

## W75×H25mm Digital graphic panel meter for mosaic panel

### ■ Features

- Various input function  
: 0-2VDC, 0-10VDC, 1-5VDC,  
DC0-1mA, DC4-20mA
- Prescale function(High / Low scale setting)
- Max. display : -999 to 9999
- Error display function and self diagnosis function
- High quality by microprocessor built-in
- Display accuracy :F.S.  $\pm 0.2\%$  rdg  $\pm 1$ digit



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

### ■ Ordering information

<b>M</b>	<b>4</b>	<b>V</b>	-		
Item	Digit	Size	Input	No mark	Standard
				X	Option
	4	V	W75×H25mm		
				9999(4digit)	
	M	Meter			

※It is enable to customized with another specifications except for standard one.

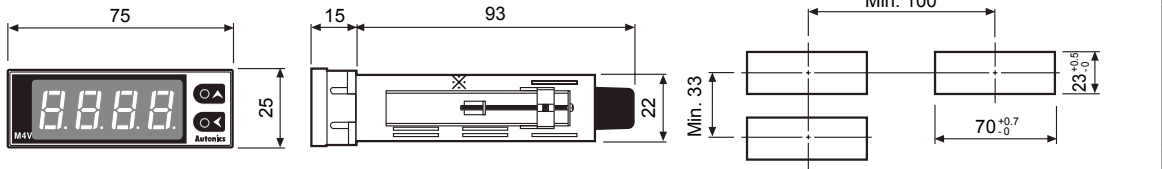
### ■ Specifications

Model	<b>M4V</b>				
Measurement function	DC volt			DC ampere	
Measurement input	0-2VDC	1-5VDC	0-10VDC	DC0-1mA	DC4-20mA
Max. allowable input	110% of measurement input				
Power supply	12-24VDC				
Allowable voltage range	90 to 110% of rated voltage				
Power consumption	Approx. 2W				
Display method	7 Segment red LED display(Segment height : 14mm)				
Display accuracy	0 to 50°C : F.S. $\pm 0.2\%$ rdg $\pm 1$ digit -10 to 0°C : F.S. $\pm 0.3\%$ rdg $\pm 1$ digit				
Sampling period	500ms				
Setting method	Scale set by front swithces				
Set-diagnosis	Error indication				
Insulation resistance	Min. 100MΩ(at 500VDC megger)				
Dielectric strength	2000VAC 50/60Hz for 1 minute				
Noise strength	$\pm 300$ V the square wave noise(pulse width : 1μs) by the noise simulator				
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 50Hz(for 1 min.) in each of X, Y, Z directions for 1hour			
	Malfunction	0.5mm amplitude at frequency of 10 to 50Hz(for 1 min.) in each of X, Y, Z directions for 10minutes			
Shock	Mechanical	300m/s <sup>2</sup> (approx. 30G) in X, Y, Z direction for 3 times			
	Malfunction	100m/s <sup>2</sup> (approx. 10G) in X, Y, Z directions for 3 times			
Environ-ment	Ambient temperature	-10 to 50°C, storage : 20 to 60°C			
	Ambient humidity	35 to 85%RH, storage : 35 to 85%RH			
Accessory	Mosaic graphic panel mounting bracket				
Unit weight	Approx. 83g				

※Environment resistance is rated at no freezing or condensation.

# Graphic Panel Meter

## ■ Dimensions



※It is attached on mosaic graphic panel. Please mount the unit properly on general panel

## ■ Input and connection

Input	Display	Connection
0-2VDC	0-2U	0-2VDC, 1-5VDC, 0-10VDC SOURCE HI ↓ LOW ↓ - + ↓ 1 2 3 4 5 6
1-5VDC	1-5U	
0-10VDC	0-10	
DC0-1mA	1nA	DC0-1mA SOURCE HI ↓ LOW ↓ - + ↓ 1 2 3 4 5 6
DC4-20mA	4-20	DC4-20mA SOURCE HI ↓ LOW ↓ - + ↓ 1 2 3 4 5 6

## ■ Factory default setting

1n-t	0-2U	dot	0.0
L-5C	0.0	1n-b	00
H-5C	100.0	LoC	OFF

## ■ Error display

Display indicates "Error" when wrong measuring input value is applied.

### ◎ Display an Error

- In case of lower value than measuring input value.  
Ex) In case of applying DC2mA when measuring input range is selected as DC4-20mA : L L L L flashes.
- In case of higher value than measuring input value.  
Ex) In case of applying DC22mA when measuring input range is selected as DC4-20mA : H H H H flashes.
- In case of damaging the memory chip by high frequency noise, strong surge noise : E R - E flashes.

### ◎ Cancellation of Error

- H H H H and L L L L Error is to exceed measuring input range, therefore if measuring input value is applied with in input range, Error message will be cleared automatically.
- 00E R is indicated by mis-connection or in case of occurring something wrong in measuring input. Please cut off the power and then check measuring input.
- E R - E indicates data damage programmed in memory chip, and damaged data can not be recovered.  
Ask a dealer shop for A/S.  
It is impossible to clear E R - E by end-user, therefore it must be repaired by our engineer.

(A) Photo electric sensor

(B) Fiber optic sensor

(C) Door/Area sensor

(D) Proximity sensor

(E) Pressure sensor

(F) Rotary encoder

(G) Connector/Socket

(H) Temp. controller

(I) SSR/ Power controller

(J) Counter

(K) Timer

(L) Panel meter

(M) Tacho/ Speed/ Pulse meter

(N) Display unit

(O) Sensor controller

(P) Switching mode power supply

(Q) Stepper motor& Driver&Controller

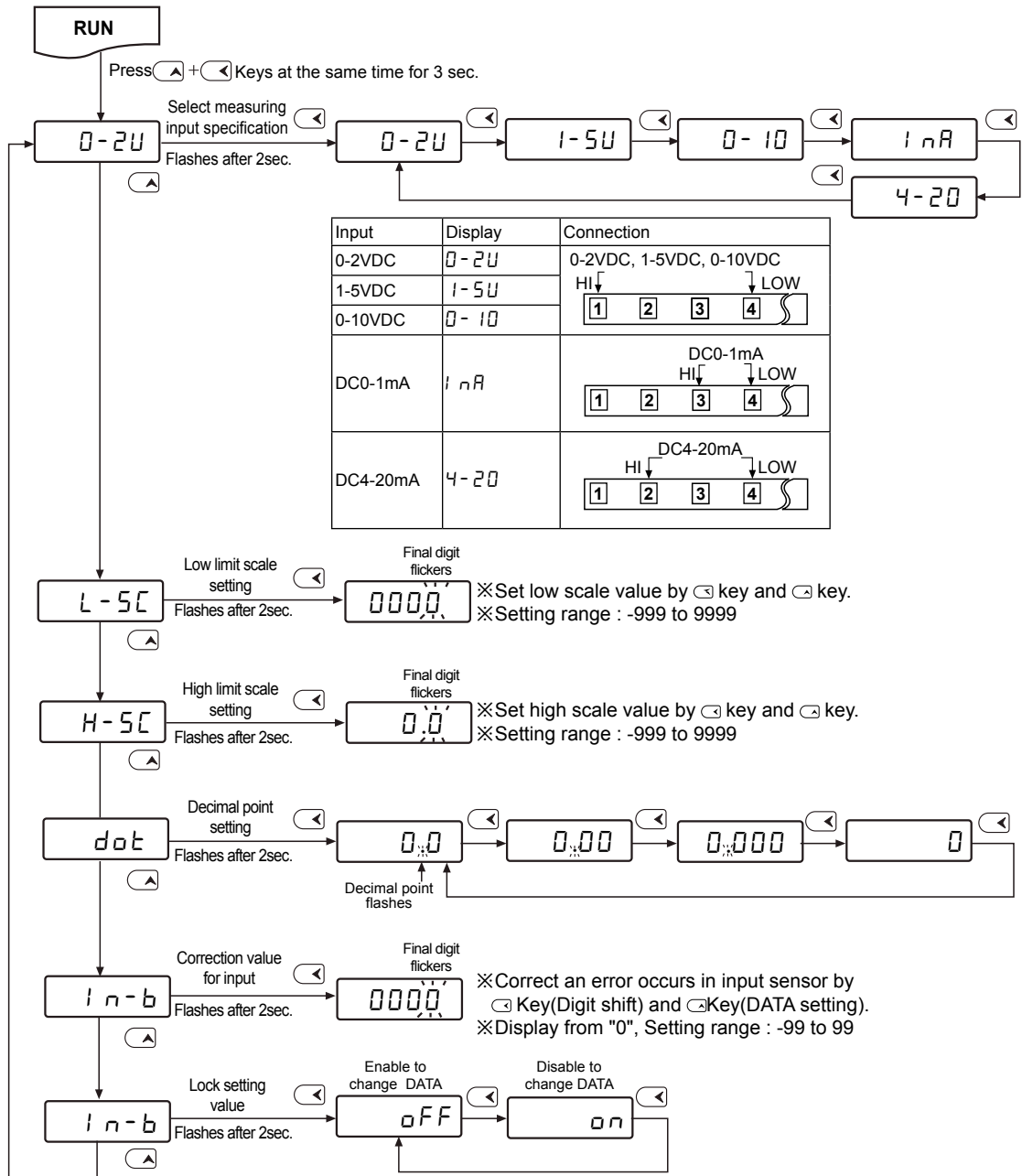
(R) Graphic/ Logic panel

(S) Field network device

(T) Software

(U) Other

## Parameter description



### How to change the setting value

1. When advance to MODE, change digit flashing by  $\leftarrow$  Key then set DATA value by  $\rightarrow$  Key.
2. After complete DATA value setting, please press  $\leftarrow$  Key for 2sec. then it will move to next MODE saving DATA.
3. Press  $\leftarrow$  Key for 2sec. to return RUN mode after changing (Setting) DATA value in each MODE.

※ Press  $\leftarrow$  Key for 2sec., then it will return to RUN without change setting value.

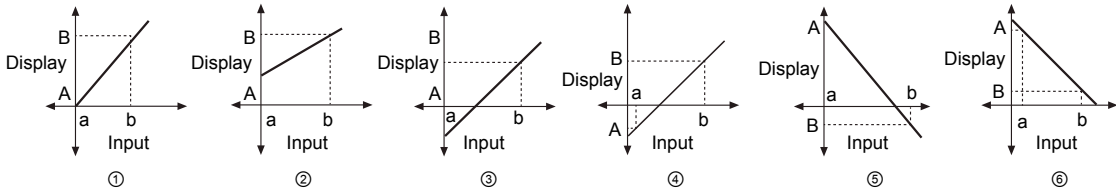
※ When checking the setting value only in each mode. Press  $\leftarrow$  Key for 2sec., then press for 2sec. again.

(If press continuously, it will not advance to next mode and return to RUN mode)

※ If any key is untouched for 60sec., it will return to RUN mode.

## ■ Prescale function

This function is to display setting of particular high/low-limit value in order to display high/low-limit value of measuring input. If measuring inputs are a or b and display values are A or B, it will display a=A, b=B as below graph.

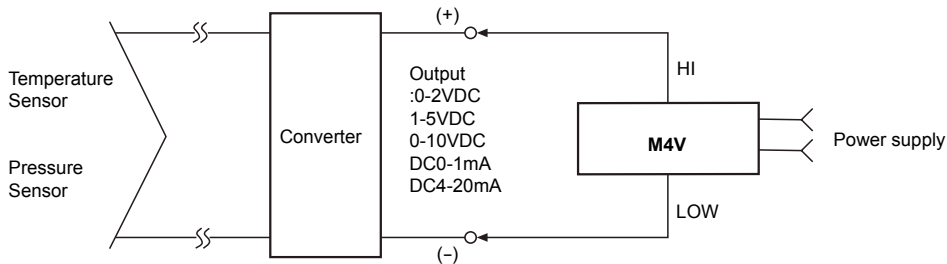


Ex) Able to set the display value for input as certain value(Not "0") by using prescale function.

Measuring input	Prescale setting value	Display	Graph
0-10VDC	L-Scale : 0      H-Scale : 200	0 to 200	①
	L-Scale : 50      H-Scale : 200	50 to 200	②
	L-Scale : -100      H-Scale : 200	-100 to 200	③
	L-Scale : 200      H-Scale : -50	200 to -50	⑤

※ Prescale value setting range → L-SC(Low limit) : -999 to 9999, H-SC(High limit) : -999 to 9999  
But, there must be offset "1" between L-SC and H-SC.

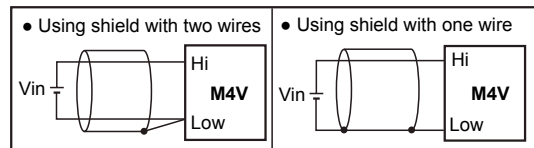
## ■ Application of connections



## ■ Proper usage

- Please read this catalog before purchase Panel meter.
- Ambient condition
  - Please use this product under -10 to 50°C of ambient operating temperature and less than 35 to 85%RH of humidity. Moreover, use this item near normal temperature 20°C, the most important condition, which manages the accuracy.
  - Please avoid the condition of dew status by rapidly changing temperature.
  - Please avoid too much vibration or shock.
  - Please avoid the place where there are drag, dust, and chemical agent or gas, which is destructive to electrical parts.
  - Do not use this item where the voltage or noise is over the proper specification. it may cause malfunction.

- Storage  
When you keep it, please avoid a direct ray of light and keep it under -20 to 60°C of ambient operating temperature and less than 35 to 85%RH of humidity. Wrap and keep it as initial state.
- Input Line  
Shield wire must be used when the measuring input line is getting longer or there are too much noise.



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