

PM4S

Specifications

| Item | | Type | PM4S Multi-range Timer | | | | |
|-----------------------|---------------------------------------|-------------|--|--|----------------|--------------|--------------|
| Rating | Rated operating voltage | | 100 to 120V AC | | 200 to 240V AC | 12V DC | 24V DC |
| | Rated frequency | | 50/60 Hz | | | | |
| | Rated power consumption | | Approx. 3.0VA/3.6VA (at 100V AC) Approx. 4.5VA/5.25VA (at 120V AC) | Approx. 5.6VA/6.8VA (at 200V AC) Approx. 7.5VA/9.8VA (at 240V AC) | Approx. 1.3W | | Approx. 1.7W |
| | Output rating | | 5A 250V AC (resistive load) | | | | |
| | Operating mode | | Power ON-delay | | | | |
| | Time range | A type | | 1s/10s/1min/10min (4 time ranges selectable) | | | |
| | | B type | | 3s/30s/3min/30min (4 time ranges selectable) | | | |
| C type | | | 6s/60s/6min/60min (4 time ranges selectable) | | | | |
| D type | | | 1min/10min/1h/10h (4 time ranges selectable) | | | | |
| E type | | | 3min/30min/3h/30h (4 time ranges selectable) | | | | |
| Time accuracy Note) | Operating time fluctuation | | ±1% (power off time change at the range of 0.1s to 1h) | | | | |
| | Setting error | | ±5% (Full-scale value) | | | | |
| | Voltage error | | ±1% (at the operating voltage changes between 85 to 110%) | | | | |
| | Temperature error | | ±2% (at 20°C ambient temp. at the range of -10 to +50°C +14 to +122°F) | | | | |
| Contact | Contact arrangement | | T.D.: Timed-out 2 Form C INST.: Timed-out 1 Form C, instantaneous 1 Form C (Selected by front switch) | | | | |
| | Contact resistance (Initial value) | | Max. 100mΩ (at 1A 6V DC) | | | | |
| | Contact material | | Silver alloy | | | | |
| Life | Mechanical (contact) | | Min. 10 ⁷ | | | | |
| | Electrical (contact) | | Min. 10 ⁵ (at rated control capacity) | | | | |
| Electrical function | Allowable operating voltage range | | 85 to 110% of rated operating voltage | | | | |
| | Insulation resistance (Initial value) | | Min. 100MΩ | Between live and dead metal parts | | (At 500V DC) | |
| | Breakdown voltage (Initial value) | | Between input and output | | | | |
| | | | Between contacts of different poles | | | | |
| | | | Between contacts of same pole | | | | |
| Min. power off time | | 100 ms | | | | | |
| Max. temperature rise | | 55°C 131°F | | | | | |
| Mechanical function | Vibration resistance | Functional | 10 to 55Hz: 1 cycle/min double amplitude of 0.25mm (10min on 3 axes) | | | | |
| | | Destructive | 10 to 55Hz: 1 cycle/min double amplitude of 0.375mm (1h on 3 axes) | | | | |
| | Shock resistance | Functional | Min. 98m/s ² (4 times on 3 axes) | | | | |
| | | Destructive | Min. 980m/s ² (5 times on 3 axes) | | | | |
| Operating condition | Ambient temperature | | -10 to +50°C +14 to +122°F | | | | |
| | Ambient humidity | | 30 to 85%RH (non-condensing) | | | | |
| | Atmospheric pressure | | 860 to 1,060hPa | | | | |
| | Ripple factor (DC type) | | 20% | | | | |
| Others | Weight | | Approximately 110 g 3.880 oz | | | | |

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

Applicable standard

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

PM4H-A/S/M

Time range

| Scale | Time unit | 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 |

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

Note: 0 setting is for instantaneous output operation.

Specifications

| Item | Type | PM4H-A | PM4H-S | PM4H-M |
|--------------------------|---------------------------------------|---|---|--|
| Rating | Rated operating voltage | 100 to 240V AC, 48 to 125V DC, 12V DC, 24V AC/DC | | |
| | Rated frequency | 50/60Hz common (AC operating type) | | |
| | Rated power consumption | Approx. 10VA (100 to 240V AC) Approx. 2.5VA (24V AC) Approx. 1.5W (12V DC, 24V DC, 48 to 125V DC) | | |
| | Rated control capacity | 5A 250V AC (resistive load) | | |
| | Operating mode | Pulse ON-delay Pulse Flicker Pulse ON-Flicker Differential ON/OFF-delay (1) (2) Signal OFF-delay Pulse One-shot Pulse One-cycle | Power ON-delay | Power ON-delay Power Flicker Power ON-flicker Power One-shot Power One-cycle (with instantaneous contact) |
| | Time range | 1s to 500h (Max.) 16 time ranges switchable | | |
| Time accuracy (Note:) | Operating time fluctuation | ±0.3% (power off time change at the range of 0.1s to 1h) | | |
| | Setting error | ±5% (Full-scale value) | | |
| | Voltage error | ±0.5% (at the operating voltage changes between 85 to 110%) | | |
| | Temperature error | ±2% (at 20°C ambient temp. at the range of -10 to +50°C +14 to +122°F) | | |
| Contact | Contact arrangement | Timed-out 2 Form C | | Timed-out 1 Form C Instantaneous 1 Form C |
| | Contact resistance (Initial value) | Max. 100mΩ (at 1A 6V DC) | | |
| | Contact material | Silver alloy | | Au flash on Silver alloy |
| Life | Mechanical (contact) | 2×10 ⁷ | | |
| | Electrical (contact) | 10 ⁵ (at rated control capacity) | | |
| Electrical function | Allowable operating voltage range | 85 to 110% of rated operating voltage (at 20°C coil temp.) | | |
| | Insulation resistance (Initial value) | Min. 100MΩ | Between live and dead metal parts Between input and output Between contacts of different poles Between contacts of same pole | (At 500V DC) |
| | Breakdown voltage (Initial value) | 2,000Vrms for 1 min Between live and dead metal parts 2,000Vrms for 1 min Between input and output 2,000Vrms for 1 min Between contacts of different poles 1,000Vrms for 1 min Between contacts of same pole | | |
| | Min. power off time | 100ms | | |
| | Max. temperature rise | 55°C 131°F | | 65°C 149°F |
| Mechanical function | Vibration resistance | Functional | 10 to 55Hz: 1 cycle/min double amplitude of 0.25mm (10min on 3 axes) | |
| | | Destructive | 10 to 55Hz: 1 cycle/min double amplitude of 0.375mm (1h on 3 axes) | |
| | Shock resistance | Functional | Min. 98m/s ² (4 times on 3 axes) | |
| | | Destructive | Min. 980m/s ² (5 times on 3 axes) | |
| Operating condition | Ambient temperature | -10 to +50°C +14 to +122°F | | |
| | Ambient humidity | 30 to 85%RH (at 20°C 68°F, non-condensing) | | |
| | Atmospheric pressure | 860 to 1,060hPa | | |
| | Ripple factor (DC type) | 20% | | |
| Others | Protective construction | IP65 on front panel (using rubber gasket ATC18002) <only for IP65 type> | | |
| | Weight | 100g 3.527 oz (Pin type) 110g 3.880 oz (Screw terminal type) | | |

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

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