Final Control Elements

PARAMETER GENERATOR

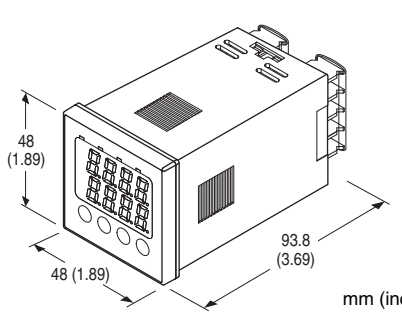
(with digital displays)

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 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 ≥ 1M Ω)

OUTPUT

M: 4 – 20 mA DC (Load resistance ≤ 550 Ω)
/ 1 – 5 V DC (Load resistance ≥ 250 kΩ)

[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 ±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; 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.

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

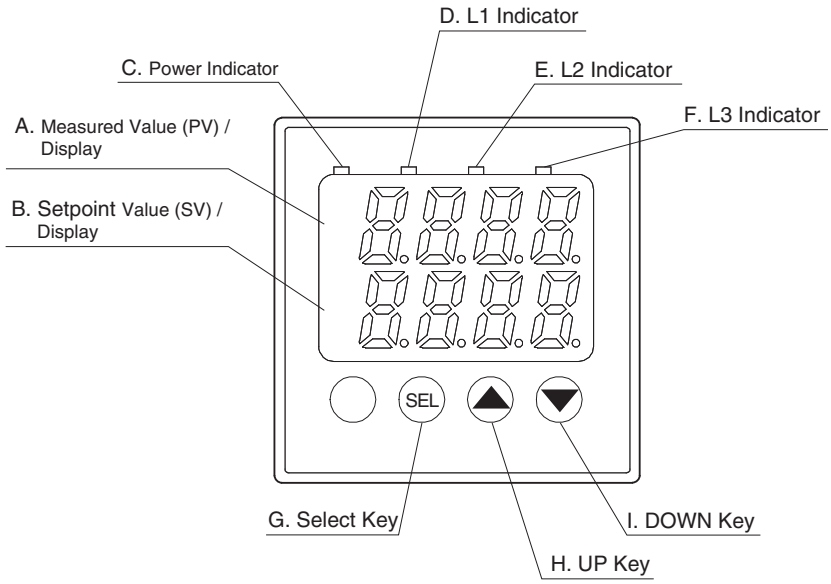
■ **PV DISPLAY**
Display accuracy: ±0.2 % ±1 digit of the span
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Line voltage effect: Included in the display accuracy
■ **OUTPUT SIGNAL**
Setpoint accuracy: ±0.2 % of the span
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Response time: Approx. 0.5 sec. (0 – 90 %)
Line voltage effect: Included in the setpoint accuracy

Insulation resistance: ≥ 100 MΩ 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)
RoHS Directive

EXTERNAL VIEW

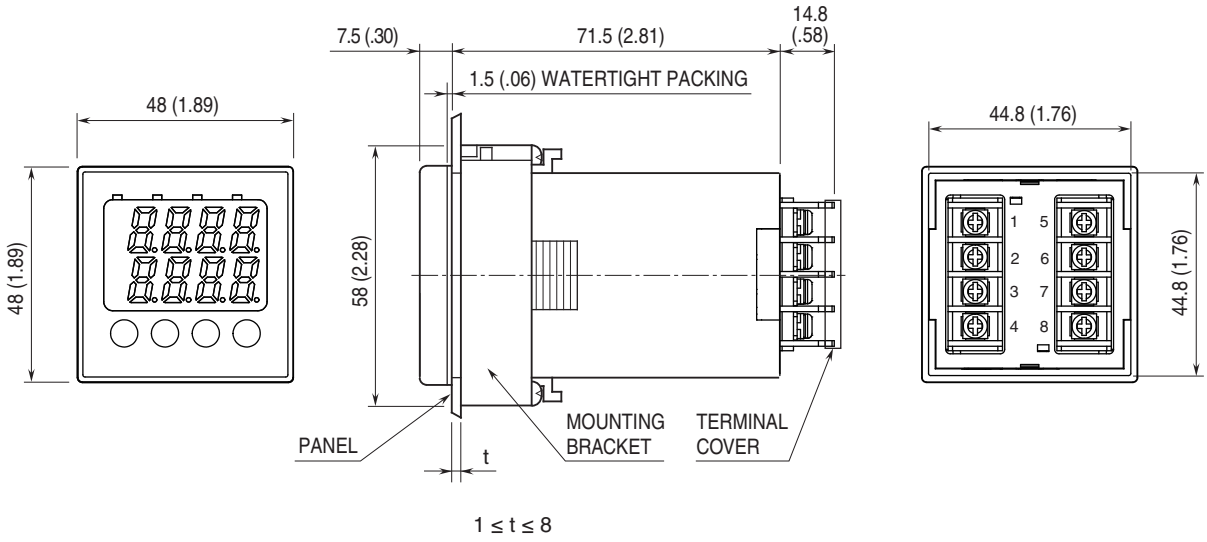


■ **COMPONENT IDENTIFICATION**

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.

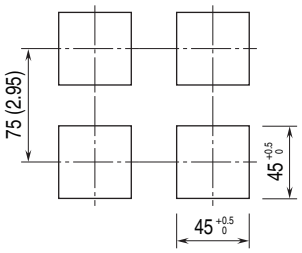
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



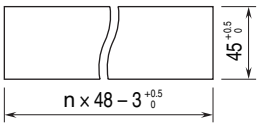
$1 \leq t \leq 8$

PANEL CUTOUT unit: mm (inch)

• Single Mounting
(Conform to degree of protection IP66)

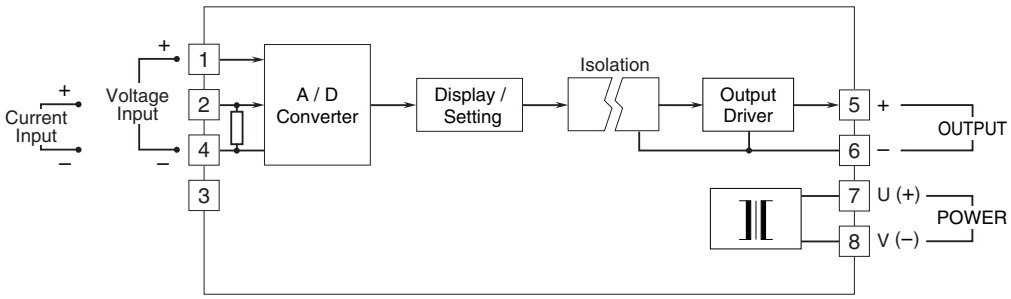


• Clustered Mounting
(Not conform to degree of protection IP66)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



⚠ Specifications are subject to change without notice.