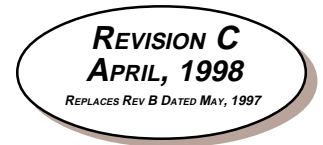




INSTALLATION INSTRUCTIONS

TIME RANGER™ MULTI-RANGE PLUG-IN TIME DELAY RELAYS AND STANDARD PLUG-IN TIME DELAY RELAYS



901-0000-051

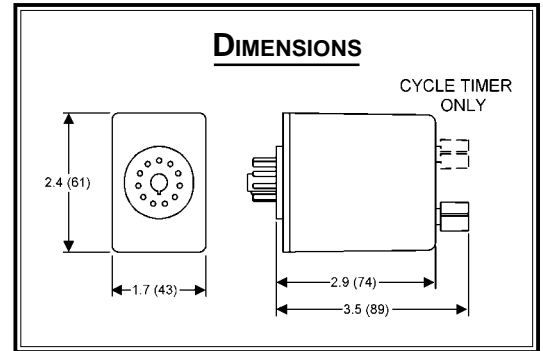
**READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE.
KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

SPECIFICATIONS _____	Input Voltage:	See Product Nameplate. AC: +10/-15% @ 50/60 Hz. DC: +10/-15%.
	Output Contact Rating:	10A Resistive @ 240VAC 10A Resistive @ 30VDC 1/3 HP @ 240VAC
	Temperature Range:	-28° to 65°C (-20° to 150° F)

SOCKETS

AND ACCESSORIES _____

Description	Product Number
8 Pin Octal Socket	70169-D
11 Pin Octal Socket	70170-D
DIN Mounting Track	70100
End Clamp	70200



INSTALLATION _____

Mount the appropriate 8 or 11 pin octal socket in a suitable enclosure. Set the time delay as described below. Wire the socket per the diagrams on back of this sheet or on the side of the timer. Plug unit into socket.

SETTING THE TIME DELAY _____

SS-602	SS-617	}
SS-605	SS-618	
SS-613	SS-619	
SS-614	SS-631	
SS-615	SS-651	
SS-616	SS-661	

These products come with 16 built-in time ranges in one unit. First determine the desired time range from the Timing Range Chart located on the wide side of the case. Then position the 4 switches on the top of the unit as indicated by the arrows on the Timing Range Chart. **Do not change the setting of these switches with power applied to the unit.** As a reference, the numbers 1-2-3-4 in the first row of the Timing Range Chart correspond to the numbers 1-2-3-4 on the top of the unit above the 4 switches. The up or down settings of these switches correspond to the up or down arrows under the numbers on the Timing Range Chart. Insure switches are positioned to the extreme of their travel. Finally, adjust the time delay within the programmed time range by using the knob located on the top of the unit. Note that the tick marks are for reference only.

SS-502	SS-517	}
SS-505	SS-518	
SS-513	SS-519	
SS-514	SS-531	
SS-515	SS-551	
SS-516	SS-561	

These products come with a specific time delay range as indicated on the nameplate and by the suffix to the Product Number. Adjust the time delay within the specific time range by using the knob located on the top of the unit. Note that the tick marks are for reference only.

TROUBLESHOOTING _____

If the unit fails to operate properly, check that all connections are correct per the diagrams on back. If problems continue, contact Macromatic at 800-238-7474 for assistance.

WARRANTY _____

All products manufactured by Macromatic are warranted to be free from defects in workmanship or material under normal service and use for a period of eighteen (18) months from date of manufacture; or for a period of twelve (12) months from date of purchase by the user, whichever period expires first. A complete description of the Macromatic warranty can be found in our latest Catalog.

WARNING

Potentially hazardous voltages are present. Turn off all power supplying this equipment before connecting or disconnecting wiring.

INSTALLATION INSTRUCTIONS

TIME RANGER™ MULTI-RANGE PLUG-IN TIME DELAY RELAYS AND STANDARD PLUG-IN TIME DELAY RELAYS

FUNCTION	WIRING/SOCKET	PRODUCT	OPERATION	TIMING CHART
ON DELAY	Standard (Diagram 1)	SS-602 SS-502	Upon application of control power, the preset time begins. At the end of the preset time, the relay contacts transfer. Control power must be removed and reapplied to reset the time delay relay.	
INTERVAL ON	Standard (Diagram 1)	SS-605 SS-505	Upon application of control power, the relay contacts transfer and the preset time begins. At the end of the preset time, the contacts return to their normal condition. Control power must be removed and reapplied to reset the time delay relay.	
SINGLE SHOT	5-6 Triggered * (Diagram 2) Power Triggered * (Diagram 4)	SS-615 SS-515 SS-617 SS-517	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon closure of control switch, the relay contacts transfer and the preset time begins. During time-out, the trigger input is ignored. The time delay relay is reset by applying the trigger when the relay is not energized.	
OFF DELAY	5-6 Triggered * (Diagram 2) 7-10 Triggered * (Diagram 3) Power Triggered * (Diagram 4)	SS-616 SS-516 SS-614 SS-514 SS-619 SS-519	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon closure of the control switch, the relay contacts transfer and hold. Upon release of the control switch, the preset time begins. At the end of the preset time, the relay contacts return to their normal condition. Any application of the control switch will reset the time.	
WATCHDOG	Power Triggered * (Diagram 4) 5-6 Triggered * (Diagram 2)	SS-618 SS-518 SS-613 SS-513	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon application of the trigger, the relay contacts transfer and the preset time begins. At the end of the preset time, the relay contacts return to their normal condition unless the trigger is opened and closed prior to time out (before preset time elapses). Continuous cycling of the trigger at a rate faster than the preset time will cause the relay contacts to remain closed.	
REPEAT CYCLE Off / On Delay	Standard (Diagram 1)	SS-631 SS-531	Upon application of control power, a preset delay begins. At the end of the preset delay, the relay contacts transfer and remain in that condition for a second, independently adjustable preset time. At the end of this time, the relay contacts drop out and the sequence repeats until power is removed.	
REPEAT CYCLE On / Off Delay	Standard (Diagram 1)	SS-651 SS-551	Upon application of control power, the relay contacts transfer and a preset delay begins. At the end of the preset delay, the relay contacts drop out and remain in that condition for a second, independently adjustable preset time. At the end of this time, the relay contacts pull in and the sequence repeats until power is removed.	
DELAYED INTERVAL Single Cycle	Standard (Diagram 1)	SS-661 SS-561	Upon application of control power, a preset delay begins. At the end of the preset delay, the relay contacts transfer and remain in that condition for a second, independently adjustable preset time. At the end of this time, the contacts drop out and the sequence stops. Power must be removed and re-applied to reset the time delay relay.	

* **NOTE:** On 5-6 and 7-10 Triggered units, the Control Switch is a dry-type contact. On the Power Triggered units, the Control Switch is the application of voltage with a value equal to the Input Voltage.

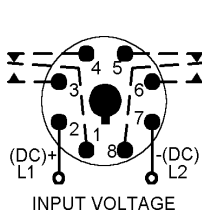


DIAGRAM 1

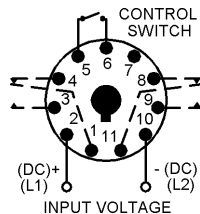


DIAGRAM 2

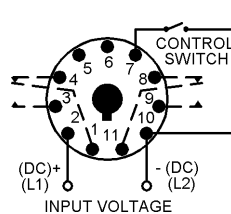


DIAGRAM 3

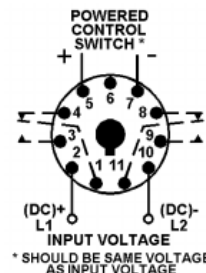


DIAGRAM 4

* SHOULD BE SAME VOLTAGE AS INPUT VOLTAGE