

T3000 Frequency Relay

Combined Over Frequency and Under Frequency 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
- Accepts high supply voltage variations: 70 - 110%
- 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

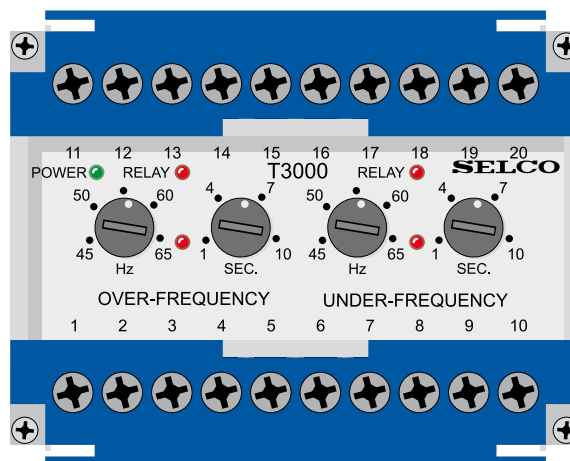
Application

The T3000 Frequency Relay is intended for effective frequency monitoring on generators, busbars or other distribution systems.

The T3000 is part of the SELCO T-Line series with modular units for protection, control and monitoring of generators, both in marine and land-based applications. The T3000 is type approved by major marine classification societies.

Function

The T3000 consists of two circuit parts fundamentally alike, one circuit part for over frequency and one for under fre-



quency monitoring. Each circuit part has been provided with continuous variable presetting knobs and adjustable time delayed output relays.

The output relays are normally energized output relays. The output relay for under frequency is activated at frequencies higher than the preset value, while the output relay for over frequency is activated at frequencies lower than the preset value. This means that both output relays are activated at frequencies within the interval between the under and over frequency scale range.

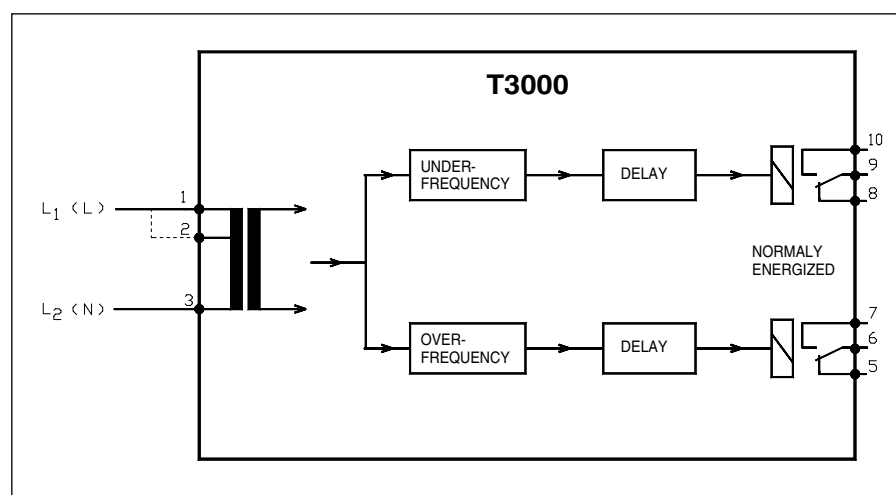
One LED is illuminated at under frequency and another at over frequency pick-up level. Also, two LEDs

will illuminate when the respective output relays are deactivated. The green power LED illuminates when the T3000 Frequency Relay is on power.

The connection diagram shows the system de-energized.

Installation

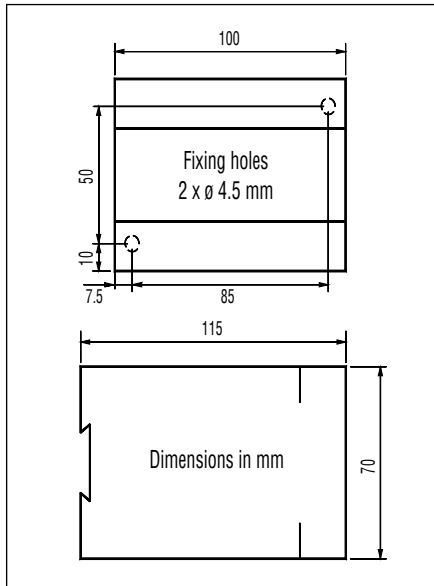
The supply voltage is connected to terminals 1 and 3 or 2 and 3 according to the supply source. The frequency detection is done through the supply source. Connections are made as shown in the diagram.



Connection Diagram. Relay shown de-energized.

Specifications

T3000 Frequency Relay



Dimensions.

Type Approvals and Certificates

The T3000 has been designed and tested for use in harsh environments. The unit is based on standard components, providing long term durability.

The T3000 carries the CE label and has been approved by the following marine classification societies:



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

Over frequency level	45 - 65Hz
Delay	1 - 10 sec.
Under frequency level	45 - 65Hz
Delay	1 - 10 sec.
Max. voltage	660V
Voltage range	70 - 110%
Consumption	5VA at U_N
Frequency range	40 - 70Hz
Output relays	Normally energized
Contact ratings	AC: 250V, 2A, 250VA DC: 60V, 2A, 100W
Overall accuracy	±3% of highest value
Repeatability	±1%
Operating temperature	-20°C to +70°C
Dielectric test	2500V, 50Hz
EMC	CE according to EN50081-1, EN50082-1, EN50081-2, EN50082-2
Approvals	Certified by major marine classification societies
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

Type	Terminal	
	1 - 3	2 - 3
T3000.0010	230V	
T3000.0020	450V	400V
T3000.0030	110V	100V
T3000.0040	480V	415V
T3000.0050	127V	120V

Other voltages are available on request.

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