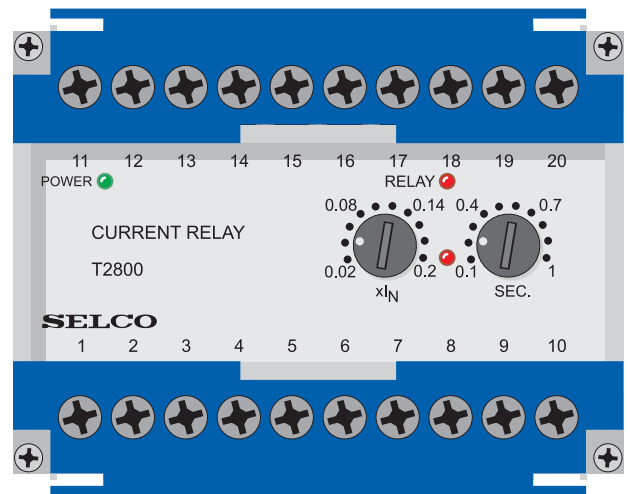


T2800 Overcurrent or Earth Fault Relay



- Protection of generators against earth faults or overcurrent
- Visual indication of power, pick-up and relay tripping
- Wide range of settings for current and delay, both in two steps.
- High precision digital countdown timer for delayed output
- Accepts high supply voltage variations: 60 - 110%
- Cost effective and highly reliable compact design
- 50 hours burn-in before final test
- Flame retardant enclosure



Application

The T2800 Overcurrent or Earth Fault Relay has a broad application as an earth fault or a single phase overcurrent detection relay. It has a wide setting range for protection, control and monitoring.

The T2800 is part of the SELCO T-Line series with modular units for protection, control and monitoring of generators.

Function

The T2800 detects the magnitude of the current and, if this exceeds the preset level (0.02 - 2 x IN), the pick-up LED will indicate and the delay timer will be started.

After the preset time (0.1 - 10 sec.) has expired the output relay and the corresponding LED will be activated, provided that the current level was exceeded for the entire delay time.

The T2800 has a normally energized output relay. The relay is a latching relay which can be reset or disabled.

Installation

terminals 1 and 3 or terminals 2 and 3, according to the supply source.

The T2800 is connected to the measuring current coming from the current transducer(s) secondary via terminals 5 and 6. See application diagram.

The latching of the output relays is reset or disabled by bridging terminals 15 and 16. The current setting range (0.02 - 0.2 x IN) is multiplied by 10 (0.2 - 2.0 x IN) by bridging terminals 18 and 19.

The delay setting range (0.1 - 1.0 sec.) is multiplied by 10 (1.0 - 10 sec.) by bridging terminals 12 and 13.

The current setting can be calculated according to the following example:

Overcurrent protection of a generator.
 Required trip level: 110%
 Generator rating: 695A
 Current transformer: 800/5A
 Setting: $110 \times 695 / 800 = 96\% = 0.96 \times I_N$

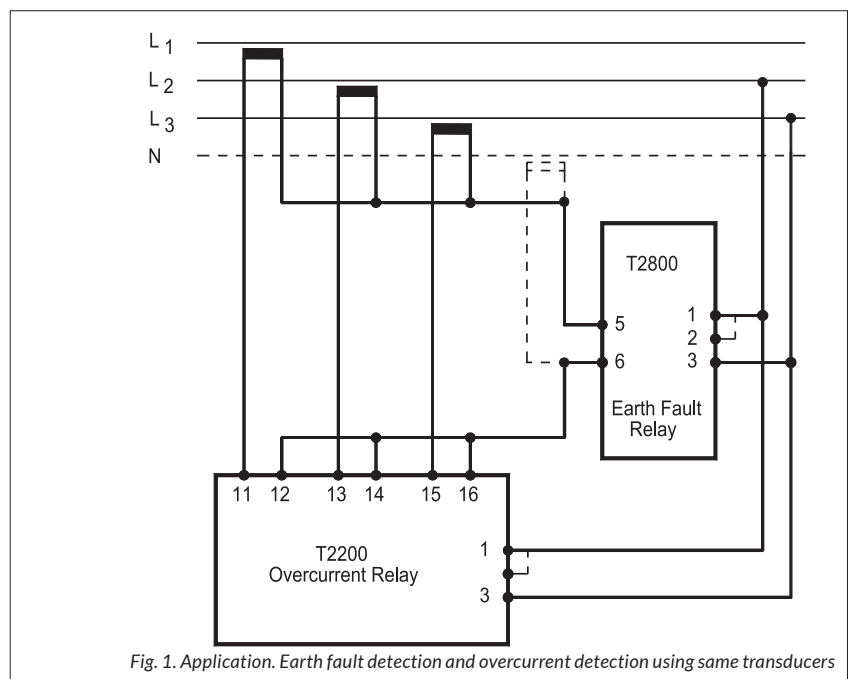


Fig. 1. Application. Earth fault detection and overcurrent detection using same transducers

Specifications

T2800 Overcurrent or Earth Fault Relay

| | |
|-----------------------|--|
| Trip level | 0.02 - 0.2 x I _N or 0.2 - 2 x I _N |
| Delay | 0.1 - 1.0 sec. or 1.0 - 10 sec. |
| Max. voltage | 660V |
| Voltage range | 60 - 110% |
| Consumption | Voltage 5VA at U _N Current 0.3VA at I _N |
| Continuous current | 2 x I _N |
| Frequency range | 45 - 400Hz |
| Output relay | Normally energized, latching, resetable |
| Contact rating | AC: 400V, 5A, 2000VA DC: 150V, 5A, 150W |
| Overall accuracy | ±5% |
| Repeatability | ±1% |
| Operating temperature | -20°C to +70°C |
| Dielectric test | 2500V, 50Hz |
| EMC | According to IEC/EN 61000-6-1/2/3/4 |
| Burn-in | 50 hours before final test |
| Enclosure material | Polycarbonate. Flame retardant |
| Weight | 0.5kg |
| Dimensions | 70 x 100 x 115mm (H x W x D) |
| Installation | 35mm DIN rail or 4mm (3/16") screws |

The specifications are subject to change without notice.

Type Selection Table

Standard types: I_N = 5A

| Type | Terminals | | |
|----------|-----------|------|----------------|
| | 1-3 | 2-3 | I _N |
| T2800-00 | 230V | | 5A |
| T2800-01 | 450V | 400V | 5A |
| T2800-02 | 127V | 120V | 5A |
| T2800-04 | 24V DC+AC | | 5A |
| T2800-05 | 480V | 415V | 5A |
| T2800-08 | 230V | | 1A |

Other combinations and voltages are available on request.

Approvals & Certificates

The T2800 has been approved by major marine classification societies.

For more information about the individual certificates, please visit selco.com

Troubleshooting

- 1) If the relay is not operating please check that the power LED is on, ensuring that the supply is present.
- 2) Measure the supply voltage which must be compatible with the information label on top of the enclosure.
- 3) Measure the current levels in terminals 5 and 6 and check that the current is above setting.

For example:

$$0.08 \times I_N = 0.4A; 1 \times I_N = 5A$$

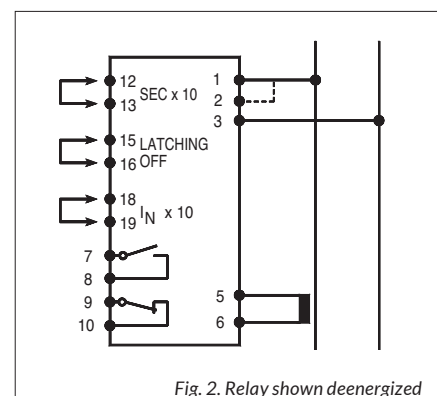


Fig. 2. Relay shown deenergized

