

## Final Control Elements

### PARAMETER GENERATOR

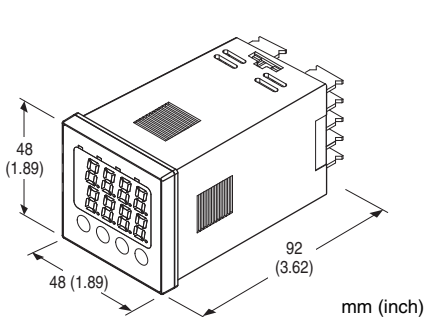
(with digital displays)

#### Functions & Features

- 1/16 DIN size
- Process input monitor display
- All parameters are programmable via the front control keys
- Field-selectable voltage or current input
- IP66 front panel (single mounting)

#### Typical Applications

- Various parameter settings for computers and DCS's



## MODEL: ABS3-MM-[1][2]

### ORDERING INFORMATION

- Code number: ABS3-MM-[1][2]
- Specify a code from below for each [1] and [2]. (e.g. ABS3-MM-M2/Q)
- Specify the specification for option code /Q (e.g. /C01/SET)

### INPUT

**M:** 4 - 20 mA DC (Input resistance 37  $\Omega$ )  
/ 1 - 5 V DC (Input resistance  $\geq$  1M  $\Omega$ )

### OUTPUT

**M:** 4 - 20 mA DC (Load resistance  $\leq$  550  $\Omega$ )  
/ 1 - 5 V DC (Load resistance  $\geq$  250 k $\Omega$ )

### [1] POWER INPUT

#### AC Power

**M2:** 100 - 240 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

#### DC Power

**R:** 24 V DC

(Operational voltage range 24 V  $\pm$ 10 %, ripple 10 %p-p max.)

### [2] OPTIONS

**blank:** none

**/Q:** With options (specify the specification)

### SPECIFICATIONS OF OPTION: Q (multiple selections)

#### COATING (For the detail, refer to M-System's web site.)

**/C01:** Silicone coating

**/C02:** Polyurethane coating

**/C03:** Rubber coating

#### EX-FACTORY SETTING

**/SET:** Preset according to the Ordering Information Sheet (No. ESU-9413)

### GENERAL SPECIFICATIONS

**Construction:** Panel flush mounting

**Degree of protection:** IP66; applicable to the front of the panel meter with single mounted according to the specified panel cutout

**Connection:** M3 screw terminals (torque 0.6 N·m)

**Screw terminal:** Nickel-plated steel

**Housing material:** Flame-resistant resin (black)

**Isolation:** Input to output to power

**Security:** Protecting settings by inhibiting operation of parameter block 0 to 3 button

**Programming:** Front membrane pad keys

#### Setting:

- Scaled range
- Moving average
- Input filter time constant
- Others

### DISPLAY

#### ■ DIGITAL DISPLAYS

##### • PV Display

**Display:** 7-segment, 4-digit, red LED, 10 mm (.39") high

**Scaling range:** -1999 to 9999

**Decimal point position:** 10<sup>-1</sup>, 10<sup>-2</sup>, 10<sup>-3</sup> or none

**Read rate:** Max. 4/sec. (0.25 sec.)

**Over-range indication:** 'UUUU' when the input signal goes above +10 % of the scaled range or 9999; 'LLLL' when the input signal goes below -10 % of the scaled range or -1999

##### • SV Display

**Display:** 7-segment, 4-digit, green LED, 10 mm (.39") high

**Selectable range:** -10 to +110 % in 1 % increments

##### • Status Indicators

**PWR indicator:** Green LED turns on while the power is supplied.

**L1 indicator:** Amber LED turns on when setting the parameter block 1.

**L2 indicator:** Amber LED turns on when setting the parameter block 2.

**L3 indicator:** Amber LED turns on when setting the parameter block 3.

RoHS Directive  
EN 50581

## INPUT SPECIFICATIONS

Input signal range: -10 % - +110 %

## OUTPUT SPECIFICATIONS

Output available range: -10 % - +110 %

## INSTALLATION

### Power Consumption

- AC: 4 VA at 100 V AC  
5 VA at 200 V AC  
6 VA at 264 V AC

- DC:  $\leq 3$  W

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 10 to 90 %RH (non-condensing)

Mounting: Panel flush mounting

Weight: 130 g (0.29 lb)

## PERFORMANCE in percentage of span

### ■ PV DISPLAY

Display accuracy:  $\pm 0.2$  %  $\pm 1$  digit of the span

Temp. coefficient:  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)

Line voltage effect: Included in the display accuracy

### ■ OUTPUT SIGNAL

Setpoint accuracy:  $\pm 0.2$  % of the span

Temp. coefficient:  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)

Response time: Approx. 0.5 sec. (0 - 90 %)

Line voltage effect: Included in the setpoint accuracy

Insulation resistance:  $\geq 100$  M $\Omega$  with 500 V DC

Dielectric strength: 1500 V AC @1 minute (input to output to power to ground)

## STANDARDS & APPROVALS

### EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

EN 61010-1

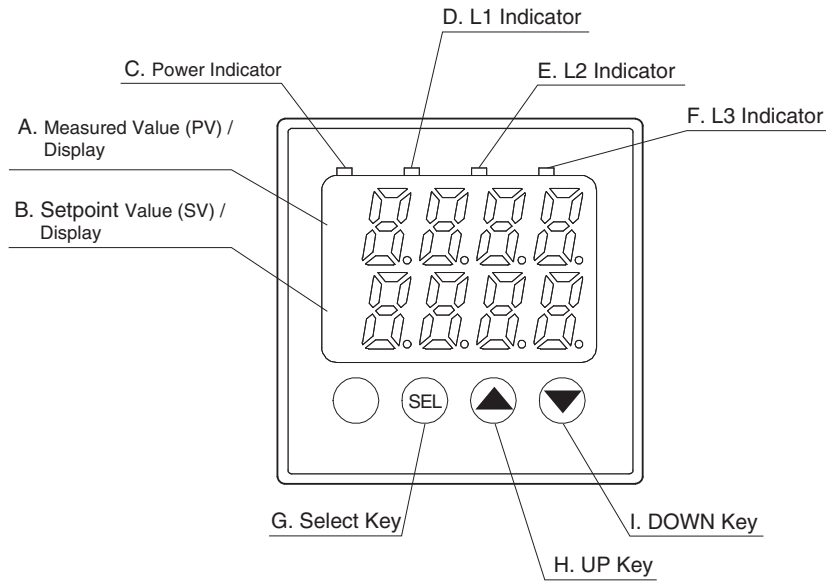
Installation Category II (power)

Pollution degree 2

Input or output to power: Reinforced insulation (300 V)

Input to output: Basic insulation (300 V)

## EXTERNAL VIEW

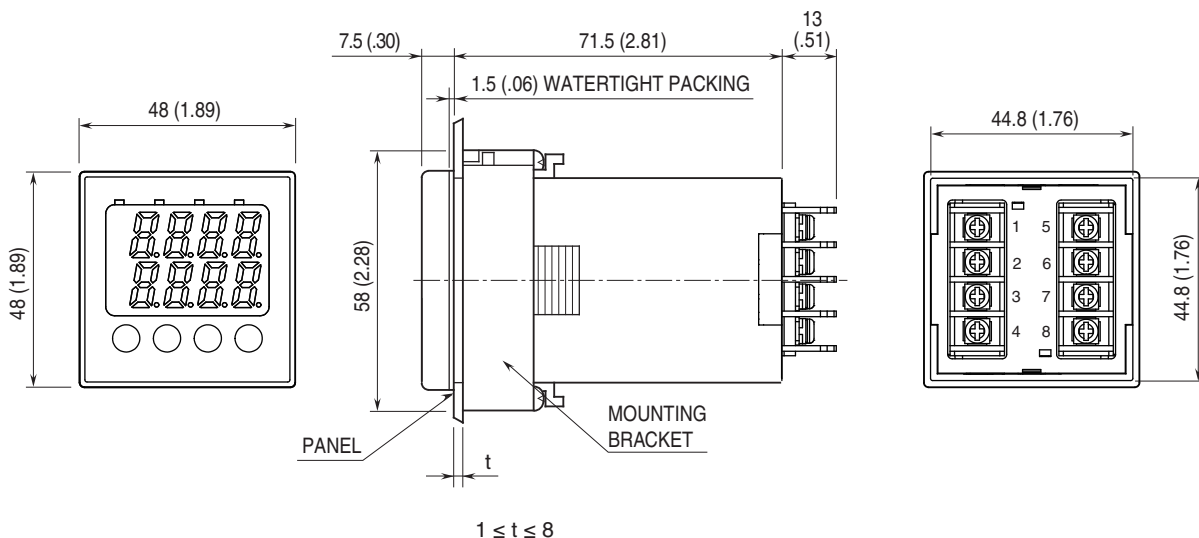


### COMPONENT IDENTIFICATION

No.	COMPONENT	FUNCTION
A	PV display	Red LED indicates the measured value (PV) or parameter types.
B	SV display	Green LED indicates the setpoint value (SV) or parameter values.
C	Power indicator	Green LED turns on while the power is supplied.
D	L1 indicator	Amber LED turns on when setting the parameter block 1.
E	L2 indicator	Amber LED turns on when setting the parameter block 2.
F	L3 indicator	Amber LED turns on when setting the parameter block 3.
G	Select key	Select key used to move between parameter block levels, and to choose and apply parameters.
H	UP key	UP key used to choose parameters and increase the reading value. *1
I	DOWN key	DOWN key used to choose parameters and decrease the reading value. *1

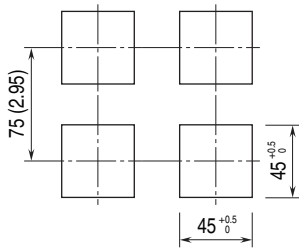
\*1. Holding down UP or DOWN key increases incrementing speed, except for controlling SV. In order to slow down, release the key once and then continue.

## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

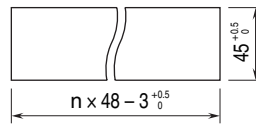


## PANEL CUTOUT unit: mm (inch)

- Single Mounting  
(Conform to degree of protection IP66)

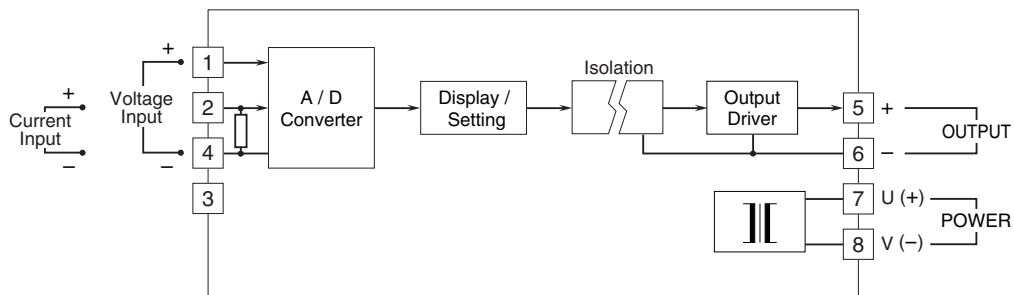


- Clustered Mounting  
(Not conform to degree of protection IP66)



n : number of the units  
Panel thickness : 1 to 8 mm

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.