

B9500 Master Time Controller

- Accurate clock adjustments in generator control systems
- Quartz crystal based
- Knob for manual control
- Visual indication of time correction and time error
- 50 hours burn-in before final test

Application

The Master Time Controller B9500 is used to ensure that electrical clocks, working on the system frequency in electrical generator installations, are running precisely.

The B9500 Master Time Controller is used as a complementary unit to SELCO's T4800 Load Sharers which in addition to the load sharing functions also perform frequency control. Only one B9500 Master Time Controller is necessary for an installation consisting of several generators.

Function

The B9500 Master Time Controller will compare the generator frequency with a stable quartz crystal oscillator and deviations are corrected through the T4800 Load Sharer. The frequency control in the Load Sharer is disabled, thus the control of the frequency is taken care of by the Master Time Controller. Integration of periods from the generator and the oscillator respectively takes place, and if the difference deviates more than 1.3 sec. (64 periods at 50 Hz) a small correction of the frequency (0.5 Hz) takes place until the time deviation is zero.

Installation

See application diagram for connection of the B9500 Master Time Controller to the T4800 Load Sharer.

All terminals 9 (FREQ. IN) on all the Load Sharers are interconnected and terminated to terminal 4 of the Master Time Controller. This terminal supplies the frequency control signal to the Load Sharers.

Likewise all terminals 12 (COM) on all Load Sharers are interconnected and terminated to terminal 5 of the Master Time Controller. Terminal 5 is the common connection terminal.



On all Load Sharers terminals 8 (FREQ. OUT) and 12 (COM) are to be interconnected, hereby disabling the internal frequency reference in the Load Sharers.

In order to make the system work, start by activating the contact "RESET" on the front, causing the time measuring to start and any time differences to be neglected.

On the front of the Master Time Controller are 2 LEDs labelled "+ +" and "- -". If one of these LEDs is activated, it indicates that a time difference of more than approximately 9 seconds has arisen e.g. due to a power disconnection. To restart the function, it is necessary to press

"RESET". Two other LEDs labelled "+" and "-" indicate that the time correction function is active.

If the internal clock is not running correctly, the knob on the front can be used for adjustment. Turning +45° gives approx. +16 sec./week and turning -45° gives approx. -8 sec./week. Please observe that time differences below ± 1.3 sec. are within the limit where no correction takes place, and the first 1.3 sec. time error must not be considered when making error calculation.

On the rear of the unit is a switch, on which the system frequency 50Hz or 60Hz can be selected.

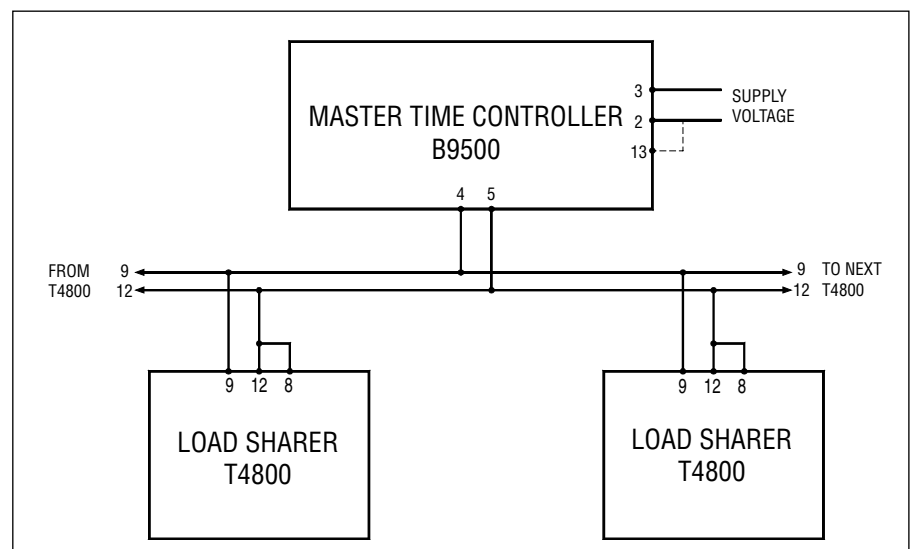


Fig. 1. Application Diagram.

Specifications

B9500 Master Time Controller

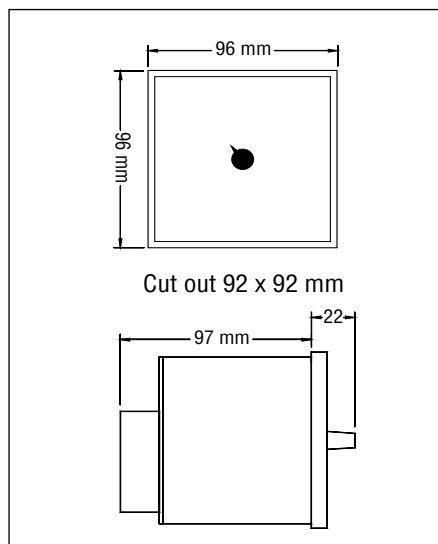


Fig. 2. Dimensions.

Voltage range	80 - 110%
Consumption	5 VA at U_N
Frequency range	45 - 65 Hz
Accuracy	1 sec. / week \pm 1.3 sec. (adjustment knob in pos. 0)
Time difference before correction	50Hz: 1.28 sec. 60Hz: 1.06 sec.
Max. time difference for correction	50Hz: 9.10 sec. 60Hz: 7.58 sec.
Frequency deviation at time correction	\pm 0.5Hz
Max. number of T4800s connected	20 units
Output voltage	\pm 6V
Operating temperature	-5°C to +65°C
Burn-in	50 hours before final test
Enclosure material	Fibre glass, reinforced NORYL
Weight	0.45kg
Dimensions	96 x 96 x 82.5mm (H x W x D)
Panel cut out	92 x 92mm (H x W)

The specifications are subject to change without notice.

SELCO Worldwide



Type Selection Table

Type	Terminal	Terminal
	1-3	2-3
B9500.0010	230 V	
B9500.0020	127 V	120 V

Other voltages and combinations are available on request.

Main office:
 SELCO A/S
 Betonvej 10
 DK-4000 Roskilde
 Denmark
 Phone: + 45 7026 1122
 Fax: + 45 7026 2522
 e-mail: selco.dk@selco.com
 www.selco.com