

Plug-in Signal Conditioners M-UNIT

POTENTIOMETER TRANSMITTER

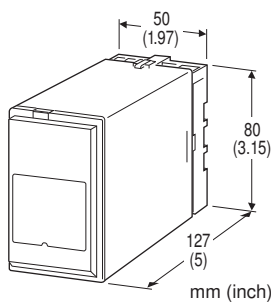
(CE, I/O non-isolated)

Functions & Features

- Providing a DC output proportional to a potentiometer or slidewire position input
- Constant voltage excitation allows use with pots with total resistances from 100 Ω - 10 k Ω without affecting accuracy
- 50 % zero/span adjustments with minimal interaction
- High-density mounting

Typical Applications

- Tank levels
- Positions



MODEL: PM-[1]-[2][3]

ORDERING INFORMATION

- Code number: PM-[1]-[2][3]
Specify a code from below for each [1] through [3].
(e.g. PM-A-B/CE/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01/S01)

INPUT POTENTIOMETER

Total resistance 100 Ω - 10 k Ω

[1] OUTPUT

Current

- A: 4 - 20 mA DC (Load resistance 750 Ω max.)
- B: 2 - 10 mA DC (Load resistance 1500 Ω max.)
- C: 1 - 5 mA DC (Load resistance 3000 Ω max.)
- D: 0 - 20 mA DC (Load resistance 750 Ω max.)
- E: 0 - 16 mA DC (Load resistance 900 Ω max.)
- F: 0 - 10 mA DC (Load resistance 1500 Ω max.)
- G: 0 - 1 mA DC (Load resistance 15 k Ω max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 - 10 mV DC (Load resistance 10 k Ω min.)
- 2: 0 - 100 mV DC (Load resistance 100 k Ω min.)
- 3: 0 - 1 V DC (Load resistance 3000 Ω min.)
- 4: 0 - 10 V DC (Load resistance 10 k Ω min.)
- 5: 0 - 5 V DC (Load resistance 5000 Ω min.)
- 6: 1 - 5 V DC (Load resistance 5000 Ω min.)
- 4W: -10 - +10 V DC (Load resistance 20 k Ω min.)
- 5W: -5 - +5 V DC (Load resistance 10 k Ω min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[2] POWER INPUT

AC Power

- B: 100 V AC
- C: 110 V AC
- D: 115 V AC
- F: 120 V AC
- G: 200 V AC
- H: 220 V AC
- J: 240 V AC

DC Power

- S: 12 V DC
- R: 24 V DC
- V: 48 V DC

[3] OPTIONS (multiple selections)

Standards & Approvals (must be specified)

/CE: CE marking

Other Options

blank: none

/Q: Option other than the above (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

TERMINAL SCREW MATERIAL

/S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals

Screw terminal: Chromated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: Input or output to power

Zero adjustment: 0 - 50 % of total resistance (front)

Span adjustment: 50 - 100 % of total resistance (front)



INPUT SPECIFICATIONS

Minimum span: 50 % of total resistance

Excitation: 0.5 V DC

OUTPUT SPECIFICATIONS

■ **DC Current:** 0 - 20 mA DC

Minimum span: 1 mA

Offset: Max. 1.5 times span

Load resistance: Output drive 15 V max.

■ **DC Voltage:** -10 - +12 V DC

Minimum span: 5 mV

Offset: Max. 1.5 times span

Load resistance: Output drive 1 mA max. at ≥ 3 V

INSTALLATION

Power input

• **AC:** Operational voltage range: rating ± 10 %, 50/60 ± 2 Hz, approx. 2 VA

• **DC:** Operational voltage range: rating ± 10 %, ripple 10 %p-p max., approx. 2 W (80 mA at 24 V)

Operating temperature: -5 to +60°C (23 to 140°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 300 g (0.66 lbs)

PERFORMANCE in percentage of span

Accuracy: ± 0.1 %

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

Response time: ≤ 0.5 sec. (0 - 90 %)

Line voltage effect: ± 0.1 % over voltage range

Insulation resistance: ≥ 100 M Ω with 500 V DC

Dielectric strength: 2300 V AC @1 minute
(input or output to power to ground)

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

EMS EN 61000-6-2: 2005

Low Voltage Directive (2006/95/EC)

EN 61010-1: 2001

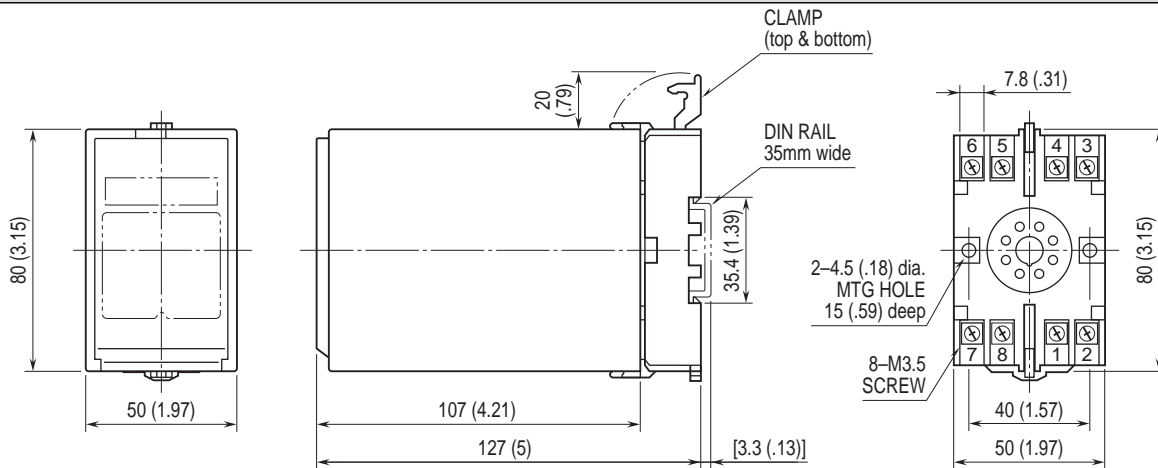
Installation Category II

Pollution Degree 2

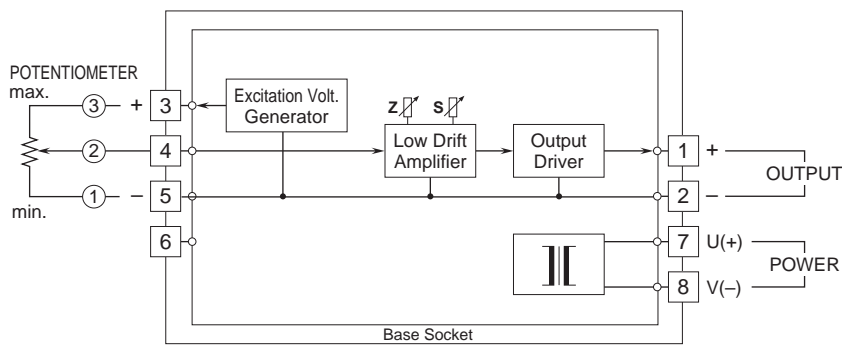
Input or output to power: Reinforced insulation (300 V)



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.