

Final Control Elements

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

PARAMETER GENERATOR

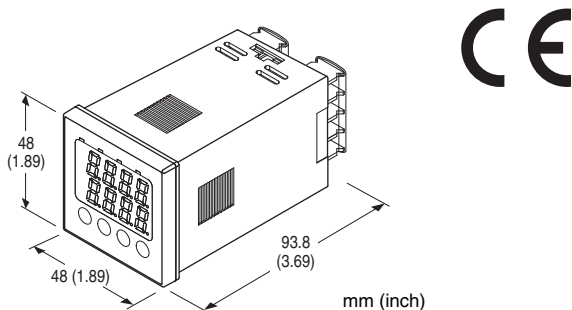
(with digital displays)

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 of [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 Ω)
/ 1 – 5 V DC (Input resistance $\geq$ 1M Ω)

OUTPUT

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

[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

[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; terminal access via screw terminals at the rear; terminal cover provided

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^{-1} , 10^{-2} , 10^{-3} 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

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: ≤ 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: ± 0.2 % ± 1 digit of the span

Temp. coefficient: ± 0.015 %/°C (± 0.008 %/°F)

Line voltage effect: Included in the display accuracy

■ OUTPUT SIGNAL

Setpoint accuracy: ± 0.2 % of the span

Temp. coefficient: ± 0.015 %/°C (± 0.008 %/°F)

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

Line voltage effect: Included in the setpoint accuracy

Insulation resistance: ≥ 100 M Ω 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

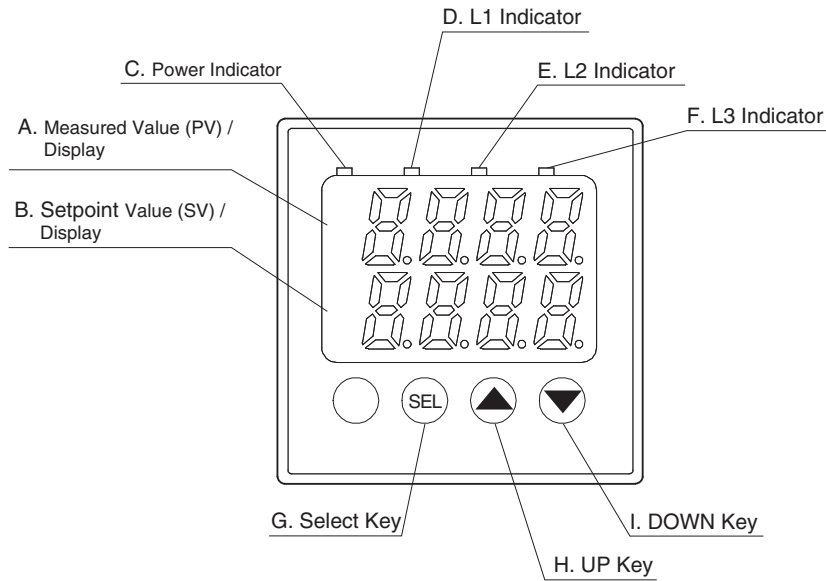
Installation Category II

Pollution Degree 2

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

Input to output: Basic insulation (300 V)

EXTERNAL VIEW

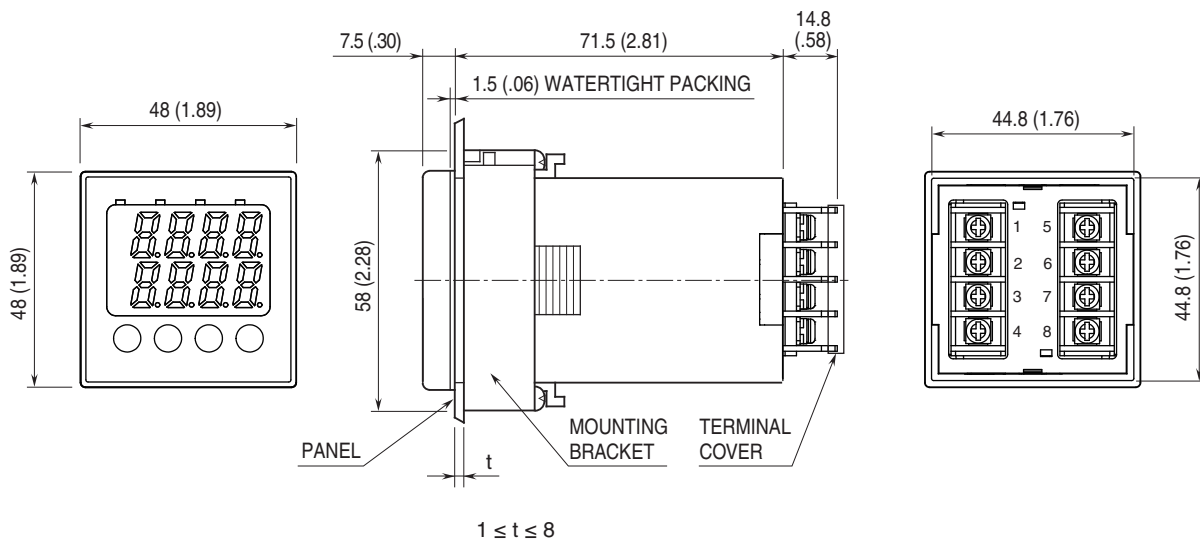


COMPONENT IDENTIFICATION

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

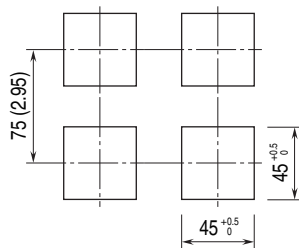
*1. Holding down UP or DOWN key increases incrementing speed, except for controlling SV. In order to slow down, release the key once and then continue.

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

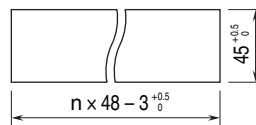


PANEL CUTOUT unit: mm (inch)

- Single Mounting
(Conform to degree of protection IP66)

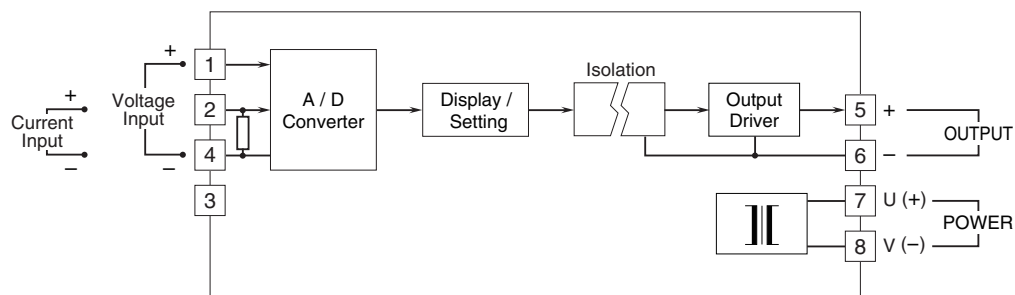


- Clustered Mounting
(Not conform to degree of protection IP66)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.