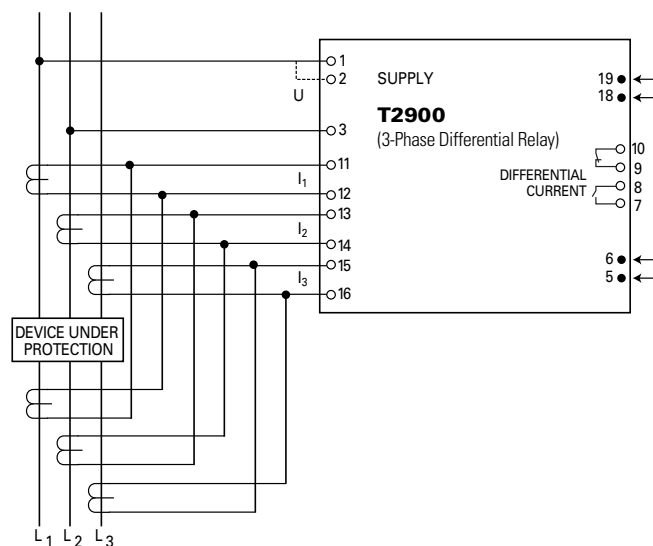


## T2900 SERIES

### 3-Phase Differential Relay



### Simplified Circuit Diagram



Bridge between terminals 5 and 6 results in latching relay.  
Bridge between terminals 18 and 19 reduces time delay to 0.1-1 sec.

### Ordering Information

ORDERING NUMBER	TERMINALS		$I_N$
	1-3	2-3	
T2900.0010	450 V	400 V	5 A
T2900.0020	230 V		5 A
T2900.0030	480 V	415 V	5 A
T2900.0040	110 V	100 V	5 A

Standard types:  $I_N = 5$  A and output relay normally de-energized.  
Other combinations and voltages are available on request.

### Description

The T2900 3-Phase Differential Relay is designed for monitoring current leakage in generators. The T2900 measures the differential current of each of the 3 phases. The differential currents are measured by connecting a current transformer for each winding in parallel with inverse polarity. The highest of the 3 currents is selected and, if it exceeds the preset level ( $0.04-0.4 \times I_N$ ), the pick-up LED will indicate this and the delay timer will be started. After the preset time 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 time delay can be adjusted between 1-10 sec. This time delay can be reduced by a factor 10 by bridging terminals 18 and 19.

### Features & Benefits

FEATURES	BENEFITS
<b>Accepts high supply voltage variation</b>	Ensures correct operation in spite of voltage supply fluctuations (fulfills marine class requirement)
<b>Visual indication of power, pick-up, and output trip</b>	Provides quick and concise status information
<b>Direct line-line or line-neutral voltage supply (up to 690 Vac)</b>	Simplifies design and installation. No need for PTs.
<b>Built-in capacitor back-up supply</b>	Ensures correct operation in spite of drop in the supply voltage
<b>Galvanic isolated inputs</b>	Protects the unit against high AC voltage and currents from the installation including spikes
<b>DIN-rail or screw-mount &amp; adjustment by potentiometers</b>	Easy installation

### Specifications

<b>Trip Level</b>	$0.04-0.4 \times I_N$
<b>Delay</b>	1-10 sec. (0.1-1 sec. when bridging terminals 18 and 19)
<b>Max. Voltage</b>	660 V
<b>Voltage Range</b>	60-110%
<b>Consumption</b>	Voltage 5 VA at $U_N$ Current 0.3 VA at $I_N$
<b>Continuous Current</b>	$2 \times I_N$
<b>Frequency Range</b>	45-400 Hz
<b>Output Relay</b>	Normally de-energized, latching, resettable
<b>Contact Rating</b>	AC: 400 V, 5 A, 2000 VA DC: 150 V, 5 A, 150 W
<b>Overall Accuracy</b>	$\pm 5\%$
<b>Repeatability</b>	$\pm 1\%$
<b>Operating Temperature</b>	$-20^\circ\text{C}$ to $+70^\circ\text{C}$
<b>Dielectric Test</b>	2500 V, 50 Hz
<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>	0.5 kg
<b>Dimensions</b>	H 70 mm (2.76"); W 100 mm (3.94"); D 115 mm (4.52")
<b>Installation</b>	35 mm DIN rail or 4 mm ( $3/16$ ") screws

# Mouser Electronics

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