

# Ampere Meter

## ■ Features

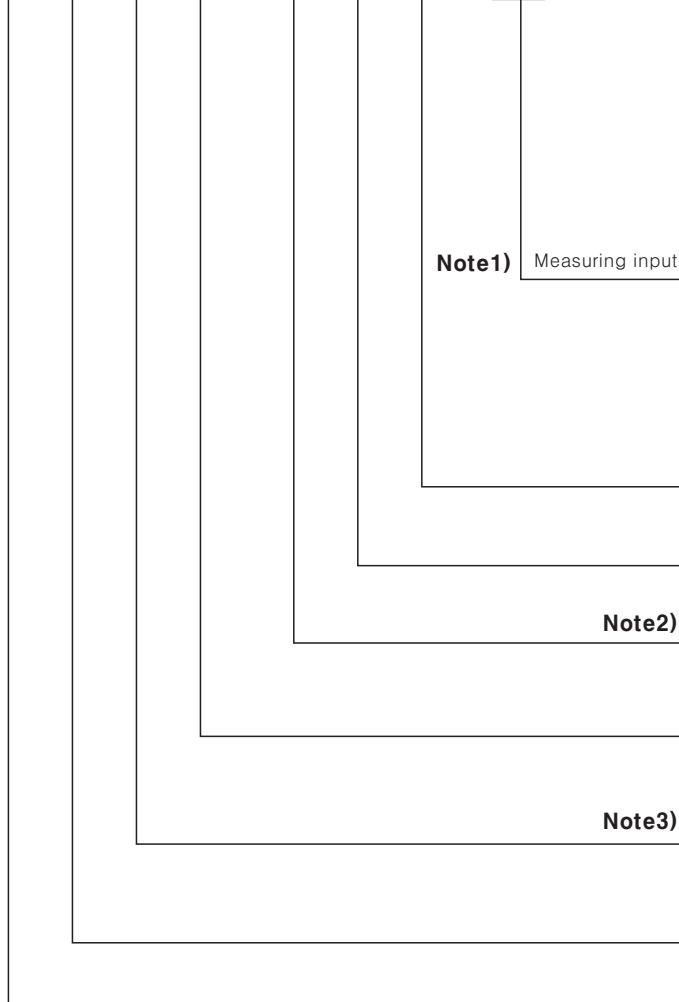
- Max. display: 19999 (M5W), 1999 (Others)
- AUTO ZERO function or HOLD function (Except M5W)
- RMS/AVG value selection function (AC Voltage)
- 7 Segment LED Display
- Case size by DIN specification
- Indication type only, Single preset output type, Double preset output type



**⚠ Please read "Caution for your safety" in operation manual before using.**

## ■ Ordering information

**M** **4** **W**  - **A** **A**  - **1**



**Note1)** Measuring input

**Note2)**

**Note3)**

NO	M4Y / M4W / M4M		M5W	
	DC INPUT (F · S)	AC INPUT (F · S)	DC INPUT (F · S)	AC INPUT (F · S)
1	199.9 μA	19.99mA	199.99 μA	19.999mA
2	1.999mA	199.9mA	1.9999mA	199.99mA
3	19.99mA	1.999A	19.999mA	1.9999A
4	199.9mA	19.99A	199.99mA	19.999A
5	1.999A	199.9A	1.9999A	199.99A
6	19.99A	1999A	19.999A	1999.9A
7	199.9A	—	199.99A	—
8	1999A	—	1999.9A	—
XX	Option		Option	
	AVG value			
R	RMS value			
V	Volt Meter			
A	Ampere Meter			
	DC type			
A	AC type			
	Indication type			
1P	Single setting			
2P	Double setting			
Y	DIN Size W72×H36mm			
W	DIN Size W96×H48mm			
M	DIN Size W72×H72mm			
4	3½digit			
5	4½digit			
M	Meter			

**Note1)** Measuring input and display is 1:1 for DC INPUT No.1 to 5 and AC INPUT No.1 to 3, DC INPUT No.6 to 8 is used with DC50mV Shunt, AC INPUT No.4 to 6 are used with C.T (Current transducer)

**Note2)** RMS only applies to AC measuring type. Do not enter "R" with DC model.

**Note3)** M4Y, M5W are an indication type.

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Proximity sensor

(J) Photo electric sensor

(K) Pressure sensor

(L) Rotary encoder

(M) 5-Phase stepping motor & Driver & Controller

# M4Y/M4W/M5W/M4M Series

## ■ Specifications

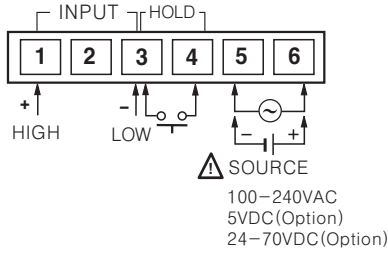
Model	M4Y-DV-□ M4Y-AA□-□ M5W-DA-□ M5W-AA-□	M4W-DA-□ M4W-AA□-□ M4M-DA-□ M4M-AA□-□	M4W1P-DA-□ M4W1P-AA□-□ M4M1P-DA-□ M4M1P-AA□-□	M4W2P-DA-□ M4W2P-AA□-□ M4M2P-DA-□ M4M2P-AA□-□
Measurement function	DC, AC voltage			
Max. allowable input	150% for each input specification			
Power supply	★5VDC (Except M5W) ★24-70VDC 100-240VAC 50/60Hz	★24-70VDC ★100-240VAC 50/60Hz 110/220VAC 50/60Hz		
Allowable voltage range	90 ~ 110% of rated voltage			
Power consumption	DC : 2W, AC : 4VA		DC : 2W, AC : 5VA	
Display method	7Segment LED Display			
Character height	14.1mm		M4W:10.16mm, M4M:10mm	
Display accuracy	DC : F · S ±0.2% rdg ±1digit AC : F · S ±0.5% rdg ±1digit			
Sampling cycle	300ms			
A/D conversion method	Dual slope integral method			
Response time	2sec.(0 ~ Max.)			
Setting time	2.5 times/sec			
Contact capacity	—————		Relay output : 250VAC 3A 1c	Relay output : 250VAC 3A 1c×2
Insulation resistance	Min. 100MΩ (at 500VDC)			
Dielectric strength	2000VAC 50/60Hz for 1 minute			
Noise strength	±1kV the square wave noise (pulse width:1μs) by the noise simulator			
Vibration	Mechanical	0.75mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 1 hour		
	Malfunction	0.5mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 10 minutes		
Shock	Mechanical	300m/s <sup>2</sup> (30G) in X, Y, Z directions for 3 times		
	Malfunction	100m/s <sup>2</sup> (10G) in X, Y, Z directions for 3 times		
Relay life cycle	Mechanical	—————		
	Malfunction	————— Min. 1,000,000 (250VAC 3A resistive load)		
Ambient temperature	-10 ~ +50°C (at non-freezing status)			
Storage temperature	-25 ~ +65°C (at non-freezing status)			
Ambient humidity	35~85%RH			
Weight	M4Y:Approx. 170g M5W:Approx. 317g	M4W:Approx. 317g M4M:Approx. 401g	M4W-1P:Approx. 408g M4M-1P:Approx. 467g	M4W-2P:Approx. 424g M4M-2P:Approx. 496g

※ "★" (Power supply) is optional.

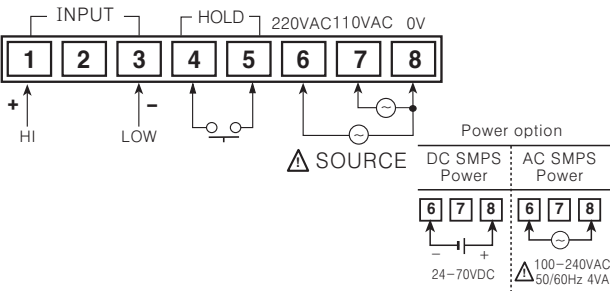
# Ampere Meter

## Connections

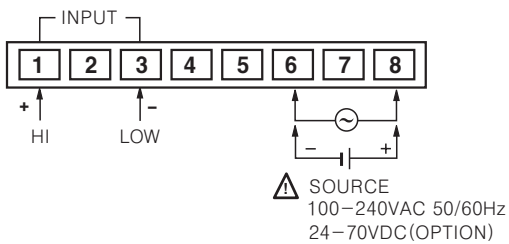
### ●M4Y



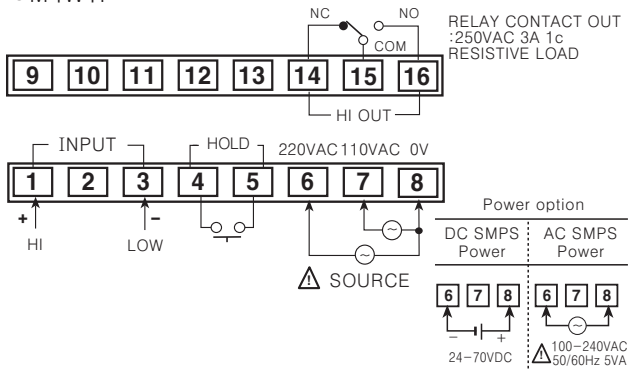
### ●M4W



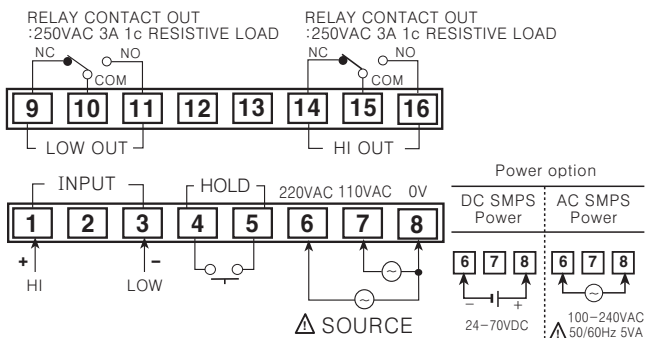
### ●M5W



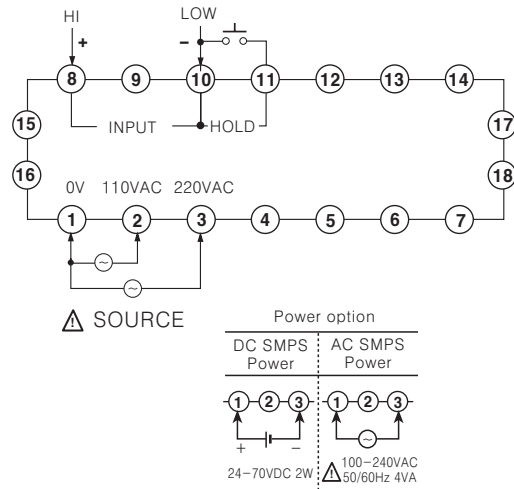
### ●M4W1P



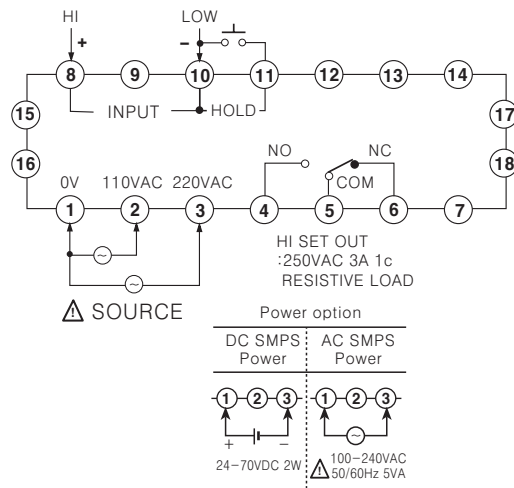
### ●M4W2P



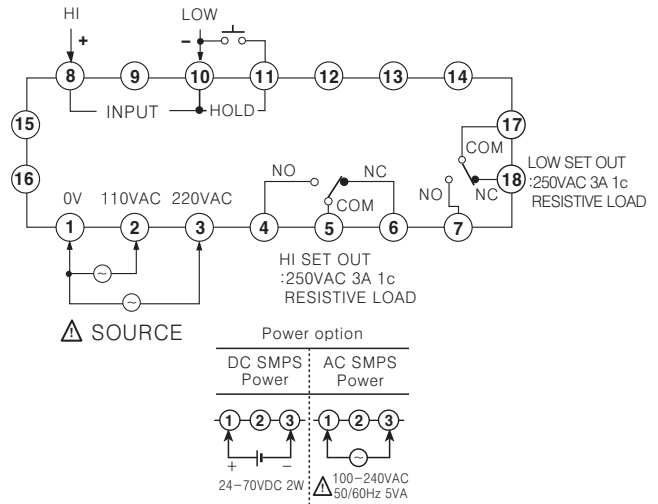
### ●M4M



### ●M4M1P



### ●M4M2P



(A)  
Counter

(B)  
Timer

(C)  
Temp.  
controller

(D)  
Power  
controller

(E)  
Panel  
meter

(F)  
Tacho/  
Speed/  
Pulse  
meter

(G)  
Display  
unit

(H)  
Sensor  
controller

(I)  
Proximity  
sensor

(J)  
Photo  
electric  
sensor

(K)  
Pressure  
sensor

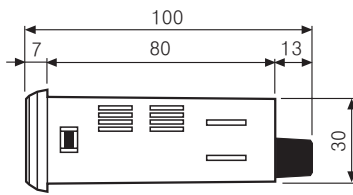
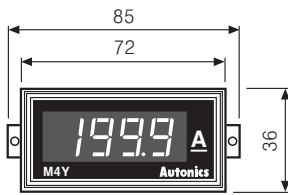
(L)  
Rotary  
encoder

(M)  
5-Phase  
stepping  
motor &  
Driver &  
Controller

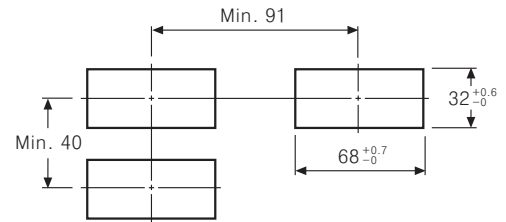
# M4Y/M4W/M5W/M4M Series

## ■ Dimensions

### ● M4Y

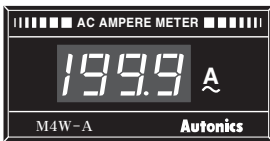


### ● Panel cut-out

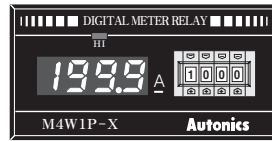


Unit:mm

### ● M4W



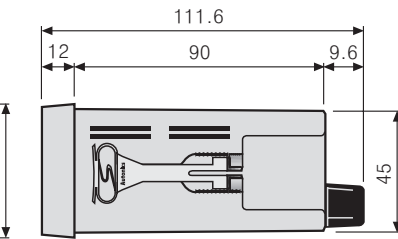
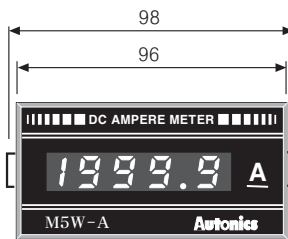
### ● M4W1P



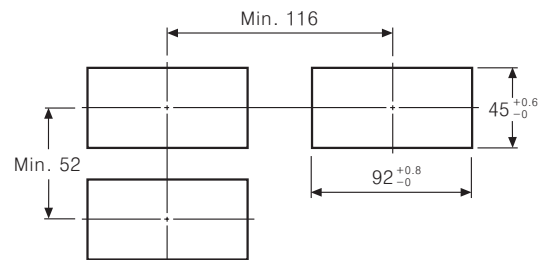
### ● M4W2P



### ● M5W

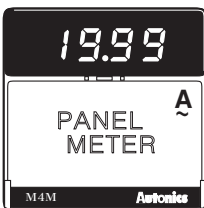


### ● Panel cut-out

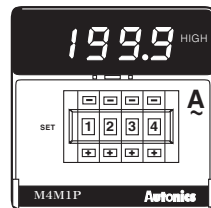


Unit:mm

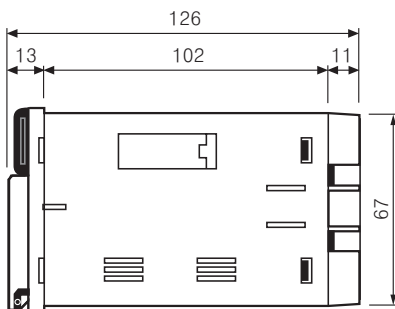
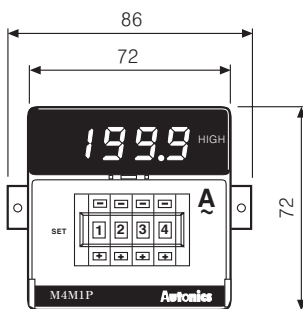
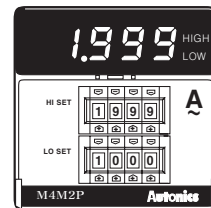
### ● M4M



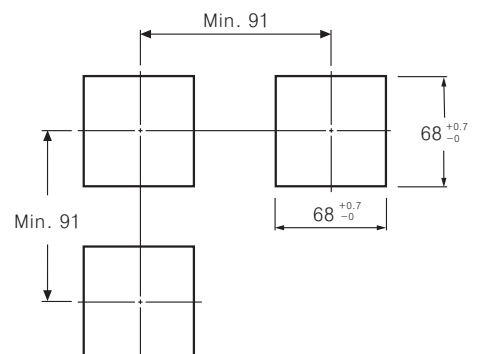
### ● M4M1P



### ● M4M2P



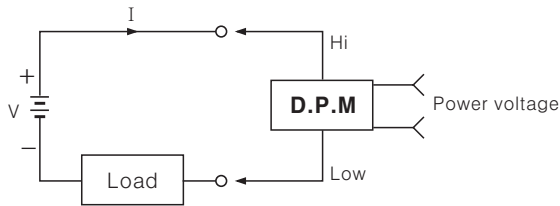
### ● Panel cut-out



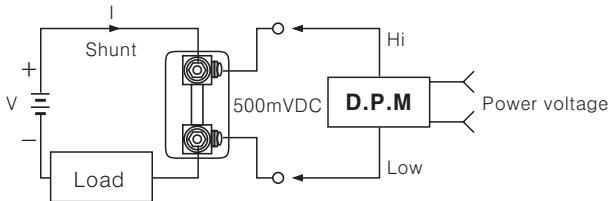
Unit:mm

## ■Connections

### ◎Measuring DC voltage



(Fig. 1) Measuring lower than 2ADC of current

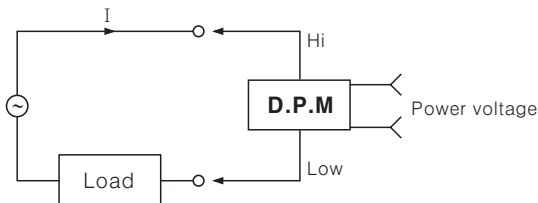


(Fig. 2) Measuring higher than 2ADC of current

- ※Higher than 2ADC is using shunt for measuring current.
- ※Basically the 2nd part of shunt value is 50mVDC.

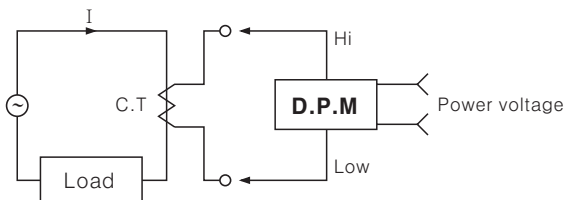
Ex) Ordering D.P.M in case of 10ADC of measuring ampere : Select 10ADC/50mVDC of shunt and 50VDC/1000ADC of D.P.M.

### ◎Measuring AC voltage



(Fig. 3) Measuring lower than 5AAC of current

Ex) Ordering D.P.M in case of lower than 5AAC of measuring ampere :  
Select M4W-AA-XX AC5A/5.00A



(Fig. 4) Measuring lower than 5AAC of current

- ※ If the current is higher than 5AAC, please use C.T.

Ex) How to order D.P.M in case of 300AAC of measuring ampere : Select 300AAC/5A of C.T and 5AAC/300A of D.P.M.

## ■Proper usage

- Before you buy or use the Panel Meter, please read this catalog. The product, which is produced by customer's requirement, cannot be exchanged or refunded.
- If it displays arbitrary number even though the power is ON, please remove the input signal and check whether it displays "0000" after short the measurement terminal.  
(Checking Auto Zero function)  
If it does not display "0000", please connect to our A/S center.  
Note) M5W Series does not have Auto Zero function.
- If it indicates 1999 or -1999 during input signal is ON, please turn OFF the power and check the connection condition.  
(Checking Auto Zero function)  
It is because the input signal is too low or high.  
Note) M5W Series indicates "19999" or "-19999".
- The specification of measurement input, which is indicated in model ordering, is a standard specification, 1:1 of measurement input and processing value.  
※Our company does not sell a shunt or C.T, so please buy it individually.
- The D.P.M for measuring AC voltage has both AVG type and RMS type separately.  
Because it is produced with AVG type, please mark the model name accurately.  
Ex) In case of M4Y, M4W, M4M Series (Include setting type)  
The model of RMS type: M4W-AAR-6  
The model of AVG type: M4W-AA-6  
※The specification will be set by sign "R".  
※M5W Series has RMS type only, and it is not indicated "R" on the model name.
- In case of D.P.M for measuring AC voltage, please check if it is AVG type or RMS type when comparison measuring with other company's products.

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Proximity sensor

(J) Photo electric sensor

(K) Pressure sensor

(L) Rotary encoder

(M) 5-Phase stepping motor & Driver & Controller