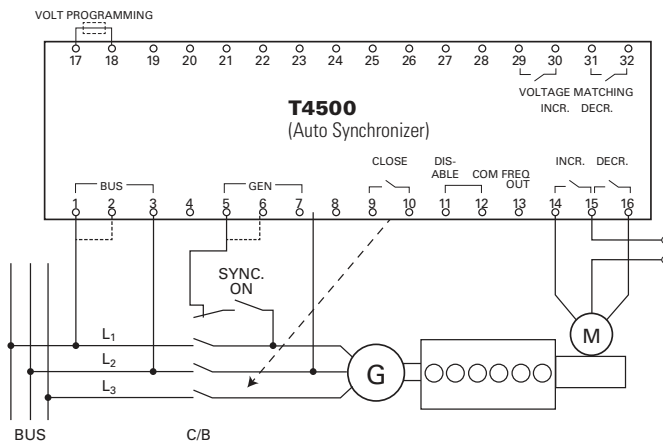


T4500 SERIES

Auto Synchronizer for Conventional Governors



Simplified Circuit Diagram



Ordering Information

ORDERING NUMBER	TERMINALS	
	1-3 5-7	2-3 6-7
T4500.0010	450 V	400 V
T4500.0020	230 V	
T4500.0030	480 V	415 V
T4500.0040	110 V	63 V
T4500.0050	127 V	120 V
T4500.0060	110 V	100 V
T4500.0070	600 V	

Other supply voltages and combinations are available on request.

Description

The T4500 Auto Synchronizer provides automatic synchronization of a generator to a busbar in a minimum of time, by controlling the speed via the electric servomotor on a conventional speed governor, or by controlling an electronic speed controller via an intermediate motorized potentiometer. A unique feature of the T4500 is the possibility of simultaneous synchronization of already parallel running generators to another busbar section, a shaft generator or the grid. The T4500 includes outputs for controlling the Automatic Voltage Regulator (AVR) as well. When used, T4500 will not only control the speed of the generator, but also the alternator voltage (Voltage Matching).

Features & Benefits

FEATURES	BENEFITS
Adjustable delta frequency, synchronizing window (delta voltage), & breaker make time by front panel potentiometers & terminal bridging resistors	Facilitates adjustment during installation and commissioning
Inputs for disabling internal frequency control	Enables synchronization to external frequency set-point from other busbar sections, shaft generators or the main grid (grid-parallel operation)
Automatic voltage matching	Enables use in installations with fluctuating system voltage
Visual indication of bus, generator, & delta voltage, closing signal, & speed & voltage increase/decrease signals	Provides quick and concise status information
Direct line-line voltage Supply (up to 690 Vac)	Simplifies design and installation. No need for PTs or separate power supply
Galvanic isolated inputs	Protects the unit against high AC voltage and currents from the installation including spikes
DIN rail or screw-mount	Easy installation

Specifications

Max. Voltage	660 V
Voltage Range	70-110%
Consumption	4 VA at U_N
Frequency Range	35-70 Hz
Frequency Difference	0.1-1.0 Hz
C/B Make Time	20-200 ms
Voltage Difference	2-10%
Contact Rating	AC: 400 V, 2 A, 250 VA; DC: 110 V, 2 A, 100 W
Operating Temperature	-20°C to +70°C
Vibration Test	4 g (500-100 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 150 mm (5.9"); D 115 mm (4.5")
Installation	35 mm DIN rail or 4 mm (3/16") screws