

# Koino MULTI TIMING RELAY

## KTM-3MN Series Multi timing relay

Miniature timer with multiple time ranges and multiple operating modes

### FEATURE

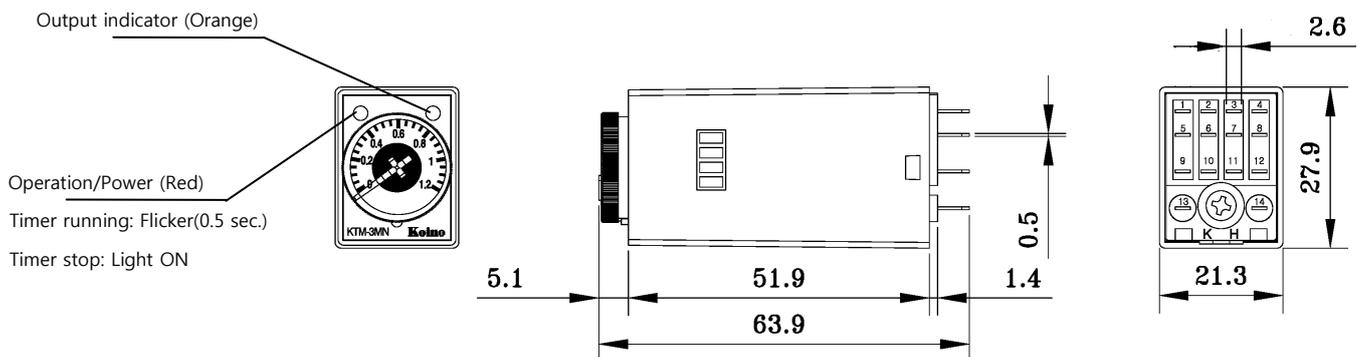
- Compact size
- Multiple operating modes and multiple time ranges.
- Output and operation indicator with LED lamp
- Change settings in real time (DIP switch)
- Time error  $\pm 5\%$  max.



### CLASSIFICATION

KTM-3MN	1	A2	2	Mark	Description
				KTM-3MN	KOINO 3M New ( Multi timing relay )
TIME Range				1	1.2sec ~ 12min
				3	3sec ~ 30min
				7	1.2min ~ 12hour
				9	3min ~ 30hour
				5 ( Order made )	6sec ~ 60min
				6 ( Order made )	6min ~ 60hour
Input voltage				A1	100~120VAC
				A2	200~230VAC
				D1	12VDC
				D2	24VDC
PIN Type				None	4PIN
				2	2PIN

### DIMENSIONS

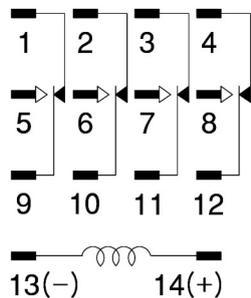


## TECHNICAL DATA

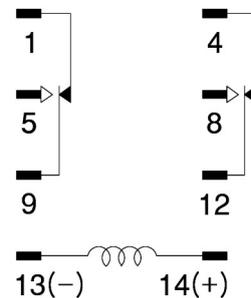
		KTM-3MNxA1(2)	KTM-3MNxA2(2)	KTM-3MNxD1(2)	KTM-3MNxD2(2)
Time		1.2sec~12min / 3sec~30min / 1.2min~12hour / 3min~30hour			
Operating mode		ON DELAY , INTERVAL , FLICKER ON START , FLICKER OFF START			
Compatible sockets		KH-RS-14M, KH-RS-14N ( KOINO - 14Pin Socket )			
Input voltage		100~120VAC	200~230VAC	12VDC	24VDC
Operating voltage range		90~110% of rated voltage			
Power consumption		3VA max.		1.5W max	
Reset time		100ms max. ( Power reset time )			
Contact output ratings		2PIN = 220VAC, 5A ( Resistive ) / 4PIN = 220VAC, 3A ( Resistive )			
Relay durability	Mechanical	Minimum 10 million operations			
	Electrical	Minimum 200,000 operations( 1800/ hour )			
Contact		2PIN : 2C ( 2a2b ) / 4PIN : 4C ( 4a4b )			
Operating time deviation		±0.5%, 10msec max. ( at the maximum time setting )			
Set deviation		±5%, 50msec max. ( at the maximum time setting )			
Voltage deviation		±0.2% max. ( at the maximum time setting )			
Temperature deviation		±2% max.( at the maximum time setting )			
Insulation resistance		100MΩ ( at 500VDC )			
Noise-proof		By noise simulator (pulse width: 100 ns/1 μs, 1-ns rise)±2,000V			
Dielectric strength		2,000VAC 50/60Hz for 1minute ( between live-part and dead-part)			
Vibration resistance		10 to 55 Hz, 0.5mm single double for 1 hour each in 3 directions			
Shock resistance		Approx. 30G ( 300m/s <sup>2</sup> )			
Ambient temperature		Operation: -10°C ~ +50°C ( with no icing)			
		Storage: -20°C ~ +55°C ( with no icing)			
Ambient humidity		35 ~ 85% RH			
Protection degree		IP40			
Materials		Case: ABS , Body: PC , Dial: PC			
Weight		Approx. 40g			

## WIRING DIAGRAM

KTM-3MN□□□



KTM-3MN□□□2

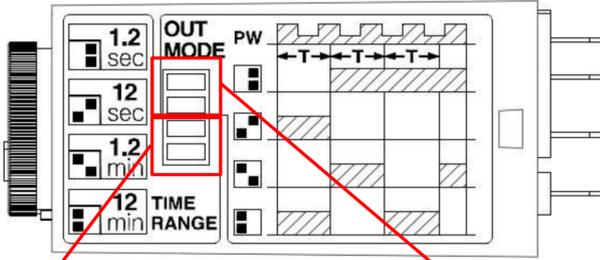


\* AC: 100~120VAC, 200~230VAC 50/60Hz

\* DC: 12VDC, 24VDC Be careful when connecting wires. Contact 13(-), 14(+)

## DIP Switch settings

EX) 1.2sec~12min



Time setting

Mode setting

Model	Time range	Time setting range	DIP switch	Operating mode	
				MODE 1	MODE 2
KTM-3MN1x	1.2sec	0.05 ~ 1.2sec		MODE 1	ON DELAY
	12sec	0.5 ~ 12sec		MODE 2	INTERVAL
	1.2min	0.05 ~ 1.2min		MODE 3	FLICKER OFF START
	12min	0.5 ~ 12min		MODE 4	FLICKER ON START
KTM-3MN3x	3sec	0.125 ~ 3sec			
	30sec	1.25 ~ 30sec			
	3min	0.125 ~ 3min			
	30min	1.25 ~ 30min			
KTM-3MN7x	1.2min	0.05 ~ 1.2min			
	12min	0.5 ~ 12min			
	1.2hour	0.05 ~ 1.2hour			
	12hour	0.5 ~ 12hour			
KTM-3MN9x	3min	0.125 ~ 3min			
	30min	1.25 ~ 30min			
	3hour	0.125 ~ 3hour			
	30hour	1.25 ~ 30hour			

\*KTM-3MN5x, KTM-3MN6x: Order made only

\*t= time, (t-a)<t

\*Rt= Reset time (0.1 sec. min.)

\*2 PIN: Time limit contact NC(1-9, 4-12),  
Time limit contact NO(1-5, 4-8)

## Precaution

For DC power supply type, be sure to check the polarity of terminals.

In case of 12VDC, 24VAC/DC model, isolated and limited voltage/current or Class 2 source should be provided for power supply.

Do not use this unit at below places.

- Places where there are severe vibration or impact.
- Places where strong alkalis or acids are used.
- Places where there are direct rays of the sun
- Places where strong magnetic field or electric noise are generated.

Installation environment

- It shall be used indoor
- Altitude Max. 2,000m
- Pollution Degree 2

## Timing Chart

