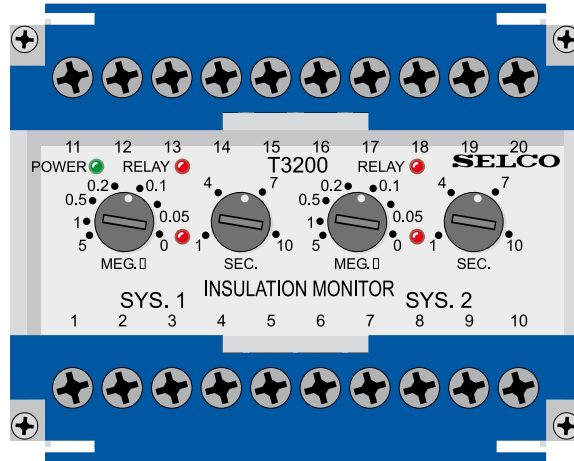


# T3200 Insulation Monitoring Relay

## Double Insulation Monitoring Relay

- Price competitive due to the combined functions
- Visual indication of power, pick-up and relay tripping on both relays
- High precision digital countdown timer for delayed output
- Cost effective and highly reliable compact design
- 50 hours burn-in before final test
- Operating temperature range: -20°C to +70°C
- Certified by major marine classification societies
- Flame retardant enclosure
- DIN rail or screw mounting



## Application

The T3200 Insulation Monitoring Relay is intended for continuous insulation monitoring on three-phased insulated networks on board ships.

The T3200 continuously monitors two systems, galvanically separated from each other, e.g. the busbar and the lighting system, or two busbar systems.

The unit features two output relays for alarm purposes and two analog outputs for instrument reading. Instruments are available from SELCO as standard sized switchboard instruments.

## Function

For each insulation system (I and II) the electronic measuring circuit will compare the measured insulation value to the preset value of the relay. An insulation drop to a value lower than the preset value will cause activation of the corresponding output relay resulting in alarm signals to be obtained between terminals 6 and 7 or 9 and 10 (system I or system II respectively).

Consequently, the output relays will be deactivated when the insulation values are satisfactory, while insulation values lower than the preset value will cause activation of the output relays. This means that power supply interruptions will not result in alarm signals as the output relays normally are deactivated.

The alarm signal can be delayed by means of a presetting function on the

front of the unit. In this way only continuous earth faults will cause alarm signals.

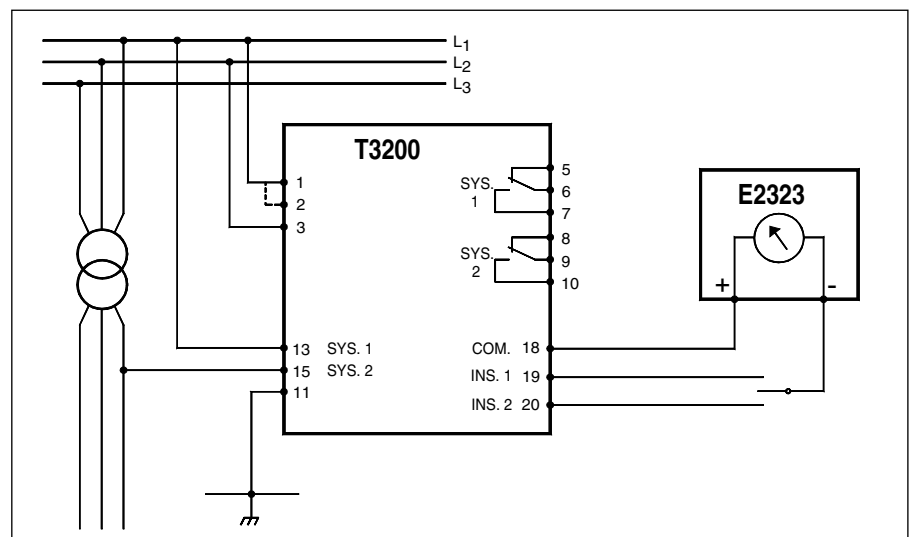
The instrument output has been adapted for connection of a megaohmmeter which indicates the actual insulation level, either by means of two instruments simultaneously indicating for both insulation systems (I and II), or by means of one instrument which can be connected to the two instrument outputs via a change-over switch. See connection diagram.

NOTE: The T3200 operates only on AC installations. Insulation faults in connection with thyristor controls and other semiconductor devices can cause errors in measurements.

## Installation

The measuring circuits for the two insulation systems I and II are connected to the network as shown on the connection diagram.

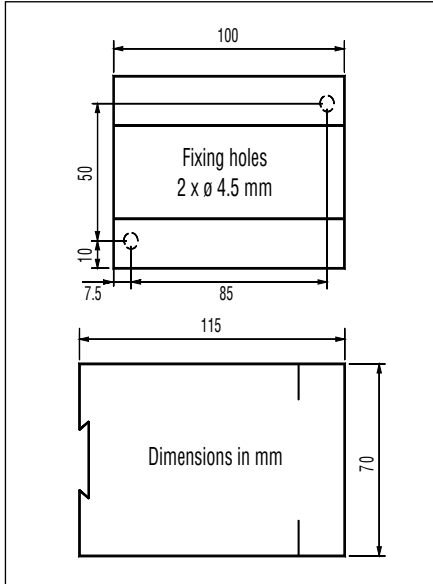
The supply voltage is connected to terminals 1-3 or 2-3 according to the supply source.



Connection Diagram.

# Specifications

## T3200 Insulation Monitoring Relay



Dimensions.

### Type Approvals and Certificates

The T3200 has been designed and tested for use in harsh environments. The unit is based on standard components, providing long term durability.

The T3200 carries the CE label and has been approved by the following marine classification societies:



Bureau Veritas  
Polish Register of Shipping  
Romanian Register of Shipping  
Russian Maritime Register of Shipping

|                              |  |
|------------------------------|--|
| <b>Insulation level</b>      | 0 - 5MΩ  |
| <b>Delay</b>                 | 1 - 10 sec.  |
| <b>Max. voltage</b>          | 660V   |
| <b>Voltage range</b>         | 80 - 110%  |
| <b>Consumption</b>           | Max. 2VA   |
| <b>Frequency range</b>       | 45 - 65Hz  |
| <b>Measuring voltage</b>     | 15V DC   |
| <b>Internal resistance</b>   | 200kΩ  |
| <b>Instrument output</b>     | 0 - 1mA  |
| <b>Instrument resistance</b> | Max. 100Ω  |
| <b>Output relays</b>         | Normally de-energized                                      |
| <b>Contact ratings</b>       | AC: 400V, 2A, 250VA<br>DC: 110V, 2A, 100W                  |
| <b>Overall accuracy</b>      | ±5% of preset value  |
| <b>Operating temperature</b> | -20°C to +70°C   |
| <b>Dielectric test</b>       | 2500V, 50Hz  |
| <b>EMC</b>                   | CE according to EN50081-1, EN50082-1, EN50081-2, EN50082-2 |
| <b>Approvals</b>             | Certified by major marine classification societies         |
| <b>Burn-in</b>               | 50 hours before final test                                 |
| <b>Enclosure material</b>    | Polycarbonate. Flame retardant                             |
| <b>Weight</b>                | 0.5kg  |
| <b>Dimensions</b>            | 70 x 100 x 115mm (H x W x D)                               |
| <b>Installation</b>          | 35mm DIN rail or 4mm (3/16") screws                        |

The specifications are subject to change without notice.

### Type Selection Table

| Type       | Terminals |      | Function                 |
|------------|-----------|------|--------------------------|
|            | 1-3       | 2-3  |                          |
| T3200.0010 | 230V      |      |                          |
| T3200.0020 | 450V      | 400V |                          |
| T3200.0030 | 480V      | 415V |                          |
| T3200.0040 | 24V DC    |      | With 24V DC/DC converter |
| T3200.0050 | 110V      | 100V |                          |
| T3200.0060 | 127V      | 120V |                          |

Other voltages are available on request.

### Accessories

|                         | Dimensions | Weight |
|-------------------------|------------|--------|
| E2323.0010 Megaohmmeter | 96x96mm    | 0.5kg  |
| E2324.0010 Kiloohmmeter | 96x96mm    | 0.5kg  |
| E2333.0010 Megaohmmeter | 144x144mm  | 0.8kg  |

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