

**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 ① - ② ③**

**① Size**

S: DIN W 48 × H 48 mm  
 Y: DIN W 72 × H 36 mm  
 W: DIN W 96 × H 48 mm

**② Power supply**

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

**③ Output**

Output	Main (comparative value) output	Sub (display value) output
MP5S	N	Indicator
	N	Indicator
	1	NPN open collector quintuple
	2	PNP open collector quintuple
	3	Indicator
	4	Indicator
MP5Y	3	Indicator
	4	Indicator
	5	Indicator
	6	Relay triple (H, GO, L)
	N	Indicator
	A	Relay quintuple (HH, H, GO, L, LL)
MP5W	1	Relay triple (H, GO, L)
	2	NPN open collector quintuple
	4	NPN open collector quintuple
	5	PNP open collector quintuple
	8	NPN open collector quintuple
	9	PNP open collector quintuple

# Multi Pulse Meters



**Software**

Download the installation file and the manuals from the Autonics website.

**■ DAQMaster**

It is the comprehensive device management program for Autonics' products, providing parameter setting, monitoring and data management.

## MP5S / MP5Y / MP5W 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**

- 16 operation modes
  - Frequency / revolutions / speed, passing speed, cycle, passing time, time interval
  - Time differential, absolute ratio, error ratio, density, error, length measurement 1 / 2, interval
  - Accumulation, addition / subtraction (individual input), addition / subtraction (phase difference input)
- Various output models
  - Relay triple / quintuple output, NPN / PNP open collector quintuple output
  - BCD Dynamic output, PV transmission output (current output)
  - RS485 communication output (Modbus RTU)
- Various function
  - Prescale, delay monitoring, hysteresis, auto-zero, parameter lock, data bank (MP5W only)
- Display range: -19999 to 99999
- Various display units

## Specifications

Series	MP5S	MP5Y	MP5W
<b>Input signal<sup>(01)</sup></b>	Solid state input 1: ≤ 50 kHz (pulse width: ≥ 10 μs) Solid state input 2 <sup>(02)</sup> : ≤ 5 kHz (spulse width: ≥ 100 μs) Contact input: ≤ 45 Hz (contact: 12 VDC≒ ≥ 5 mA, (pulse width: ≥ 11 ms)		
<b>Voltage input</b>	Input impedance: 3.9 kΩ, [H]: 4.5 - 24 VDC≒, [L]: 0 - 1 VDC≒		
<b>No-voltage input</b>	Short-circuit impedance: ≤ 80 Ω, residual voltage: ≤ 1 VDC≒, open-circuit impedance: ≥ 100 kΩ		
<b>Display method</b>	7-segment LED (zero blanking method)		
<b>Character size</b>	W 4 × H 8 mm	W 7 × H 14 mm	
<b>Prescale</b>	0.0001 × 10 <sup>3</sup> to 9.9999 × 10 <sup>9</sup>		
<b>Hysteresis</b>	0 to 9999 <sup>(03)</sup>		
<b>Display cycle</b>	OFF <sup>(04)</sup> , 0.05, 0.5, 1, 2, 4, 8 sec (same as update output cycle)		
<b>Display range</b>	-19999 to 99999		
<b>Output</b>	Depending on models		
Relay	250 VAC~ 3 A, 30 VDC≒ 3 A resistive load		
NPN / PNP open collector	≤ 30 VDC≒ 30 mA		
BCD Dynamic	NPN open collector ≤ 30 VDC≒ 30 mA (Dynamic COM cycle (T) = 40 ms)		
PV transmission	DC 4 - 20 mA (load: ≤ 500 Ω, resolution: 8,000 divisions) / DC 0 - 20 mA (load: ≤ 500 Ω, resolution: 10,000 divisions)		
RS485 communication	Modbus RTU		
<b>Product components</b>	Product, instruction manual		
Bracket	Mounted	× 2	× 2
Unit sticker	× 1	× 1	× 2
<b>Unit weight (package)</b>	≈ 132 g (≈ 191 g)	≈ 140 g (≈ 230 g)	≈ 210 g (≈ 334 g)
<b>Approval</b>	CE  ENEC		

01) Standard duty ratio 1:1

02) Operation mode F7, F8, F9, F10: ≤ 1 kHz (pulse width: ≥ 100 μs)

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

04) Only available operation mode F2, F16

	AC voltage	AC / DC voltage
<b>Power supply</b>	100 - 240 VAC ~ ± 10 % 50 / 60 Hz	24 VAC ~ ± 10 % 50 / 60 Hz, 24 - 48 VDC≒ ± 10 %
<b>Power consumption</b>	Depending on Series / power supply	
MP5S	≤ 7.5 VA	AC: ≤ 6 VA, DC: ≤ 4.5 W
MP5Y	≤ 9 VA	AC: ≤ 7 VA, DC: ≤ 6.2 W
MP5W	≤ 15 VA	AC: ≤ 11 VA, DC: ≤ 7 W
<b>External power supply</b>	≤ 12 VDC≒ ± 10 % 80 mA	
<b>Sub power supply<sup>(01)</sup></b>	≤ 24 VDC≒ 30 mA	
<b>Memory retention</b>	Number of inputs: 100,000 operations (non-volatile semiconductor memory type)	
<b>Relay life cycle</b>	Mechanical: ≥ 10,000,000 operations (switching frequency 180 operations / min) Electrical: ≥ 100,000 operations (250 VAC~ 3 A, 30 VDC≒ 3 A resistive load) (switching frequency 20 operations / min)	
<b>Insulation resistance</b>	≥ 100 MΩ (500 VDC≒ megger)	
<b>Dielectric strength</b>	2,000 VAC~ 60 Hz for 1 min	
<b>Noise immunity</b>	± 2 kV the square wave noise (pulse width: 1 μs) by the noise simulator	
<b>Vibration</b>	0.75 mm double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 1 hour	
<b>Vibration (malfunction)</b>	0.5 mm double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 min	
<b>Shock</b>	300m / s <sup>2</sup> (≈ 30G) in each X, Y, Z direction for 3 times	
<b>Shock (malfunction)</b>	100m / s <sup>2</sup> (≈ 30G) in each X, Y, Z direction for 3 times	
<b>Ambient temperature</b>	-10 to 50 °C, storage: -20 to 60 °C (no freezing or condensation)	
<b>Ambient humidity</b>	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)	

01) Only for MP5W

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		
F4 Passing time	0.01 to max. of each time range	F.S. ± 0.01 % rdg ± 1 digit
F5 Time interval		
F6 Time differential		
F7 Absolute ratio	0.0005 Hz to 50 kHz	F.S. ± 0.05 % rdg ± 1digit
F8 Error ratio		
F9 Density		
F10 Error		
F11 Length measurement 1	0 to 99999	
F12 Interval		
F13 Accumulation		
F14 Addition / subtraction-individual input	-19999 to 99999	
F15 Addition / subtraction-phase difference input		
F16 Length measurement 2	0 to 99999	

## Communication Interface

### ■ RS485

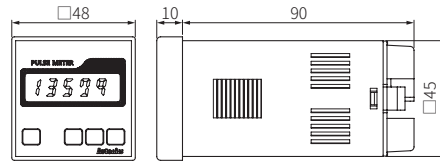
<b>Comm. protocol</b>	Modbus RTU (16-bit CRC)
<b>Application standard</b>	Compliance with EIA RS485
<b>Max. connection</b>	31-unit (address: 1 to 127)
<b>Comm. synchronous method</b>	Asynchronous
<b>Comm. method</b>	2-wire half duplex
<b>Comm. distance</b>	≤ 800 m
<b>Comm. speed</b>	2,400 / 4,800 / 9,600 (default) / 19,200 / 38,400 bps
<b>Comm. response time</b>	5 to 99 ms (default: 20 ms)
<b>Start bit</b>	1-bit (fixed)
<b>Data bit</b>	8-bit (fixed)
<b>Parity bit</b>	None (default), Even, Odd
<b>Stop bit</b>	1-bit, 2-bit (default)

## Dimensions

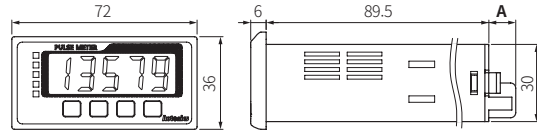
• Unit: mm, For the detailed drawings, follow the Autonics website.

• This dimensions shows the indicator. The connector (side length) is different according to the output specification.

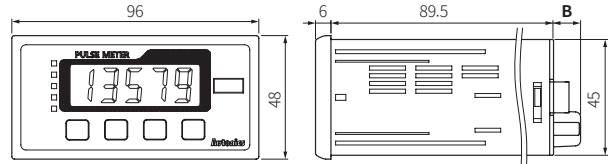
### ■ MP5S



### ■ MP5Y



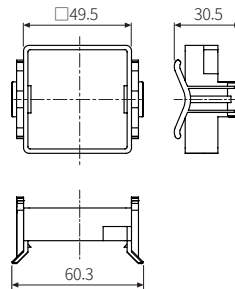
### ■ MP5W



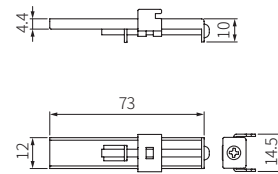
	MP5Y-□N	MP5Y-□1/2/3/4/5	MP5Y-□6	MP5W-□N	MP5W-□A/1	MP5W-□2/4/5/8/9
<b>A</b>	10.5	14.5	15.3	-	-	-
<b>B</b>	-	-	-	10.5	10.5	14.5

### ■ Bracket

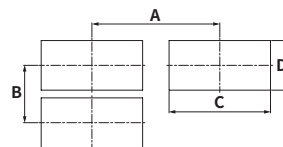
• MP5S



• MP5Y / MP5W



### ■ Panel cut-out



	A	B	C	D
<b>MP5S</b>	≥ 65	≥ 65	45 <sup>±0.5</sup>	45 <sup>±0.5</sup>
<b>MP5Y</b>	≥ 91	≥ 40	68 <sup>±0.7</sup>	31.5 <sup>±0.5</sup>
<b>MP5W</b>	≥ 116	≥ 52	92 <sup>±0.8</sup>	45 <sup>±0.6</sup>