T5000 SERIES

Paralleling Relay

Description

The T5000 Paralleling Relay is a check synchronizer, inhibiting closure of circuit breaker if synchronizing parameters such as voltage, frequency and phase angle are outside limits, thus preventing generator damage and disturbance to the busbar.

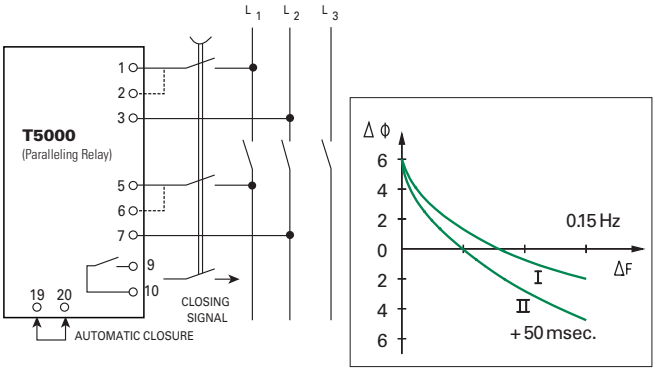
The T5000 can also be used as synchronizing aid for manual or automatic synchronization where voltage and frequency are adjusted by the operator to roughly the values required, and the unit will provide a closing signal to the circuit breaker at phase accordance.

Automatic closure
In order to use the T5000 with automatic closure, terminals 19 and 20 should be interconnected, and the T5000 will now operate as illustrated in graph at left.

Line I shows the closing signal directly from the T5000.

Line II shows the main contact closure with an additional circuit breaker operation time of 50 msec.

Simplified Circuit Diagram



Features & Benefits

FEATURES	BENEFITS
Visual indication of voltage and closing signal	Provides quick and concise status information
Adjustable combined setting, %U, of synchronizing window (delta frequency, delta voltage, delta phase)	Facilitates adjustment during installation and commissioning
Automatic closure function	Enables use with fast reacting circuit breakers
Galvanic isolated inputs	Protects the unit against high AC voltage and currents from the installation including spikes
DIN rail or screw-mount	Easy installation
N-G continuity alarm	Monitors neutral-to-ground integrity and alarms if ground path becomes open circuit
Passive filtering	Eliminates nuisance tripping

Ordering Information

ORDERING NUMBER	TERMINALS 1-1 5-7	TERMINALS 1-3 6-7	FUNCTION
T5000.0010	450 V	400 V	
T5000.0020	230 V		
T5000.0030	480 V	415 V	
T5000.0040	110 V	100 V	
T5000.0050	127 V	120 V	
T5000.0060	480 V	415 V	Δϕ=9-13.5°, ΔF=0.2-0.3 Hz
T5000.0070	450 V	400 V	ΔU=15-20%, Δϕ=9-13.5°, ΔF=0.2-0.3 Hz
T5000.0080	110 V	100 V	ΔU=15-20%, Δϕ=9-13.5°, ΔF=0.2-0.3n Hz
T5000.0090	450 V	400 V	Δϕ=9-13.5°, ΔF=0.2-0.3 Hz
T5000.0100	660 V		

Other supply voltages, nominal currents and combinations are available on request.

Specifications

Max. Voltage	660 V
Voltage Range	70-110%
Consumption	2 x 5 VA max.
Frequency Range	45-65 Hz
Voltage Difference	10-15% } Combined setting
Frequency Difference	0.15 - 0.225 Hz
Phase Difference	6-9°
Contact rating	AC: 400 V, 5 A, 1250 VA; DC: 150 V, 5 A, 120 W
Operating Temperature	–20°C to +70°C
Dielectric Test	2500 V, 50 Hz
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	0.7 kg
Dimensions	**H** 70 mm (2.7"); **W** 100 mm (3.9"); **D** 115 mm (4.5")
Installation	35 mm DIN rail or 4 mm (3/16") screws

© 2014 Littelfuse Protection Relays & Controls

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Littelfuse:

T5000.0030 T5000.0040 T5000.0080 T5000.0020 T5000.0070 T5000.0010