

Analog Timer

These analog dial set multi-function, multi-range timers cover 18 different operating modes, and include true power off-delay, star-delta, and cyclic twin timers. Available with pin or screw terminals, it has a washdown front panel, up to 3 signal inputs; and relay output.

Key Features

- 8 Different Operation Modes (PM4H-S)
- Tube Base with Pin Style Terminals
- Multiple Time Ranges - 1s to 500h (Max)
- Short Body - 62.5mm (2.461 in) (Screw Terminal Type)
- IP50/IP65 Rated - Front panel protected against water-splash and dust
- 100-240V AC Free-Voltage Input, 48-125V DC Type Available
- Built-in Screw Terminals
- Easy Wiring - Reduces additional costs
- Changeable Panel Cover

PM4H/4S Models

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Currently viewing: PM4H/4S Timers

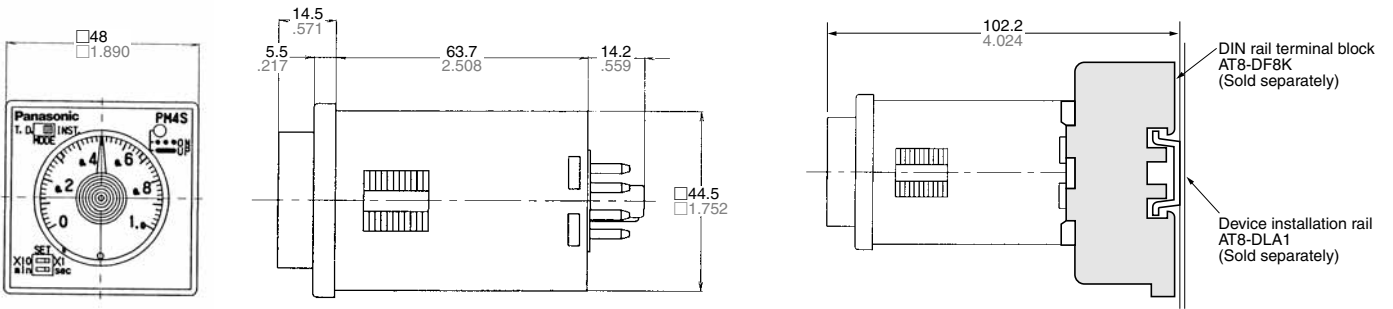
Model Name	Operation Mode	Time Range	Terminal Type	Control Output Current/voltage	Mounting Method	Mounting Parts	Operating Voltage	Min. Power Off Time (ms)
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Sort ▲▼	Sort ▲▼	Sort ▲▼	Sort ▲▼	Sort ▲▼	Sort ▲▼	Sort ▲▼	Sort ▲▼	Sort ▲▼
PM4HA-H-24V	Pulse on delay-flicker-ON flicker-Differential ON/Off, OFF delay, Pulse On shot, One cycle	16 ranges 1s to 500h	11 Pins	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	24 V AC/DC	100
PM4HA-H-24VS	Pulse on delay-flicker-ON flicker-Differential ON/Off, OFF delay, Pulse On shot, One cycle	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	24 V AC/DC	100
PM4HA-H-24VSW	Pulse on delay-flicker-ON flicker-Differential ON/Off, OFF delay, Pulse On shot, One cycle	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	24 V AC/DC	100
PM4HA-H-24VW	Pulse on delay-flicker-ON flicker-Differential ON/Off, OFF delay, Pulse On shot, One cycle	16 ranges 1s to 500h	11 Pins	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	24 V AC/DC	100
PM4HA-H-AC240V	Pulse on delay-flicker-ON flicker-Differential ON/Off, OFF delay, Pulse On shot, One cycle	16 ranges 1s to 500h	11 Pins	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	100 to 240 V AC	100
PM4HA-H-AC240VS	Pulse on delay-flicker-ON flicker-Differential ON/Off, OFF delay, Pulse On shot, One cycle	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	100 to 240 V AC	100
PM4HA-H-AC240VSW	Pulse on delay-flicker-ON flicker-Differential ON/Off, OFF delay, Pulse On shot, One cycle	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	100 to 240 V AC	100

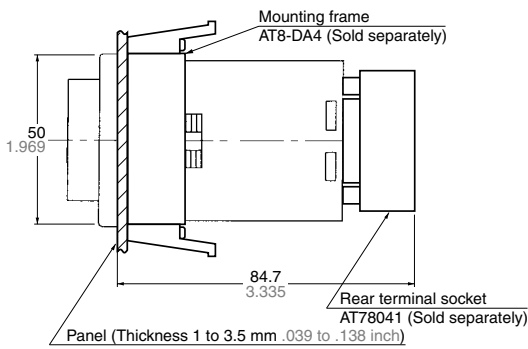
PM4HS-H-24VSW	Power ON delay	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	24 V AC/DC	100
PM4HS-H-24VW	Power ON delay	16 ranges 1s to 500h	8 Pins	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	24 V AC/DC	100
PM4HS-H-AC240V	Power ON delay	16 ranges 1s to 500h	8 Pins	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	100 to 240 V AC	100
PM4HS-H-AC240VS	Power ON delay	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	100 to 240 V AC	100
PM4HS-H-AC240VSW	Power ON delay	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	100 to 240 V AC	100
PM4HS-H-AC240VW	Power ON delay	16 ranges 1s to 500h	8 Pins	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	100 to 240 V AC	100
PM4HS-H-DC12V	Power ON delay	16 ranges 1s to 500h	8 Pins	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	12 V DC	100
PM4HS-H-DC12VS	Power ON delay	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	12 V DC	100
PM4HS-H-DC12VSW	Power ON delay	16 ranges 1s to 500h	Screw Terminal	5 A / 250 V AC	Flush mount / DIN rail - adapter-	Terminal block, cap, panel cover, rubber gasket, mounting frame	12 V DC	100

Dimension (Unit: mm inch) Tolerance: $\pm 0.5 \pm .020$

• **Surface mount dimensions**

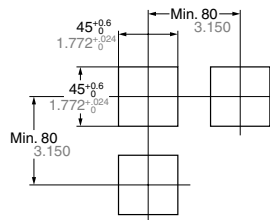


• **Panel mount dimensions (with mounting frame)**

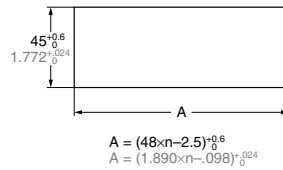


• **Panel cut out dimensions**

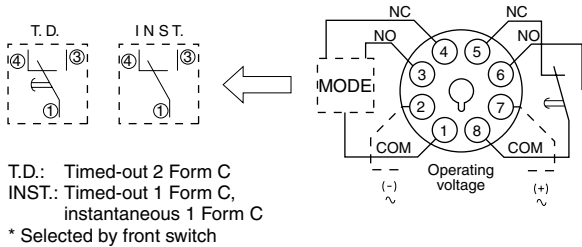
Standard cut out dimensions are shown below.
Use mounting frame (AT8-DA4) and rubber gasket (ATC18002).



• **Adjacent mounting**



• **Terminal layouts and wiring diagrams**

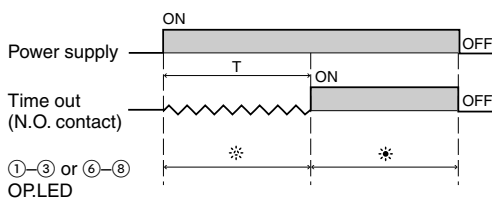


Notes:

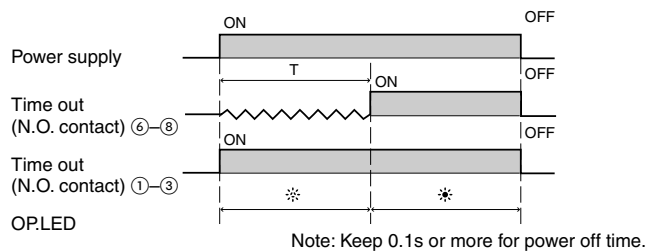
- Operating voltage signs in parentheses () indicate the polarity of the DC type.
- is a time delay contact.
- is an instantaneous contact.

Operation mode

1. **T.D. mode**



2. **INST. mode**



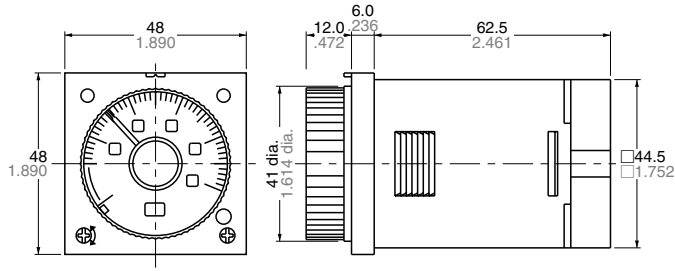
PM4H-A/S/M

Dimensions

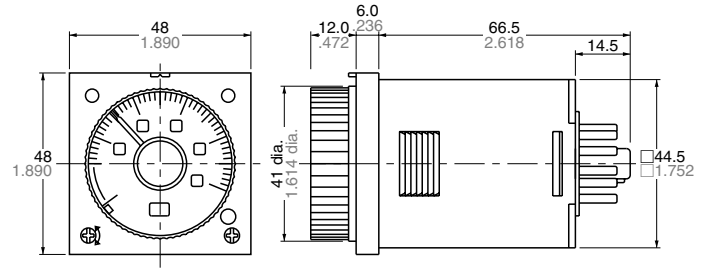
mm inch
Tolerance: $\pm 0.5 \pm 0.020$

• PM4H-□

Screw terminal type
(Flush mount)

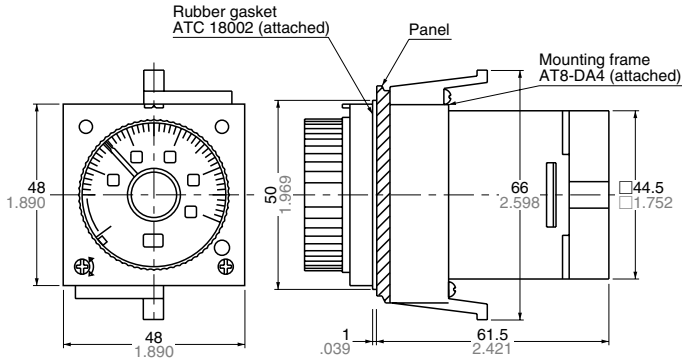


Pin type
(Flush mount/Surface mount)

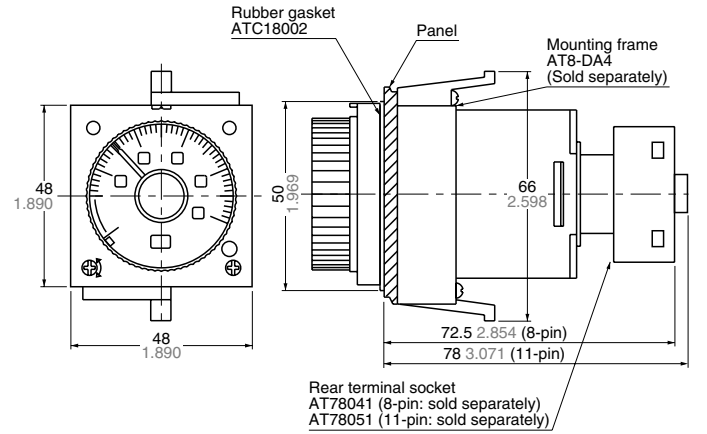


• Panel mount dimensions (with mounting frame)

Screw terminal type

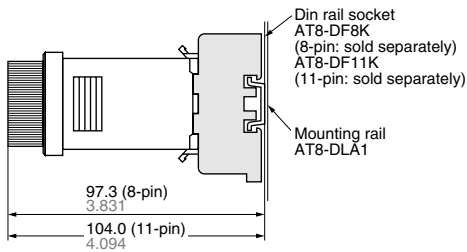


Pin type



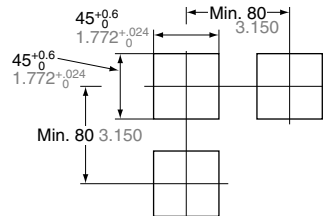
• Surface mount dimensions

Pin type

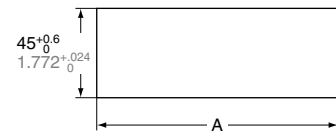


• Panel cut out dimensions

Standard cut out dimensions are shown below.
Use mounting frame (AT8-DA4) and rubber gasket (ATC18002).



• Adjacent mounting



$$A = (48 \times n - 2.5) \pm 0.6$$

$$A = (1.890 \times n - .098) \pm 0.024$$

- Note) 1. The proper thickness of mounting panel is between 1 to 5mm.
2. Adjacent mount is less water-resistant.

PM4S

Specifications

Item		Type	PM4S Multi-range Timer					
Rating	Rated operating voltage		100 to 120V AC		200 to 240V AC	12V DC	24V DC	
	Rated frequency		50/60 Hz				—	
	Rated power consumption		Approx. 3.0VA/3.6VA (at 100V AC) Approx. 4.5VA/5.25VA (at 120V AC)	Approx. 5.6VA/6.8VA (at 200V AC) Approx. 7.5VA/9.8VA (at 240V AC)	Approx. 1.3W		Approx. 1.7W	
	Output rating		5A 250V AC (resistive load)					
	Operating mode		Power ON-delay					
	Time range	A type		1s/10s/1min/10min (4 time ranges selectable)				
		B type		3s/30s/3min/30min (4 time ranges selectable)				
C type			6s/60s/6min/60min (4 time ranges selectable)					
D type			1min/10min/1h/10h (4 time ranges selectable)					
E type			3min/30min/3h/30h (4 time ranges selectable)					
Time accuracy (Note)	Operating time fluctuation		±1% (power off time change at the range of 0.1s to 1h)					
	Setting error		±5% (Full-scale value)					
	Voltage error		±1% (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		T.D.: Timed-out 2 Form C INST.: Timed-out 1 Form C, instantaneous 1 Form C (Selected by front switch)					
	Contact resistance (Initial value)		Max. 100mΩ (at 1A 6V DC)					
	Contact material		Silver alloy					
Life	Mechanical (contact)		Min. 10 ⁷					
	Electrical (contact)		Min. 10 ⁵ (at rated control capacity)					
Electrical function	Allowable operating voltage range		85 to 110% of rated operating voltage					
	Insulation resistance (Initial value)		Min. 100MΩ	Between live and dead metal parts		(At 500V DC)		
	Breakdown voltage (Initial value)		2,000Vrms for 1 min Between live and dead metal parts					
			2,000Vrms for 1 min Between input and output					
			2,000Vrms for 1 min Between contacts of different poles					
Min. power off time		100 ms						
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	Weight		Approximately 110 g 3.880 oz					

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.

Applicable standard

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)
	Conductivity noise immunity	EN61000-4-5 1 kV (power line)
	Power frequency magnetic field immunity	EN61000-4-6 10 V/m AM modulation (0.15 MHz to 80 MHz)
	Voltage dip/Instantaneous stop/Voltage fluctuation immunity	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)

PM4H-A/S/M

Time range

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

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

Note: 0 setting is for instantaneous output operation.

Specifications

Item	Type	PM4H-A	PM4H-S	PM4H-M
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)		
	Operating mode	Pulse ON-delay Pulse Flicker Pulse ON-Flicker Differential ON/OFF-delay (1) (2) Signal OFF-delay Pulse One-shot Pulse One-cycle	Power ON-delay	Power ON-delay Power Flicker Power ON-flicker Power One-shot Power One-cycle (with instantaneous contact)
	Time range	1s to 500h (Max.) 16 time ranges switchable		
Time accuracy (Note:)	Operating time fluctuation	±0.3% (power off time change at the range of 0.1s 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		Timed-out 1 Form C Instantaneous 1 Form C
	Contact resistance (Initial value)	Max. 100mΩ (at 1A 6V DC)		
	Contact material	Silver alloy		Au flash on 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 Between contacts of same pole	(At 500V DC)
	Breakdown voltage (Initial value)	2,000Vrms for 1 min Between live and dead 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	100ms		
	Max. temperature rise	55°C 131°F		65°C 149°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 (at 20°C 68°F, 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	100g 3.527 oz (Pin type) 110g 3.880 oz (Screw terminal type)		

Note: 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.