

Thumbwheel Switch Multi Pulse Meters



MP5M Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- 14 operation modes
 - Frequency / revolutions / speed, passing speed, cycle, passing time, time interval
 - Time differential, absolute ratio, density, length measurement 1 / 2, interval
 - Accumulation, addition / subtraction (individual input), addition / subtraction (phase difference input)
- Various output models
 - Relay single (high-limit) / double (high / low-limit) + NPN open collector output
- Various functions
 - Prescale, monitoring delay, hysteresis, auto-zero, parameter lock
- NPN input (non-contact / contact) or PNP input (non-contact / contact)
- Display range: -19999 to 99999
- Various display units
- Power supply
 - 100 - 240 VAC ~ 50 / 60Hz (AC type)
 - 24 VAC ~ 50 / 60 Hz, 24 - 48 VDC = (AC / DC type)

Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

MP 5 M - ① ②

① Power supply

- 2: 24 VAC ~ 50 / 60 Hz, 24 - 48 VDC =
- 4: 100 - 240 VAC ~ 50 / 60 Hz

② Output

- N: Indicator
- 1: Relay single (high-limit) + NPN open collector output
- 2: Relay double (high / low-limit) + NPN open collector output

Product Components

- Product (+ bracket)
- Instruction manual

Specifications

Series	MP5M-□N	MP5M-□1	MP5M-□2
Input signal ⁽⁰¹⁾	Solid state input 1: ≤ 50 kHz (pulse width: ≥ 10 μs) Solid state input 2 ⁽⁰²⁾ : ≤ 5 kHz (pulse width: ≥ 100 μs) Contact input: ≤ 45 Hz (contact: ≥ 12 VDC = 5 mA, pulse width: ≥ 11 ms)		
Voltage input	Input impedance: 3.9 kΩ, [H]: 4.5 - 24 VDC =, [L]: 0 - 1 VDC =		
No-voltage input	Short-circuit impedance: ≤ 80 Ω, residual voltage: ≤ 1 VDC =, open-circuit impedance: ≥ 100 kΩ		
Display method	7-segment LED (zero blanking method)		
Character size	W 4 × H 8 mm		
Prescale	0.0001 × 10 ⁹ to 9.9999 × 10 ⁹		
Hysteresis	-		
Display cycle	OFF ⁽⁰⁴⁾ , 0.05, 0.5, 1, 2, 4, 8 sec (same as update output cycle)		
Display range	-19999 to 99999		
Contact control output	Relay		
Type	-	1c × 1	1a × 2
Capacity	-	250 VAC ~ 3 A, 30 VDC = 3 A resistive load	250 VAC ~ 3 A, 30 VDC = 3 A resistive load
Solid-state control output	NPN open collector		
Type	-	× 1	× 2
Capacity	-	≤ 30 VDC = 100 mA	≤ 30 VDC = 100 mA
Approval	CE, RoHS, ENEC		
Unit weight (package)	≈ 168 g (≈ 243 g)	≈ 181 g (≈ 256 g)	≈ 190 g (≈ 265 g)

01) Standard duty ratio 1:1

02) Operation mode F7, F8: ≤ 1 kHz (pulse width: ≥ 500 μs)

03) The hysteresis setting range varies according to the decimal point setting position.

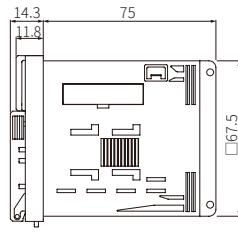
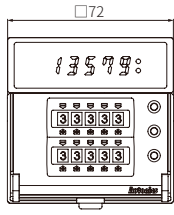
04) Only available operation mode F2, F14

	AC voltage	AC / DC voltage
Power supply	100 - 240 VAC ~ ± 10 % 50 / 60 Hz	24 VAC ~ ± 10 % 50 / 60 Hz, 24 - 48 VDC = ± 10 %
Power consumption	≤ 9 VA	AC: ≤ 6.5 VA, DC: ≤ 5 W
External power supply	≤ 12 VDC = ± 10 % 80 mA	
Memory retention	Number of inputs: 100,000 operations (non-volatile semiconductor memory type)	
Relay life cycle	Mechanical: ≥ 5,000,000 operations Electrical: ≥ 100,000 operations (250 VAC ~ 3 A resistive load)	
Insulation resistance	≥ 100 MΩ (500 VDC = megger)	
Dielectric strength	2,000 VAC ~ 60 Hz for 1 min	
Noise immunity	± 2 kV the square wave noise (pulse width: 1 μs) by the noise simulator	
Vibration	0.75 mm double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 1 hour	
Vibration (malfunction)	0.5 mm double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 min	
Shock	300m / s ² (≈ 30G) in each X, Y, Z direction for 3 times	
Shock (malfunction)	100m / s ² (≈ 30G) in each X, Y, Z direction for 3 times	
Ambient temperature	-10 to 50 °C, storage: -20 to 60 °C (no freezing or condensation)	
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)	

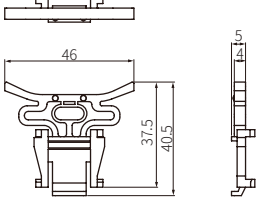
Operation mode	Measurement range	Measurement accuracy (23 ± 5 °C)
F1 Frequency / revolutions / speed	0.0005 Hz to 50 kHz	F.S. ± 0.05 % rdg ± 1-digit
F2 Passing speed		
F3 Cycle	0.01 to max. of each time range	F.S. ± 0.01 % rdg ± 1-digit
F4 Passing time		
F5 Time interval		
F6 Time differential		
F7 Absolute ratio	0.0005 Hz to 50 kHz	F.S. ± 0.05 % rdg ± 1-digit
F8 Density		
F9 Length measurement 1	0 to 99999	-
F10 Interval		
F11 Accumulation		
F12 Addition / subtraction-individual input		
F13 Addition / subtraction-phase difference input	-19999 to 99999	-
F14 Length measurement 2	0 to 99999	-

Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.



Bracket



Panel cut-out

