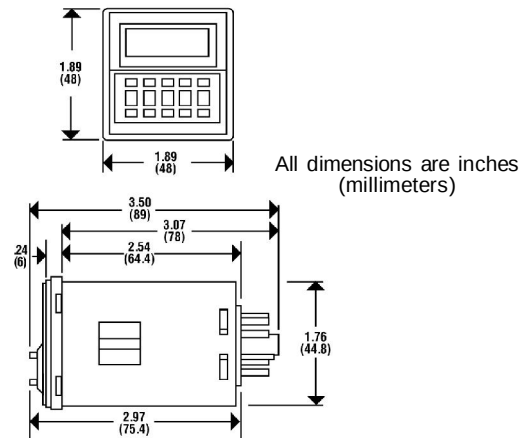


TIME DELAY RELAYS

Time Ranger™ III
Digital-Set
Multi-Function
Multi-Range



- u 8 field-selectable functions in one unit
- u Push-button thumbwheels for digital-setting of time delay
- u Universal AC/DC input voltage
- u LCD display
- u 0.1 Second to 9,990 Hours programmable timing range
- u Panel, track or surface mounting
- u 1/16 DIN style case
- u 3A SPDT output contacts



FUNCTION	INPUT VOLTAGE	PRODUCT NUMBER	WIRING/SOCKETS _n
8 FIELD-SELECTABLE FUNCTIONS u	24-240V AC 50/60Hz & 12-240V DC	9816U1	SEE DIAGRAMS ON PAGE 49 11 Pin Octal

u Functions Include: On Delay, Flasher, Interval/Off Delay, Off Delay (2 Versions), Interval, Delayed Interval and On Delay/Off Delay (see Page 49 for Further Details)

n See below for **Sockets & Accessories**.

Application Data

Voltage Tolerance:
±10% of rated voltage.

Load (Burden):
Less than 3 VA

Repeat Accuracy:
±0.3%, ±0.05 seconds (includes variation due to voltage and temperature changes).

Setting Accuracy:
±0.5%, ±0.05 seconds maximum.

Recycle Time:
0.5 seconds maximum.

Temperature:
-10° to 55°C (14° to 131°F)

Output Contacts:
SPDT 3A Resistive @ 250V AC
SPDT 5A Resistive @ 28V DC

Life:
Mechanical: 10,000,000 operations
Full Load: 100,000 operations

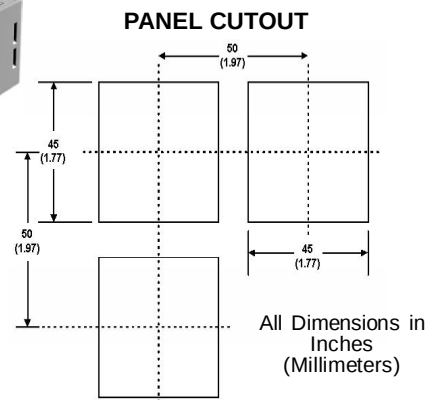
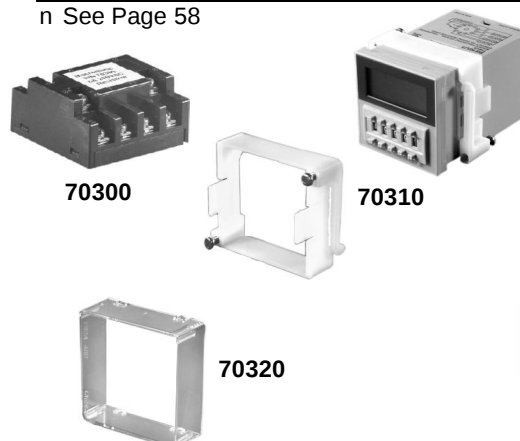
Approvals:



Sockets & Accessories

DESCRIPTION	PRODUCT NUMBER
11 Pin Octal Socket (Surface or Track Mounting)	70170-Dn
11 Pin Octal Socket (Back Mounting)	70300
Panel Mounting Adaptor	70310
Protective Cover	70320

n See Page 58



800-238-7474

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whats-up@macromatic.com

TIME DELAY RELAYS

Time Ranger™ III Digital-Set Multi-Function Multi-Range

FUNCTION		OPERATION	TIMING CHART
MODE A On-Delay	Standard (Diagram 7)	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.	
	Triggered (Diagram 9)	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon closure of the Start switch, the preset time begins. At the end of the preset time, the relay contacts transfer. Any closure of the Start switch is ignored until reset. The time delay relay is reset by closing the Reset switch or removing the control power.	
MODE B Flasher	Standard (Diagram 7)	Upon application of control power, the preset time begins. At the end of the preset time, the relay contacts transfer and remain in that condition for the preset time. At the end of this time, the relay contacts return to their normal condition and the sequence repeats until control power is removed.	
	Triggered (Diagram 9)	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon closure of the Start switch, the preset time begins. At the end of the preset time, the relay contacts transfer and remain in that condition for the preset time. At the end of this time, the relay contacts return to their normal condition and the sequence repeats until the Reset switch is closed or control power is removed.	
MODE C Interval/Off-Delay	(Diagram 8)	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon closure or opening of the Start switch, the relay contacts transfer and the preset time begins. At the end of the preset time, the relay contacts return to their normal condition. Any closure or opening of the Start switch during timing causes the time to reset.	
MODE D Off-Delay (I)	(Diagram 8)	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon closure of the Start switch, the relay contacts transfer and hold. Upon release of the Start switch, the preset time begins. At the end of the preset time, the relay contacts return to their normal condition. Any application of the Start switch will reset the time.	
MODE E Interval	Standard (Diagram 7)	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.	
	Triggered (Diagram 9)	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon closure of the Start switch, the relay contacts transfer and the preset time begins. At the end of the preset time, the contacts return to their normal condition. Any closure of the Start switch is ignored until reset. The time delay relay is reset by closing the Reset switch or removing the control power.	
MODE F Delayed Interval	Standard (Diagram 7)	Upon application of control power, the preset time begins. At the end of the preset time, the relay contacts transfer and remain in that condition for the preset time. At the end of this time, the relay contacts return to their normal condition and the sequence stops. Power must be removed and reapplied to reset the time delay relay.	
	Triggered (Diagram 9)	Upon application of control power, the time delay relay is ready to accept trigger signals. At the end of the preset time, the relay contacts transfer and remain in that condition for the preset time. At the end of this time, the relay contacts return to their normal condition and the sequence stops. Power must be removed and reapplied to reset the time delay relay.	
MODE G On-Delay/Off-Delay	(Diagram 8)	Upon application of control power, the time delay relay is ready to accept trigger signals. Upon closure of the Start switch, the preset time begins. At the end of the preset time, the relay contacts will transfer. Upon opening of the Start switch, the preset time begins. At the end of the preset time, the output contacts return to their normal condition.	
MODE H Off-Delay (II)	(Diagram 8)	Upon application of control power, the time delay relay is ready to accept trigger signals. Closure of the Start switch is ignored. Upon release of the Start switch, the relay contacts transfer and the preset time begins. At the end of the preset time, the relay contacts return to their normal condition. Opening the Start switch during timing resets the time.	

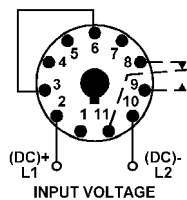


DIAGRAM 7

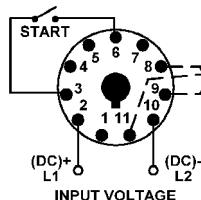


DIAGRAM 8

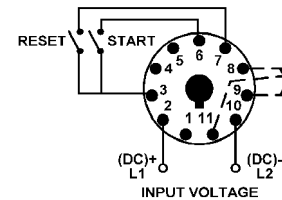


DIAGRAM 9