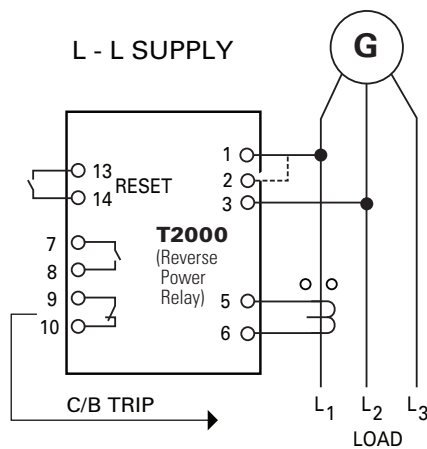


# T2000 SERIES

## Reverse Power Relay



### Simplified Circuit Diagram



### Description

Under parallel operation, the T2000 Reverse Power Relay will protect the generator from being run as an electric motor. The T2000 will protect the prime mover of the generator against physical damage, but will also protect the parallel running generators from overload caused by the inversed load shift in a reverse power situation.

The T2000 calculates  $I \times \cos F$ , representing the active power. If the active power becomes negative and exceeds the preset level (2-20%), the pick-up LED will indicate this and the delay timer will be started. After the preset time (2-20 sec.) has expired, the output relay and LED will be activated, provided that the reverse power level was exceeded for the entire delay time.

### 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 or separate power supply
<b>Available with instant output trip</b>	Enables alternative use for detection of current direction
<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

### Ordering Information

ORDERING NUMBER	TERMINALS		I <sub>N</sub>	SUPPLY	FUNCTION
	1-3	2-3			
T2000.0010	230 V		5 A	L-N	
T2000.0020	450 V	400 V	5 A	L-L	
T2000.0030	127 V	120 V	5 A	L-N	
T2000.0040	110 V	100 V	5 A	L-L	
T2000.0050	110 V	100 V	5 A	L-L	No time delay
T2000.0060	230 V		1 A	L-N	
T2000.0070	660 V		5 A	L-L	
T2000.0080	450 V	400 V	5 A	L-N	Delay 0.2 - 2.0 sec.
T2000.0090	127 V	120 V	5 A	L-L	
T2000.0100	110 V	100 V	1 A	L-L	
T2000.0110	450 V	400 V	5 A	L-L	No time delay
T2000.0120	480 V	415 V	5 A	L-L	
T2000.0130	230 V		5 A	L-N	No time delay
T2000.0140	230 V		5 A	L-L	
T2000.0150	480 V	415 V	1 A	L-L	
T2000.0160	450 V	400 V	1 A	L-L	

Other supply voltages and combinations are available on request.

### Specifications

<b>Trip Level</b>	2-20% I <sub>N</sub>
<b>Delay</b>	2-20 sec.
<b>Max. Voltage</b>	660 V
<b>Voltage Range</b>	50-110%
<b>Consumption</b>	5 VA at U <sub>N</sub>
<b>Continuous Current</b>	2 x I <sub>N</sub>
<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, 1250 VA DC: 150 V, 5 A, 120 W
<b>Overall Accuracy</b>	±5%
<b>Repeatability</b>	±1%
<b>Operating Temperature</b>	-20°C to +70°C
<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>	<b>H</b> 70 mm (2.76"); <b>W</b> 100 mm (3.94"); <b>D</b> 115 mm (4.52")
<b>Installation</b>	35 mm DIN rail or 4 mm (3/16") screws