

### DESCRIPTION

Toroidal Transformers (TARD) can be combined with the RD family of Earth Leakage Relays to detect current leakages due to loss of ground insulation. The TARD fits on the live wires of the single, two or three phase supply (phases and neutral if distributed), while the safety wire should not be included.

A signal proportional to the vectorial sum of the active current (L1+L2+L3 in case of a three phase line with neutral) is sent to the differential relay. The coil is insulated from the magnetic core and undergoes an insulation test of 2,5 kV at mains frequency for one minute. The TARD are made in highly permeable magnetic materials and are available with internal diameters from 35 mm to 210 mm in closed or open format, allowing the fitting on bars and cables up to considerable dimensions. The enclosure is made with insulating and fire retardant covers, provided with fins for mechanical fitting and accessories for the fixing on DIN guides.

The connection between the RD and the TARD should be made with shielded cables. This kind of consideration should be taken when the currents to be registered are under 100mA.

The cables should be twisted in case no shielded cables are used.

The distance of the connection should be as short as possible and additionally far away from power cables and other devices that may cause electromagnetic interference.

### SPECIFICATIONS

*Nominal Frequency:* 47 to 63 Hz

*Ratio of measure winding:* 500/1

*Insulation test:* 2,5 kV 50/60 Hz (60 sec.)

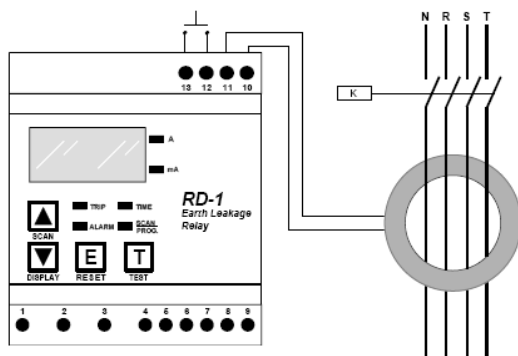
*Permanent Overload:* 1000 A

*Thermal Overload:* 40 kA (1 sec.)

*Working temperature:* -10° to 55°

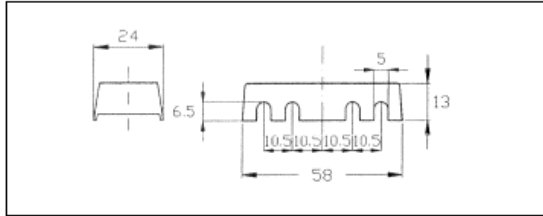
*Terminals:* Screws for 16 AWG 1.6 mm<sup>2</sup>

*Covers material:* fire retardant plastic

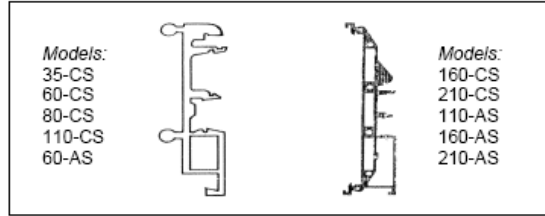


Example of connection with the RD-1 model

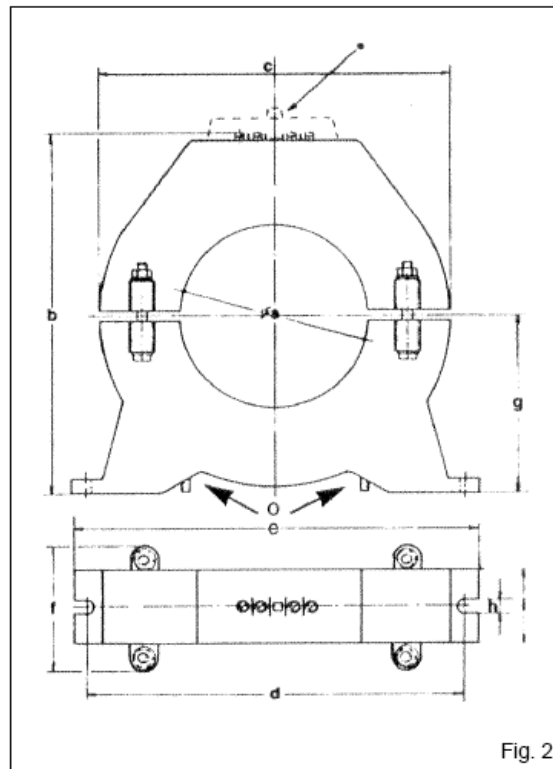
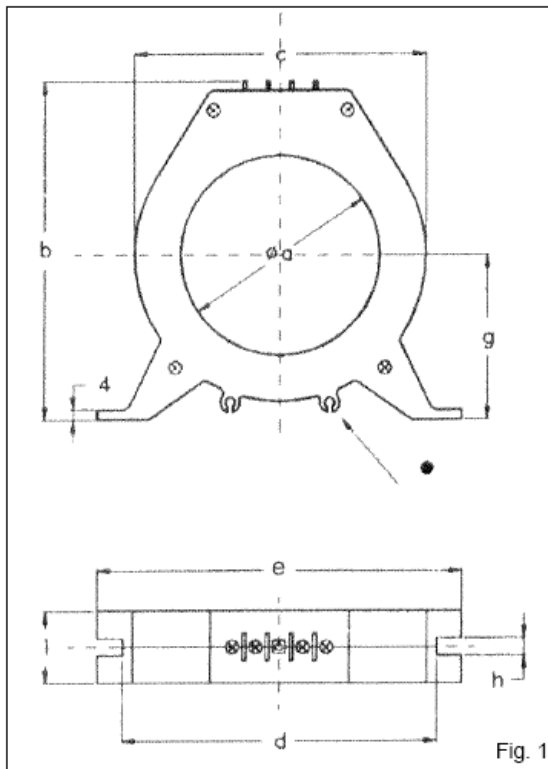
### TERMINAL COVER (included)



### DIN MOUNTING (included)



### DIMENSIONS



Order Code	Core	Fig	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	l mm	Weight kg
RD-1												
TARD35-CS	CLOSED	1	35	83	73	92	100	-	40	6	28	0,200
TARD60-CS			60	112	98	116	125	-	55	6	28	0,28
TARD80-CS			80	132	118	136	146	-	65	6	28	0,41
TARD110-CS			110	158	148	166	178	-	78	6	28	0,5
TARD160-CS			160	265	255	265	275	-	130	8,5	45	1,22
TARD210-CS			210	315	305	310	325	-	155	8,5	45	2,4
TARD60-AS	OPEN	2	60	125	116	133	140	45	60	6,5	34	0,47
TARD110-AS			110	215	205	220	235	70	105	6,5	40	1,25
TARD160-AS			160	265	255	265	275	75	130	8,5	45	1,3
TARD210-AS			210	315	305	310	325	75	155	8,5	45	2,4

ORION ITALIA Srl

Via G. Orsi 35, 29100 Piacenza [PC] - Italia

Phone: + 39 0523591161 - Fax: + 39 0523593898 - [www.orionitalia.com](http://www.orionitalia.com)



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Protection Relay