



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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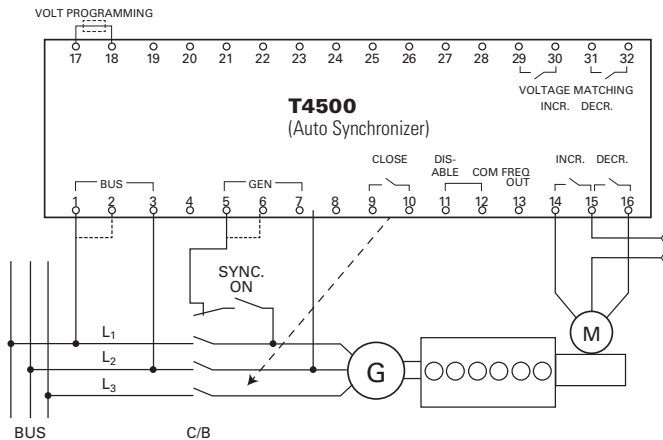


# T4500 SERIES

## 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
<b>Adjustable delta frequency, synchronizing window (delta voltage), &amp; breaker make time by front panel potentiometers &amp; terminal bridging resistors</b>	Facilitates adjustment during installation and commissioning
<b>Inputs for disabling internal frequency control</b>	Enables synchronization to external frequency set-point from other busbar sections, shaft generators or the main grid (grid-parallel operation)
<b>Automatic voltage matching</b>	Enables use in installations with fluctuating system voltage
<b>Visual indication of bus, generator, &amp; delta voltage, closing signal, &amp; speed &amp; voltage increase/decrease signals</b>	Provides quick and concise status information
<b>Direct line-line voltage Supply (up to 690 Vac)</b>	Simplifies design and installation. No need for PTs or separate power supply
<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</b>	Easy installation

### Specifications

<b>Max. Voltage</b>	660 V
<b>Voltage Range</b>	70-110%
<b>Consumption</b>	4 VA at $U_N$
<b>Frequency Range</b>	35-70 Hz
<b>Frequency Difference</b>	0.1-1.0 Hz
<b>C/B Make Time</b>	20-200 ms
<b>Voltage Difference</b>	2-10%
<b>Contact Rating</b>	AC: 400 V, 2 A, 250 VA; DC: 110 V, 2 A, 100 W
<b>Operating Temperature</b>	-20°C to +70°C
<b>Vibration Test</b>	4 g (500-100 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>	0.7 kg
<b>Dimensions</b>	<b>H</b> 70 mm (2.7"); <b>W</b> 150 mm (5.9"); <b>D</b> 115 mm (4.5")
<b>Installation</b>	35 mm DIN rail or 4 mm (3/16") screws