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.

MS4SM Series

- 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
- Power on LED indicator (green) flickers during timing operation, UP (red) LED is on when normally open contact is closed

MS4SA Series

- 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 0-60s
- 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 Series

- 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

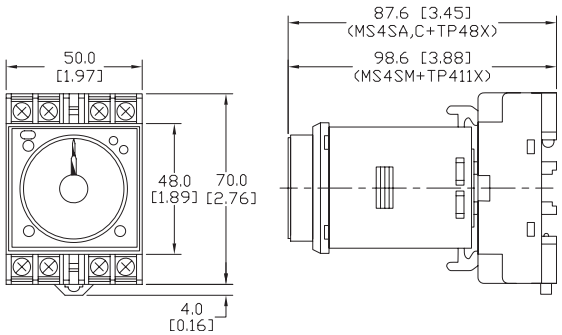
Part Number	Price	Description	Time Range
MS4SM-AP-ADC*		Fuji Electric multi-mode relay timer, LED indicator(s), 0.05 seconds to 60 hours selectable timing range, 100-240 VAC operating voltage, (1) DPDT timed relay output(s), socket mount, 11-pin.	0.05 seconds to 60 hours
MS4SA-AP-ADC*		Fuji Electric on-delay relay timer, LED indicator(s), 0.05 seconds to 60 hours selectable timing range, 100-240 VAC operating voltage, (1) DPDT timed relay output(s), socket mount, 8-pin.	0.05 seconds to 60 hours
MS4SC-AP-ADC*		Fuji Electric on-delay relay timer, LED indicator(s), 0.05 seconds to 60 hours selectable timing range, 100-240 VAC operating voltage, (1) SPDT timed relay and (1) SPDT instant relay output(s), socket mount, 8-pin.	0.05 seconds to 60 hours
MS4SM-CE-ADC*		Fuji Electric multi-mode relay timer, LED indicator(s), 0.05 seconds to 60 hours selectable timing range, 24 VAC/VDC operating voltage, (1) DPDT timed relay output(s), socket mount, 11-pin.	0.05 seconds to 60 hours
MS4SA-CE-ADC*		Fuji Electric on-delay relay timer, LED indicator(s), 0.05 seconds to 60 hours selectable timing range, 24 VAC/VDC operating voltage, (1) DPDT timed relay output(s), socket mount, 8-pin.	0.05 seconds to 60 hours
MS4SC-CE-ADC*		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.	0.05 seconds to 60 hours
TP411X		Fuji Electric timer socket, 35mm DIN rail mount. For use with MS4SM series timers.	N/A
TP411SBA		Fuji Electric timer socket, panel mount. For use with MS4SM series timers.	
TP48X		Fuji Electric timer socket, 35mm DIN rail mount. For use with MS4SA and MS4SC series timers.	
TP48SB		Fuji Electric timer socket, panel mount. For use with MS4SA and MS4SC series timers.	
PANEL-16		AutomationDirect mounting clips, package of 5. For use with 1/16 DIN timers and counters.	

*** Socket mounts must be purchased separately**

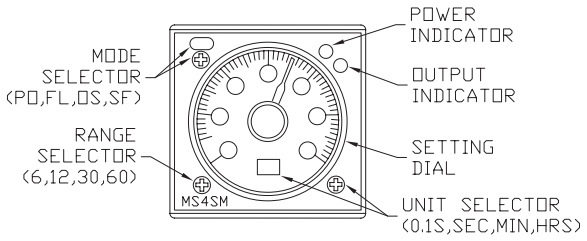
Dimensions

mm [inches]

(Timer and Socket Assembly)



Control

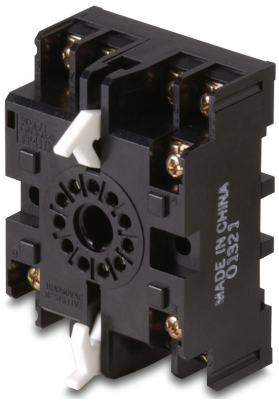


Fuji 1/16 DIN Super Timers

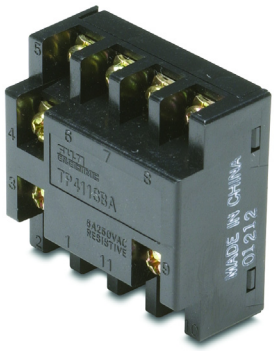
MS4SM-AP-ADC
MS4SM-CE-ADC

MS4SA-AP-ADC
MS4SA-CE-ADC

MS4SC-AP-ADC
MS4SC-CE-ADC

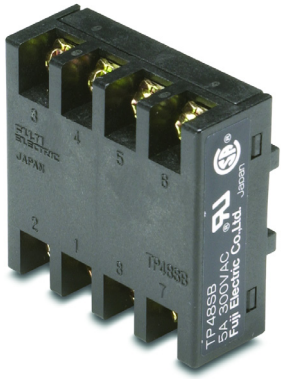


TP411X



TP411SBA*

TP48X



TP48SB*

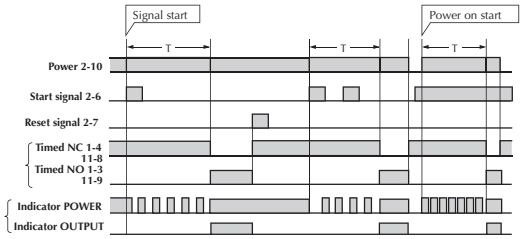
Specifications		
Approvals	UL file no.: E44592, CSA file no.: LR20479, TÜV license no: R9551800	
Repeat Accuracy	±0.3% at maximum setting time	
Reset Time	0.1 second or less	
Operating Voltage Range	85-264 VAC 50/60Hz MS4SM-AP-ADC MS4SA-AP-ADC MS4SC-AP-ADC	20.4-26.4 VDC/AC MS4SM-CE-ADC MS4SA-CE-ADC MS4SC-CE-ADC
Operating Temperature Range	-10 to +55°C (14 to 131°F) (no icing)	
Humidity	35 to 85% (no condensation)	
Contact Ratings	5A at 30VDC resistive load, 1A @ 30VDC inductive load, 5A @ 250VAC resistive load, 2.5 A @ 120VAC inductive load	
Power Consumption	Approx. 10VA for AC; 1W at 24VDC	
Insulation Resistance	100MΩ at 500VDC insulation tested	
Dielectric Strength	2000VAC 1 min. between current carrying part and non-current carrying part 2000VAC 1 min. between output contact and control circuit 1000VAC 1 min. between open contacts	
Vibration	Malfunction durability: 10 to 55Hz, 0.5mm double amplitude Mechanical durability: 10 to 55Hz, 0.75mm double amplitude	
Shock	Malfunction durability: 100m/s² Mechanical durability: 500m/s²	
Life Expectancy	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)	
Weight	Approx. 100g (3.527 oz)	

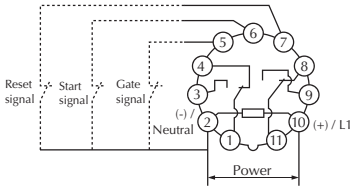
***When using panel mount sockets TP411SBA and TP48SB, mounting clip PANEL-16 is required and must be purchased separately.**

Fuji 1/16 DIN Timers Timing and Wiring Diagrams

MS4SM

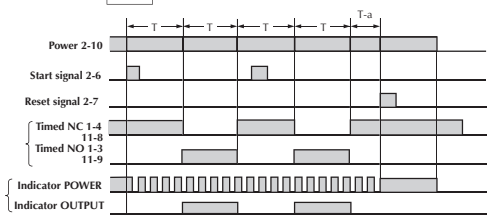
1. On-delay PO





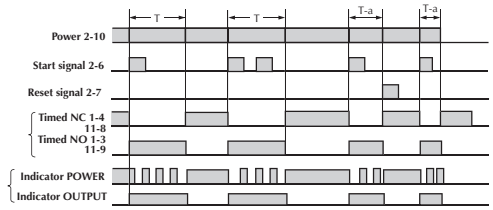
- With power off turn the mode selector until PO is displayed.
- When power is on, applying the start signal turns the timed N.O. (normally open) contact on after the set time has elapsed.
- When using a power-on start, pins 2 and 6 (start signal) must be jumpered together
- To make timer output a signal as soon as power is turned on, turn timer dial fully counter-clockwise.

2. Flicker FL



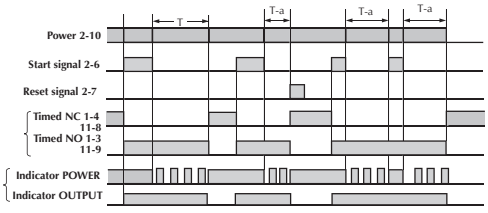
- With power off, turn the mode selector until FL is displayed.
- When power is on, applying the start signal turns the timed contact on and off repeatedly at the set time intervals.
- When using a power-on start, pins 2 and 6 (start signal) must be jumpered together

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



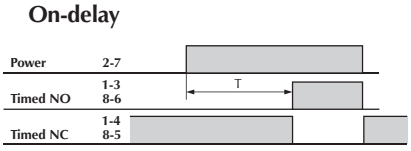
- With power off, turn the mode selector until SF is displayed.
- When power is on, applying the start signal instantly turns the timed N.O. contact on. Removing the start signal turns the contact off after the set time has elapsed.

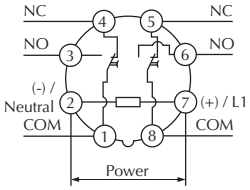
Notes:

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

MS4SA

On-delay

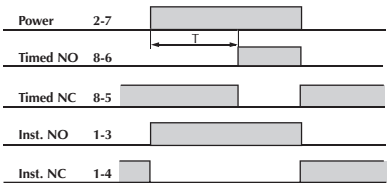


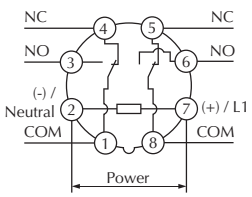


- When power is applied, the timed N.O. contacts make after the set time has elapsed.
- When power is removed, the contacts reset.
- To make timer output a signal as soon as power is turned on, turn timer dial fully counter-clockwise.

MS4SC

On-delay





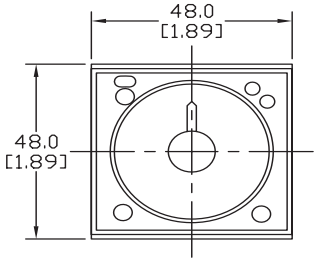
- Timed contact
  When power is applied, the N.O. contact makes after the set time has elapsed. When power is removed, the contacts reset.
- Instantaneous contact
  When power is applied, the N.O. contact makes instantly. When power is removed, the contacts reset.
- To make timer output a signal as soon as power is turned on, turn timer dial fully counter-clockwise.

Fuji 1/16 DIN Super Timers Dimensions

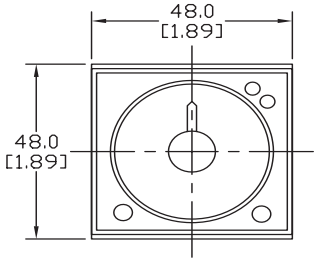
Dimensions

mm [inches]

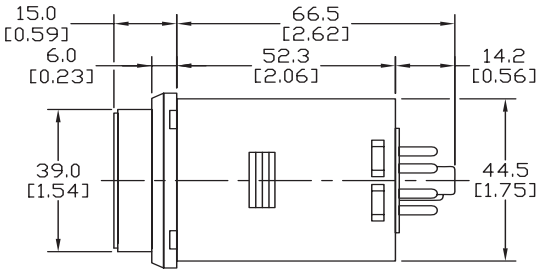
MS4SM



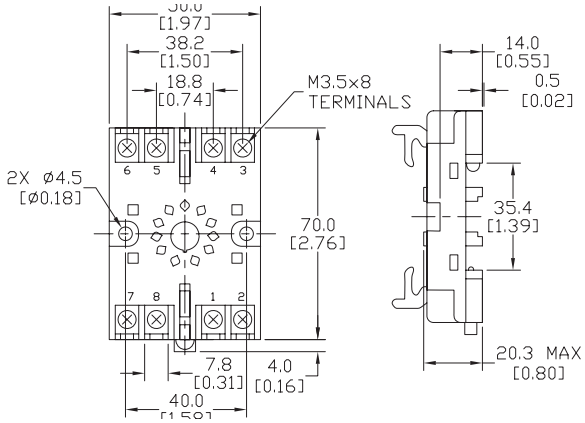
MS4SA and MS4SC



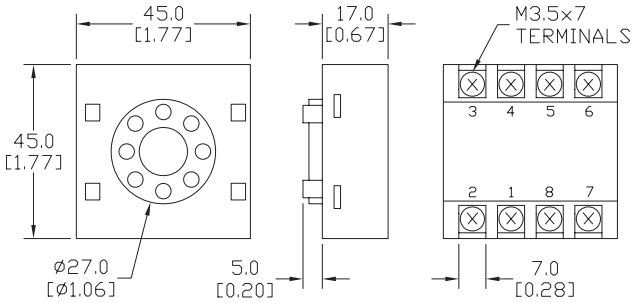
Side View



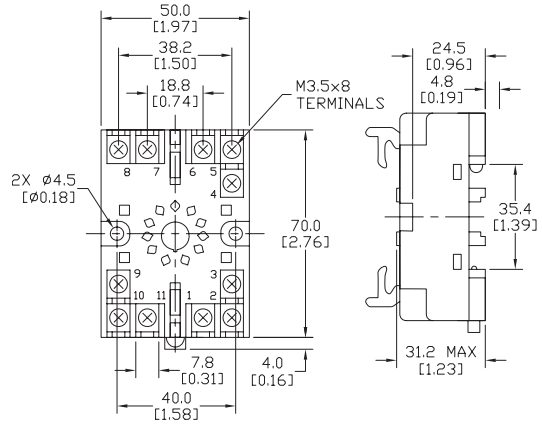
Socket for MS4SA, MS4SC (8-pin)
TP48X



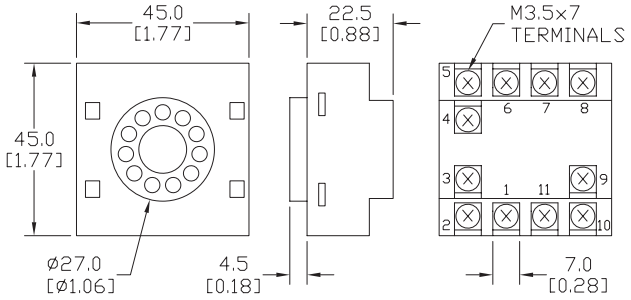
Socket for MS4SA, MS4SC, (8-pin)
TP48SB



Socket for MS4SM (11-pin)
TP411X



Socket for MS4SM (11-pin)
TP411SBA



Cutout for panel mounting TP48SB and TP411SBA sockets using PANEL-16 mounting clips