■ **Ordering code system**
● **Super Timer MS4S series**

M S 4 S M-AP 1T
① ② ③ ④ ⑤⑥ ⑦⑧

① Product category

Code	Description
M	Timer, counter

② Series category

Code	Description
S	Super timer

③ Timer size

Code	Description
4S	DIN 48mm square

④ Version

Code	Operation
M	Multimode operation
A	On-delay operation
C	On-delay operation with instantaneous contact
F	Off-delay operation
Y	For star-delta starting
R	Repeat operation

⑤⑥ Input voltage

Code ⑤	⑥	Input voltage
A	P	100–240V AC
C	E	24V AC/DC
D	L	48–127V DC

⑦⑧ Timing range

Code ⑦	⑧	Timing range
1	T	0.6 – 12s (MS4SF)
1	N	0.6 – 12min (MS4SF)

● **Super Timer ST7P series**

M S 7 P 2-AP 1T
① ② ③ ④ ⑤ ⑥⑦ ⑧⑨

① Product category

Code	Description
M	Timer, counter

② Series category

Code	Description
S	Super timer

③ Timer size

Code	Description
7	Miniature type

④ Mounting

Code	Mounting
P	Plug-in
B	Printed circuit board

⑤ Output contact

Code	Contact arrangement
2	Timed, 2PDT
4	Timed, 4PDT
Blank	Timed, SPDT (ST7PF only)

⑥⑦ Input voltage

Code ⑥	⑦	Input voltage
A	2	200–230V AC
A	1	100–120V AC
A	P	240V AC
A	E	24V AC
D	1	100–110V DC
D	F	48V DC
D	E	24V DC
D	B	12V DC

⑧⑨ Timing range

Code ⑧	⑨	Timing range
P	5	0.06 – 0.5s(MS7P□,7B□)
1	S	0.1 – 1s(MS7P□,7B□)
3	S	0.3 – 3s(MS7P□,7B□)
5	S	0.4 – 5s(MS7P□,7B□)
1	T	1 – 10s(MS7P□,7B□)
3	T	2 – 30s(MS7P□,7B□)
6	T	4 – 60s(MS7P□,7B□)
3	M	0.25 – 3min(MS7P□,7B□)
1	N	1 – 10min(MS7P□,7B□)
3	N	2 – 30min(MS7P□,7B□)
6	N	4 – 60min(MS7P□,7B□)
2	H	0.2 – 2h(MS7P□,7B□)
6	H	0.5 – 6h(MS7P□,7B□)
1	J	1 – 12h(MS7P□,7B□)
2	J	2 – 24h(MS7P□,7B□)

● **Socket (For MS4S)**

Mounting	Terminal	Type	Ordering code
Surface	Screw	TP411X	MX41X2
Surface	Screw	TP48X	MX48X2
Flush	Screw	TP411SBA	MX41N1A
Flush	Screw	TP48SB	MX48N1
Flush	Soldering	ATX1NS	MX48NS
Flush	Soldering	ATX2NS	MX41NS

● **Socket (For ST7P)**

Mounting	Terminal	Type	Ordering code
Surface	Soldering	TP88	MX58
Surface	Soldering	TP814	MX54
Surface	Wire wrap	TP88R2	MX58R2
Surface	Wire wrap	TP814R2	MX54R2
Surface	P. C. board	TP88B	MX58B
Surface	P. C. board	TP814B	MX54B
Surface	Screw	TP88X2	MX58X2
Surface	Screw	TP814X2	MX54X2
Surface	Screw	TP88X1	MX58X1
Surface	Screw	TP814X1	MX54X1

● **Accessory**

Description	Type	Ordering code
Hold-down spring	FX3	MZ24
Adaptor	TX4	MZ34

■ **Types**

Description	Operation	Contact arrangement		Timer body	Required socket type Surface mounting	Flush mounting	Rail mounting
		Timed	Instant.	Type	Type	Type	Type
Super Timer Multi-range, compact body	Multi-mode • On-delay • Flicker • One-shot • Signal off-delay	2PDT	–	**MS4SM**	TP411X 11GB + FX3 (Hold-down spring)	TP411SBA+TX4 (Adaptor) ATX2NS+TX4 (Adaptor)	TP411X
	On-delay	2PDT SPDT	– SPDT	**MS4SA MS4SC**	TP48X 8GB + FX3 (Hold-down spring)	TP48SB+TX4 (Adaptor) ATX1NS+TX4 (Adaptor)	TP48X
	Off-delay	2PDT SPDT	–	**MS4SF MS4SF-R**			
	Star-delta	2NO	1NO	**MS4SY**			
	On-off repetitive operation	2PDT	–	**MS4SR**			
Super Timer Miniature size	On-delay	2PDT	–	**ST7P-2**	TP88 TP88R2 TP88B	–	TP88X2 TP88X1
	On-delay	4PDT	–	**ST7P-4**	TP814 TP814R2 TP814B	–	TP814X2 TP814X1

Time Delay Relays
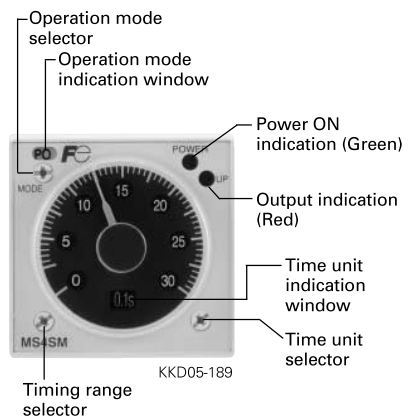## Super Timers
MS4S

Direct-reading time-scale and compact body
MS4S Super Timer

MS4S series Super Timers feature an easy setting and direct-reading system of four time-scale.
MS4SM timer is multimode operation type and MS4SA and MS4SC timers are on-delay operation type.

■ Features
• Time-scale indication window and time-scale selector
By turning a time-scale selector, the timing-scales appear in the indication windows one set a time.
Although this is a multimode timer, the optional times such as 56 or 27 minutes can be easily set with the direct-reading time-scale.

• Compact timer with instantaneous contact
On-delay timers with instantaneous contact, as well as multimode and on-delay timers, are compact.
The front to back length of the timers is only 66.5mm.

• Operation mode indication window and operation mode selector
Four operation modes are provided (MS4SM type only).
By turning the operation mode selector, the on-delay, flicker, one-shot, or signal off-delay operation mode can be selected. The present mode is shown in the operation mode indication window with the marks PO, FL, OS or SF.

• LED power ON and output indicator
The power-source lamp (Green) is lit when power is on and flickers during timer operation.
The output lamp (Red) is lit when the timed NO contact is on.

• Wide range of AC supply voltage
Supply voltages of 100 to 240V AC are commonly available (ordering code: AP type only).

• Instantaneous operation function with 0 indication
When the timer dial is set at 0, output is given instantaneously, allowing sequence checks to be performed easily.

• Time unit indication window and time unit selector
By turning the time selector, time units of 0.1 sec., sec., min, and hours. can be selected and made to appear in the indication window.

• Improvement of resistance to waveform distortion
The resistance to distortion of secondary voltage waveform of the power supply caused by inverters and uninterruptible power supplies (UPS) is improved.
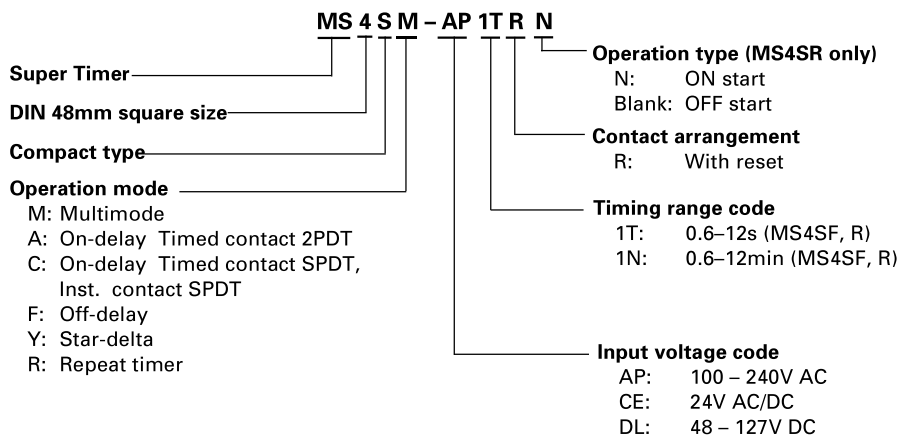

MS4SM　KKD05-126

- Operation mode selector
- Operation mode indication window
- Power ON indication (Green)
- Output indication (Red)
- Time unit indication window
- Time unit selector
- Timing range selector

KKD05-189

• UL, c🅤us and TÜV approved

■ Timing range/16 ranges

Time-scale	Time unit indication window			
	0.1s	sec	min	hrs
0 1 2 3 4 5 6	0.05 – 0.6s	0.05 – 6s	0.5 – 6min	0.5 – 6h
0 2 4 6 8 10 12	0.1 – 1.2s	1 – 12s	1 – 12min	1 – 12h
0 5 10 15 20 25 30	0.25 – 3s	2.5 – 30s	2.5 – 30min	2.5 – 30h
0 10 20 30 40 50 60	0.5 – 6s	5 – 60s	5 – 60min	5 – 60h

■ Type number nomenclature

MS 4 S M – AP 1T R N

Super Timer

DIN 48mm square size

Compact type

Operation mode
  M: Multimode
  A: On-delay　Timed contact 2PDT
  C: On-delay　Timed contact SPDT,
      Inst.　contact SPDT
  F: Off-delay
  Y: Star-delta
  R: Repeat timer

Input voltage code
  AP:　100 – 240V AC
  CE:　24V AC/DC
  DL:　48 – 127V DC

Timing range code
  1T:　0.6–12s (MS4SF, R)
  1N:　0.6–12min (MS4SF, R)

Contact arrangement
  R:　With reset

Operation type (MS4SR only)
  N:　ON start
  Blank: OFF start

■ Ordering information
Specify the following
1. Ordering code or type number of body and socket.

03

■ **Specifications   (MS4SM, MS4SA, MS4SC)**

Type	Ordering code	Input voltage	Operation	Contact	Timing range	Socket *
MS4SM	MS4SM-AP MS4SM-CE MS4SM-DL	100 – 240V AC 24V AC/DC 48 – 127V DC	On-delay Flicker One-shot Signal off-delay	Timed: 2PDT 5A	Total 16 ranges 0.05 – 0.6s 0.1 – 1.2s 0.25 – 3s 0.05 – 6s 0.5 – 6 (s, min, h) 1 – 12 (s, min, h) 2.5 – 30 (s, min, h) 5 – 60 (s, min, h)	Surface mounting: TP411X 11GB(RX1G)+FX3(MZ24) Flush mounting: TP411SBA ATX2NS(MX41NS)
MS4SA	MS4SA-AP MS4SA-CE MS4SA-DL	100 – 240V AC 24V AC/DC 48 – 127V DC	On-delay	Timed: 2PDT 5A		Surface mounting: TP48X(MX48X2) 8GB(RX8G)+FX3(MZ24) Flush mounting: TP48SB(MX48N1) ATX1NS(MX48NS)
MS4SC	MS4SC-AP MS4SC-CE MS4SC-DL	100 – 240V AC 24V AC/DC 48 – 127V DC	On-delay	Timed: SPDT Instant: SPDT 5A		

* (   ): Ordering code

■ **Technical data   (MS4SM, MS4SA, MS4SC)**

Repeat accuracy	±0.3% at max. setting time
Reset time	0.1s or less
Operating voltage range	0.85 to 1.1 times rated input voltage
Operating temperature range	–10 to +55°C (No icing)
Humidity	35 to 85% (No condensation)
Contact ratings	5A at 250V AC resistive load
Power consumption	Approx. 10VA at AC, Approx. 1W at DC,
Insulation resistance	100MΩ at 500 DC megger
Dielectric strength	2000V AC 1min. between current carrying part and non-current carrying part 2000V AC 1min. between output contact and control circuit 1000V AC 1min. 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/s^2 Mechanical durability: 500m/s^2
Durability	Mechanical: 20 million operations Electrical: 100000 operations at 240V AC 5A resistive load
Mass	Approx. 100g

■ **Standards**
UL file No.:   E44592
TÜV License No.: R50007315 (MS4SM)
                          R50006667 (MS4SA, MS4SC)