

# Time Delay Relays

## Super Timers

### ST7P, 7B


#### Miniature size Super Timer ST7P series

The ST7P and ST7B series are compact and highly accurate Super Timers.

The ST7P and ST7B are on-delay operation types.

#### ■ Features

- These Super Timers are highly accurate. Their repeat accuracy is less than  $\pm 1\%$  at maximum setting time.

- Timing range  
ST7P and ST7B are the single timing range types; 0.06 sec. to 24 hours.
- The large setting dial makes time setting easy.
- The LED indicators make it easy to check timer operation.
- The ST7P has been approved by the UL,  us and TÜV.

#### ■ Standards

UL file No.    Body: E44592  
                   Socket: E90265  
 TÜV License No.: R50004818



#### ■ Specifications

##### Single timing range types

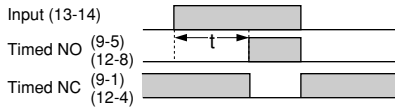
Type	Ordering code	Contact	Operation	Timing range (Refer to Page 03/50)	Input voltage	Socket
<b>ST7P-2</b>	MS7P2-■□	Timed: 2PDT	On-delay	0.06–0.5s    4–60s    0.5–6h 0.1–1s        0.25–3min    1–12h 0.3–3s        1–10min        2–24h	200-230V AC 50/60Hz 100-120V AC 50/60Hz 240V AC 50/60Hz	Screw Soldering Wire wrap PC board
<b>ST7P-4</b>	MS7P4-■□	Timed: 4PDT		0.4–5s        2–30min 1–10s         4–60min	100-110V DC 24V DC	
<b>ST7B-2</b>	MS7B2-■□	Timed: 2PDT		2–30s         0.2–2h	12V DC	
<b>ST7B-4</b>	MS7B4-■□	Timed: 4PDT				

Notes: Enter the input voltage code in the ■ mark and timing range code in the □ mark. \* Other voltages are available on request, contact FUJI.

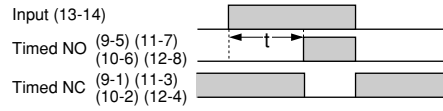
#### ■ Technical data

Repeat accuracy	$\pm 1\%$ at max. setting time
Reset time	0.1s or less
Max. operating cycle	1800 cycles/h
Operating temperature range	-10°C to 50°C
Mechanical durability	50 million operations
Electrical durability	500000 operations at 220V AC 3A resistive load (ST7P-2, 7B-2) 100000 operations at 220V AC 3A resistive load (ST7P-4, 7B-4)
Operating voltage range	0.85 to 1.1 times input voltage
Contact ratings	3A at 220V AC resistive load
Power consumption	1.2VA at 100V AC, 1.5VA at 200V AC, 1.1W at 24V DC
Dielectric strength	2000V AC rms. 1min. between current carrying part and non current carrying part 1500V AC rms. 1min. between output contacts and control circuit 1000V AC rms. 1min. between open contacts
Insulation resistance	100M $\Omega$ at 500V DC megger
Vibration	Mechanical durability: 10 to 55Hz, 0.75mm double amplitude Malfunction durability: 10 to 55Hz, 0.5mm double amplitude
Shock	Mechanical durability: 1000m/s <sup>2</sup> Malfunction durability: 50m/s <sup>2</sup>

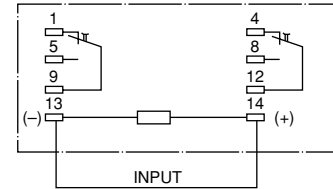
## ■ Timing diagrams ST7P-2, 7B-2



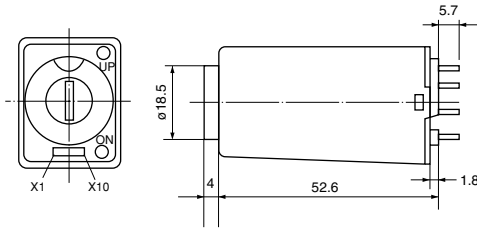
## ST7P-4, 7B-4



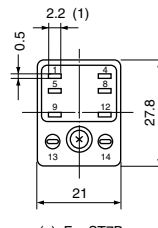
## ■ Wiring diagrams ST7P-2, 7B-2



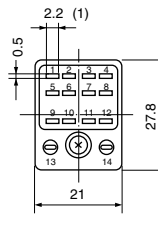
## ■ Dimensions, mm ● Bodies



## ST7□-2

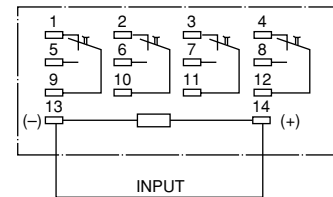


## ST7□-4



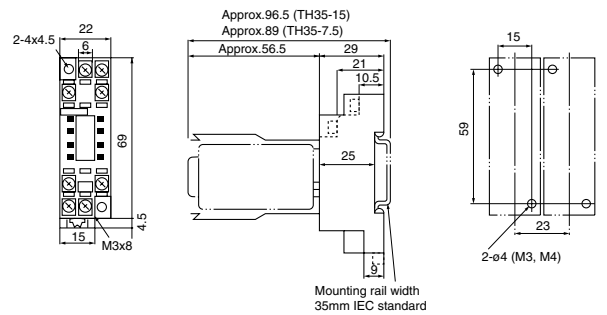
( ) : For ST7B

## ST7P-4, 7B-4

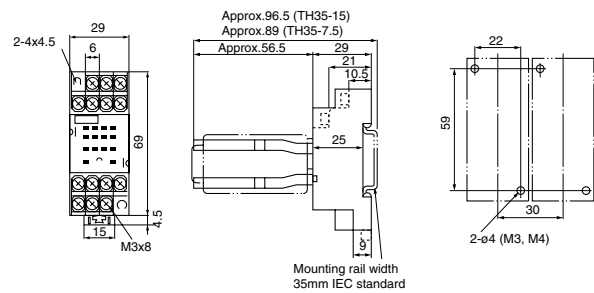


Mass: 45g

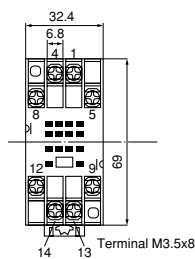
## ● Sockets/Screw terminal and rail mounting TP88X1 (M3)



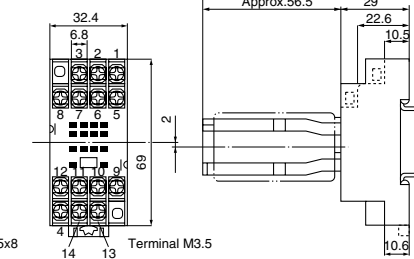
## TP814X1 (M3)



## TP88X2 (M3.5)

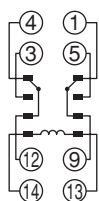


## TP814X2 (M3.5)

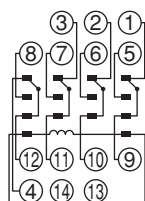


## ■ Socket's terminal arrangement

### TP88X1, TP88X2

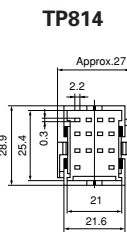
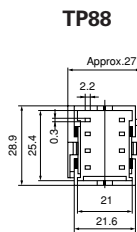
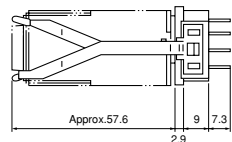


### TP814X1, TP814X2



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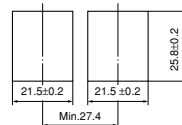
## ■ Dimensions, mm ● Sockets/soldering



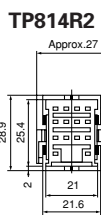
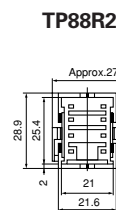
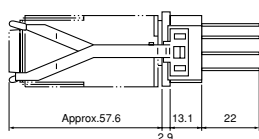
Terminal



Panel cutting  
TP88, 814  
TP88R2, 814R2



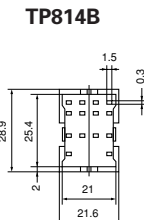
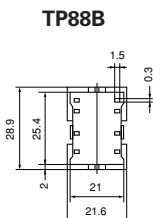
## ● Sockets/Wire wrap



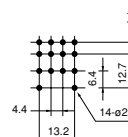
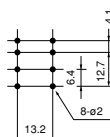
Terminal



## ● Sockets/PC board



PC board drilling  
TP88B TP814B



## Sockets

Terminal	For ST7P-2, ST7B-2			For ST7P-4, ST7B-4			Finger protection cover	
	Type	Ordering code	Mass (g)	Type	Ordering code	Mass (g)	Type	Ordering code
Screw terminal, rail mounting	<b>TP88X1(M3)</b>	MX58X1	35	<b>TR814X1(M3)</b>	MX54X1	54	RZ52X1	RZ52X1
Screw terminal, rail mounting	<b>TP88X2(M3.5)</b>	MX58X2	47	<b>TP814X2(M3.5)</b>	MX54X2	51	RZ54X1	RZ54X1
Soldering	<b>TP88</b>	MX58	9	<b>TP814</b>	MX54	10	FX14X2	RZ54X2
Wire wrap	<b>TP88R2</b>	MX58R2	11	<b>TP814R2</b>	MX54R2	13		
PC board	<b>TP88B</b>	MX58B1	9	<b>TP814B</b>	MX54B	10		

## ● Mounting rails: See page 03/58.

## ■ Type number nomenclature

ST 7 P - 2 AC100V 5S

Super Timer

Size

Mounting

P: Plug-in (using sockets)  
B: PC board

Contact

2: Timed 2PDT contact (8 terminals)  
4: Timed 4PDT contact (11 terminals)

Timing range

● ST7P-□, 7B□

0.5S: 0.06–0.5s 3M: 0.25–3min  
1S: 0.1–1s 10M: 1–10min  
3S: 0.3–3s 30M: 2–30min  
5S: 0.4–5s 60M: 4–60min  
10S: 1–10s 2H: 0.2–2h  
30S: 2–30s 6H: 0.5–6h  
60S: 4–60s 12H: 1–12h

Input voltage

● ST7P, 7B

AC200V: 200–230V AC  
AC100V: 100–120V AC  
AC240V: 240V AC  
DC100V: 100–110V DC  
DC24V: 24V DC  
DC12V: 12V DC

## ■ Ordering information

Specify the following:

- Ordering code or type number of body (add a suffix of the timing range) and socket. (Socket is sold separately.)