## Plug-in Signal Conditioners M-UNIT

## POTENTIOMETER TRANSMITTER

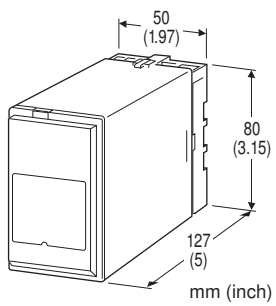
(CE, isolated)

Functions & Features

• Providing a DC output proportional to a potentiometer or slidewire position input
• Constant voltage excitation allows the connection of pots with total resistance from 100 Ω – 10 kΩ without affecting accuracy
• 50% zero/span adjustments with minimal interaction
• Fast response type available
• High-density mounting

Typical Applications

• Tank levels
• Positions




CE

## MODEL: PMS–[1]–[2][3]

## ORDERING INFORMATION

• Code number: PMS-[1]-[2][3]
Specify a code from below for each of [1] through [3].
(e.g. PMS-A-B/K/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 kΩ

## [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 kΩ max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)

**Voltage**

1: 0 – 10 mV DC (Load resistance 10 kΩ min.)
2: 0 – 100 mV DC (Load resistance 100 kΩ min.)
3: 0 – 1 V DC (Load resistance 3000 Ω min.)
4: 0 – 10 V DC (Load resistance 10 kΩ 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 kΩ min.)
5W: -5 – +5 V DC (Load resistance 10 kΩ 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)

**Response Time (0 – 90 %)**

blank: Standard (≤ 0.5 sec.)
/K: Fast Response (Approx. 25 msec.)

**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 to output to power EN 50581
**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 lb)

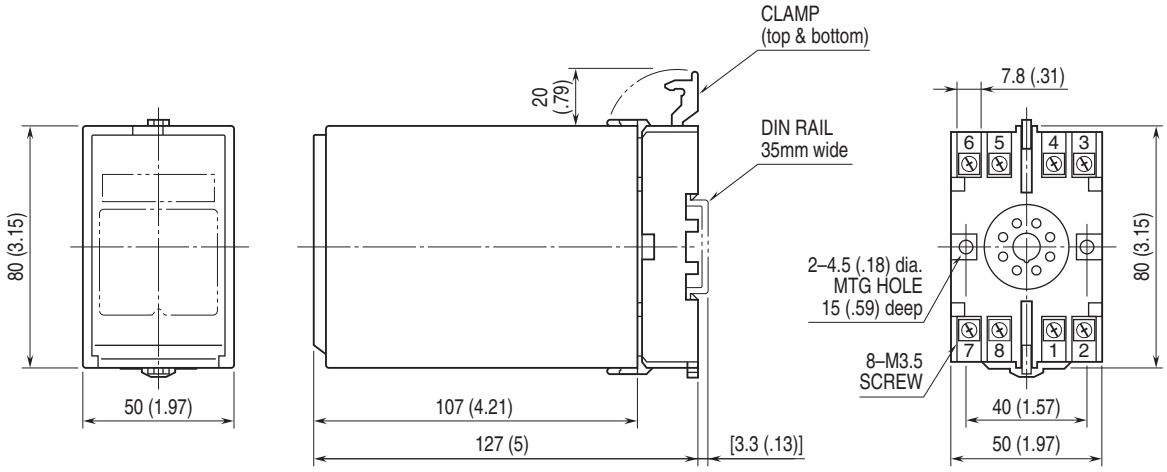
## PERFORMANCE in percentage of span

**Accuracy**: ±0.1 %
**Temp. coefficient**: ±0.015 %/°C (±0.008 %/°F)
**Line voltage effect**: ±0.1 % over voltage range
**Insulation resistance**: ≥ 100 MΩ with 500 V DC
**Dielectric strength**:
1350 V AC @1 minute (input to output)
2300 V AC @1 minute (input or output to power to ground)

## STANDARDS & APPROVALS

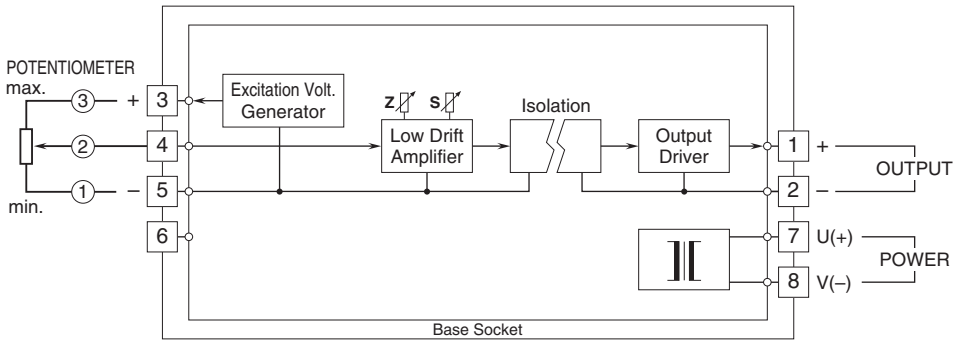
**EU conformity**:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
Low Voltage Directive
EN 61010-1
Installation Category II
Pollution Degree 2
Input or output to power: Reinforced insulation (300 V)
Input to output: Basic insulation (300 V)
RoHS Directive

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




• When mounting, no extra space is needed between units.

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM




⚠ Specifications are subject to change without notice.