# NON-PROGRAMMABLE

## COMPACT



- Compact, economical design with standard features for basic applications
- 6 separate timing ranges from 0.2 to 300 seconds
- ◆ 5A SPDT output contacts
- Uses industry-standard 8 pin octal sockets





with appropriate socket

# **TIMING RANGES**

** TIMING RANGE TABLE COMPLETE PRODUCT NUMBER USING TWO DIGIT CODE FROM TABLE BELOW i.e., SS-6262-04		
Time Delay Range	<u>Code</u>	
0.2 - 5 Sec.	04	
0.5 - 15 Sec.	06	
1 - 30 Sec.	07	
2 - 60 Sec.	80	
6 - 180 Sec.	10	
10 - 300 Sec.	12	

For Fixed Time Delay, add suffix "F" and time delay desired to basic Product Number, i.e., SS-6262-F5S is an On Delay fixed at 5 seconds.



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FUNCTION ■	INPUT VOLTAGE	PRODUCT NUMBER **	WIRING/ SOCKET
ON DELAY	120V AC 12V DC 24V AC/DC	SS-6262-** SS-6266-** SS-6268-**	8 Pin Octal 70169-D
INTERVAL ON	120V AC 12V DC 24V AC/DC	SS-8062-** SS-8066-** SS-8068-**	2 1 1 8 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
OFF DELAY	120V AC 12V DC 24V AC/DC	SS-8562-** SS-8566-** SS-8568-**	8 Pin Octal <b>70169-D</b> TRIGGER
SINGLE SHOT	120V AC 12V DC 24V AC/DC	SS-8762-** SS-8766-** SS-8768-**	21 8 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

- See "Definitions of Timing Functions".
- \*\* Complete Product Number using two-digit Code from Table left.

### Sockets & Accessories available

# **APPLICATION DATA**

#### **Voltage Tolerance:**

AC Operation: +10/-15% of nominal at 50/60 Hz.; DC Operation: +10/-15% of nominal.

Load (Burden): Less than 3 VA

### **Setting Accuracy:**

Maximum Setting: +10%, -0% Minimum Setting: +0%, -50%

Fixed Time Delay: > 2 Seconds  $\pm 2\%$  0.1 - 2 Seconds  $\pm 5\%$ 

### **Repeat Accuracy:**

> 2 Seconds Delay±2% 0.1 - 2 Seconds Delay ±5%

Reset Time: 0.2 Seconds

### Triggering Off Delay & Single Shot Units:

Timing sequence must be initiated only after input power is applied to unit. Minimum required trigger switch closure time is 0.1 seconds.

### Temperature:

Operating:  $0^{\circ}$  to  $60^{\circ}$ C ( $32^{\circ}$  to  $140^{\circ}$ F) Storage:  $-40^{\circ}$  to  $85^{\circ}$ C ( $-40^{\circ}$  to  $185^{\circ}$ F)

#### Compatibility:

Using a solid state switch to initiate the time sequence is acceptable. See <a href="https://www.macromatic.com/leakage">www.macromatic.com/leakage</a> or contact Macromatic for information regarding leakage current limits and other solid state design considerations.

### Output Contacts:

SPDT 5A @ 120V AC/28V DC, 1/6HP @ 120V AC

#### Life:

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

#### Approvals:

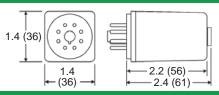




File #E109466

with appropriate socket File #E109466

**DIMENSIONS** 



All Dimensions in Inches (Millimeters)

Build your Time Delay Relays with the Online Product Builder

# **DEFINITION OF TIMING FUNCTIONS**

Understanding the differences between all the functions available in time delay relays can sometimes be a daunting task. To begin with, time delay relays are simply control relays with a time delay built in. Their purpose is to control an event based on time.

Typically, time delay relays are initiated or triggered by one of two methods, depending on the function:

- application of input voltage
- application of a trigger

These triggers can be one of two signals: a control switch (dry contact), i.e., limit switch, push button, float switch, etc., or voltage (commonly known as a power trigger).

CAUTION: any time delay relay that is designed to be initiated with a dry contact control switch trigger could be damaged if voltage is applied to the trigger switch terminals. Only products that have a "power trigger" should be used with voltage as the trigger.

To help understand, some definitions are important:

- Input Voltage control voltage applied to the input terminals. Depending on the function, input voltage will either initiate the unit or make it ready to initiate when a trigger is applied.
- ◆ <u>Trigger</u>- on certain timing functions, a trigger is used to initiate the unit after input voltage has been applied. As noted above, this trigger can either be a control switch (dry contact switch) or a power trigger (voltage).
- Output (Load) every time delay relay has an output (either mechanical relay or solid state) that will open & close to control the load. Note that the user must provide the voltage to power the load being switched by the output contacts of the time delay relay. In all wiring diagrams, the output is shown in the normal de-energized position.

Below and on the following pages are both written and visual descriptions on how the common timing functions operate. A Timing Chart shows the relationship between Input Voltage, Trigger (if present) and Output. If you cannot find a product to fit your requirements or have any questions, Macromatic's Application Engineers offer technical information along with product selection and application assistance. Call us at 800-238-7474 or e-mail us tech-help@macromatic.com.

Function/Code	Operation	Timing Chart
ON DELAY Delay on Operate Delay on Make	Upon application of input voltage, the time delay (t) begins. At the end of the time delay (t), the output is energized. Input voltage must be removed to reset the time delay relay & de-energize the output	INPUT VOLTAGE OUTPUT t t
INTERVAL ON Interval B	Upon application of input voltage, the output is energized and the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Input voltage must be removed to reset the time delay relay.	INPUT VOLTAGE OUTPUT t t
OFF DELAY Delay on Release Delay on Break Delay on De-Energization	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the output is energized. Upon removal of the trigger, the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Any application of the trigger during the time delay will reset the time delay (t) and the output remains energized.	INPUT VOLTAGE TRIGGER OUTPUT  t <t t<="" td=""></t>
SINGLE SHOT One Shot Momentary Interval	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the output is energized and the time delay (t) begins. During the time delay (t), the trigger is ignored. At the end of the time delay (t), the output is de-energized and the time delay relay is ready to accept another trigger.	INPUT VOLTAGE TRIGGER OUTPUT  t  t

# **DEFINITION OF TIMING FUNCTIONS**

Function/Code	Operation	Timing Chart
FLASHER (Off First)	Upon application of input voltage, the time delay (t) begins. At the end of the time delay (t), the output is energized and remains in that condition for the time delay (t). At the end of the time delay (t), the output is de-energized and the sequence repeats until input voltage is removed.	INPUT VOLTAGE OUTPUT t t t < t
FLASHER (ON First)	Upon application of input voltage, the output is energized and the time delay (t) begins. At the end of the time delay (t), the output is de-energized and remains in that condition for the time delay (t). At the end of the time delay (t), the output is energized and the sequence repeats until input voltage is removed.	OUTPUT t t t <
ON/OFF DELAY  G	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the time delay (t1) begins. At the end of the time delay (t1), the output is energized. When the trigger is removed, the output contacts remain energized for the time delay (t2). At the end of the time delay (t2), the output is de-energized & the time delay relay is ready to accept another trigger. If the trigger is removed during time delay period (t1), the output will remain de-energized and time delay (t1) will reset. If the trigger is removed during time delay period (t2), the output will remain energized and the time delay (t2) will reset.	INPUT VOLTAGE TRIGGER OUTPUT  t1  t2
SINGLE SHOT FALLING EDGE	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the output remains de-energized. Upon removal of the trigger, the output is energized and the time delay (t) begins. At the end of the time delay (t), the output is de-energized unless the trigger is removed and re-applied prior to time out (before time delay (t) elapses). Continuous cycling of the trigger at a rate faster than the time delay (t) will cause the output to remain energized indefinitely.	INPUT VOLTAGE TRIGGER OUTPUT  t <t t<="" th=""></t>
WATCHDOG Retriggerable Single Shot	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the output is energized and the time delay (t) begins. At the end of the time delay (t), the output is de-energized unless the trigger is removed and re-applied prior to time out (before time delay (t) elapses). Continuous cycling of the trigger at a rate faster than the time delay (t) will cause the output to remain energized indefinitely.	INPUT VOLTAGE TRIGGER OUTPUT  t <t t<="" th=""></t>
TRIGGERED ON DELAY	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the time delay (t) begins. At the end of the time delay (t), the output is energized and remains in that condition as long as either the trigger is applied or the input voltage remains. If the trigger is removed during the time delay (t), the output remains de-energized & the time delay (t) is reset.	INPUT VOLTAGE TRIGGER OUTPUT  t  t

# **DEFINITION OF TIMING FUNCTIONS**

Function/Code	Operation	Timing Chart
REPEAT CYCLE (OFF 1st)	Upon application of input voltage, the time delay (t1) begins. At the end of the time delay (t1), the output is energized and remains in that condition for the time delay (t2). At the end of this time delay, the output is de-energized and the sequence repeats until input voltage is removed.	OUTPUT t1 t2 t1 t2 <t1< th=""></t1<>
REPEAT CYCLE (ON 1st)	Upon application of input voltage, the output is energized and the time delay (t1) begins. At the end of the time delay (t1), the output is de-energized and remains in that condition for the time delay (t2). At the end of this time delay, the output is energized and the sequence repeats until input voltage is removed.	OUTPUT t1 t2 t1 t2 <t1< th=""></t1<>
DELAYED INTERVAL Single Cycle	Upon application of input voltage, the time delay (t1) begins. At the end of the time delay (t1), the output is energized and remains in that condition for the time delay (t2). At the end of this time delay (t2), the output is de-energized. Input voltage must be removed to reset the time delay relay.	OUTPUT t1 t2 t1 t2
TRIGGERED DELAYED INTERVAL	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the time delay (t1) begins. At the end of the time delay (t1), the output is energized and remains in that condition for the time delay (t2). At the end of the time delay (t2), the output is de-energized & the relay is ready to accept another trigger. During both time delay (t1) & time delay (t2), the trigger is ignored.	INPUT VOLTAGE TRIGGER OUTPUT  t1 t2 t1 t2
TRUE OFF DELAY	Upon application of input voltage, the output is energized. When the input voltage is removed, the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Input voltage must be applied for a minimum of 0.5 seconds to assure proper operation. Any application of the input voltage during the time delay (t) will reset the time delay. No external trigger is required.	INPUT VOLTAGE OUTPUT t t
ON DELAY/ TRUE OFF DELAY	Upon application of input voltage, the time delay (t1) begins. At the end of the time delay (t1), the output is energized. When the input voltage is removed, the output remains energized for the time delay (t2). At the end of the time delay (t2), the output is de-energized. Input voltage must be applied for a minimum of 0.5 seconds to assure proper operation. Any application of the input voltage during the time delay (t2) will keep the output energized & reset the time delay (t2). No external trigger is required.	OUTPUT t1 t2 t1 t2
SINGLE SHOT-FLASHER	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the time delay (t1) begins and the output is energized for the time delay (t2). At the end of this time delay (t2), the output is de-energized and remains in that condition for the time delay (t2). At the end of the time delay (t2), the output is energized and the sequence repeats until time delay (t1) is completed. During the time delay (t1), the trigger is ignored.	INPUT VOLTAGE TRIGGER OUTPUT  t2 t2 t2 t2 <t2< th=""></t2<>
ON DELAY- FLASHER	Upon application of input voltage, the time delay begins (t1). At the end of the time delay (t1), the output is energized and remains in that condition for the time delay (t2). At the end of this time delay (t2), the output is de-energized and remains in that condition for the time delay (t2). At the end of the time delay (t2), the output is energized and the sequence repeats until input voltage is removed.	OUTPUT t1 t2 t2 t2 <t2< th=""></t2<>

# **SOCKETS & ACCESSORIES**

Catalog Number 70169-D

### 8 Pin Octal Socket-Surface or DIN Rail-Mounted

10A @ 600V 1 or 2 #12-22 AWG Wire Recommended Tightening Torque of 7 in-lbs. (12 in-lbs maximum) Pressure Wire Clamp Terminations

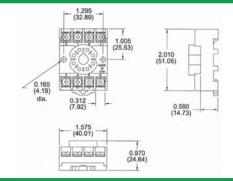






File #E169693 File #LR701114

Catalog Number 70170-D



### 11 Pin Octal Socket-Surface or DIN Rail-Mounted

10A @ 300V 1 or 2 #12-22 AWG Wire Recommended Tightening Torque of 7 in-lbs. (12 in-lbs maximum) Pressure Wire Clamp Terminations

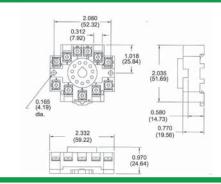






File #E169693 File #LR701114





### 8 Pin Octal Socket-Back-Mounted

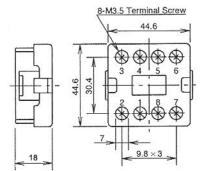
10A @ 300V Pressure Wire Clamp Terminations



File #E62437

## Catalog Number SR6P-M08G





### 11 Pin Octal Socket-Back-Mounted

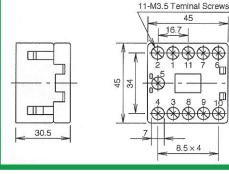
10A @ 300V Pressure Wire Clamp Terminations



File #E62437

# Catalog Number SR6P-M11G





# **SOCKETS & ACCESSORIES**

### Hold Down Spring Catalog Number 70166

Can be used for:

- Panel-Mounted Sockets
- ◆ Sockets Mounted to 35mm DIN Rail \*
- Requires two machine screws with washers & nuts-contact Macromatic or <u>www.macromatic.com/70166</u> for more information.





### DIN Rail Adaptor Kit Catalog Number 70500

Quick & Economical Way to Install Any THx Series 2" x 2" Encapsulated Time Delay Relays on 35mm DIN Rail

- Clip Comes with a Threaded Hole to Eliminate Need for a Washer & Nut
- All Mounting Hardware Included



