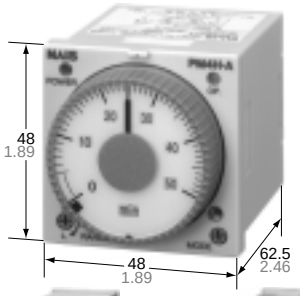
NAiS

DIN48 SIZE
MULTI-RANGE ANALOG TIMER

PM4H-A
PM4H-S
PM4H-M




Socket mount


Flush mount

FEATURES

- **Front panel of IP65 type is protected against water-splash and dust**
- **100-240V AC free-voltage input**
- **Built-in Screw terminals**
- **Screw terminal type is used for easy wiring and reducing additional cost for accessories.**
- **8 different operation modes: (PM4H-A)**
- **Tube base with pin style terminals**
- **Multiple time ranges — 1 s to 500 h (Max.)**
- **Short body — 62.5mm 2.46 inch (screw terminal type)**

PRODUCT TYPE

Type	Operation mode	Contact arrangement	Time range	Protective construction	Rated operating voltage	Terminal type	Part No.
PM4H-A	8 operation modes • Pulse ON-delay • Pulse Flicker • Pulse ON-flicker • Differential ON/OFF-delay (1) (2) • Signal OFF-delay • Pulse One-shot • Pulse One-cycle	Relay Timed-out 2 Form C	16 selectable ranges 1s to 500h	IP65	100 to 240V AC	11 pin	PM4HA-H-AC240VW
						Screw terminal	PM4HA-H-AC240VSW
					24V AC/DC	11 pin	PM4HA-H-24VW
						Screw terminal	PM4HA-H-24VSW
					12V DC	11 pin	PM4HA-H-DC12VW
						Screw terminal	PM4HA-H-DC12VSW
				IP50	100 to 240V AC	11 pin	PM4HA-H-AC240V
						Screw terminal	PM4HA-H-AC240VS
					24V AC/DC	11 pin	PM4HA-H-24V
						Screw terminal	PM4HA-H-24VS
					12V DC	11 pin	PM4HA-H-DC12V
						Screw terminal	PM4HA-H-DC12VS
PM4H-S	Power ON-delay	Relay Timed-out 2 Form C		IP65	100 to 240V AC	8 pin	PM4HS-H-AC240VW
						Screw terminal	PM4HS-H-AC240VSW
					24V AC/DC	8 pin	PM4HS-H-24VW
						Screw terminal	PM4HS-H-24VSW
					12V DC	8 pin	PM4HS-H-DC12VW
						Screw terminal	PM4HS-H-DC12VSW
				IP50	100 to 240V AC	8 pin	PM4HS-H-AC240V
						Screw terminal	PM4HS-H-AC240VS
					24V AC/DC	8 pin	PM4HS-H-24V
						Screw terminal	PM4HS-H-24VS
					12V DC	8 pin	PM4HS-H-DC12V
						Screw terminal	PM4HS-H-DC12VS
PM4H-M	5 operation modes (With instantaneous contact) • Power ON-delay • Power Flicker • Power ON-flicker • Power One-shot • Power One-cycle	Relay Timed-out 1 Form C Instantaneous 1 Form C		IP65	100 to 240V AC	8 pin	PM4HM-H-AC240VW
						Screw terminal	PM4HM-H-AC240VSW
					24V AC/DC	8 pin	PM4HM-H-24VW
						Screw terminal	PM4HM-H-24VSW
					12V DC	8 pin	PM4HM-H-DC12VW
						Screw terminal	PM4HM-H-DC12VSW
				IP50	100 to 240V AC	8 pin	PM4HM-H-AC240V
						Screw terminal	PM4HM-H-AC240VS
					24V AC/DC	8 pin	PM4HM-H-24V
						Screw terminal	PM4HM-H-24VS
					12V DC	8 pin	PM4HM-H-DC12V
						Screw terminal	PM4HM-H-DC12VS

If you use this timer under harsh environment, please order above sealed type (IP65 type). IP65 type — Protection dust and water jet splay on the front face.

TIME RANGE

Scale \ Time unit		sec	min	hrs	10h
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

Note: 0 setting is for instantaneous output operation.

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.

CHARACTERISTICS

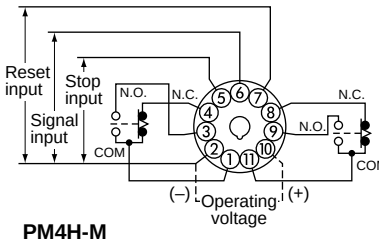
Item			PM4H-A	PM4H-S	PM4H-M
Rating	Rated operating voltage		100 to 240V AC, 12V DC, 24V AC/DC		
	Rated frequency		50/60Hz common (AC operating type)		
	Rated power consumption		Max. 10VA (100 to 240V AC) Max. 2.5VA (24V AC) Max. 2W (12V DC, 24V DC)		
	Output rating		5A 250V AC (resistive load)		
	Operating 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%		
	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		
	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		
Mechanical function	Shock resistance	Functional	Min. 98m/s² (4 times on 3 axes)		
		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)		
		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) <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.

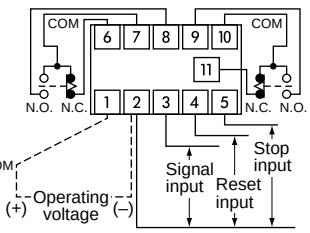
WIRING DIAGRAMS

PM4H-A

Pin type
- Timed-out 2 Form C

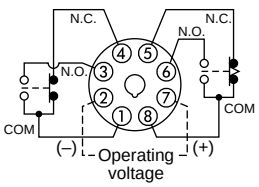


Screw terminal type
- Timed-out contact 2 Form C

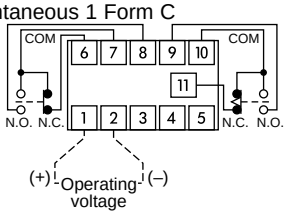


PM4H-M

Pin type
- Timed-out 1 Form C
- Instantaneous 1 Form C

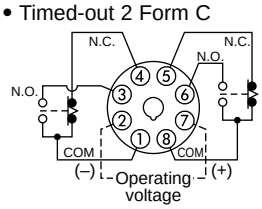


Screw terminal type
- Timed-out 1 Form C
- Instantaneous 1 Form C

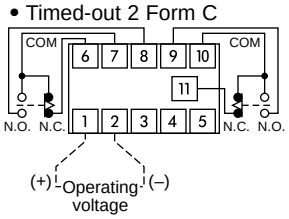


PM4H-S

Pin type
- Timed-out 2 Form C



Screw terminal type
- Timed-out 2 Form C



1) DC Type

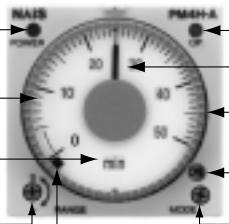
Type	Pin	Screw terminal
PM4H-A	Connect the terminal ② to negative (–), and the terminal ⑩ to positive (+).	Connect the terminal 2 to negative (–), and the terminal 1 to positive (+).
PM4H-S PM4H-M	Connect the terminal ② to negative (–), and the terminal ⑦ to positive (+).	

2) Contact

PARTS NAME

PM4H-S

PM4H-A



16 time settings selectable
1 s to 500 h
1s 5s 10s 50s
1min 5min 10min 50min
1h 5h 10h 50h
10h 50h 100h 500h

Instantaneous output area
When the hand is in this area, instantaneous operation starts.

Selectable from 8 operation modes
ON : Pulse ON-delay
FL : Pulse Flicker
FO : Pulse ON-flicker
OF1 : Differential ON/OFF-delay (1)
SF : Signal OFF-delay
OS : Pulse One-shot
OF2 : Differential ON/OFF-delay (2)
OC : Pulse One-cycle

PM4H-M

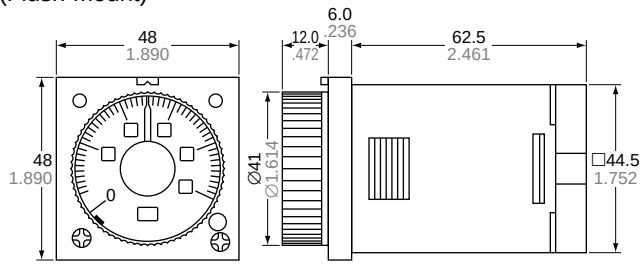
Operation mode selector
Selectable from 5 operation modes
ON : Pulse ON-delay
FL : Pulse flicker
FO : Pulse ON-flicker
OS : Pulse One-shot
OC : Pulse One-cycle

DIMENSIONS

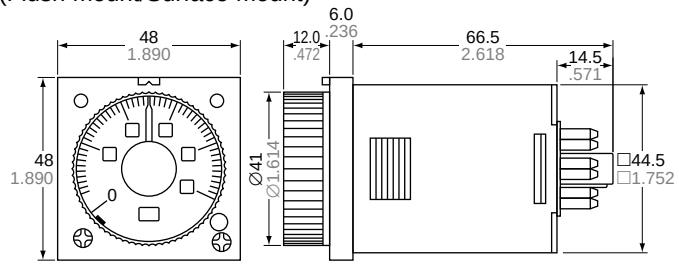
mm inch

• PM4H-□

Screw terminal type
(Flush mount)

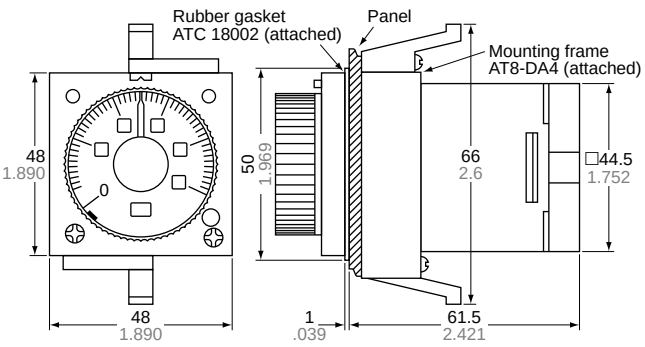


Pin type
(Flush mount/Surface mount)

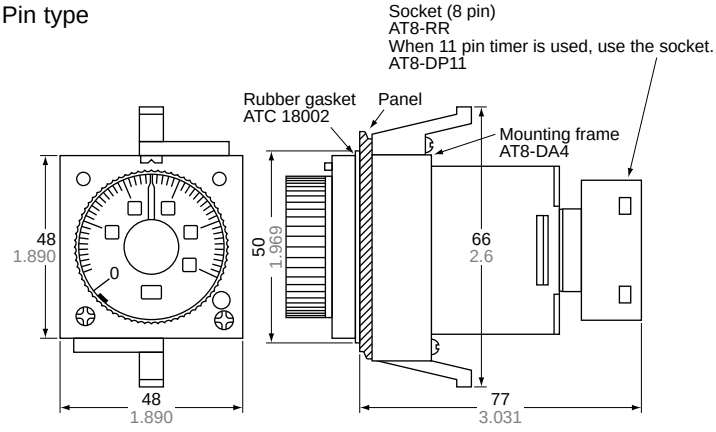


• Panel mount dimensions (with mounting frame)

Screw terminal type

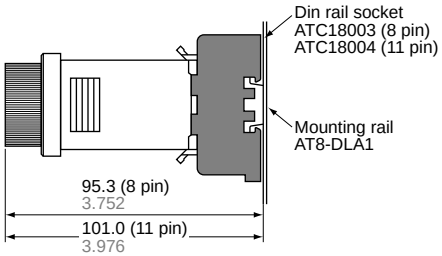


Pin type



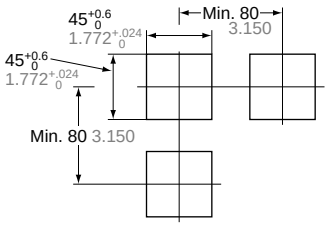
• Surface mount dimensions

Socket mount (Pin type)

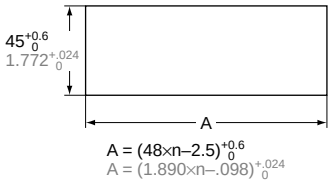


• Panel cut out dimensions

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



• Adjacent mounting



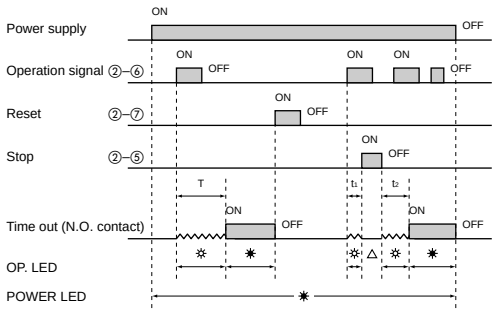
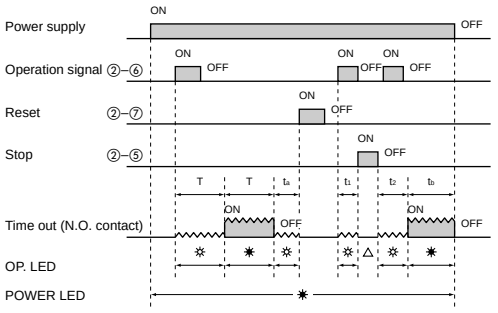
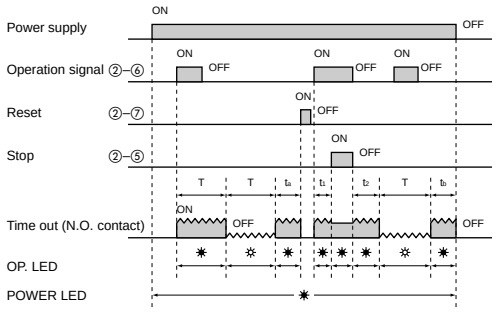
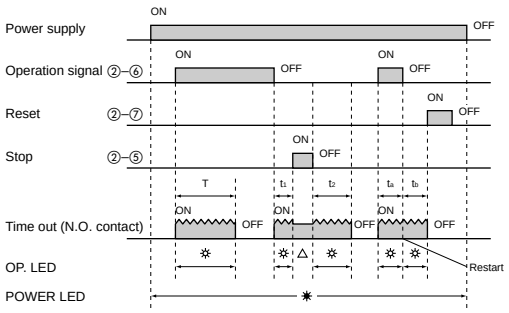
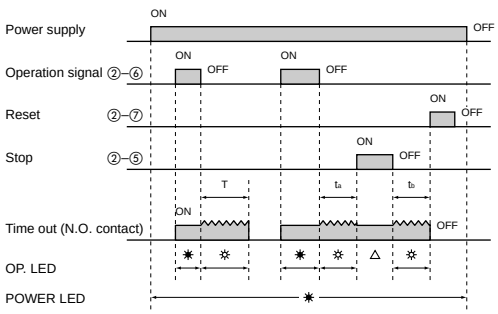
$A = (48 \times n - 2.5)^{+0.6}_{0}$
$A = (1.890 \times n - .098)^{+.024}_{0}$

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

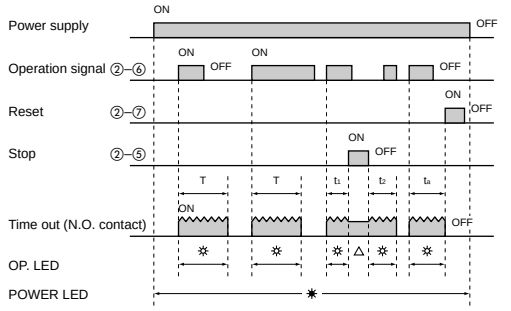
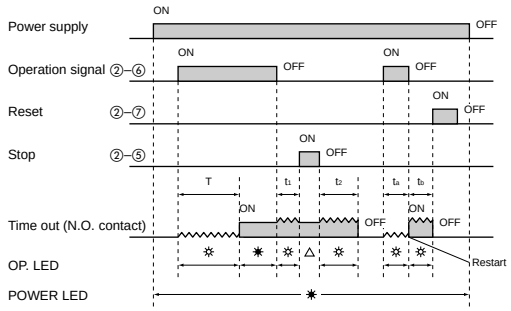
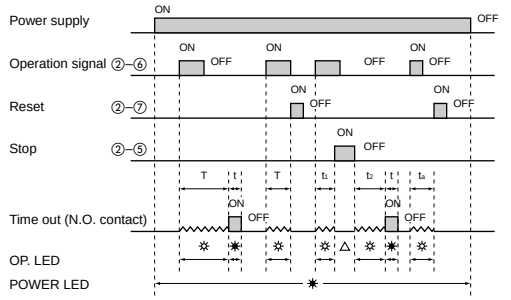
OPERATION MODE

PM4H-A

(✷ LED lighting ✲ LED flickering
T: Setting time t_1, t_2, t_a, t_b<T t_1+t_2=T)

Operation mode	Operation	Time chart
Pulse ON-delay (ON)	Turn the operation selector to (ON). Power is applied continuously. When a start signal is applied, the time cycle begins. The output contacts change state after the time delay is completed. The contacts will return to their normal state when a reset signal is applied or power is removed. (Note: When a stop signal is applied during timing operation, the time cycle stops. When a stop signal is removed, the time cycle resumes where it left off.)	 △Note: ✷ LED lighting or No LED lighting
Pulse OFF-Flicker (FL)	Turn the operation selector to (FL). Power is applied continuously. When a start signal is applied, the time cycle begins but the output contacts remain in their normal state. When the time delay is completed, the output contacts change state and next time cycle begins. When this time delay is completed, the output contacts return to their normal state. This cycle will repeat until a reset signal is applied or power is removed. (Note: When a stop signal is applied during timing operation, the time cycle stops. When a stop signal is removed, the time cycle resumes where it left off.)	 △Note: ✷ LED lighting or No LED lighting
Pulse ON-flicker (FO)	Turn the operation selector to (FO). Power is applied continuously. When a start signal is applied, the output contacts change state immediately and time cycle begins. When the time delay is completed, the output contacts change state and next time cycle begins. When the time delay is completed, the output contacts return to the normal state. This cycle will repeat until a reset signal is applied or power is removed. (Note: When a stop signal is applied during timing operation, the time cycle stops. When a stop signal is removed, the time cycle resumes where it left off.)	
Differential ON/OFF-delay (1) (OF1)	Turn the operation selector to (OF1). Power is applied continuously. When a start signal is applied, the output contacts change state immediately and time cycle begins. The output contacts change state after the timing cycle is completed. When the start signal is removed, the output contacts change state and time cycle starts again. If operation signal is turned ON or OFF during timing operation, the time cycle will restart. The output contacts will return to their normal state when a reset signal is applied or power is removed. (Note: When a stop signals is applied during timing operation, the time cycle stops. When a stop signal is removed, the time cycle resumes where it left off.)	 △Note: ✷ LED lighting or No LED lighting
Signal OFF-delay (SF)	Turn the operation selector to (SF). Power is applied continuously. When a start signal is applied, the output contacts change state immediately. When the start signal is removed the time cycle begins. The output contacts will return to their normal state when the time delay is completed. Reset will occur when a reset signal is applied or power is removed. (Note: When a stop signal is applied during timing operation, the time cycle stops. When a stop signal is removed, the time cycle resumes where it left off.)	 △Note: ✷ LED lighting or No LED lighting

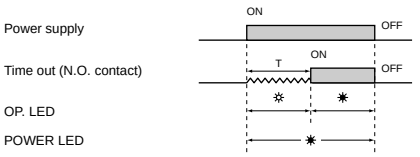
Note: Keep 0.1s or more for power off time.
Keep 0.05s or more for signal, stop, reset input time.

Operation mode	Operation	Time chart
Pulse One-shot (0S)	Turn the operation selector to (0S). Power is applied continuously. When a start signal is applied, the output contacts change state immediately and time cycle begins. When the time delay is completed, the output contacts return to their normal state. The contacts will return to normal state when a reset signal is applied or power is removed. (Note: When a stop signal is applied during timing operation, the time cycle stops. When a stop signal is removed, the time cycle resumes where it left off.)	 △Note: ✷ LED lighting or No LED lighting
Differential ON/OFF-delay (2) (0F2)	Turn the operation selector to (0F2). Power is applied continuously. When a start signal is applied, the ON-delay time cycle begins and the output contacts remain in their normal state. The output contacts change state after time delay is completed. When the start signal is removed the OFF-delay time cycle begins. The output contacts return to their normal state after the time delay is completed. If the start signal is applied or removed during the timing operation, the output contacts will change state and the time cycle starts over. The contacts will return to their normal state when a reset signal is applied or power is removed. (Note: When a stop signal is applied during timing operation, the time cycle stops. When a stop signal is removed, the time cycle resumes where it left off.)	 △Note: ✷ LED lighting or No LED lighting
Pulse One-cycle (0C)	Turn the operation selector to (0C). Power is applied continuously. When a start signal is applied, the time cycle begins but the output contacts remain in their normal state. The output contacts change state for 0.8s after time delay is completed. Reset will occur when a reset signal is applied or power is removed. (Note: When a stop signal is applied during timing operation, the time cycle stops. When a stop signal is removed, the time cycle resumes where it left off.)	 One pulse time (t): Approx. 0.8s △Note: ✷ LED lighting or No LED lighting

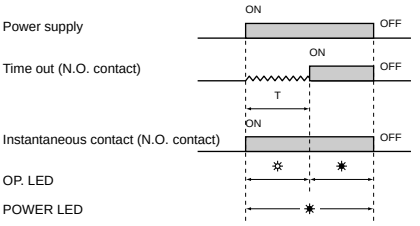
Note: Keep 0.1s or more for power off time.
Keep 0.05s or more for signal, stop, reset input time.

PM4H-S

(✷ LED lighting ✲ LED flickering
T: Setting time)

Operation mode	Operation	Time chart
Power ON-delay	When power is applied continuously, the time cycle begins. The output contacts change state after the time delay is completed.	

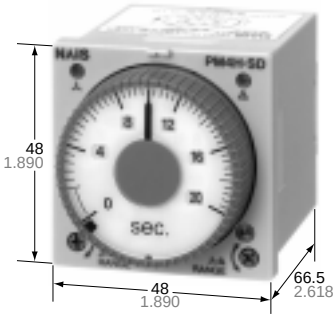
PM4H-M

Operation mode	Operation	Time chart
Power ON-delay (ON) **Power Flicker** (FL) **Power ON-flicker** (FO) **Power One-shot** (0S) **Power One-cycle** (0C)	Power ON-delay When power is applied continuously, the instantaneous output contact changes state and the timing cycle begins. The timed contact changes state after the time delay is completed. Reset will occur when power is removed. PM4H-M timers do not have external signal, reset and stop inputs. (For other operation modes, refer to the operation mode of PM4H-A.)	Power ON-delay 

Note: Keep 0.1s or more for power off time. PM4H-M timers do not have each input which is signal, reset and stop.

DIN48 SIZE ANALOG STAR (⅄)-DELTA (△) TIMERS

PM4H-SD/SDM



mm inch

FEATURES

- **Select four types of operation time ranges between 0.2 s and 100 s on a single unit.**
- **Select between five (⅄-△ switching) time ranges between 0.04 s and 0.7 s.**
- **There is a ⅄-△ switching indicator so you can check the operation at a glance.**

CHARACTERISTICS

Item \ Type			PM4H-SD/SDM
Rating	Rated operating voltage		100 to 240V AC, 24V AC
	Rated frequency		50/60Hz common (AC operating type)
	Rated power consumption		Max. 10VA (100 to 240V AC) Max. 2.5VA (24V AC)
	Output rating		5A 250V AC (resistive load)
	Operation mode		⅄-△ star-delta switching (Power ON-delay)
	⅄ operation control time range		2s to 100s, 4 time ranges switchable
	⅄-△ switching time		0.04, 0.1, 0.3, 0.5, 0.7s (5 time ranges selectable)
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 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		Star (⅄) side: Timed-out 1 Form A Delta (△) side: Timed-out 1 Form A Instantaneous: 1 Form A (Instantaneous for SDM type only)
	Contact resistance (Initial value)		Max. 100mΩ (at 1A 6V DC)
	Contact material		Au flash on 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 (At 500V DC) Between live and dead metal parts Between input and output Between contacts of different poles *3 Between contacts of same pole
	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 *3 1,000Vrms for 1 min Between contacts of same pole
	Min. power off time		500ms
	Max. temperature rise		65°C 131°F
Mechanical function	Shock resistance	Functional	Min. 294m/s² (4 times on 3 axes)
		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)
		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
Others	Protective construction		IP65 on front panel (using rubber gasket ATC18002)
	Weight		100g 3.527 oz (Pin type)
			110g 3.880 oz (Screw terminal type)

Notes: 1) Unless otherwise specified, the measurement conditions at the maximum scale time standard are specified at rated operating voltage, 20°C 68°F ambient temperature, and 1s power off time.
2) For the 2s range, the tolerance for each specification becomes ±10ms.
3) Between contacts of different poles for SDM type only.

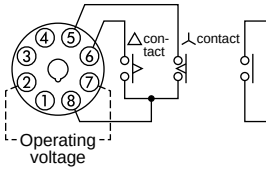
PRODUCT TYPE

Type	Operation mode	Contact arrangement	Time range	Protective construction	Rated operating voltage	Terminal type	Part number
PM4H-SD Star (⅄)-Delta (△) switching	Star (⅄)-Delta (△) switching	Relay Timed-out ⅄ side: 1 Form A △ side: 1 Form A	4 selectable operation ranges over 2s to 100s (⅄-△ switching time: 0.04, 0.1, 0.3, 0.5, 0.7s)	IP65	100 to 240V AC	8 pin	PM4HSD-S-AC240VW
						screw	PM4HSD-S-AC240VSW
					24V AC	8 pin	PM4HSD-S-AC24VW
						screw	PM4HSD-S-AC24VSW
PM4H-SDM Star (⅄)-Delta (△) switching (Instantaneous contact)		Relay Timed-out ⅄ side: 1 Form A △ side: 1 Form A Instantaneous: 1 Form A			100 to 240V AC	8 pin	PM4HSDM-S-AC240VW
						screw	PM4HSDM-S-AC240VSW
					24V AC	8 pin	PM4HSDM-S-AC24VW
						screw	PM4HSDM-S-AC24VSW
PM4H-SD Star (⅄)-Delta (△) switching		Relay Timed-out ⅄ side: 1 Form A △ side: 1 Form A		IP50	100 to 240V AC	8 pin	PM4HSD-S-AC240V
						screw	PM4HSD-S-AC240VS
					24V AC	8 pin	PM4HSD-S-AC24V
						screw	PM4HSD-S-AC24VS
PM4H-SDM Star (⅄)-Delta (△) switching (Instantaneous contact)		Relay Timed-out ⅄ side: 1 Form A △ side: 1 Form A Instantaneous: 1 Form A			100 to 240V AC	8 pin	PM4HSDM-S-AC240V
						screw	PM4HSDM-S-AC240VS
					24V AC	8 pin	PM4HSDM-S-AC24V
						screw	PM4HSDM-S-AC24VS

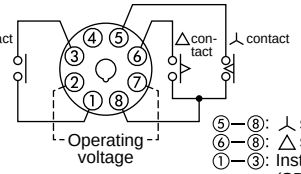
WIRING DIAGRAMS

Pin type

No instantaneous contact



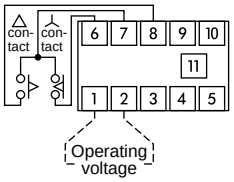
With instantaneous contact



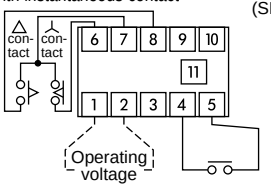
⑤—⑧: ⅄ side time-delay contact
⑥—⑧: △ side time-delay contact
①—③: Instantaneous contact (SDM type)
6—7: ⅄ side time-delay contact
8—7: △ side time-delay contact
4—5: Instantaneous contact (SDM type)

Screw terminal type

No instantaneous contact

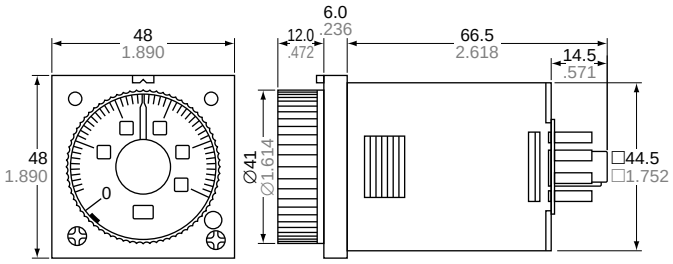


With instantaneous contact

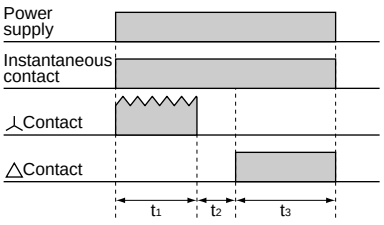


DIMENSIONS

mm inch



OPERATION MODE



t1: ⅄ operation time (⅄ indicator LED lights)
t2: ⅄ – △ switching time
t3: △ operation time (△ indicator LED lights)

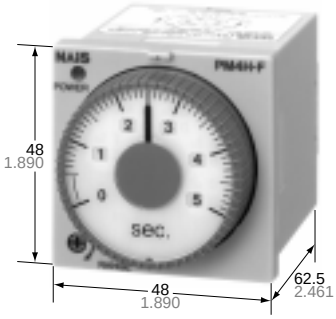
TIME RANGE

Time range / Time range unit	Operating time (s)	⅄-△ switching time (s)
2	0.2s to 2s	0.04
10	1s to 10s	0.1
20	2s to 20s	0.3
100	10s to 100s	0.5
		0.7

NAiS

DIN48 SIZE ANALOG MULTIRANGE POWER OFF-DELAY TIMERS

PM4H-F



FEATURES

- **Six selectable time ranges (three between 1 and 10 s and three between 1 and 10 min).**
- **Instantaneous reset available.**
- **The shorter body makes it easier to use.**

CHARACTERISTICS

Item \ Type			PM4H-F8	PM4H-F8R	PM4H-F11R
Rating	Rated operating voltage		100 to 120V AC, 200 to 240V AC, 24V AC, 24V DC, 12V DC		
	Rated frequency		50/60Hz common (AC operating type)		
	Rated power consumption		Max. 5VA (AC type) Max. 2W (DC type)		
	Output rating		3A 250V AC (resistive load)		
	Operation mode		Power OFF-delay	Power OFF-delay (with reset)	
	Time range		1s to 10s: 3 range switchable 1 min to 10 min: 3 range switchable		
Time accuracy *1	Operation time fluctuation		±0.3%		
	Setting error		±5%		
	Voltage error		±0.5% (at 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	Timed-out 2 Form C
	Contact resistance (Initial value)		Max. 100mΩ (at 1A 6V DC)		
	Contact material		Au flash on Silver alloy		
Life	Mechanical		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.), 90 to 110% (DC Type)		
	Insulation resistance (Initial value)		Min. 100MΩ (At 500V DC) Between live and dead metal parts Between input and output Between contacts of different poles *3 Between contacts of same pole		
	Breakdown voltage (Initial value)		1,500Vrms for 1 min Between live and dead metal parts 1,500Vrms for 1 min Between input and output 1,000Vrms for 1 min Between contacts of different poles *3 750Vrms for 1 min Between contacts of same pole		
	Min. power on time		seconds range: 100ms minutes range: 2s		
	Min. power off time		————	50ms	
	Max. temperature rise		55°C 131°F		
Mechanical function	Shock resistance	Functional	Min. 98m/s² (4 times on 3 axes)		
		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)		
		Destructive	10 to 55Hz: 1 cycle/min double amplitude of 0.75mm (1hr 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		100g 3.527 oz (Pin type)		
			110g 3.880 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.

2) For the 1s range, the tolerance for each specification becomes ±10ms. When the power goes on, in rush current (0.3A) flows. Cautions should be taken. The minimum power supplying time after forced reset input is 2s or more.

3) Between contacts of different pools for F8, F11R types only.

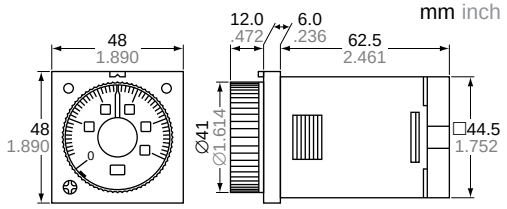
PRODUCT TYPE

Type	Operation mode	Contact arrangement	Time range	Protective construction	Rated operating voltage	Terminal type	Part Number
PM4H-F8	Power OFF-delay (without reset)	Relay Timed-out 2 Form C	3 selectable time ranges over 1s to 10s	IP65	100 to 120V AC	8 pin	PM4HF8-S-AC120VW
					200 to 240V AC	8 pin	PM4HF8-S-AC240VW
					24V AC	8 pin	PM4HF8-S-AC24VW
					12V DC	8 pin	PM4HF8-S-DC12VW
					24V DC	8 pin	PM4HF8-S-DC24VW
			3 selectable time ranges over 1 min to 10 min		100 to 120V AC	8 pin	PM4HF8-M-AC120VW
					200 to 240V AC	8 pin	PM4HF8-M-AC240VW
					24V AC	8 pin	PM4HF8-M-AC24VW
					12V DC	8 pin	PM4HF8-M-DC12VW
					24V DC	8 pin	PM4HF8-M-DC24VW
			3 selectable time ranges over 1s to 10s	IP50	100 to 120V AC	8 pin	PM4HF8-S-AC120V
					200 to 240V AC	8 pin	PM4HF8-S-AC240V
					24V AC	8 pin	PM4HF8-S-AC24V
					12V DC	8 pin	PM4HF8-S-DC12V
					24V DC	8 pin	PM4HF8-S-DC24V
			3 selectable time ranges over 1 min to 10 min		100 to 120V AC	8 pin	PM4HF8-M-AC120V
					200 to 240V AC	8 pin	PM4HF8-M-AC240V
					24V AC	8 pin	PM4HF8-M-AC24V
					12V DC	8 pin	PM4HF8-M-DC12V
					24V DC	8 pin	PM4HF8-M-DC24V
PM4H-F8R	Power OFF-delay (with instantaneous reset)	Relay Timed-out 1 Form C	3 selectable time ranges over 1s to 10s	IP65	100 to 120V AC	8 pin	PM4HF8R-S-AC120VW
					200 to 240V AC	8 pin	PM4HF8R-S-AC240VW
					24V AC	8 pin	PM4HF8R-S-AC24VW
					12V DC	8 pin	PM4HF8R-S-DC12VW
					24V DC	8 pin	PM4HF8R-S-DC24VW
			3 selectable time ranges over 1 min to 10 min		100 to 120V AC	8 pin	PM4HF8R-M-AC120VW
					200 to 240V AC	8 pin	PM4HF8R-M-AC240VW
					24V AC	8 pin	PM4HF8R-M-AC24VW
					12V DC	8 pin	PM4HF8R-M-DC12VW
					24V DC	8 pin	PM4HF8R-M-DC24VW
			3 selectable time ranges over 1s to 10s	IP50	100 to 120V AC	8 pin	PM4HF8R-S-AC120V
					200 to 240V AC	8 pin	PM4HF8R-S-AC240V
					24V AC	8 pin	PM4HF8R-S-AC24V
					12V DC	8 pin	PM4HF8R-S-DC12V
					24V DC	8 pin	PM4HF8R-S-DC24V
			3 selectable time ranges over 1 min to 10 min		100 to 120V AC	8 pin	PM4HF8R-M-AC120V
					200 to 240V AC	8 pin	PM4HF8R-M-AC240V
					24V AC	8 pin	PM4HF8R-M-AC24V
					12V DC	8 pin	PM4HF8R-M-DC12V
					24V DC	8 pin	PM4HF8R-M-DC24V

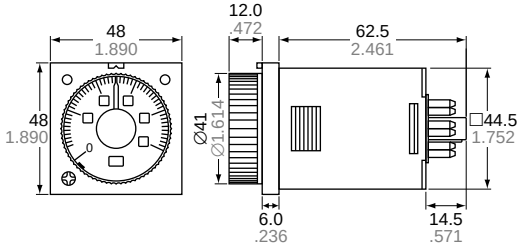
Type	Operation mode	Contact arrangement	Time range	Protective construction	Rated operating voltage	Terminal type	Part Number
PM4H-F11R	Power OFF-delay (with instantaneous reset)	Relay Timed-out 2 Form C	3 selectable time ranges over 1s to 10s	IP65	100 to 120V AC	11 pin	PM4HF11R-S-AC120VW
						screw	PM4HF11R-S-AC120VSW
					200 to 240V AC	11 pin	PM4HF11R-S-AC240VW
						screw	PM4HF11R-S-AC240VSW
					24V AC	11 pin	PM4HF11R-S-AC24VW
						screw	PM4HF11R-S-AC24VSW
					12V DC	11 pin	PM4HF11R-S-DC12VW
						screw	PM4HF11R-S-DC12VSW
					24V DC	11 pin	PM4HF11R-S-DC24VW
						screw	PM4HF11R-S-DC24VSW
				IP50	100 to 120V AC	11 pin	PM4HF11R-S-AC120V
						screw	PM4HF11R-S-AC120VS
					200 to 240V AC	11 pin	PM4HF11R-S-AC240V
						screw	PM4HF11R-S-AC240VS
					24V AC	11 pin	PM4HF11R-S-AC24V
						screw	PM4HF11R-S-AC24VS
					12V DC	11 pin	PM4HF11R-S-DC12V
						screw	PM4HF11R-S-DC12VS
					24V DC	11 pin	PM4HF11R-S-DC24V
						screw	PM4HF11R-S-DC24VS
			3 selectable time ranges over 1 min to 10 min	IP65	100 to 120V AC	11 pin	PM4HF11R-M-AC120VW
						screw	PM4HF11R-M-AC120VSW
					200 to 240V AC	11 pin	PM4HF11R-M-AC240VW
						screw	PM4HF11R-M-AC240VSW
					24V AC	11 pin	PM4HF11R-M-AC24VW
						screw	PM4HF11R-M-AC24VSW
					12V DC	11 pin	PM4HF11R-M-DC12VW
						screw	PM4HF11R-M-DC12VSW
					24V DC	11 pin	PM4HF11R-M-DC24VW
						screw	PM4HF11R-M-DC24VSW
				IP50	100 to 120V AC	11 pin	PM4HF11R-M-AC120V
						screw	PM4HF11R-M-AC120VS
					200 to 240V AC	11 pin	PM4HF11R-M-AC240V
						screw	PM4HF11R-M-AC240VS
					24V AC	11 pin	PM4HF11R-M-AC24V
						screw	PM4HF11R-M-AC24VS
					12V DC	11 pin	PM4HF11R-M-DC12V
						screw	PM4HF11R-M-DC12VS
					24V DC	11 pin	PM4HF11R-M-DC24V
						screw	PM4HF11R-M-DC24VS

DIMENSIONS

• Screw terminal type (embedded mounting)

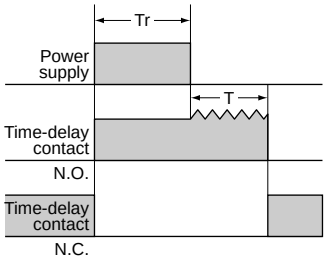


• Pin type (embedded mounting/surface

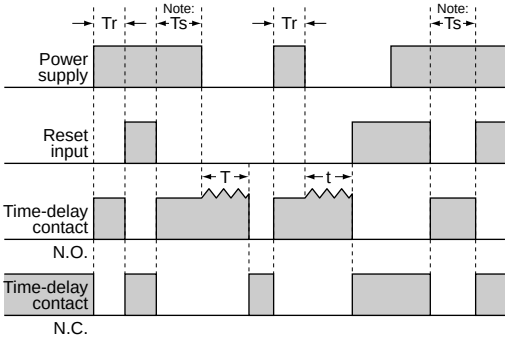


OPERATION

• PM4H-F8 (no reset input)



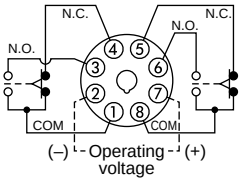
• PM4H-F8R/F11R (with reset input)



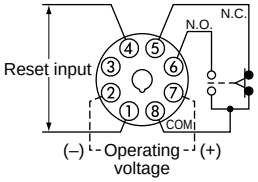
Note: t<T: Time setting
Tr: Minimum power supply application time
Ts: Min. 2s (Time to restart operation after reset input is set to OFF: both second type and minute type)

WIRING DIAGRAMS

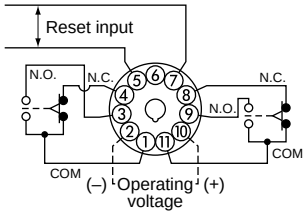
- **PM4H-F8 (no reset input)**
  Pin type
  Time-delay 2C



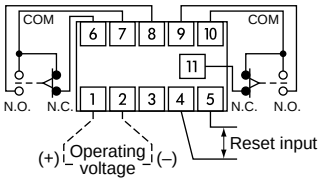
- **PM4H-F8R (with reset input)**
  Pin type
  Time-delay 1C, with reset input



- **PM4H-F11R (with reset input)**
  Pin type
  Time-delay 2C, with reset input



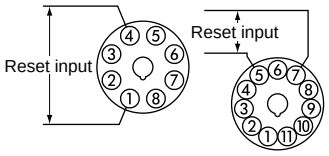
Screw terminal type
Time-delay 2C, with reset input



PM4H-F (WITH RESET) INPUT CONDITIONS

1. Contact operating input (pin type example)

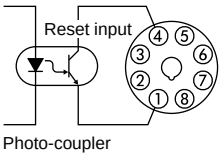
PM4H-F8R **PM4H-F11R**



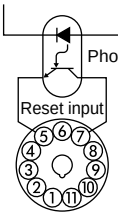
Use a contact with good contact reliability for the input. Contact bounce can lead to erroneous operation of the timer, so use a contact with short bounce time. Make the resistance between terminals for a short circuit less than 1k-ohms. Make the resistance between terminals for an open circuit greater than 100k-ohms.

2. Non-contact input (pin type example)

PM4H-F8R



PM4H-F11R



Be sure to use a photo-coupler for non-contact input.

Check that Vce = 0.6V Max. when ON.

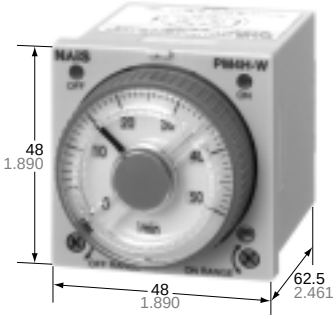
TIME RANGE

Time range / Time range unit	second range	minute range
1	0.04s to 1s	0.04 min to 1 min
5	0.2s to 5s	0.2 min to 5 min
10	0.4s to 10s	0.4 min to 10 min

NAiS

DIN48 SIZE ANALOG MULTI-RANGE CYCLIC TWIN TIMERS

PM4H-W



mm inch

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.**

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 (At 500V DC) Between live and dead metal parts Between input and output 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)
		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)
		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)

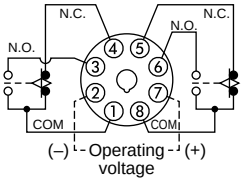
Notes: 1) Unless otherwise specified, the measurement conditions at the maximum scale time standard are specified at rated operating voltage (within 5% ripple factor for DC), 20°C 68°F ambient temperature, and 1s power off time.
2) For the 1s range, the tolerance for each specification becomes ±10ms.

PRODUCT TYPE

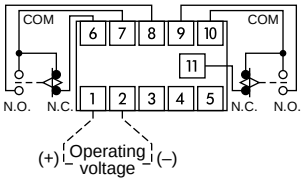
Type	Operating mode	Contact arrangement	Time range	Protective construction	Rated Operating voltage	Terminal type	Part Number
PM4H-W Twin timer	Cyclic (OFF-start, Twin)	Relay Timed-out 2 Form C	16 selectable time ranges (1s to 500h)	IP65	100 to 240V AC	8 pin	PM4HW-H-AC240VW
						Screw terminal	PM4HW-H-AC240VSW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

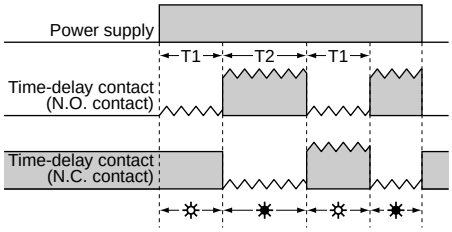
Pin Type
Cyclic timed-out relay contact: 2C



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



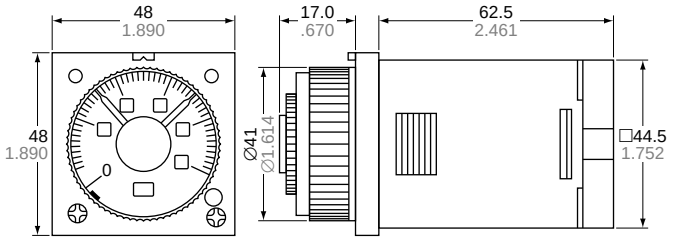
OPERATION

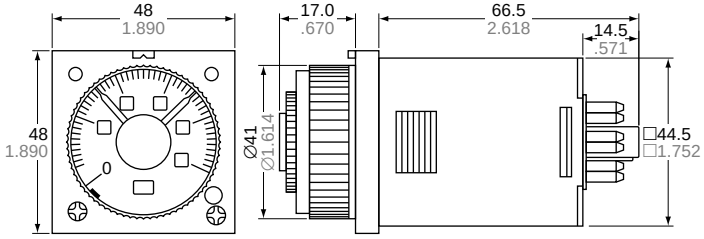


☼: Output OFF indicator (red)
✷: Output ON indicator (green)
T1: OFF set time
T2: ON set time

DIMENSIONS

mm inch





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

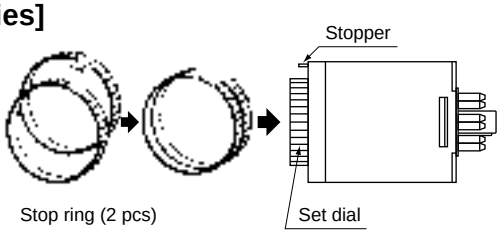
1) Operation mode setting [PM4H-A]
8 operation modes are selectable with operation mode selector.
Turn the operation mode selector with screw driver.
Operation mode is shown through the window above the mode selector. The marks are Ⓞ, Ⓕ, Ⓕ, Ⓕ, Ⓢ, Ⓞ, Ⓕ, Ⓒ.
Turn the mode selector (clicking sound) to the 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]

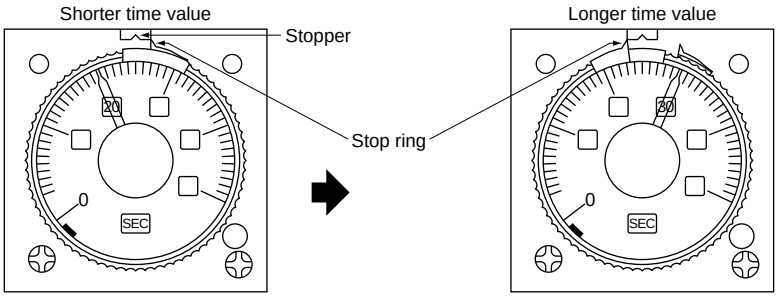
1) Fixed time setting
Set the desired time and put 2 stop rings together.
Insert the rings into stopper to fix the time.

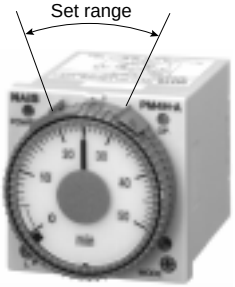


2) Fixed time range setting
Example: Time range 20s to 30s.

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.

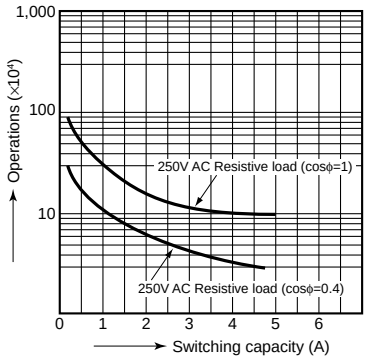




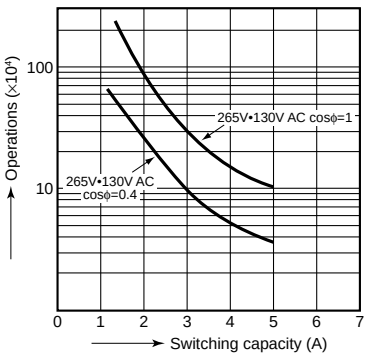
DATA

■ Load control life

• Load life curve (PM4H-A, PM4H-S)

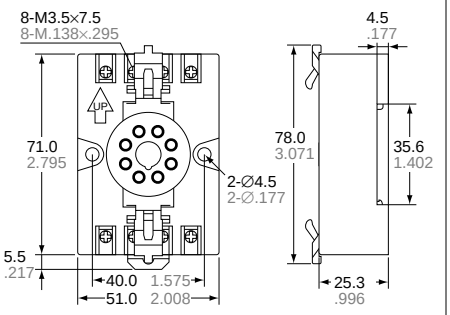
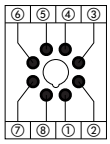
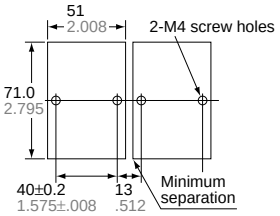
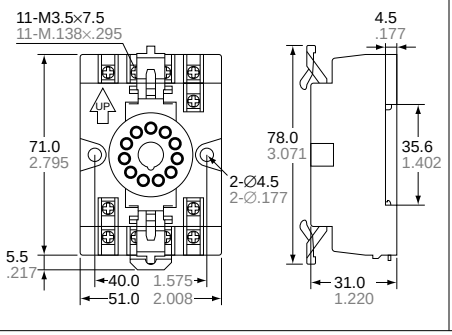
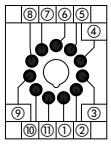
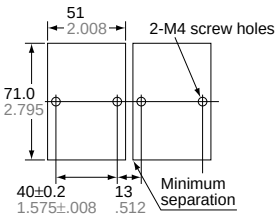


• Load life curve (PM4H-M)



ACCESSORIES

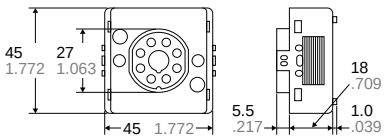
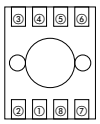
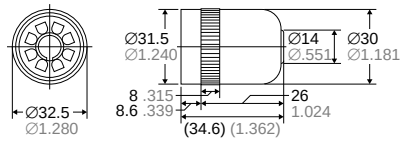
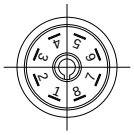
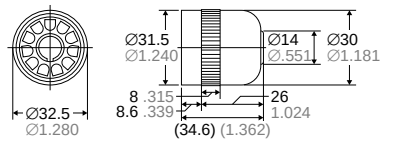
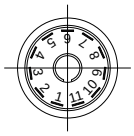
mm inch

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		 Note: Terminal No. on the main body are identifical to those on the terminal socket.	
PM4H-A PM4H-F11R (11 pin)	• DIN rail socket (11 pin)  ATC18004		 Note: Terminal No. on the main body are identifical to those on the terminal socket.	

Note: Terminal No. on the main body are identifical 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			———
	• 8 pin cap  AD8-RC			———
PM4H-A PM4H-F11R (11 pin)	• 11 pin cap  AT8-DP11			———

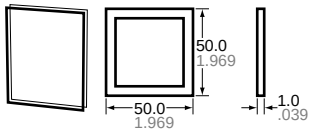
Note: Terminal No. on the main body are identifical to those on the terminal socket.

Tolerance: ±1 ±.039

MOUNTING PARTS

mm inch

• Rubber gasket



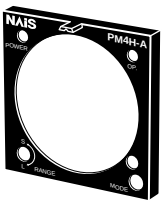
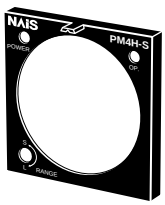
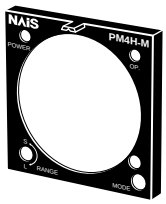
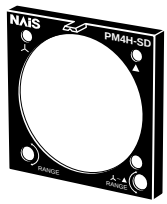
ATC18002

• 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)

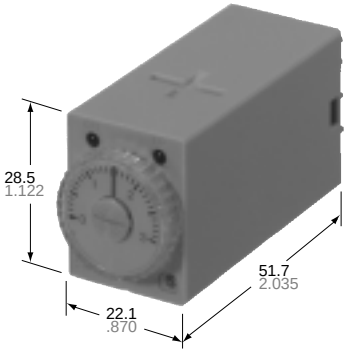
• PM4H-A	• PM4H-S	• PM4H-M	• PM4H-W	• PM4H-SD	• PM4H-F
					
ATC18011	ATC18012	ATC18013	ATC18014	ATC18015	ATC18016

NAiS

COMPACT SIZE HIGH PRECISION ANALOG TIMERS

(one)

S1DX Timers



mm inch

- **Twelve time ranges available**
- **4 models available**
  S1DX-A: Power ON-delay S1DX-F: Power Flicker
  S1DX-S: Power One-shot S1DX-C: Power One-cycle
- **5 output configurations**
  Relay Timed-out 2 Form C type
  Relay Timed-out 4 Form C type
  Transistor Timed-out Normally OFF type
  Triac (Non Zero-Cross) Timed-out Normally OFF type
  Triac (Zero-Cross) Timed-out Normally OFF type
- **Indicator LEDs provide status at a glance [power supply (red) and operation (green)]**
- **Flush mountable with accessories**
- **UL recognized, CSA approved**

SPECIFICATIONS

Timing

Type		Relay output		Solid state output		
		AC operating type	DC operating type	Transistor	Triac (Non Zero-Cross)	Triac (Zero-Cross)
Time accuracy (max.)	Operating time fluctuation & Power off time change error	[Except 0.5s & 1s types] ±1% [0.5s type]: ±(2%+10ms) [1s type]: ±(1%+10ms) (power off time change at the range of 0.1 s to 1 h)		±1%*		±(1%+1/2 cycle)**
	Temperature error	±5%				
	Voltage error	[Except 0.5s & 1s types] ±1% [0.5s type]: ±(2%+10ms) [1s type]: ±(1%+10ms)		±1%		
	Setting error	±10%				
Min. power off time		100ms				

*Power Flicker and Power One-shot Triac (Non Zero-Cross) type: ±(1%+1/2 cycle)
**Power Flicker and Power One-shot Triac (Zero-Cross) type: ±(1%+1 cycle)

Characteristics

1. Relay output type

Type		AC type	DC type
Rated operating voltage		24V, 100 to 120V, 220V to 240V	12V, 24V
Operating voltage range		80 to 110% of rated operating voltage	
Rated frequency		50/60Hz common	—
Power supply ripple		—	Full-wave rectified (Approx. 48%)
Rated power consumption		Max. 3VA	Max. 2W
Rated control capacity (resistive)		[Timed -out 2 Form C]: 7A 250V AC [Timed -out 4 Form C]: 5A 250V AC	
UL/CSA rating		[Timed -out 2 Form C]: 7A 125 AC, 6A 250V AC, 1/6HP 125, 250V AC, PILOT DUTY C300 [Timed -out 4 Form C]: 5A 250V AC, 1/10HP 125, 250V AC, PILOT DUTY C300	
Output arrangement		Timed-out 2 Form C, Timed-out 4 Form C	
Initial contact resistance, max. (By voltage drop 6V DC 1A)		100mΩ	
Expected life (min. operations)	Mechanical	10^7	
	Electrical (resistive)	2×10^5	
Initial insulation resistance (At 500V DC)		Min. 100MΩ Between live and dead metal parts/input and output Between contact sets Between contacts	
Initial breakdown voltage		1500Vrms for 1min Between live and dead metal parts/input and output 1500Vrms for 1min Between contact sets 1000Vrms for 1min Between contacts	
Shock resistance	Functional	Min. 10G (4 times on 3 axes)	
	Destructive	Min. 100G (5 times on 3 axes)	
Vibration resistance	Functional	10 to 55Hz: 1 cycle/min double amplitude of 0.5mm (10min on 3 axes)	
	Destructive	10 to 55Hz: 1 cycle/min double amplitude of 0.75mm (1h on 3 axes)	
Max. temperature rise		70 deg.	
Ambient temperature		–10 to 50°C + 14 to 122°F	
Ambient humidity		Max. 85% RH	

2. Solid State output type

Type			Transistor output		Triac Non Zero-Cross output		Triac Zero-Cross output	
Rated operating voltage			12V DC	24V DC	12V DC	24V DC	12V DC	24V DC
Operating voltage range			9.6 to 13.2V DC	19.2 to 26.4V DC	9.6 to 13.2V DC	19.2 to 26.4V DC	9.6 to 13.2V DC	19.2 to 26.4V DC
Rated power consumption, max.			0.5W	1W	0.5W	1W	0.5W	1W
Current consumption (approx.)		Output OFF	3mA	3mA	3mA	3mA	3mA	3mA
		Output ON	24mA	24mA	24mA	24mA	24mA	24mA
Rated control capacity	Control current		2mA to 800mA		50mA to 1A			
	Control voltage		5 to 100V DC		75 to 250V AC			
UL/CSA rating			0.8A 100V DC		1A 250V AC			
Output arrangement			Timed-out Normally OFF					
OFF-state leakage current, max.			10μA (at 100V DC)		5mA (at 250V AC)			
ON-state voltage drop, max.			1.2V (at max. rated load)		1.6V (at max. rated load)			
Initial insulation resistance (At 500V DC) (I/O isolation resistance)			Min. 100MΩ Between input and output					
Initial breakdown voltage (I/O isolation voltage)			1500Vrms for 1 min Between input and output					
Shock resistance		Functional	Min. 20G (4 times on 3 axes)					
		Destructive	Min. 100G (5 times on 3 axes)					
Vibration resistance		Functional	10 to 55Hz: 1 cycle/min double amplitude of 0.5mm (10min on 3 axes)					
		Destructive	10 to 55Hz: 1 cycle/min double amplitude of 0.75mm (1h on 3 axes)					
Ambient temperature			–10 to 50°C + 14 to 122°F					
Ambient humidity			Max. 85% RH					

ORDERING INFORMATION

1. Relay output type

Ex. S1DX- A 2C 5S AC120V

Operation mode	Control output arrangement	Time range *		Operating voltage *
A: Power ON-delay	2C: Timed-out 2 Form C	0.5S: 0.05 to 0.5 s	60S: 3 to 60 s	AC24V: 24V AC
F: Power Flicker	4C: Timed-out 4 Form C	1S: 0.1 to 1 s	3M: 0.1 to 3 min	AC120V: 100 to 120V AC
S: Power One-shot		3S: 0.1 to 3 s	10M: 0.5 to 10 min	AC240V: 220 to 240V AC
C: Power One-cycle		5S: 0.2 to 5 s	30M: 1 to 30 min	DC12V: 12V DC
		10S: 0.5 to 10 s	60M: 3 to 60 min	DC24V: 24V DC
		30S: 1 to 30 s	3H: 0.1 to 3 h	

*For other time range types and operating voltage types, please consult us.
Note: Not all ordering code combinations are available. Refer to Price List for a listing of typical models or consult the factory for availability.

2. Solid State output type

Ex. S1DX- A T 5S DC24V

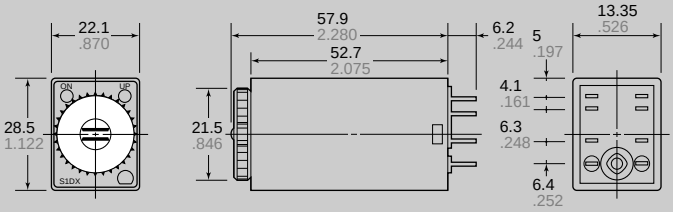
Operation mode	Control output * arrangement	Time range *		Operating voltage
A: Power ON-delay	T: Transistor Timed-out Normally OFF	0.5S: 0.05 to 0.5 s	60S: 3 to 60 s	DC12V: 12V DC
F: Power Flicker		1S: 0.1 to 1 s	3M: 0.1 to 3 min	DC24V: 24V DC
S: Power One-shot		3S: 0.1 to 3 s		
C: Power One-cycle	S: Triac Non Zero-Cross Timed-out Normally OFF	5S: 0.2 to 5 s		
		10S: 0.5 to 10 s		
		30S: 1 to 30 s		
	SZ: Triac Zero-Cross Timed-out Normally OFF			

*For other time range types and other control output types, please consult us.
Note: Not all ordering code combinations are available. Refer to Price List for a listing of typical models or consult the factory for availability.

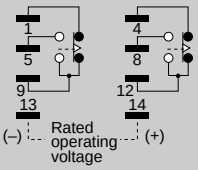
DIMENSIONS

mm inch

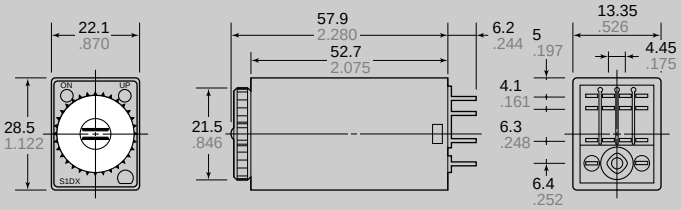
Relay Timed-out 2 Form C type

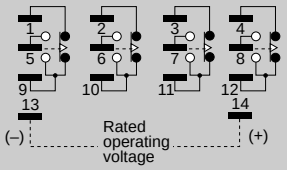


• Wiring diagram

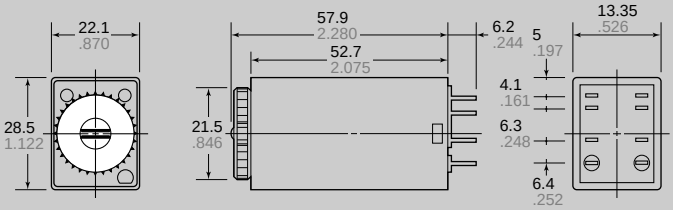


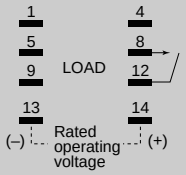
Relay Timed-out 4 Form C type





Solid State Output type

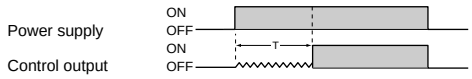
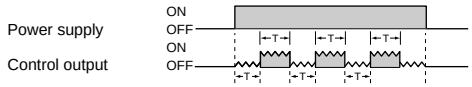
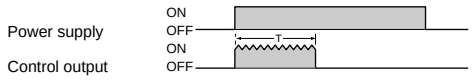
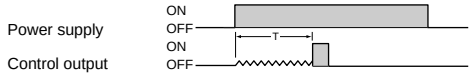




(For the DC operating type, terminal 14 is +,and terminal 13 is –.)

OPERATION MODES

T: Set time

Operation mode	Time unit indicator color	Description	Time chart
Power ON-delay	Yellow	Timing operation will start when the power is supplied. The control output turns on after the setting time.	
Power Flicker	Blue	When power is supplied, the control output turns on after the setting time and then turns off after the setting time. This operation is repeated.	
Power One-shot	Green	When power is supplied, the control output turns on for the setting time.	
Power One-cycle	Red	When power is supplied, the control output turns on for one pulse after the setting time.	 One pulse time: Approx. 1 s

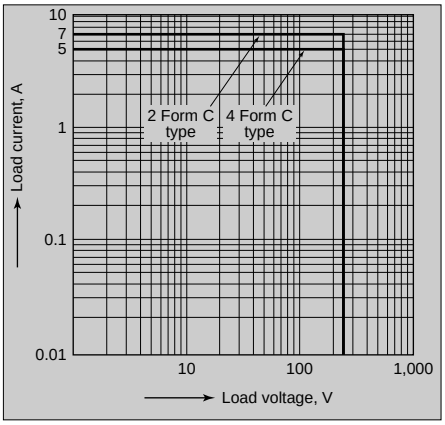
Notes: • Even if timer is set to “0” graduation, the timing operation is performed at least for min. operation time.
• Once power is cut off or the timing operation is completed, a minimum power off time of 0.1s is needed to start the operation again.

DATA

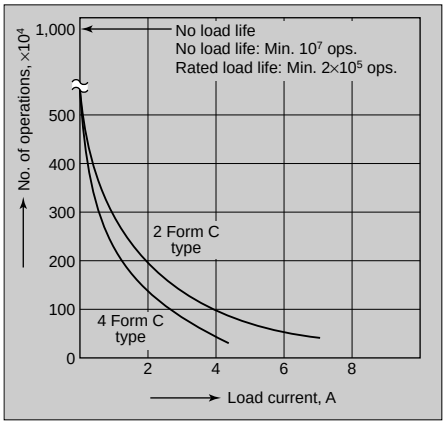
1. Relay Output types

1-1) Load control capacity and life

• Switching capacity

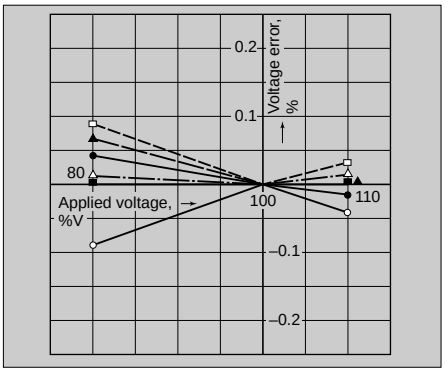


• Life curve

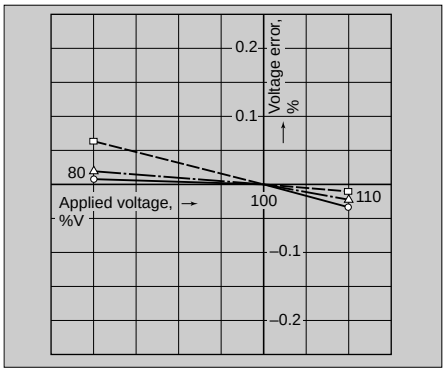


1-2) Time accuracy

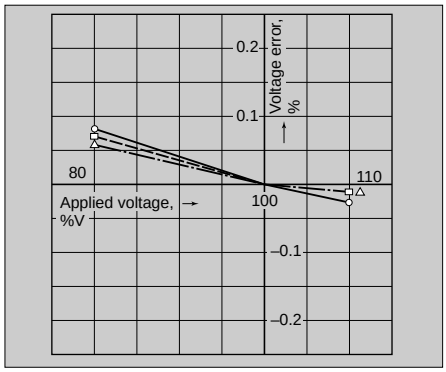
• Voltage error test 1
3 s range, 120V AC operation — 6 pcs.



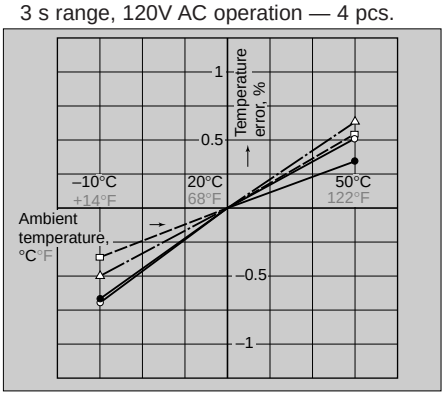
• Voltage error test 2
3 s range, 220V AC operation — 3 pcs.



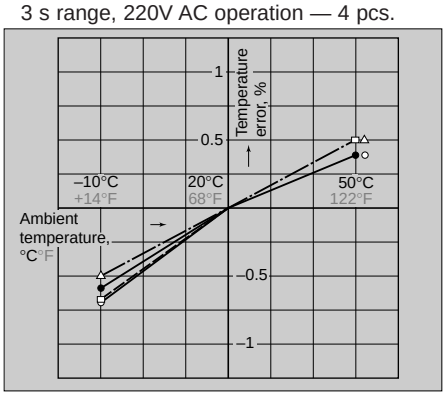
• Voltage error test 3
3 s range, 24V DC operation — 3 pcs.



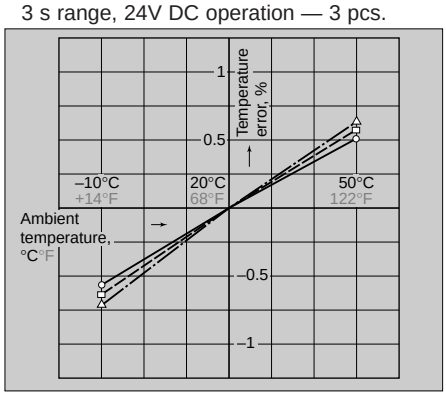
• Temperature error test 1
3 s range, 120V AC operation — 4 pcs.



• Temperature error test 2
3 s range, 220V AC operation — 4 pcs.



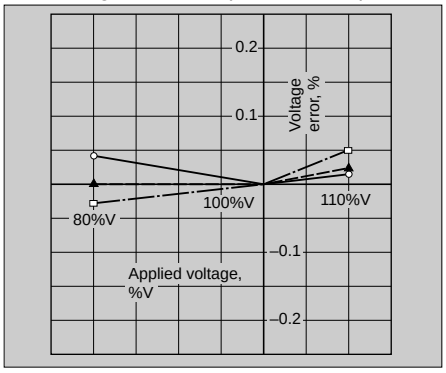
• Temperature error test 3
3 s range, 24V DC operation — 3 pcs.



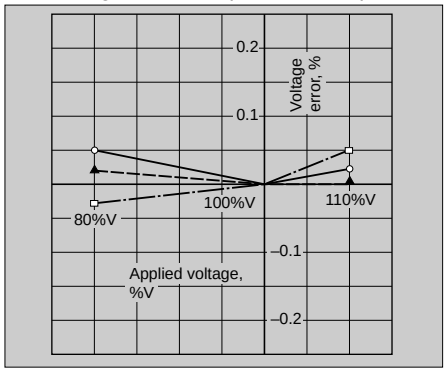
2. Solid State Output types

2-1) Time accuracy

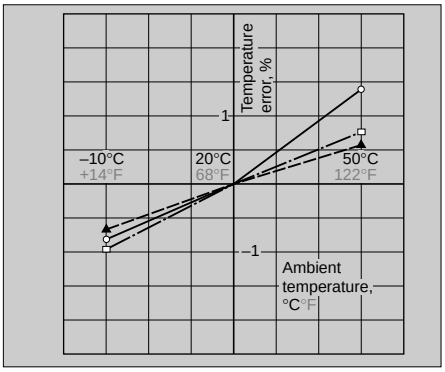
• Voltage error test 1
Transistor output type
10 s range, 24V DC operation — 3 pcs.



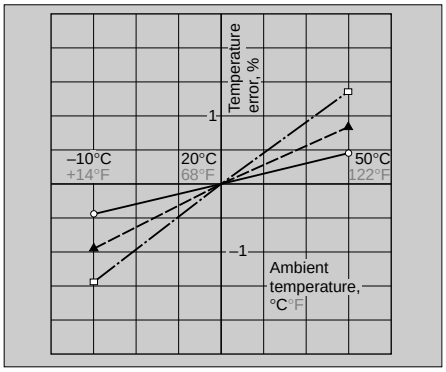
• Voltage error test 2
Triac output type
10 s range, 24V DC operation — 3 pcs.



• Temperature error test 1
Transistor output type
10 s range, 24V DC operation — 3 pcs.



• Temperature error test 2
Triac output type
10 s range, 24V DC operation — 3 pcs.



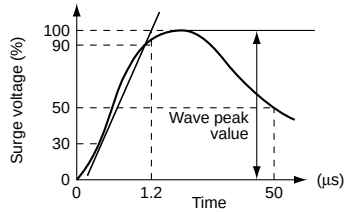
CAUTIONS

[COMMON]

1. Prevent using the timer in such places where flammable or corrosive gas is generated, a lot of dust exists, oil is splashed or considerable shock and vibration occur.
2. Since the main body cover in made of polycarbonate resin, prevent contact with organic solvents such as methyl alcohol, benzine and thinner, or strong alkali materials such as ammonia and caustic soda. In order to maintain the characteristics of the timer, do not remove the cover.
3. External surge protection may be required if the following values are exceeded. Otherwise, the internal circuit will be damaged.

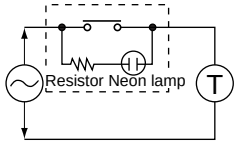
Operation voltage	Surge voltage
100 to 120V AC 220 to 240V AC	4,000V
24V AC 12V DC 24V DC	1,000V

Surge wave form [±(1.2×50)μs single polarity full wave voltage]



[Relay output type]

1. When a contact switch having an operation indicating lamp (lamp equipped limit switch, etc.) is used to apply power to the timer, a resistor having a value equal to or greater than the value below shall be connected in series with the lamp.
   100 to 120V AC operating type:
   Min. 33kΩ
   220 to 240V AC operating type:
   Min. 82kΩ

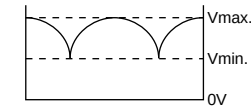


Example of limit switches with lamp.
VL with lamp, Vertical type with lamp, ML with lamp.

[Solid state output type]

1. If ripple is present in the power supply, keep the Vmax. and Vmin. as follows:

Type	Vmin.	Vmax.
DC12V	9.6V	13.2V
DC24V	19.2V	26.4V



2. Transistor output type
   • When switching inductive loads with a transistor output type such as DC solenoids, DC motors and DC clutches, it is important to absorb counter emf with a diode as shown in Fig. A.

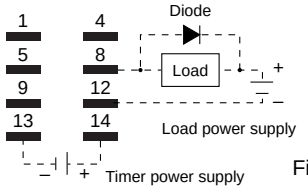


Fig. A

   • When switching a load less than control output rating with a transitor output type, add a resistor as shown in Fig. B to keep the load and resistor current 2mA or more.

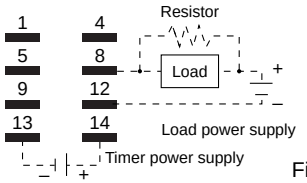


Fig. B

3. Triac output
   • When switching a load less than control output rating with a triac output type, add a resistor as shown in Fig. C to keep the load and resistor current 50mA or more.

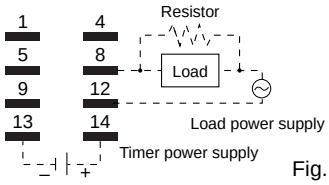
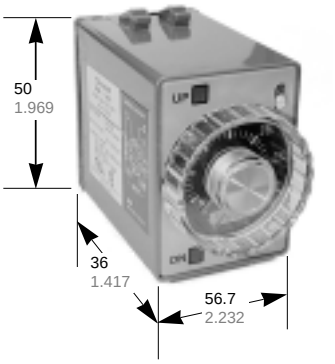


Fig. C

NAiS

COMPACT SIZE
HIGH PRECISION
POWER ON-DELAY TIMERS

PMH Timers



mm inch

Type \ Button position				
10min type	1S	10S	1M	10M
10min type	3S	30S	3M	30M
10h type	1M	10M	1H	10H
30h type	3M	30M	3H	30H

- **Four time ranges – each with 4 maximum time settings**
- **High speed subsecond timing available**
- **Indicator LED is provided for operation**
- **UL/CSA and LLOYD recognized**

SPECIFICATIONS

Timing

Time accuracy (max.)	**Operating time fluctuation & Power off time change error**	[Except 1s range]: ±0.5% [1s range]: ±(0.5%+10ms) (power off time change at the range of 0.1 s to 1 h)
	Temperature error	±2%
	Voltage error	[Except 1s range]: ±0.5% [1s range]: ±(0.5%+10ms)
	Setting error	±10%
Min. power off time		100ms

Characteristics

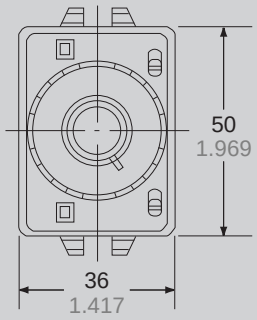
Type		**AC type**	**DC type**
Rated operating voltage		24V, 110 to 120V, 208 to 240V	12V, 24V
Operating voltage range		80 to 110% of rated operating voltage	
Rated frequency		50/60Hz common	—
Power supply ripple		—	Full-wave rectified (Approx. 48%)
Rated power consumption		Max. 3VA	Max. 2W
Rated control capacity (resistive)		10A 250V AC	
UL/CSA rating		Pilot Duty C300, 10A 1/6HP 125, 250V AC, 3A 30V DC	
Output arrangement		Timed-out 2 Form C	
Initial contact resistance, max. (By voltage drop 6V DC 5A)		50mΩ	
Expected life (min. operations)	**Mechanical**	5×10^7	
	Electrical (resistive)	2×10^5	
Initial insulation resistance (At 500V DC)		Min. 100MΩ Between input and output Between contact sets Between contacts	
Initial breakdown voltage		2000Vrms for 1min Between live and dead metal parts 2000Vrms for 1min Between contact sets 1000Vrms for 1min Between contacts	
Shock resistance	**Functional**	Min. 10G (4 times on 3 axes)	
	Destructive	Min. 100G (5 times on 3 axes)	
Vibration resistance	**Functional**	10 to 55Hz: 1 cycle/min double amplitude of 0.5mm (10min on 3 axes)	
	Destructive	10 to 55Hz: 1 cycle/min double amplitude of 0.75mm (1h on 3 axes)	
Max. temperature rise		55 deg.	
Ambient temperature		–10 to 50°C + 14 to +122°F	
Ambient humidity		Max. 85% RH	

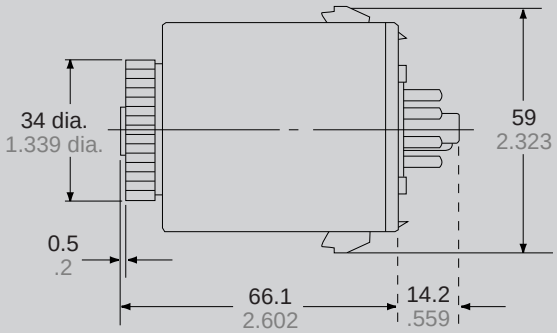
ORDERING INFORMATION

Ex. PMH — 10M — AC120V

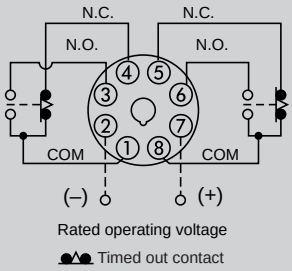
Timer Type	Time range					Rated operating voltage
PMH: PMH Timer	10M	0.05 to 1s	0.5 to 10s	0.05 to 1min	0.5 to 10min	AC24V: 24V AC AC120V: 110 to 120V AC AC220V: 208 to 240V AC DC12V: 12V DC DC24V: 24V DC
	30M	0.15 to 3s	1.5 to 30s	0.15 to 3min	1.5 to 30min	
	10H	0.05 to 1min	0.5 to 10min	0.05 to 1h	0.5 to 10h	
	30H	0.15 to 3min	1.5 to 30min	0.15 to 3h	1.5 to 30h	

DIMENSIONS



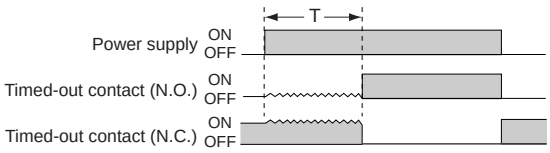


Wiring Diagram



Note: For the DC type, the No.2 terminal becomes (–).

OPERATION MODE

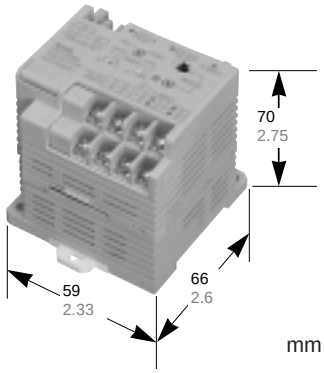
Power ON-delay	Timing operation will start when the power is supplied, and the control output turns on after the setting time.	

Notes: Set time should be greater than min. operation time.
Once power is cut off or the timing operation is completed, minimum power off time of 0.1s is needed to start the operation again.
Do not change the set time during operation. When changing set time, cut off power and set the time.

NAiS

WHEN A PLC IS TOO MUCH, AND SPACE FOR A RELAY SEQUENCE CIRCUIT IS TOO LITTLE

Pattern Selector



mm inch

- **No programming required**
  Select from among 15 preset patterns
- **Wiring far simpler than relay sequence circuits**
  Just wire the power supply, inputs and outputs and your finished.
- **A wide operating voltage range: 100V to 240V AC.**
- **A built-in sensor power supply (24 V/200 mA)**
- **One-touch mounting to the DIN rails**

Specifications

Pattern Selector (AC) AFK-6DR-AC

General specifications

Specification		Description
Rated operating voltage		100 to 240V AC (50/60 Hz)
Operating voltage range		85% to 110%
Momentary stoppage		Continuous operation after stoppages of less than 10 ms
Rated power consumption		0.3 A max.
Sensor power supply		24 V DC±10%, 200 mA
Operating temperature range		–10 to 55°C +14 to 131°F
Storage temperature range		–20 to 70°C –4 to 158°F
Operating humidity range		30% to 85%RH (without condensation) (at 20°C)
Storage humidity range		30% to 85%RH (without condensation) (at 20°C)
Breakdown voltage		*One minute at AC 1,500V Operating power terminal – I/O terminal Operating power terminal – sensor power terminal Operation power terminal – earth terminal Output terminal – earth terminal Input terminal – output terminal Output terminal 1 – output terminal 2 *One minute at 500 V AC Earth terminal – output terminal Earth terminal – sensor power terminal Input terminal – sensor power terminal
Insulation resistance		Min. 100 MΩ between each of the above terminals (with DC 500 mV insulation tester)
Vibration resistance	Functional	10 to 55 Hz sweeps/minute Compound amplitude 0.5 mm .020 inch in each axis (X, Y, Z), 10 min.
	Destructive	10 to 55 Hz sweeps/minute Compound amplitude 0.5 mm .020 inch in each axis (X, Y, Z), 1 hr.
Shock resistance	Functional	98 m/s², 4 impacts in each axis (X, Y, Z)
	Destructive	980 m/s², 4 impacts in each axis (X, Y, Z)
Noise resistance		1,000V (with noise simulator)

Timer specifications

Specification	Description
Timer points	4 (T1 through T4) 2 timer potentiometers 4 range settings (1 sec., 10 sec., 1 min., 10 min.)
Timer precision	Setting error: Max. ±10% Repeat accuracy: Max. ±1% Temperature error: ±2%

Note: Time settings are the same for both timers in the pair (T1/T3 or T2/T4). Use timer setting potentiometer 1 to set timers T1 and T3, and timer setting potentiometer 2 to set timers T2 and T4.

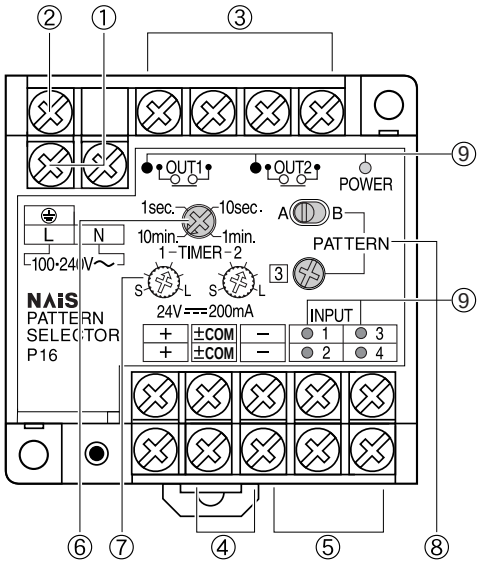
Input specifications

Specification	Description
Input points	4 points
Type of input	No-voltage contact or NPN open collector
Input ON voltage/ ON current	Up to 20.4V/up to 4 mA
Input OFF voltage/ OFF current	Up to 4.8V/up to 1 mA
Input impedance	4.7 kΩ (approx.)
Minimum input pulse width	3 ms
Operation indication	LED
Method of external connection	Terminal board (M3.5 terminal screws)
Method of insulation	Optical coupler

Output specifications

Specification	Description
Output points	2 points
Output method	1 a
Rated control capacity	5 A, 250 V AC; 5 A, 30 V DC
Input response time	OFF → ON, 10 ms max. ON → OFF, 5 ms max.
Mechanical life	20 million operations minimum
Electrical life	1 million operations minimum
Operation indication	LED
Method of external connection	Terminal board (M3.5 terminal screws)

Component Description



① **Power Input Terminal**

② **Frame Grounding Terminal**

③ **Output Terminals**

④ **Sensor Power Output Terminals**

⑤ **Input Terminals**

⑥ **Time Range Selector Switch**

⑦ **Timer Set Potentiometers**

⑧ **Pattern Selector Switch**

⑨ **Operation Indicator LEDs**

Preset Patterns

A1: Bi-directional Limit Control (continuous input)

A2: Bi-directional Limit Control (momentary input)

A3: Timed Operation Control

A4: Two Sequence Limit Control with Timed Operation

A5: Timed and Instantaneous Event Monitoring

A6: Annunciator Control

A7: Time Delay Sequence Control

A8: Manual Refill Control with Event Monitoring

B1: Time Delayed Output Reversing

B2: One-Shot Output

B3: Output Reversing

B4: AND Logic

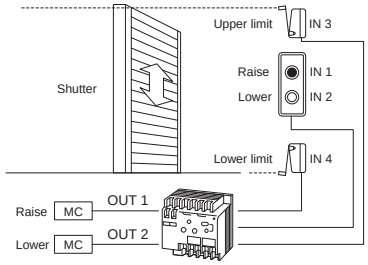
B5: OR Logic

B6: Leading Edge Input/ One-Shot Output

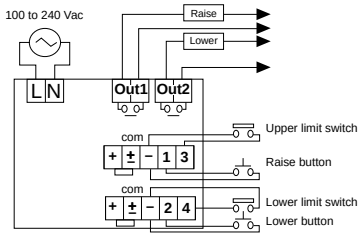
B7: Trailing Edge Input/ One-Shot Output

A1 Bi-directional Limit Control (continuous input)

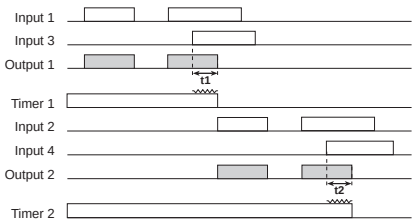
Application Example



Wiring Schematic



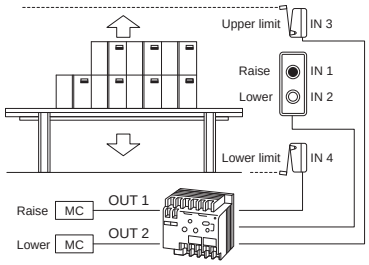
Timing Chart



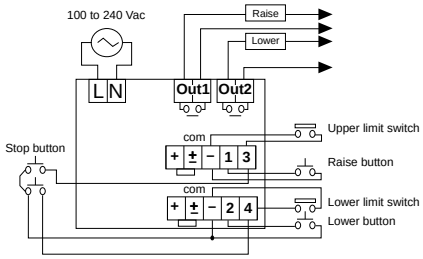
Operation: Turn the pattern switch and dial to indicate pattern A1. Power is On. Inputs 1 & 2 are used to energize Outputs 1 & 2 which can be wired to raise/lower an elevator or open/close window shutters etc. The outputs are energized only as long as the momentary input switches are held closed. Input 3 is an upper limit switch which activates Timer 1. Timer 1 de-energizes Output 1 after the selected time period has elapsed. Input 4 is a lower limit switch which activates Timer 2. Timer 2 de-energizes Output 2 after the selected time period has elapsed.

A2 Bi-directional Limit Control (momentary input)

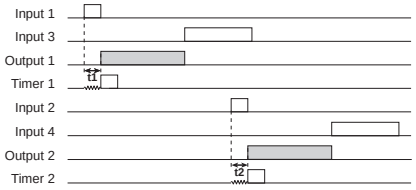
Application Example



Wiring Schematic



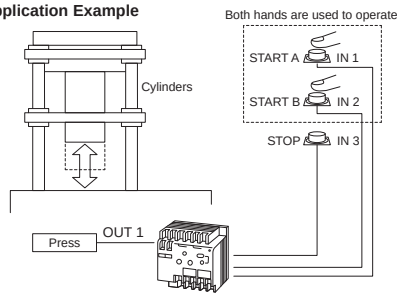
Timing Chart



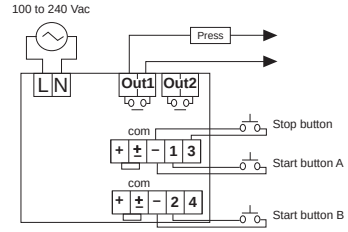
Operation: Turn the pattern switch and dial to indicate pattern A2. Power is On. Momentary contact switches on Inputs 1 & 2 are used to energize Outputs 1 & 2 which can be wired to raise/lower an elevator or open/close window shutters etc. The outputs are energized and latched until Input 3 (upper limit switch) or Input 4 (lower limit switch) is activated. A Stop switch can also be added in parallel with the limit switches to provide the capability to stop operations midway if needed. Timers 1 & 2 provide a short delay before Outputs 1 & 2 energize to eliminate any contact chatter in the momentary switches.

A3 (1) Timed Operation Control

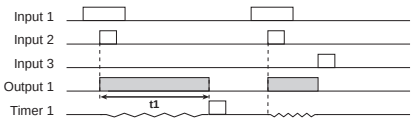
Application Example



Wiring Schematic



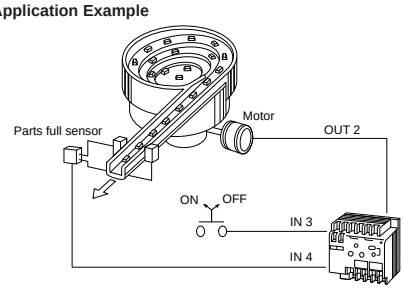
Timing Chart



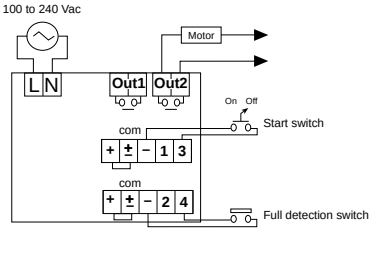
Operation: Turn the pattern switch and dial to indicate pattern A3. Power is On. Momentary contact switches on Inputs 1 & 2 are pressed simultaneously to energize Output 1 and Timer 1. Output 1 can be wired to start a pressing or imprinting machine, etc. The output remains energized until Timer 1 times out. A Stop switch can also be added to Input 3 to provide the capability to stop operations midway if needed.

A3 (2) Timed Operation Control

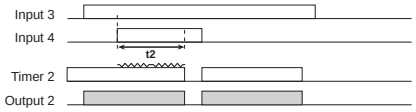
Application Example



Wiring Schematic



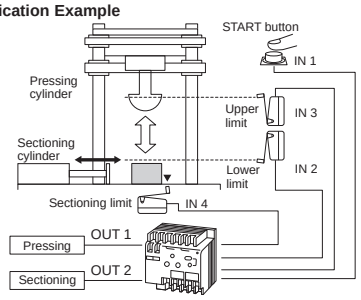
Timing Chart



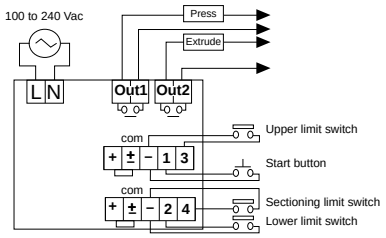
Operation: Turn the pattern switch and dial to indicate pattern A3. Power is On. A sustained contact On/Off switch on Input 3 is turned On to energize Output 2 which can be wired to start a parts feeder, etc. The output remains energized until a sensor switch on Input 4 actuates and Timer 2 times out.

A4 Two Sequence Limit Control with Timed Operation

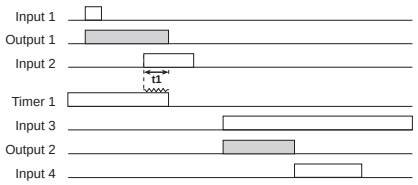
Application Example



Wiring Schematic



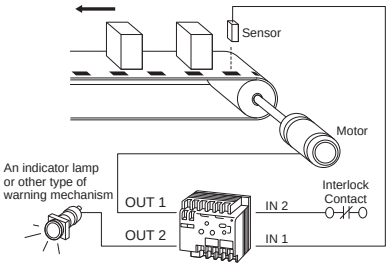
Timing Chart



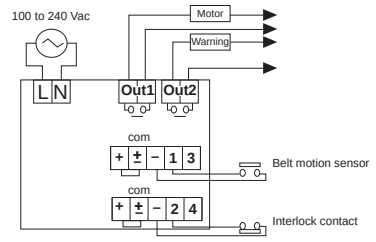
Operation: Turn the pattern switch and dial to indicate pattern A4. Power is On. When the momentary contact switch connected to Input 1 is pressed, Output 1 is energized. Output 1 can be wired to start a pressing or imprinting machine, etc. The output remains energized until the limit switch on Input 2 is actuated and Timer 1 starts and times out. When the upper limit switch connected to Input 3 is actuated, the second sequence begins by energizing Output 2. This output can be wired to start a sectioning or extruding machine, etc. When the limit switch connected to Input 4 is actuated, Output 2 turns off. For setups requiring the simultaneous pressing of two pushbuttons, connect both switches (wired in series) to Input 1.

A5 Timed and Instantaneous Event Monitoring

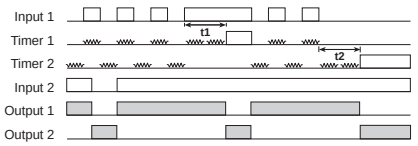
Application Example



Wiring Schematic



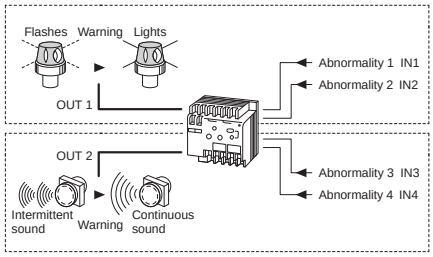
Timing Chart



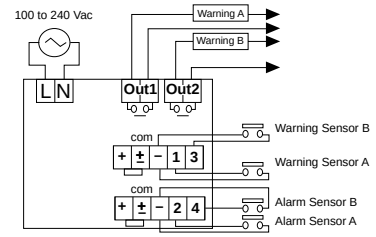
Operation: Turn the pattern switch and dial to indicate pattern A5. Jumper Input 2. Power is On. Output 1 is on. This output can be connected to a motor start/stop circuit. A sensor, whose contacts alternate from opened to closed during normal machine operation (eg. conveyor belt speed sensor) in connected to Input 1. Timer 1 is set to the maximum acceptable time the sensor contact can be closed. Timer 2 is set to the maximum time the sensor contact can be opened. When Input 1 remains on or off beyond the preset time (eg. conveyor belt slippage or break), Output 1 is turned off and Output 2 is turned on. Output 2 can be wired to an indicator lamp or annunciator circuit. When Input 1 returns to normal, the outputs will return to their normal state. The jumper on Input 2 can be replaced by another sensor (normally closed contact) to interlock operation with another device. When the contact opens, Output 1 immediately turns off and Output 2 turns on.

A6 Annunciator Control

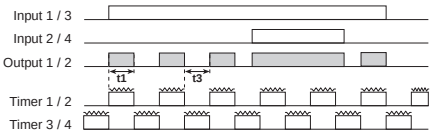
Application Example



Wiring Schematic



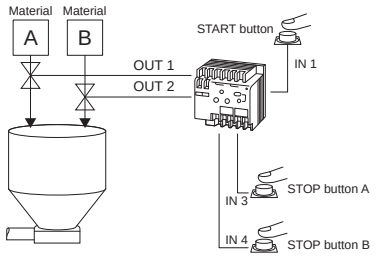
Timing Chart



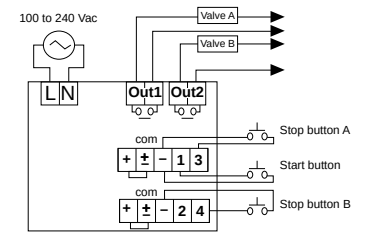
Operation: Turn the pattern switch and dial to indicate pattern A6. Power is On. When a normally open contact (Warning Sensor A) connected across Input 1 is closed, Output 1 will cycle on/off based on the interval set by Timers 1&3. If a similar contact (Alarm Sensor A) on Input 2 is closed while Output 1 is cycling, Output 1 will stay on continuously. If Input 2 opens, Output 1 will begin to cycle again. If both inputs open, Output 1 will turn off. Inputs 3 and 4 (Warning Sensor B & Alarm Sensor B), Timers 2&4, and Output 2 perform the same function.

A7 Time Delay Sequence Control

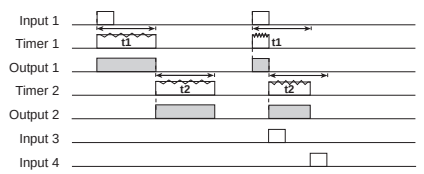
Application Example



Wiring Schematic



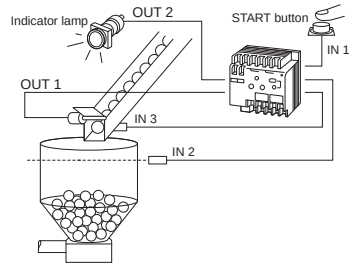
Timing Chart



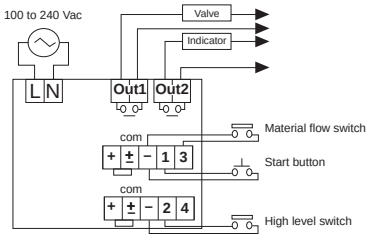
Operation: Turn the pattern switch and dial to indicate pattern A7. Power is On. When a momentary contact switch connected to Input 1 is pressed, Output 1 is energized. Output 1 can be wired to start a control valve or motor starting circuit, etc. The output remains energized until Timer 1 times out. Output 2 then turns on and remains energized until Timer 2 times out. This can be used to control a simple batch mixing system feeding two ingredients. Inputs 3 and 4 can be wired to individual pushbuttons to turn off Outputs 1 & 2 individually, or to a single pushbutton switch to shut down the sequence completely.

A8 Manual Refill Control with Event Monitoring

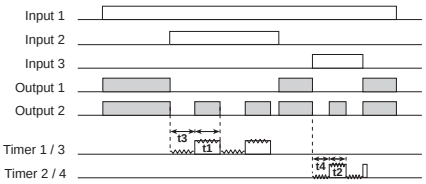
Application Example



Wiring Schematic



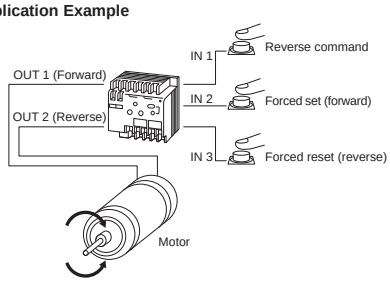
Timing Chart



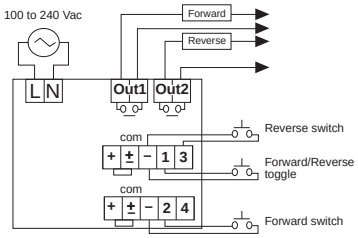
Operation: Turn the pattern switch and dial to indicate pattern A8. Power is On. When a momentary contact switch connected to Input 1 is pressed, Outputs1 & 2 are energized. Output 1 can be wired to start a control valve or motor starting circuit, etc. Output 2 would be wired to an indicator light. If the momentary contact switch is released, both outputs deenergize. Timers T1/T3 and T2/T4 are used in conjunction with Inputs 2 and 3 (Input 2 can be connected to a high hopper level switch and Input 3 to a supply material flow switch). With Input 1 energized, energizing Input 2 (hopper full) will cause Output 1 to turn Off and Output 2 will cycle On/Off based on the setting of T1. Output 2 cycling will stop and Output 1 will turn back On when Input 2 is released. With Input 1 energized, energizing Input 3 (material supply empty) will cause Output 1 to turn Off and Output 2 will cycle On/Off based on the setting of T2. Output 2 cycling will stop and Output 1 will turn back On when Input 3 is released. Turning Input 1 Off will turn both Outputs Off.

B1 Time Delayed Output Reversing

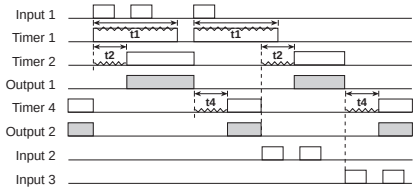
Application Example



Wiring Schematic



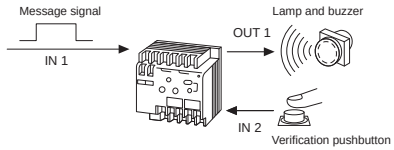
Timing Chart



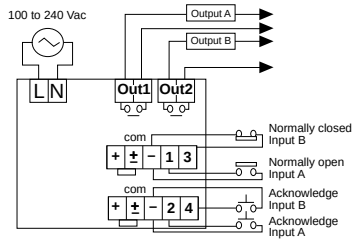
Operation: Turn the pattern switch and dial to indicate pattern B1. Power is On (when power is applied, Output 2 will energize after time period T2). When a momentary contact switch connected to Input 1 is pressed, Output 2 turns off. After time delay T2, Output 1 energizes. Pressing the momentary switch on Input 1 again will cause the outputs to transfer (Output 1 Off instantaneous, Output 2 On after T4). The outputs can be wired to a motor direction circuit to switch between forward and reverse. T2/T4 provides time for the motor to slow before reversing. Timer T1 prevents additional Input 1 commands from reversing the outputs during its time cycle. Momentary contact switches can be connected to Input 2 to force Output 1 On (after T2), and to Input 3 to force Output 2 On (after T4).

B2 One-Shot Output

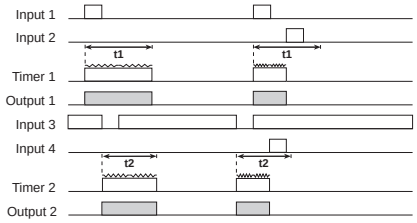
Application Example



Wiring Schematic



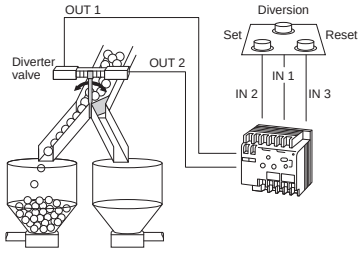
Timing Chart



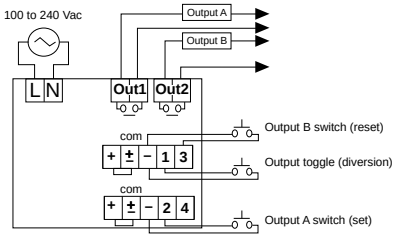
Operation: Turn the pattern switch and dial to indicate pattern B2. Power is On. When a normally open contact connected to Input 1 is closed, Output 1 is energized. The output remains energized until Timer 1 times out, or a normally open contact connected to Input 2 is closed. When a normally closed contact connected to Input 3 is opened, Output 2 is energized. Output 2 remains energized until Timer 2 times out, or a normally open contact connected to Input 4 is closed.

B3 Output Reversing

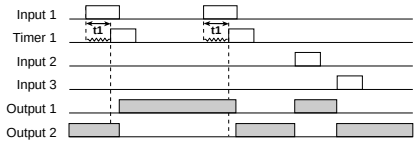
Application Example



Wiring Schematic



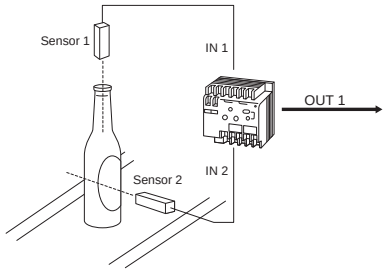
Timing Chart



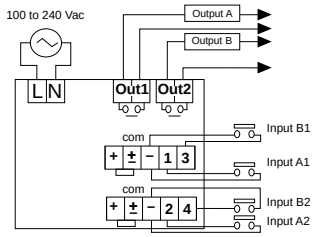
Operation: Turn the pattern switch and dial to indicate pattern B3. Power is On (Output 2 energized is the power on default). When a momentary contact switch connected to Input 1 is pressed and held for time T1, Outputs1 & 2 change state (Output 1 energizes, Output 2 deenergizes). Pressing and holding the momentary switch on Input 1 again will cause the outputs to transfer. This pattern can be used for switching or diverting applications. Timer T1 eliminates chatter of the Input 1 command. Momentary contact switches

B4 AND Logic

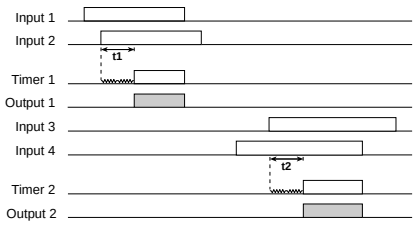
Application Example



Wiring Schematic



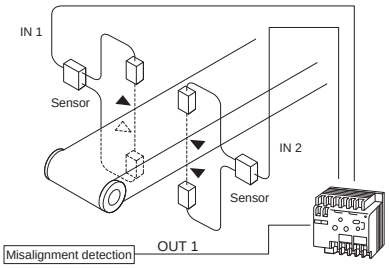
Timing Chart



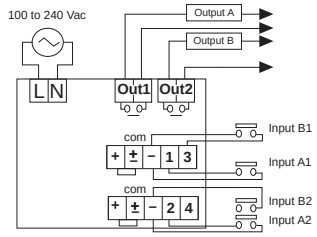
can be connected to Input 2 and 3 to force output settings (Input 2 On; Output 1 = On, Output 2 = Off || Input 3 On; Output 1 = Off, Output 2 = On).
Operation: Turn the pattern switch and dial to indicate pattern B4. Power is On. When contact closures are received at both Inputs 1 and 2 and are sustained for time T1, Output 1 energizes. Loss of either input turns Output 1 Off. When contact closures are received at both Inputs 3 and 4 and are sustained for time T2, Output 2 energizes. Loss of either input turns Output 2 Off. For a four-point AND circuit, connect Outputs 1 and 2 in series.

B5 OR Logic

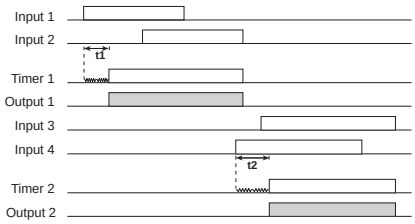
Application Example



Wiring Schematic



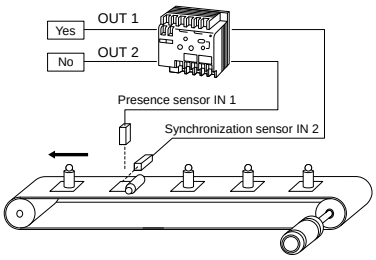
Timing Chart



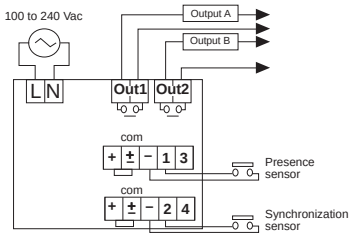
Operation: Turn the pattern switch and dial to indicate pattern B5. Power is On. When a contact closure is received at Input 1 or 2 or both and is sustained for time T1, Output 1 energizes. Loss of all inputs turns Output 1 Off. When a contact closure is received at Input 3 or 4 or both and is sustained for time T2, Output 2 energizes. Loss of all inputs turns Output 2 Off. For a four-point OR circuit, connect Outputs 1 and 2 in parallel.

B6 Leading Edge Input / One-Shot Output

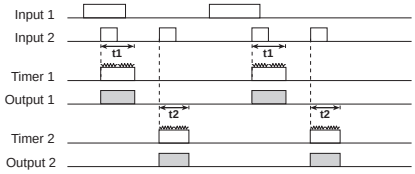
Application Example



Wiring Schematic



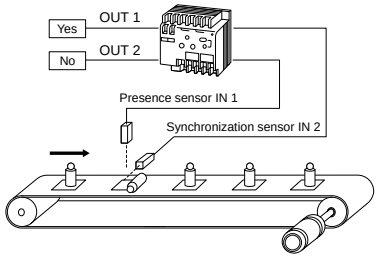
Timing Chart



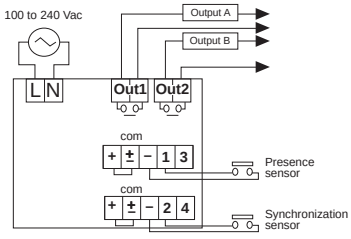
Operation: Turn the pattern switch and dial to indicate pattern B6. Power is On. Input 1 is connected to a normally open presence detection sensor, and Input 2 is connected to a timing synchronization sensor. A one-shot output goes to Output 1 if Input 1 is energized when the leading edge of the synchronization signal is received at Input 2. The one-shot duration is set by Timer 1. A one-shot output goes to Output 2 if Input 1 is deenergized when the leading edge of the synchronization signal is received at Input 2. The one-

B7 Trailing Edge Input / One-Shot Output

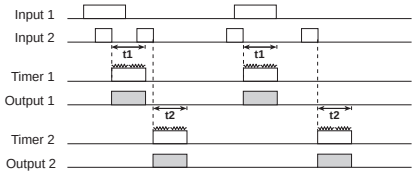
Application Example



Wiring Schematic



Timing Chart



shot duration is set by Timer 2. This pattern can be used for workpiece detection and other sensor input synchronization applications.
Operation: Turn the pattern switch and dial to indicate pattern B7. Power is On. Input 1 is connected to a normally open presence detection sensor, and Input 2 is connected to a timing synchronization sensor. A one-shot output goes to Output 1 if Input 1 is energized when the trailing edge of the synchronization signal occurs at Input 2. The one-shot duration is set by Timer 1. A one-shot output goes to Output 2 if Input 1 is deenergized when the trailing edge of the synchronization signal occurs at Input 2. The one-shot dura-