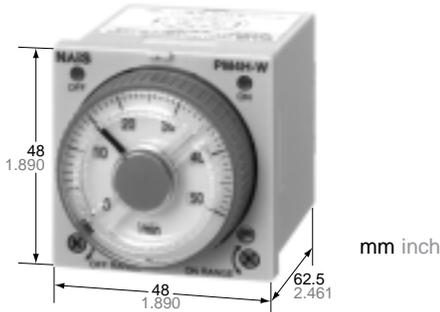# NAiS

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

PM4H-W

FEATURES

- **A single twin timer unit that repeats (variable) ON/OFF.**
- **Multiple ranges from 0.1 s to 500 h.**
- **The output ON/OFF operation is indicated by red and green LED's.
  It's easy to check the operation at a glance.**
- **A new screw terminal type allows wiring to be done easily with a screwdriver.**

48
1.890

48
1.890

62.5
2.461

mm inch

CHARACTERISTICS

Item	Type	PM4H-W
Rating	Rated operating voltage	100 to 240V AC, 12V DC, 24V AC/DC
	Rated frequency	50/60Hz common (AC operating type)
	Rated power consumption	Max. 10VA (100 to 240V AC) Max. 2.5VA (24V AC) Max. 2W (12V DC, 24V DC)
	Output rating	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 0.1s to 1h)
	Setting error	±5%
	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	2×10^7
	Electrical	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 (At 500V DC) Between contacts of different poles 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	Shock resistance — Functional	Min. 98m/s² (4 times on 3 axes)
	Shock resistance — Destructive	Min. 980m/s² (5 times on 3 axes)
	Vibration resistance — Functional	10 to 55Hz: 1 cycle/min double amplitude of 0.5mm (10min on 3 axes)
	Vibration resistance — Destructive	10 to 55Hz: 1 cycle/min double amplitude of 0.75mm (1h on 3 axes)
Operating condition	Ambient temperature	−10 to +50°C +14 to +122°F
	Ambient humidity	Max. 85%RH
	Atmospheric pressure	860 to 1,060hPa
	Ripple factor (DC type)	20%
Others	Protective construction	IP65 on front panel (using rubber gasket ATC18002)
	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 at 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.

PRODUCT TYPE

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

WIRING DIAGRAMS

Pin Type
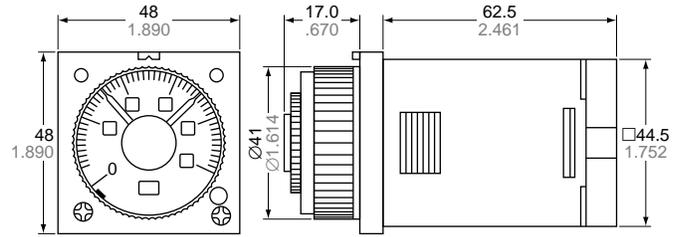Cyclic timed-out relay contact: 2C
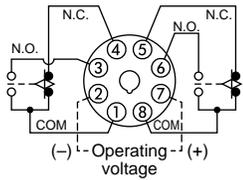
Screw terminal type
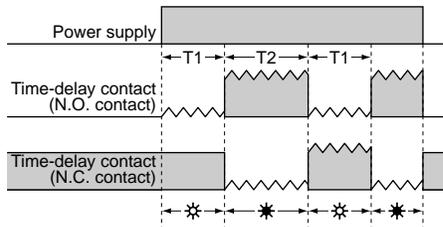Cyclic timed-out relay contact: 2C
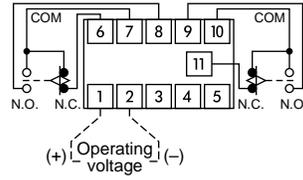
DIMENSIONS

mm inch
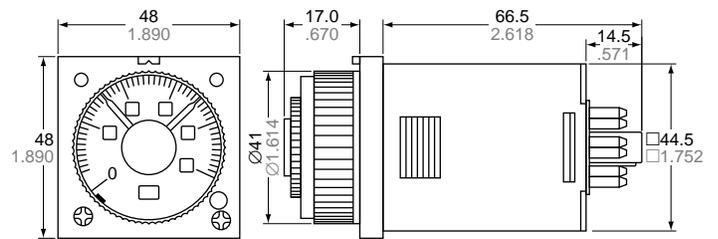
OPERATION

☼: Output OFF indicator (red)
☀: Output ON indicator (green)
T1: OFF set time
T2: ON set time

TIME RANGE

Scale \ Time unit		seconds	minutes	hours	hours
1	Control time range	0.1s to 1s	0.1 min to 1 min	0.1h to 1h	1.0h to 10h
5		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

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

MODES & TIME SETTING

1) Operation mode setting [PM4H-A]
8 operation modes are selectable with operation mode selector.
Turn the operation mode selector with screw driver.
Operation mode is shown through the window above the mode selector. The marks are ⓄⓃ, ⒻⓁ, ⒻⓄ, ⓄⒻ¹, ⓈⒻ, ⓄⓈ, ⓄⒻ², ⓄⒸ.
Turn the mode selector (clicking sound) to the desired position.
Confirm the mode selector position.
If the position is not correct, the timer might not operate properly.

2) Time range setting [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 decreases the time range.
Confirm the range selector position.

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 and operation mode cannot be changed.
Turn off the power supply or a reset signal is applied to set the new operation mode.

How to use "Stop ring" [PM4H series]

1) Fixed time setting
Set the desired time and put 2 stop rings together.
Insert the rings into stopper to fix the time.

Stop ring (2 pcs)

Stopper

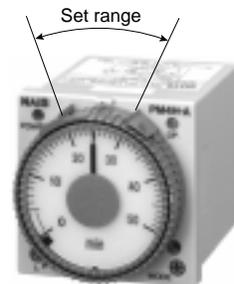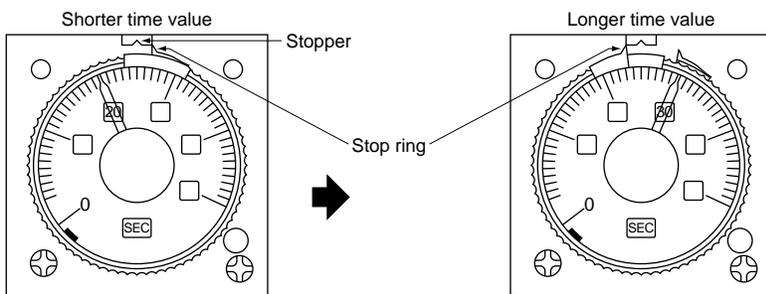Set dial
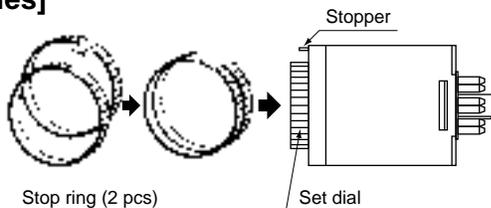
2) Fixed time range setting
Example: Time range 20s to 30s.

① Shorter time value setting
   Set the dial to 20s.
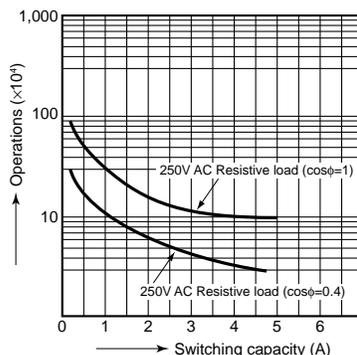   Place the stop ring at the right side of stopper.

② Longer time value setting
   Set the dial to 30s.
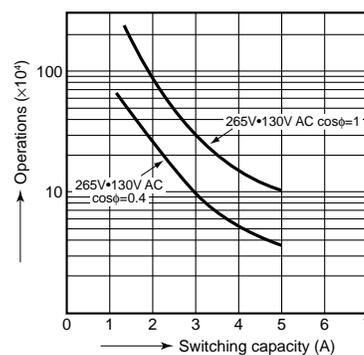   Place the stop ring at the left side of stopper.

Shorter time value — Stopper

Longer time value

Stop ring

Set range

DATA
■ Load control life

• Load life curve (PM4H-A, PM4H-S)

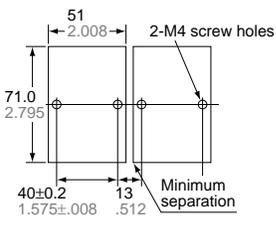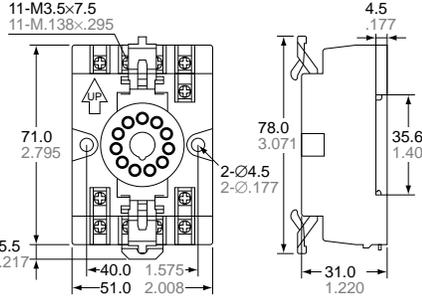Operations (×10⁴)

250V AC Resistive load (cosφ=1)

250V AC Resistive load (cosφ=0.4)

Switching capacity (A)
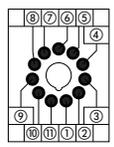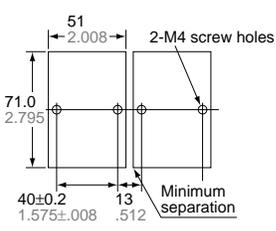
• Load life curve (PM4H-M)

Operations (×10⁴)

265V•130V AC cosφ=1

265V•130V AC cosφ=0.4
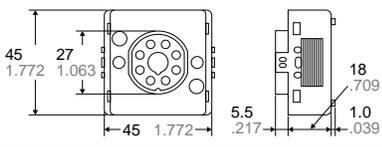
Switching capacity (A)

ACCESSORIES

mm inch

Type	Appearance	Dimensions	Terminal wiring (TOP VIEW)	Mounting hole dimensions
PM4H-S **PM4H-M** **PM4H-W** **PM4H-SD** **PM4H-F8** **PM4H-F8R** **(8 pin)**	• DIN rail socket (8 pin) ATC18003	8-M3.5×7.5 / 8-M.138×.295 ・ 4.5 .177 / 71.0 2.795 ・ 78.0 3.071 ・ 35.6 1.402 / 2-Ø4.5 2-Ø.177 / 5.5 .217 / 40.0 1.575 / 51.0 2.008 / 25.3 .996	⑥⑤④③ ⑦⑧①② Note: Terminal No. on the main body are identical to those on the terminal socket.	51 2.008 2-M4 screw holes / 71.0 2.795 / 40±0.2 1.575±.008 / 13 .512 / Minimum separation
PM4H-A **PM4H-F11R** **(11 pin)**	• DIN rail socket (11 pin) ATC18004	11-M3.5×7.5 / 11-M.138×.295 ・ 4.5 .177 / 71.0 2.795 ・ 78.0 3.071 ・ 35.6 1.402 / 2-Ø4.5 2-Ø.177 / 5.5 .217 / 40.0 1.575 / 51.0 2.008 / 31.0 1.220	⑧⑦⑥⑤④ ⑨⑩⑪①②③ Note: Terminal No. on the main body are identical to those on the terminal socket.	51 2.008 2-M4 screw holes / 71.0 2.795 / 40±0.2 1.575±.008 / 13 .512 / Minimum separation
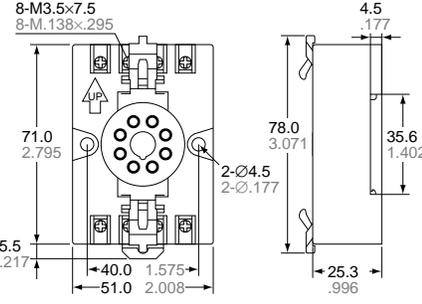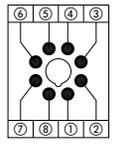
Note: Terminal No. on the main body are identical to those on the terminal socket.　　　　Tolerance: ±1 ±.039

SOCKETS & CAPS

| Type	Screw terminal	Dimensions	Terminal wiring (TOP VIEW)	Mounting hole dimensions
PM4H-S **PM4H-M** **PM4H-W** **PM4H-SD** **PM4H-F8** **PM4H-F8R** **(8 pin)**	• Screw terminal AT8-RR	45 1.772 / 27 1.063 / 18 .709 / 5.5 .217 / 1.0 .039 / 45 1.772	③④⑤⑥ ②①⑧⑦	———————
	• 8 pin cap AD8-RC	Ø31.5 Ø1.240 / Ø14 Ø.551 / Ø30 Ø1.181 / 8 .315 / 8.6 .339 / 26 1.024 / Ø32.5 Ø1.280 / (34.6) (1.362)		———————
PM4H-A **PM4H-F11R** **(11 pin)**	• 11 pin cap AT8-DP11	Ø31.5 Ø1.240 / Ø14 Ø.551 / Ø30 Ø1.181 / 8 .315 / 8.6 .339 / 26 1.024 / Ø32.5 Ø1.280 / (34.6) (1.362)		———————
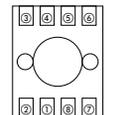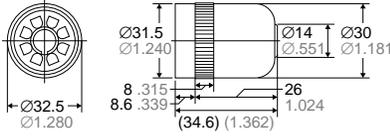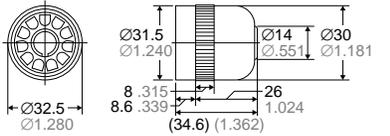
Note: Terminal No. on the main body are identical to those on the terminal socket.　　　　Tolerance: ±1 ±.039
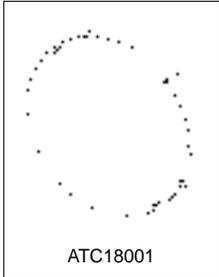
MOUNTING PARTS

• Rubber gasket

50.0
1.969

50.0
1.969
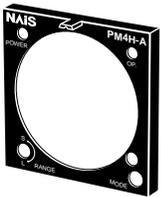
1.0
.039
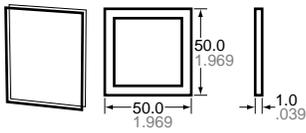
ATC18002

• **Stop ring**

ATC18001

When you control the fixed time range, the setting rings make it easy to do the time setting (a set of 2 pcs) and keep the time range all the time.
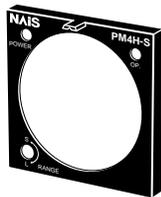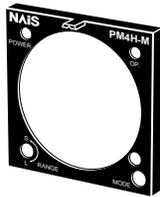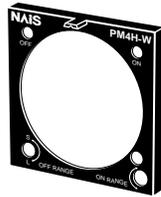
• **Panel cover (Black)**

• PM4H-A	• PM4H-S	• PM4H-M	• PM4H-W	• PM4H-SD	• PM4H-F
ATC18011	ATC18012	ATC18013	ATC18014	ATC18015	ATC18016