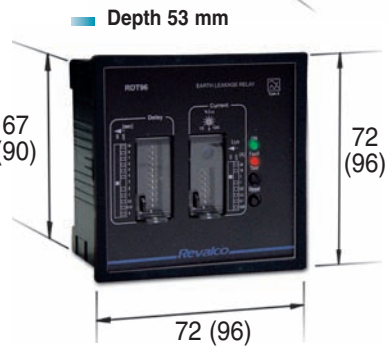




TOR30



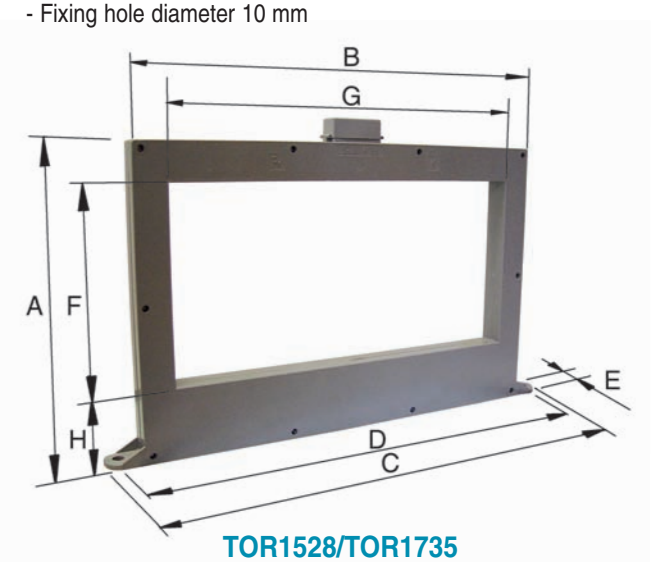




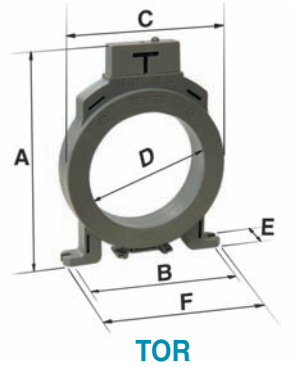
TOR15

	A	B	C	D	E	F	G	H	Weight kg
TOR1528	223	338	404	370	28	156	281	29	
TOR1735	270	410	475	463	28	170	351	66	

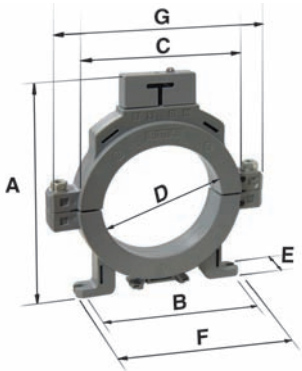
- Terminals cover height 22 mm
- Fixing hole diameter 10 mm



TOR1528/TOR1735



TOR



TORA

	D	A	B	C	E	F	G	H	Weight kg
TOR3 (R)	35	118	90	78,5	27	104			0,17
TOR3ST (R)	35	92	90	78,5	27	104			0,16
TOR6 (R)	60	143	102	94,5	27	117			0,22
TOR8 (R)	80	163	110	114,5	27	125			0,29
TOR11 (R)	110	198	140	150,5	32	155			0,45
TORA11 (R)	110	198	140	150,5	32	155	198		0,75
TOR16 (R)	160	248	181	200,5	32	197			0,65
TOR21 (R)	210	298	210	250,5	32	227			0,75
TORA21 (R)	210	298	210	250,5	32	227	296		1,20
TOR30 (R)	23	65	52		27				0,30
TOR15 (R)	15	85	35		58			45	0,20

EARTH LEAKAGE RELAYS

TECHNICAL CHARACTERISTICS

Earth Leakage control and monitoring consist of a Current Relay and associated Summation Toroidal Current Transformer which are used in LV networks with alternating current in TT, IT, and TNS systems. They provide the protection required against indirect contacts, (complementary protection against direct contacts)and against the risk of fire (as the low currents through the earth are not enough for to let the magnetothermic device intervene). The standard CEI 64.8 says that the earth leakage relay is considered as **additional protection** therefore not an unique device for protection against the direct contacts. All cables of a single or three phase system, including the neutral where present, must cross the toroid which is the point of residual current,the device activates when it detects defective insulation which is indicated when the vectorial sum of the current carrying cables results in a differential figure. **Referring standards:** CEI EN 60947.2/B, CEI 64.8, CEI EN 61008/1 and CEI EN 61010-1.

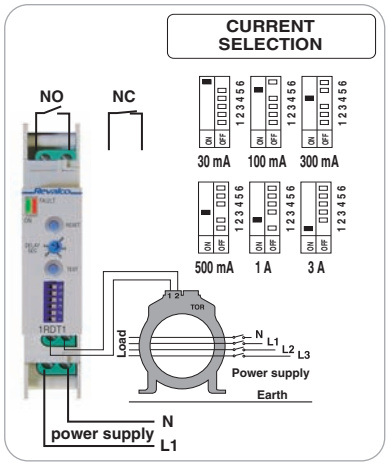
Earth leakage relay intervenes also after a loss of connection with the toroidal current transformer
It is possible to effect the remote reset simply by removing and applying again the auxiliary voltage supply.
The Test and Reset buttons are accessible from the front with sealed front window also

These earth leakage relays are developped to be used with toroids having ratio 50/0,1. For toroids with ratio 60/0,1 (1000/0,1) add suffix 60 (1000) to the standard code of earth leakage relays.

Guaranteed intervention for sinusoidal alternated currents and for specified continuous pulsating currents with or without placed upon continuous component suddenly or gradually applied. **"H" suffix identify the earth leakage relays usable with frequencies until 450Hz**

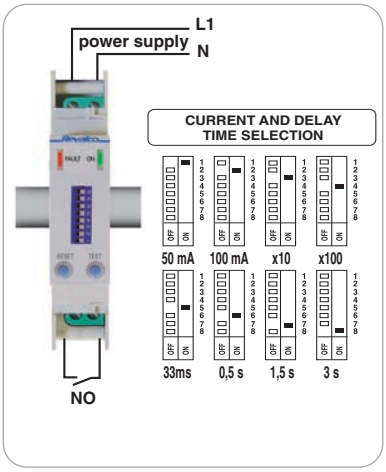
A TYPE

1RDT1: TRIP CURRENT ADJUSTMENT (IΔN) 30, 100, 300, 500 mA / 1, 3 A
- **AUXILIARY POWER SUPPLY** 230V CA ± 10% - 40 / 60 Hz
- **MAX BURDEN** <1 W (EuP)
- **TIME DELAY ADJUSTMENT** 0 - 4 sec
- **OUTPUT, one change-over contact** NC o NO 10A, 250V
- **TEMPERATURES** operating 0°C ÷ +55 °C; storage: -20°C ÷ 80°C
- **INSULATION TEST** 2kV a 50Hz for 1 min (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **SIGNALLING LED**
  FAULT (RED led): working relay, over-limits after the time delay; ON (GREEN led): device correctly supplied; RESET (push) reset of anomaly; TEST (push): test for the control of the correct functions
- **AMMETRIC CIRCUIT:** Wires: lenght max 10 m, section min. 1 mm² twist wire for reject interference
- **DIMENSIONS** 1 DIN module
- **EXAMPLES WHEN ORDERING** 1RDT1 power supply 230VAC

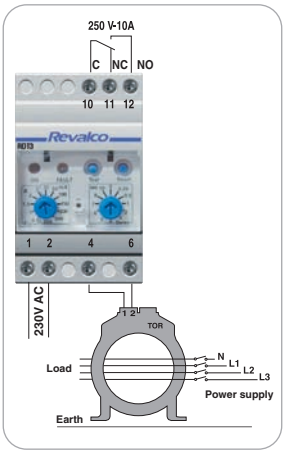


1RDT1H WITH INCORPORATED TOROID Ø 18 mm

TRIP CURRENT ADJUSTMENT (IΔN) 30mA (default) - 50mA - 100mA [x10...x100]
- **AUXILIARY POWER SUPPLY** 230V AC ± 10% - 40 / 60 Hz
- **MAX BURDEN** <1 W (EuP)
- **TIME DELAY ADJUSTMENT** 2ms (default) - 33ms - 0,5s - 1,5s - 3s (summable: example switch 8+7+6=ON, time 5s)
- **OUTPUT, one change-over contact** NO 10A, 250V
- **TEMPERATURES** operating 0°C ÷ +55 °C; storage: -20°C ÷ 80°C
- **INSULATION TEST** 2kV a 50Hz for 1 min (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **SIGNALLING LED** FAULT (RED led): working relay, over-limits after the time delay; ON (GREEN led): device correctly supplied; RESET (push) reset of anomaly; TEST (push): test for the control of the correct functions (to use with red led lights-ON, maintain pressure for 3sec)
- **AMMETRIC CIRCUIT:** Wires: lenght max 10 m, section min. 1 mm² twist wire for reject interference
- **DIMENSIONS** 1 DIN module
- **EXAMPLES WHEN ORDERING** 1RDT1H power supply 230VAC



1RDT3: TRIP CURRENT ADJUSTMENT (IΔN) 30 - 50 - 100 - 150 - 230 - 300 - 350 mA / 0,5 - 1 - 1,5 - 2 - 3 A
RDT30K: TRIP CURRENT ADJUSTMENT (IΔN) 30 - 100 - 300 mA / 0,5 - 1 - 1,5 - 2 - 3 - 5 - 10 - 20 - 30 A
- **AUXILIARY POWER SUPPLY** 230V CA ± 10% - 40 / 60 Hz
- **MAX BURDEN** **1RDT3** 1,5 W; **1RDT30K** < 1W (EuP)
- **TIME DELAY ADJUSTMENT** 0 - 0,25 - 0,5 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 10 sec
- **OUTPUT, one change-over contact** NC - C - NO 10A, 250V
- **TEMPERATURES** operating 0°C ÷ +55 °C; storage: -20°C ÷ 80°C
- **INSULATION TEST** 2 kV a 50 Hz for 1 min (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **SIGNALLING LED** FAULT (RED led):working relay, over-limits after the time delay
  ON (GREEN led): device correctly supplied
  RESET (push): reset of anomaly
  TEST (push): test for the control of the correct functions
- **AMMETRIC CIRCUIT** Wires: lenght max 20 m, section min. 1 mm²
- **DIMENSIONS** 3 DIN modules
- **EXAMPLES WHEN ORDERING**
  1RDT3 power supply 230VAC
  1RDT30KPD1 power supply 22....36VAC and 19....70VDC
  1RDT30KPD2 power supply 44....130VAC and 70....240VDC

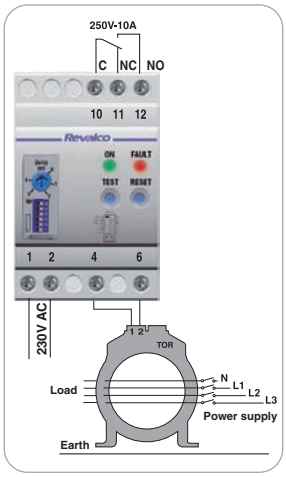


1RDT30E

- **TRIP CURRENT ADJUSTMENT (IΔN)** 30 - 300 - 500 mA / 1 - 3 - 30 A
- **TIME DELAY ADJUSTMENT** 0 - 1 - 2 - 3 - 4 sec
- **AUXILIARY POWER SUPPLY** 230V AC ± 10% - 40 / 60 Hz
- **MAX BURDEN** 1,5 W
- **OUTPUT, one change-over contact** NC - C - NO 10A, 250V
- **TEMPERATURES** operating 0°C ÷ +55 °C / storage: -20°C ÷ 80°C
- **INSULATION TEST** 2 kV a 50 Hz for 1 min (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **SIGNALLING LED** FAULT (RED led): working relay, over-limits after the time delay
  ON (GREEN led): device correctly supplied
  RESET (push): reset of anomaly
  TEST (push): test for the control of the correct functions
- **AMMETRIC CIRCUIT** Wires: lenght max 20 m, section min. 1 mm²
- **DIMENSIONS** 3 DIN modules
- **EXAMPLES WHEN ORDERING**

1RDT30E	power supply 230VAC
1RDT30EPD1	power supply 22....36VAC and 19....70VDC
1RDT30EPD2	power supply 44....130VAC and 70....240VDC

CURRENT SELECTION

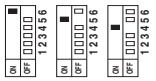


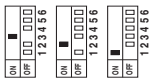
1RDT4

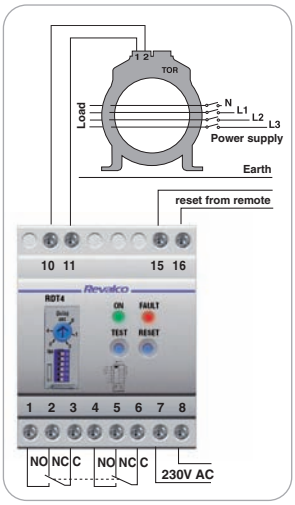
- **TRIP CURRENT ADJUSTMENT (IΔN)** 30 - 300 - 500 mA / 1 - 3 - 30 A
- **TIME DELAY ADJUSTMENT** 0 - 1 - 2 - 3 - 4 sec
- **AUXILIARY POWER SUPPLY** 230V AC ± 10% - 40 / 60 Hz
- **MAX BURDEN** 1,5 W
- **OUTPUT, double change-over contact** NC - C - NO 10A, 250V
- **TEMPERATURES** operating 0°C ÷ +55 °C / storage: -20°C ÷ 80°C
- **INSULATION TEST** 2 kV a 50 Hz for 1 min (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **SIGNALLING LED** FAULT (RED led): working relay, over-limits after the time delay
  ON (GREEN led): device correctly supplied
  RESET (push): reset of anomaly
  TEST (push): test for the control of the correct functions
- **AMMETRIC CIRCUIT** Wires: lenght max 20 m, section min. 1 mm²
- **DIMENSIONS** 4 DIN modules
- **EXAMPLES WHEN ORDERING**

1RDT4	power supply 230VAC
1RDT4PD1	power supply 22....36VAC and 19....70VDC
1RDT4PD2	power supply 44....130VAC and 70....240VDC

CURRENT SELECTION







1RDT430E

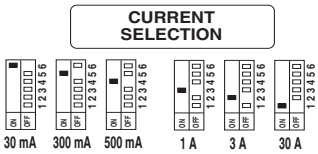
2RDT96430E

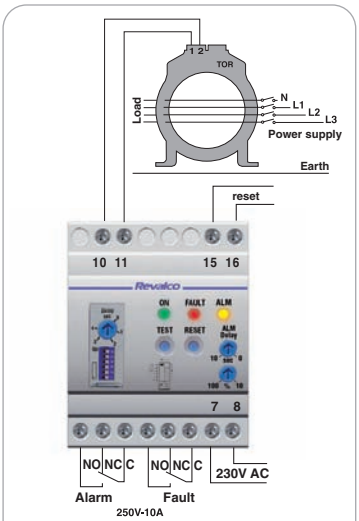
Relay with prealarm threshold

- **AUXILIARY POWER SUPPLY** 230VAC ± 10% - 40 / 60 Hz
- **MAX BURDEN** 1,5 W
- **TRIP CURRENT ADJUSTMENT (IΔN)** 30 - 300 - 500 mA / 1 - 3 - 30 A
- **TIME DELAY ADJUSTMENT** 0 - 1 - 2 - 3 - 4 sec
- **OUTPUT, two change-over contact** NC - C - NO 10A, 250V
  one for earth leakage section and one for prealarm section
- **TEMPERATURES** operating 0°C ÷ +55 °C
  storage: -20°C ÷ 80°C
- **INSULATION TEST** 2 kV a 50 Hz for 1 min
  (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **RESET FROM REMOTE** terminals 15 and 16
- **SIGNALLING LED**
  earth leakage section:
  FAULT (RED led): working relay, over-limits after the time delay
  ON (GREEN led): device correctly supplied
  RESET (push): reset of anomaly
  TEST (push): test for the control of the correct functions
  prealarm section:
  ALM (YELLOW led): alarm status (this led remains light on also if earth leakage relay doesn't works)
  DELAY ALM (trimmer): alarm delay time from 0 to 4 seconds
  INTERVENTION THRESHOLD (trimmer): prealarm threshold from 10% to 100% of selected current value by the minidip
- **Special execution on request**
- **AMMETRIC CIRCUIT** Wires: lenght max 20 m, section min. 1 mm²
- **DIMENSIONS** 4 DIN modules / 96x96mm
- **EXAMPLES WHEN ORDERING**

1RDT430E	power supply 230VAC
1RDT430EPD1	power supply 22....36VAC and 19....70VDC
1RDT430EPD2	power supply 44....130VAC and 70....240VDC

CURRENT SELECTION





NEW

1RDT4265E

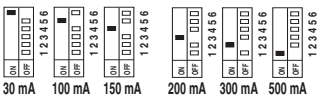
2RDT96265E

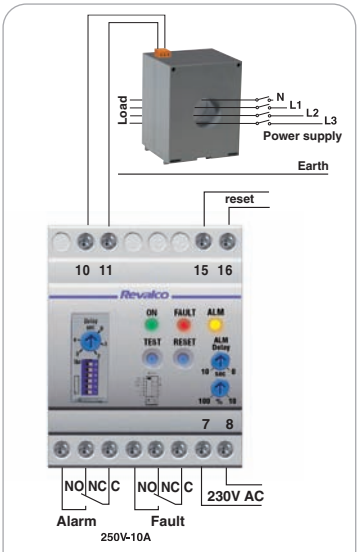
Relay with prealarm threshold and high sensibility from 2 to 65 Hz

- **AUXILIARY POWER SUPPLY** 230VAC ± 10% - 40 / 60 Hz
- **MAX BURDEN** 1,5 W
- **TRIP CURRENT ADJUSTMENT (IΔN)** 30 - 100 - 150 - 200 - 300 - 500 mA
- **TIME DELAY ADJUSTMENT** from 0 to 10 sec
- **OUTPUT, two change-over contact** NC - C - NO 10A, 250V
  one for earth leakage section and one for prealarm section
- **TEMPERATURES** operating 0°C ÷ +55 °C
  storage: -20°C ÷ 80°C
- **INSULATION TEST** 2 kV a 50 Hz for 1 min
  (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **RESET FROM REMOTE** terminals 15 and 16
- **SIGNALLING LED**
  earth leakage section:
  FAULT (RED led): working relay, over-limits after the time delay
  ON (GREEN led): device correctly supplied
  RESET (push): reset of anomaly
  TEST (push): test for the control of the correct functions
  prealarm section:
  ALM (YELLOW led): alarm status (this led remains light on also if earth leakage relay doesn't works)
  DELAY ALM (trimmer): alarm delay time from 0 to 10 seconds
  INTERVENTION THRESHOLD (trimmer): prealarm threshold from 10% to 100% of selected current value by the minidip
- **Special execution on request**
- **AMMETRIC CIRCUIT** Wires: lenght max 0,5 m, section min. 1 mm²
  Special toriod supplied together with the relay
- **DIMENSIONS** 4 DIN modules / 96x96mm
- **EXAMPLES WHEN ORDERING**

1RDT4265E	power supply 230VAC
1RDT4265EPD1	power supply 22....36VAC and 19....70VDC
1RDT4265EPD2	power supply 44....130VAC and 70....240VDC
2RDT96265E	power supply 230VAC

CURRENT SELECTION



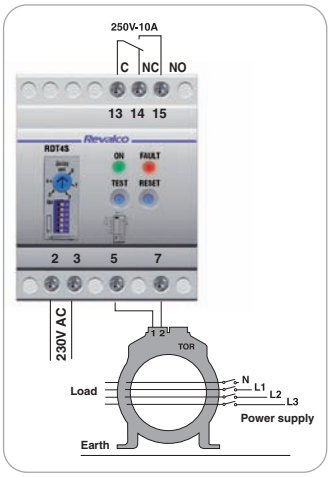


1RDT4S

- **TRIP CURRENT ADJUSTMENT (IΔN)** 30 - 300 - 500 mA / 1 - 1,5 - 3 A
- **TIME DELAY ADJUSTMENT** 0 - 1 - 2 - 3 - 4 sec
- **AUXILIARY POWER SUPPLY** 230VAC ± 10% - 40 / 60 Hz
- **MAX BURDEN** 1,5 W
- **OUTPUT, one change-over contact** NC - C - NO 10A, 250V
- **TEMPERATURES** operating 0°C ÷ +55 °C
  storage: -20°C ÷ 80°C
- **INSULATION TEST** 2 kV a 50 Hz for 1 min
  (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **SIGNALLING LED** FAULT (RED led): working relay, over-limits after the time delay
  ON (GREEN led): device correctly supplied
  RESET (push): reset of anomaly
  TEST (push): test for the control of the correct functions
- **AMMETRIC CIRCUIT** Wires: lenght max 20m, section min. 1 mm²
- **DIMENSIONS** 4 DIN modules
- **EXAMPLES WHEN ORDERING**

1RDT4S	power supply 230VAC
1RDT4SPD1	power supply 22....36VAC and 19....70VDC
1RDT4SPD2	power supply 44....130VAC and 70....240VDC

CURRENT SELECTION



2RDT4848

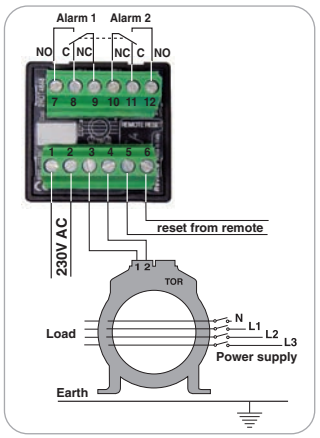
48x48 depth 90 mm

2RDT7272

72x72 depth 92 mm

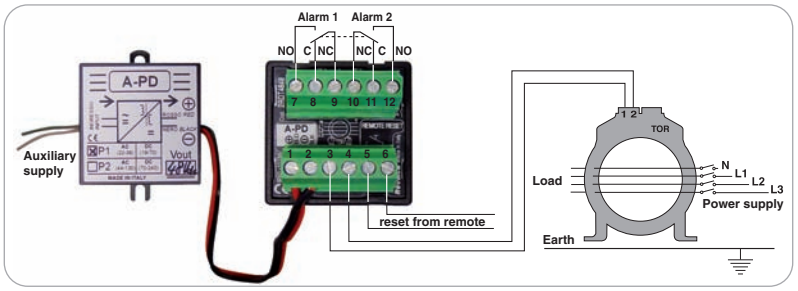
- **TRIP CURRENT ADJUSTMENT (IΔN)** 30 - 300 - 500 mA / 1 - 3 - 30 A
- **TIME DELAY ADJUSTMENT** 0 - 1 - 2 - 3 - 4 sec
- **AUXILIARY POWER SUPPLY** 230VAC ± 10% - 40 / 60 Hz
- **MAX BURDEN** 1,5 W
- **OUTPUT, one relay with 2 change-over contacts** NC - C - NO 8A, 250V insulated
- **TEMPERATURES** operating 0°C ÷ +55 °C
  storage: -20°C ÷ 80°C
- **INSULATION TEST** 2 kV a 50 Hz for 1 min
  (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **RESET FROM REMOTE**
- **SIGNALLING LED** FAULT (RED led): working relay, over-limits after the time delay
  ON (GREEN led): device correctly supplied
  RESET (push): reset of anomaly
  TEST (push): test for the control of the correct functions
- **AMMETRIC CIRCUIT** Wires: lenght max 20m, section min. 1 mm²
- **EXAMPLES WHEN ORDERING**

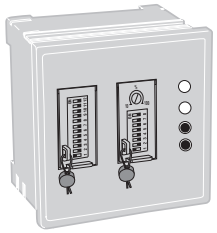
2RDT4848	power supply 230VAC - 48x48mm
2RDT7272110	power supply 110VAC - 72x72mm
2RDT4848PD1	power supply 22....36VAC and 19....70VDC - 48x48mm
2RDT7272PD2	power supply 44....130VAC and 70....240VDC - 72x72mm



CURRENT SELECTION

- On 2RDT4848-PD1, 2RDT4848-PD2, 2RDT7272-PD1 and 2RDT7272-PD2 types, multiple AC and DC auxiliary power supplies are available making connections of the correspondent external accessory (A-PD1 or A-PD2) only. Accessory is supplied together with the relay.
  A-PD1 = 22....36VAC / 19....70VDC
  A-PD2 = 44....130VAC / 70....240VDC





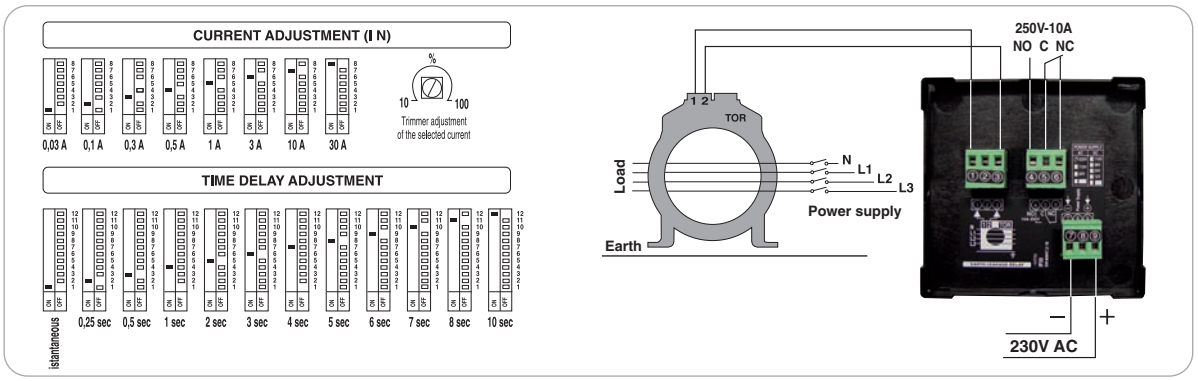
2RDT72 - 2RDT96

- **TRIP CURRENT ADJUSTMENT (IΔN)** 30 - 100 - 300 mA / 0,5 - 1 - 3 - 10 - 30 A
  With adjustment trimmer each selected range
- **TIME DELAY ADJUSTMENT** 0 - 1 - 2 - 3 - 4 sec
- **AUXILIARY POWER SUPPLY** 230V AC ± 10% - 40 / 60 Hz
- **MAX BURDEN** 1,5 W
- **OUTPUT, one change-over contact** NC - C - NO 10A, 250V
- **TEMPERATURES** operating 0°C ÷ +55 °C
  storage: -20°C ÷ 80°C
- **INSULATION TEST** 2 kV a 50 Hz for 1 min (relay-aux supply)
- **PROTECTION CLASS** IP 20 on terminals - IP40 on front
- **INSULATION CLASS** II
- **SIGNALLING LED**

FAULT (RED led):	working relay, over-limits after the time delay
ON (GREEN led):	device correctly supplied
RESET (push):	reset of anomaly
TEST (push):	test for the control of the correct functions

- **AMMETRIC CIRCUIT** Wires: lenght max 20 m, section min. 1 mm²
- **DIMENSIONS** 72x72 and 96x96 mm
- **Time delay/current/trimmer adjustment are protected by a sealable transparent covers**
- **EXAMPLES WHEN ORDERING**

2RDT72	power supply 230VAC, 72x72 mm
2RDT96PD1	power supply 22....36VAC and 19....70VDC, 96x96 mm
2RDT72PD2	power supply 44....130VAC and 70....240VDC, 72x72 mm



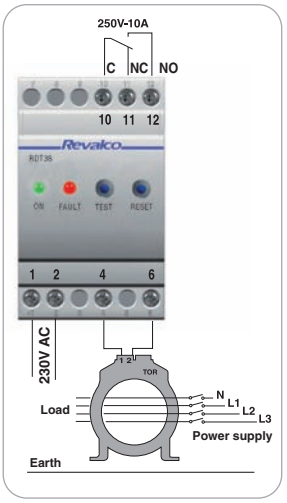
AC TYPE

Minidip view

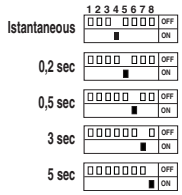
1RDT3S

- **AUXILIARY POWER SUPPLY** — 230V AC ± 10% - 40 / 60 Hz
- **MAX BURDEN** — 1,5 W
- **TRIP CURRENT ADJUSTMENT (IΔN)** — Three different currents (30mA - 300mA - 3A) selectable by an incorporated minidip
- **TIME DELAY ADJUSTMENT** — Five different times: instantaneous 0,2 sec - 0,5 sec - 3 sec - 5 sec selectable by an incorporated minidip
- **OUTPUT, one change-over contact** — 10A, 250 V
- **SIGNALLING LED**
  - FAULT (RED led): working relay, over-limits after the time delay
  - ON (GREEN led): device correctly supplied
  - RESET (push): reset of anomaly
  - TEST (push): test for the control of the correct functions
- **TEMPERATURES** — operating 0°C ÷ +55 °C / storage: -20°C ÷ 80°C
- **INSULATION TEST** — 2,5 kV for 1 min
- **PROTECTION CLASS** — IP 20
- **DIMENSIONS** — 3 DIN modules
- **EXAMPLES WHEN ORDERING**

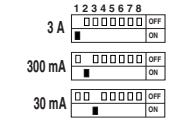
1RDT3S	power supply 230VAC
1RDT3SPD1	power supply 22....36VAC and 19....70VDC
1RDT3SPD2	power supply 44....130VAC and 70....240VDC



DELAY TIME SELECTION



CURRENT SELECTION



TOROIDAL CURRENT TRANSFORMERS

These current transformers are for applications using Earth Leakage Relays. They consist of a high quality magnetic core which detects fault currents, even of very low values.

- The connection toroid-earth leakage relay must be effected with shielded cables in the following cases:
  a) Differential threshold < 100mA
  b) Distances of toroid > 10m
  c) Signal cable installed at less than 30cm from the power cables
- It is advisable and, in critical situations, obligatory:
  a) Make a plait with the connection cables toroid-relay
  b) The section of the cables must be not less than 1mmsquare) and their lenght cannot exceed 20m
  c) The cables cannot be installed in proximity of electromechanical components or power cables that bcan be source a of magnetic fields and perturbation of measurement signal
- In order that the measurement of the toroid is correct, it is necessary:
  a) Put the cables in the center of the toroid
  b) The toroid must be not positioned in proximity of a curve zone of the cables that cross it
  c) Use a toroid with an internal diameter at least double the diameter of the cable or of the plait of cables.
  d) In very critical cases it is necessary to install a ferromagnetic sleeve around the cables in the intern of the toroid
  e) The toroid must be crossed ,in the same sense by all the active cables of the line, neutral included (if present).
  The neutral cable must not connected to the earth after the toroid
  f) In case that the protected line has a metallic protection, it must be connected to the earth, after the toroid
- In case of use of split core toroids, be sure, before to close them that the contact surfaces of the core are perfectly cleaned and that the fixing screws are very well fixed.
- Toroidal ratio 50/0,1 – Number of turns: 500 Terminal covers included
  To have torodals with ratio 60/0,1 add suffix 60 to the standard code. To have torodals with ratio 1000/0,1 add suffix 1000 to the standard code
- **Toroids with "R" suffix are used for low currents up to 10mA and frequences until 400Hz**

TOR30 (R)

TOR15 (R)

TOR3 (R)

TOR3ST (R)

TOR6 (R)

TOR8 (R)

TOR11 (R)

TOR16 (R)

TOR21 (R)

TORA11 (R)

TORA21 (R)

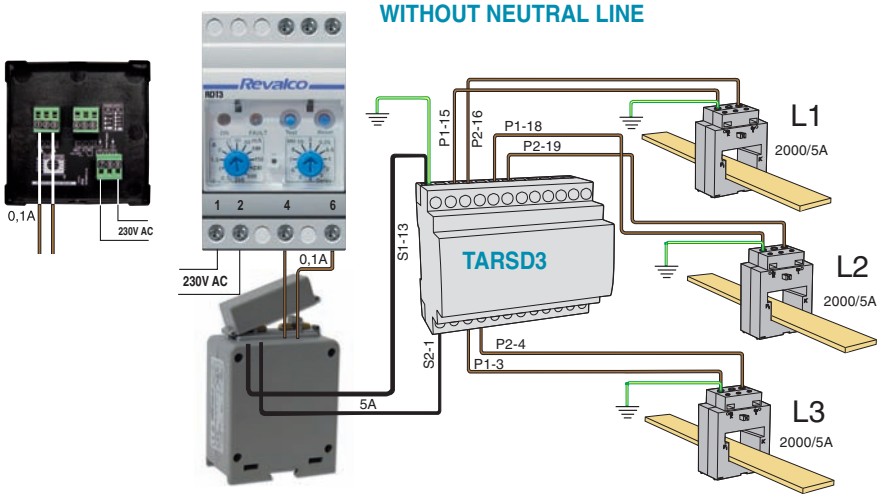
TOR1528

ADAPTER TOROIDS

Used to solve the problem of earth leakage relays connection with big bars or toroids far from relay.

TORAD 5A/0,1A - CLASS 0,2 / 1VA

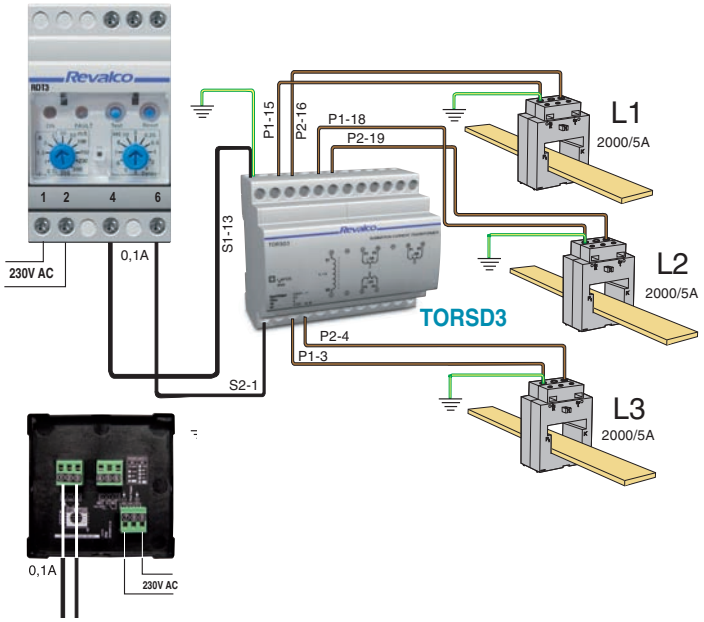
WITHOUT NEUTRAL LINE



TORAD

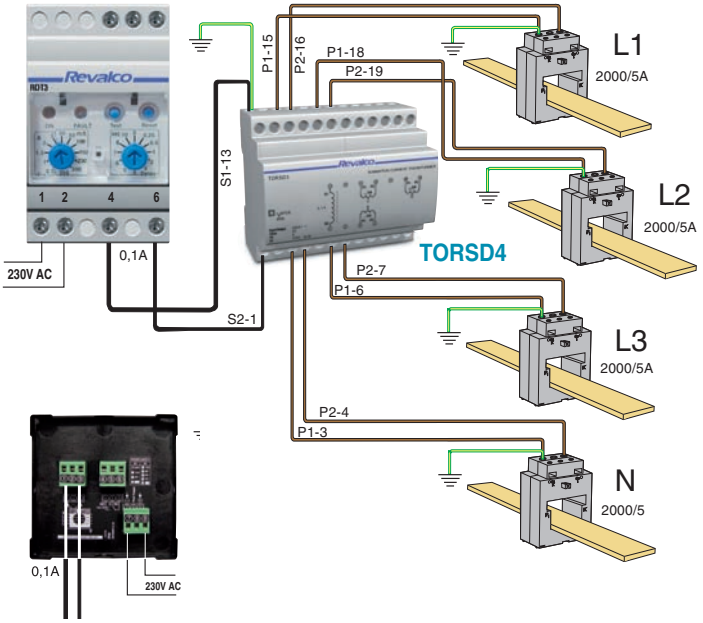
TORSD3 5+5+5A/0,1A - CLASS 0,2 / 1VA

WITHOUT NEUTRAL LINE



TORSD4 5+5+5+5A/0,1A - CLASS 0,2 / 1VA

WITH NEUTRAL LINE



INSULATION CONTROL RELAYS

1RCI

The **1RCI** is a relay used to monitor the insulation in a singlephase or threephase system, with or without a neutral insulated to earth. This device operates under the principle of a continuous voltage applied between the system voltage and earth. The **1RCI** indicates the current absorbed by the system after the application of the aforementioned voltage.
The effective value of the insulation resistance of the system is given by the relation between the applied voltage and the current pointed out.

- **POWER SUPPLY**	230V CA ±20% (others on request)
- **MAXIMUM VOLTAGE OF THE SYSTEM TO CONTROL**	≤ 400V CA
- **MEASUREMENT VOLTAGE**	≤ 24V CC
- **FREQUENCY OPERATING AND SYSTEM TO CONTROL**	50÷60 Hz
- **BURDEN**	2 W
- **MAXIMUM MEASUREMENT CURRENT**	≤ 25µA
- **INTERNAL RESISTANCE**	≥ 1 Mohm
- **CALIBRATION**	30÷300 and 300÷800 Kohm
adjustable potentiometer on front (the range is selectable by a switch located under a removable section of the upper case wall)	
- **ACCURACY**	±10%
- **INSULATION VOLTAGE**	2,5 kV for 1 minute
- **TEMPERATURE**	operating -10°C ÷ +55°C
	storage -25°C ÷ +70°C
- **DIMENSIONS / WEIGHT Kg.**	3 DIN modules / 0,35