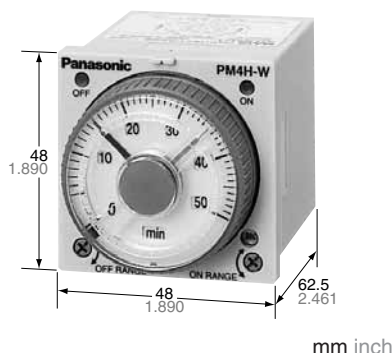


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**DIN48 SIZE
ANALOG MULTI-RANGE
CYCLIC TWIN TIMERS**

PM4H-W



**UL File No.: E122222
CSA File No.: LR39291**



Features

1. A single twin timer unit that repeats (variable) ON/OFF.
2. Multiple ranges with a 0.1 s to 500 h time specification on a single unit.
3. The output ON/OFF operation is indicated by red and green LED's. It's easy to check the operation at a glance.
4. The AC free power supply and shorter body make it easier to use.
5. A new screw terminal type has been added to the conventional pin type. Wiring can be done easily with a screwdriver.
6. Compliant with UL, CSA, CE and LLOYD.

RoHS Directive compatibility information
<http://www.nais-e.com/>

Specifications

Item	Type	PM4H-W	
Rating	Rated operating voltage	100 to 240V AC, 48 to 125V DC, 12V DC, 24V AC/DC	
	Rated frequency	50/60Hz common (AC operating type)	
	Rated power consumption	Approx. 10VA (100 to 240V AC) Approx. 2.5VA (24V AC) Approx. 1.5W (12V DC, 24V DC, 48 to 125V DC)	
	Rated control capacity	5A 250V AC (resistive load)	
	Operation mode	Cyclic (OFF-start/Twin operation)	
	Time range	1s to 500h 16 time ranges switchable (T ₁ , T ₂ time setting individually)	
Time accuracy (Note:)	Operation time fluctuation	±0.3% (power off time change at the range of 0.3s to 1h)	
	Setting error	±5% (Full-scale value)	
	Voltage error	±0.5% (at the operating voltage changes between 85 to 110%)	
	Temperature error	±2% (at 20°C ambient temp. at the range of -10 to +50°C +14 to 122°F)	
Contact	Contact arrangement	Timed-out 2 Form C	
	Contact resistance (Initial value)	Max. 100mΩ (at 1A 6V DC)	
	Contact material	Silver alloy	
Life	Mechanical (contact)	2×10 ⁷	
	Electrical (contact)	10 ⁵ (at rated control capacity)	
Electrical function	Allowable operating voltage range	85 to 110% of rated operating voltage (at 20°C coil temp.)	
	Insulation resistance (Initial value)	Min. 100MΩ Between live and dead metal parts Between input and output Between contacts of different poles (At 500V DC) Between contacts of same pole	
	Breakdown voltage (Initial value)	2,000Vrms for 1 min Between live and metal parts 2,000Vrms for 1 min Between input and output 2,000Vrms for 1 min Between contacts of different poles 1,000Vrms for 1 min Between contacts of same pole	
	Min. power off time	300ms	
	Max. temperature rise	55°C 131°F	
Mechanical function	Vibration resistance	Functional	10 to 55Hz: 1 cycle/min double amplitude of 0.25mm (10min on 3 axes)
		Destructive	10 to 55Hz: 1 cycle/min double amplitude of 0.375mm (1h on 3 axes)
	Shock resistance	Functional	Min. 98m/s ² (4 times on 3 axes)
		Destructive	Min. 980m/s ² (5 times on 3 axes)
Operating condition	Ambient temperature	-10 to +50°C +14 to +122°F	
	Ambient humidity	30 to 85%RH (non-condensing)	
	Atmospheric pressure	860 to 1,060hPa	
	Ripple factor (DC type)	20%	
Others	Protective construction	IP65 on front panel (using rubber gasket ATC18002) <only for IP65 type>	
	Weight	120g 4.233 oz (Pin type), 130g 4.586 oz (Screw terminal type)	

Notes: 1) Unless otherwise specified, the measurement conditions at the maximum scale time standard are specified to be the rated operating voltage (within 5% ripple factor for DC), 20°C 68°F ambient temperature, and 1s power off time.

2) For the 1s range, the tolerance for each specification becomes ±10ms.

3) As internal components may become worn when using continuous conduction, the product should be replaced periodically.

PM4H-W

Time range

All types of PM4H-W timer have multi-time range.
16 time ranges are selectable.
1s to 500h (Max. range) is controlled.

Scale	Time unit	sec	min	hrs	10h
		1	0.1s to 1s	0.1 min to 1 min	0.1h to 1h
5	Control time range	0.5s to 5s	0.5 min to 5 min	0.5h to 5h	5h to 50h
10		1.0s to 10s	1.0 min to 10 min	1.0h to 10h	10h to 100h
50		5s to 50s	5 min to 50 min	5h to 50h	50h to 500h

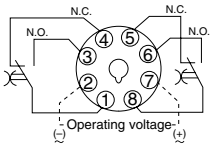
Product types

Type	Operating mode	Contact arrangement	Time range	Protective structure	Rated Operating voltage	Terminal type	Part number
PM4H-W Twin timer	Cyclic (OFF-start, Twin)	Relay Timed-out 2 Form C	16 selectable ranges (1s to 500h)	IP65	100 to 240V AC	8 pins	PM4HW-H-AC240VW
						Screw terminal	PM4HW-H-AC240VSW
					48 to 125V DC	8 pins	PM4HW-H-DC125VW
						Screw terminal	PM4HW-H-DC125VSW
					24V AC/DC	8 pins	PM4HW-H-24VW
						Screw terminal	PM4HW-H-24VSW
					12V DC	8 pins	PM4HW-H-DC12VW
						Screw terminal	PM4HW-H-DC12VSW
				IP50	100 to 240V AC	8 pins	PM4HW-H-AC240V
						Screw terminal	PM4HW-H-AC240VS
					48 to 125V DC	8 pins	PM4HW-H-DC125V
						Screw terminal	PM4HW-H-DC125VS
					24V AC/DC	8 pins	PM4HW-H-24V
						Screw terminal	PM4HW-H-24VS
					12V DC	8 pins	PM4HW-H-DC12V
						Screw terminal	PM4HW-H-DC12VS

Terminal layouts and Wiring diagrams

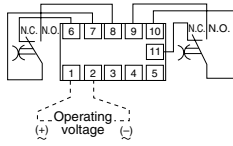
Pin Type

Cyclic timed-out relay contact: 2C



Screw terminal type

Cyclic timed-out relay contact: 2C

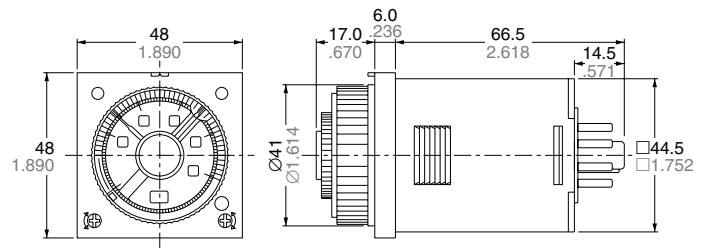
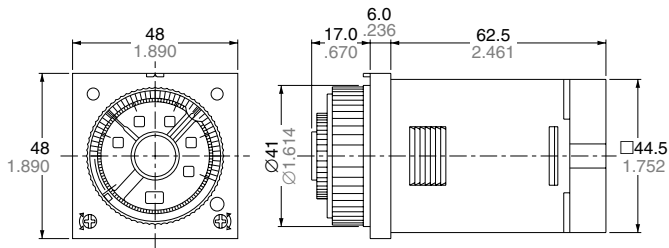


Dimensions

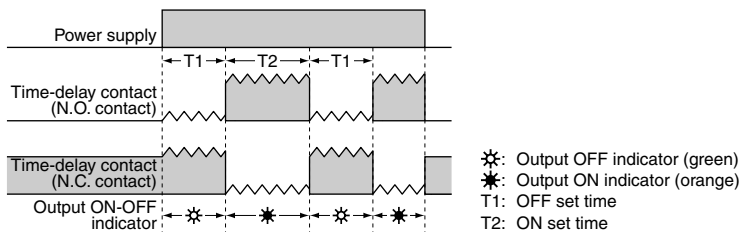
• Screw terminal type: M3.5

• Pin type

mm inch
Tolerance: $\pm 0.5 \pm 0.20$



Operation



PM4H SERIES MODES AND TIME SETTING

1. Operation method

1) Operation mode setting [PM4H-A type]

8 operation modes are selectable with operation mode selector.
Turn the operation mode selector with screw driver.
Operation mode is shown up through the window above the mode selector. The marks are (ON), (FL), (FO), (OF), (SF), (OS), (PF), (OC).
Turn the mode selector to the mark until you can check by clicking sound.
Confirm the mode selector position if it is correct.
If the position is not stable, the timer might mis-operate.



2) Time range setting [PM4H series common]

16 time ranges are selectable between 1s to 500h.
Turn the time range selector with the screw driver.
Clockwise turning increases the time range, and Counter-clockwise turning decrease the time range.
Confirm the range selector position if it is correct.
If the position is not stable, the timer might mis-operate.



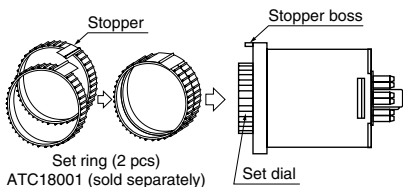
3) Time setting [common]

To set the time, turn the set dial to a desired time within the range.
Instantaneous output will be on when the dial is set to "0".
When the instantaneous output is used, the dial should be set under "0" range. (Instantaneous output area)
When power supply is on, the time range, setting time and operation mode cannot be changed.
Turn off the power supply or a reset signal is applied to set the new operation mode.
If the position is not stable, the timer might mis-operate.

2. How to use "Set ring" [PM4H series common]

1) Fixed time setting

Set the desired time and put 2 set rings together.
Insert the rings into stopper to fix the time.

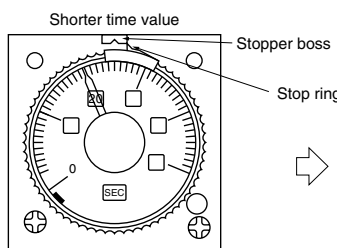


2) Time range setting

Example: Time range 20s to 30s.

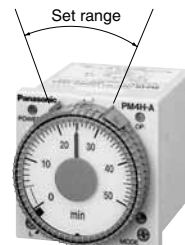
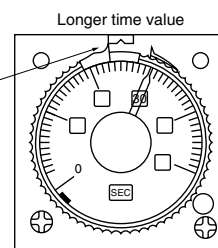
① Shorter time value setting

Set the dial to 20s.
Place the stop ring at the right side of stopper.



② Longer time value setting

Set the dial to 30s.
Place the stop ring at the left side of stopper.



Note) The stoppers for the lower limit setting set ring and the upper limit setting set ring face the opposite directions.

Applicable standard (PM4H series common)

Safety standard	EN61812-1	Pollution Degree 2/Overvoltage Category III
EMC	(EMI)EN61000-6-4 Radiation interference electric field strength Noise terminal voltage (EMS)EN61000-6-2 Static discharge immunity	EN55011 Group1 ClassA EN55011 Group1 ClassA
	RF electromagnetic field immunity	EN61000-4-2 4 kV contact 8 kV air
	EFT/B immunity	EN61000-4-3 10 V/m AM modulation (80 MHz to 1 GHz) 10 V/m pulse modulation (895 MHz to 905 MHz)
	Surge immunity	EN61000-4-4 2 kV (power supply line) 1 kV (signal line)
	Conductivity noise immunity	EN61000-4-5 1 kV (power line)
	Power frequency magnetic field immunity Voltage dip/Instantaneous stop/Voltage fluctuation immunity	EN61000-4-6 10 V/m AM modulation (0.15 MHz to 80 MHz) EN61000-4-8 30 A/m (50 Hz) EN61000-4-11 10 ms, 30% (rated voltage) 100 ms, 60% (rated voltage) 1,000 ms, 60% (rated voltage) 5,000 ms, 95% (rated voltage)

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