

# Fuji 1/16 DIN Super Timers

## Overview

The MS4S series super timers are 1/16 DIN style timing relays designed for process control, machine tool control, safety control and many other types of applications. The timers are plug-in 8-pin or 11-pin surface/DIN-rail mountable with up to four selectable modes of operation and four selectable timing ranges.

## Features

### MS4SM

- Multi-mode timer with mode indication. On-delay (PO), flicker (FL), one-shot (OS), or signal off-delay (SF)
- 11-pin plug-in with start, reset and gate (interrupt) input signals and a DPDT contact output
- Timing range from 0.05 seconds to 60 hours
- Timer scale with selectable ranges of 0-6, 0-12, 0-30 and 0-60
- Timing units in selectable ranges of 0.1s, sec, min and hrs

### MS4SA

- Power on LED indicator (green) flickers during timing operation, UP (red) LED is on when normally open contact is closed
- On-delay timer
- 8-pin plug-in with a DPDT contact output
- Timing range from 0.05 seconds to 60 hours
- Timer scale with selectable ranges of 0-6, 0-12, 0-30 and 0-60
- Timing units in selectable ranges of 0.1s, sec, min and hrs
- Power on LED indicator (green) flickers during timing operation, UP (red) LED is on when normally open contact is closed

### MS4SC

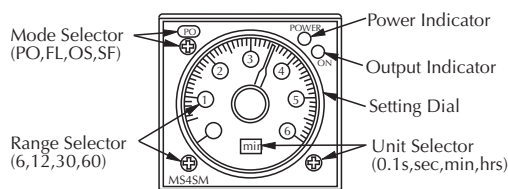
- On-delay timer
- 8-pin plug-in with a SPDT timed contact output and a SPDT instantaneous contact output
- Timing range from 0.05 seconds to 60 hours
- Timer scale with selectable ranges of 0-6, 0-12, 0-30 and 0-60

- Timing units in selectable ranges of 0.1s, sec, min and hrs
- Power on LED indicator (green) flickers during timing operation, UP (red) LED is on when normally open contact is closed

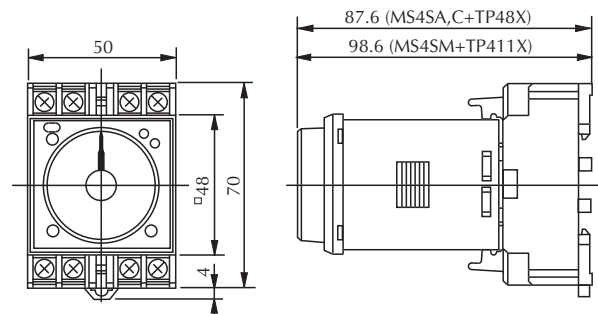
Product Selection Guide				
Part Number	Description	Voltage	Time Range	Price
<b>MS4SM-AP-ADC</b>	Multi-mode timer with selectable timing range from 0.05s to 60 hours. Input power is 100 - 240 VAC. DPDT relay output. 11-pin connection. UL, CSA, TÜV approved. <i>Note:</i> Socket mounts must be purchased separately	100-240 VAC	0.05 seconds to 60 hours	<--->
<b>MS4SA-AP-ADC</b>	On-delay timer with selectable timing range from 0.05s to 60 hours. Input power is 100 - 240 VAC. DPDT relay output. 8-pin connection. UL, CSA, TÜV approved. <i>Note:</i> Socket mounts must be purchased separately		0.05 seconds to 60 hours	<--->
<b>MS4SC-AP-ADC</b>	On-delay timer with selectable timing range from 0.05s to 60 hours. Input power is 100 - 240 VAC. SPDT timed relay output and SPDT instantaneous relay output. 8-pin connection. UL, CSA, TÜV approved		0.05 seconds to 60 hours	<--->
<b>MS4SM-CE-ADC</b>	Multi-mode timer with selectable timing range from 0.05s to 60 hours. Input power is 24 VDC/AC DPDT relay output. 11-pin connection. UL, CSA, TÜV approved. <i>Note:</i> Socket mounts must be purchased separately	24 VDC/AC	0.05 seconds to 60 hours	<--->
<b>MS4SA-CE-ADC</b>	On-delay timer with selectable timing range from 0.05s to 60 hours. Input power is 24 VDC/AC. DPDT relay output. 8-pin connection. UL, CSA, TÜV approved. <i>Note:</i> Socket mounts must be purchased separately		0.05 seconds to 60 hours	<--->
<b>MS4SC-CE-ADC</b>	On-delay timer with selectable timing range from 0.05s to 60 hours. Input power is 24 VDC/AC. SPDT timed relay output and SPDT instantaneous relay output. 8-pin connection. UL, CSA, TÜV approved. <i>Note:</i> Socket mounts must be purchased separately		0.05 seconds to 60 hours	<--->
<b>TP411X</b>	Surface mount socket for MS4SM series timers. UL, CSA, TÜV approved	N/A	N/A	<--->
<b>TP411SBA</b>	Flush mount socket for MS4SM series timers. UL, CSA, TÜV approved, requires PANEL-16*			<--->
<b>TP48X</b>	Surface mount socket for MS4SA and MS4SC series timers. UL, CSA, TÜV approved			<--->
<b>TP48SB</b>	Flush mount socket for MS4SA and MS4SC series timers. UL, CSA, TÜV approved, requires PANEL-16*			<--->

\*Panel clips for mounting through a door are optional and must be purchased separately. See part# PANEL-16 on page 24-43

## Control



## Dimensions (timer and socket shown attached)



# Fuji 1/16 DIN Super Timers



**MS4SM-AP-ADC**  
**MS4SM-CE-ADC**



**MS4SA-AP-ADC**  
**MS4SA-CE-ADC**



**MS4SC-AP-ADC**  
**MS4SC-CE-ADC**



**TP411X**



**TP411SBA\***



**TP48X**



**TP48SB\***

Specifications	
<b>Approvals</b>	UL file no.: E44592, CSA file no.: LR20479, TÜV license no: R9551800
<b>Repeat Accuracy</b>	±0.3% at maximum setting time
<b>Reset Time</b>	0.1 second or less
<b>Operating Voltage Range</b>	85-264 VAC MS4SM-AP-ADC MS4SA-AP-ADC MS4SC-AP-ADC 20.4-26.4 VDC/AC MS4SM-CE-ADC MS4SA-CE-ADC MS4SC-CE-ADC
<b>Operating Temperature Range</b>	-10 to +55°C (14 to 131°F) (no icing)
<b>Humidity</b>	35 to 85% (no condensation)
<b>Contact Ratings</b>	5 A at 30 VDC resistive load, 1 A @ 30 VDC inductive load, 5 A @ 250 VAC resistive load, 2.5 A @ 120 VAC inductive load
<b>Power Consumption</b>	Approx. 10 VA for AC; 1 W at 24 VDC
<b>Insulation Resistance</b>	100MΩ at 500 VDC insulation tested
<b>Dielectric Strength</b>	2000 VAC 1 min. between current carrying part and non-current carrying part 2000 VAC 1 min. between output contact and control circuit 1000 VAC 1 min. between open contacts
<b>Vibration</b>	Malfunction durability: 10 to 55Hz, 0.5mm double amplitude Mechanical durability: 10 to 55Hz, 0.75mm double amplitude
<b>Shock</b>	Malfunction durability: 100m/s <sup>2</sup> Mechanical durability: 500m/s <sup>2</sup>
<b>Life Expectancy</b>	Mechanical: 20 million operations (No load operation cycle: 1800/hr.) Electrical: 100,000 operations at 250 VAC 5 A resistive load (operation cycle: 1800/hr.)
<b>Weight</b>	Approx. 100g (3.527 oz.)

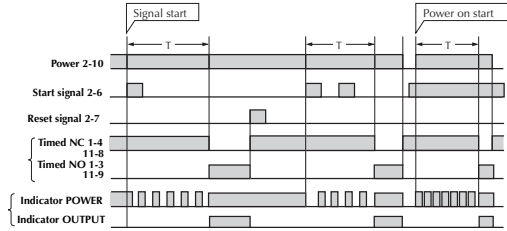
\*When using flush mount sockets TP411SBA and TP48SB, panel mounting clip PANEL-16 is required and must be purchased separately. See page 24-43

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# Fuji 1/16 DIN Timers Timing and Wiring Diagrams

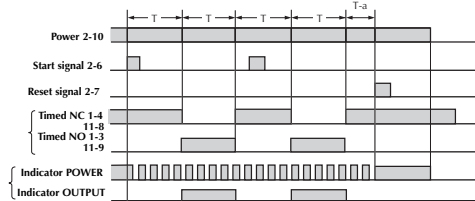
## MS4SM

### 1. On-delay **PO**



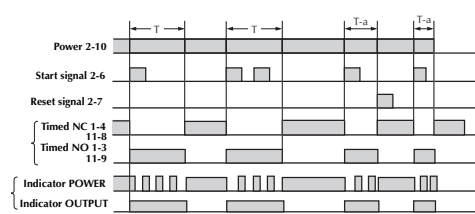
- With power off turn the mode selector until **PO** is displayed.
- When power is on, applying the start signal turns the timed N.O. (normally open) contact on after the set time has elapsed.
- When using a power-on start, pins 2 and 6 (start signal) must be jumpered together

### 2. Flicker **FL**



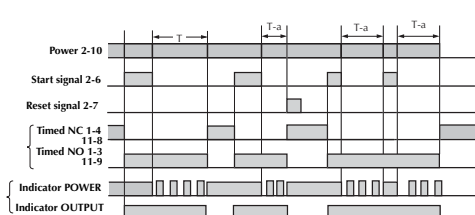
- With power off, turn the mode selector until **FL** is displayed.
- When power is on, applying the start signal turns the timed contact on and off repeatedly at the set time intervals.

### 3. One-shot **OS**



- With power off, turn the mode selector until **OS** is displayed
- When power is on, applying the start signal instantly turns the timed N.O. contact on and turns it off after the set time has elapsed.

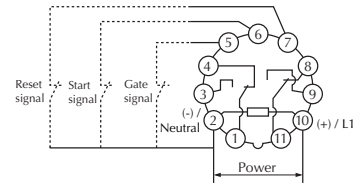
### 4. Signal off-delay **SF**



- With power off, turn the mode selector until **SF** is displayed.
- When power is on, applying the start signal instantly turns the timed N.O. contact on. Removing the start signal turns the contact off after the set time has elapsed.

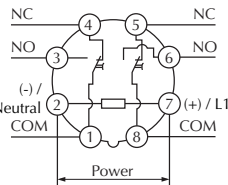
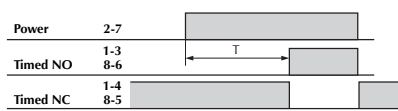
#### Notes:

1.  $T$  = set time.  $t$  = time period within set time.
2. The gate signal is used to interrupt the timing operation.



## MS4SA

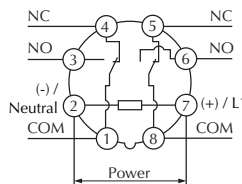
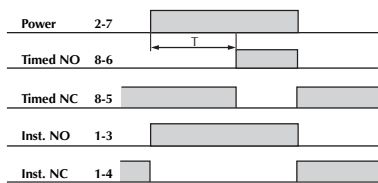
### On-delay



- When power is applied, the timed N.O. contacts make after the set time has elapsed.
- When power is removed, the contacts reset.

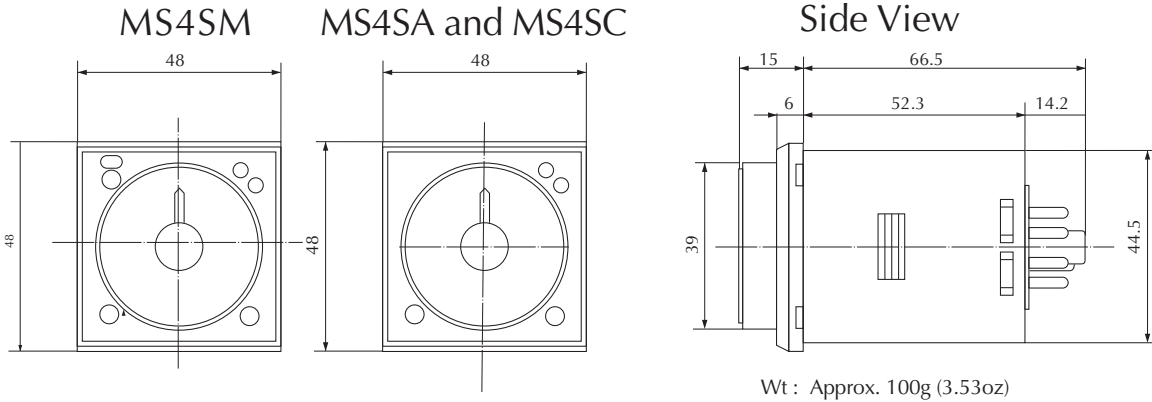
## MS4SC

### On-delay



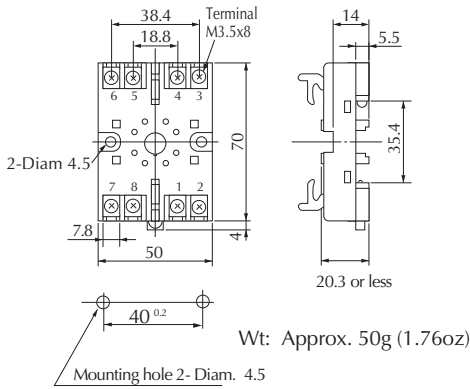
- Timed contact  
When power is applied, the N.O. contact makes after the set time has elapsed. When power is removed, the contacts reset.
- Instantaneous contact  
When power is applied, the N.O. contact makes instantly. When power is removed, the contacts reset.

# Fuji 1/16 DIN Super Timers Dimensions

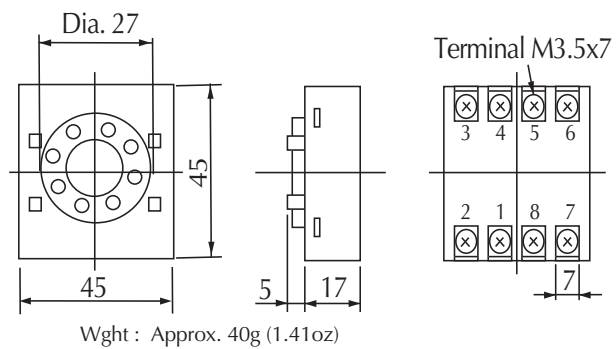


All dimensions in mm

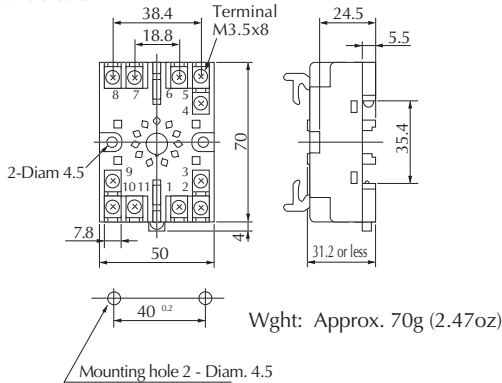
Socket for MS4SA, MS4SC (8-pin)  
TP48X



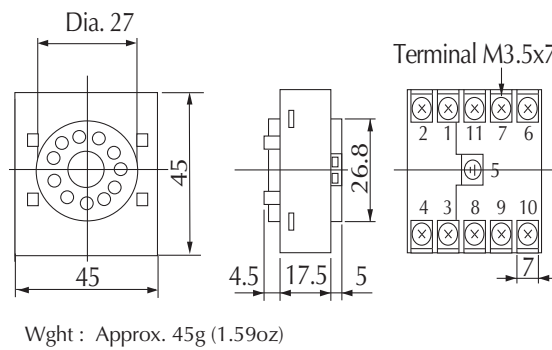
Socket for MS4SA, MS4SC (8-pin)  
TP48SB



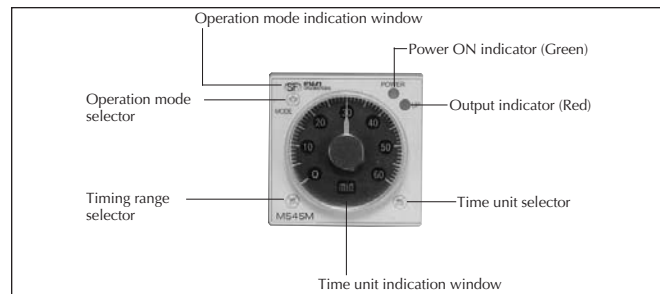
Socket for MS4SM (11-pin)  
TP411X



Socket for MS4SM (11-pin)  
TP411SBA



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