

Space-saving Plug-in Signal Conditioners F-UNIT

POTENTIOMETER TRANSMITTER

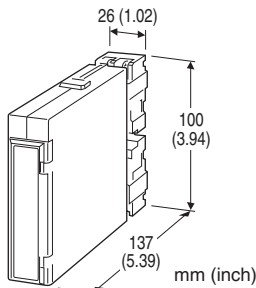
(isolated)

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
- Fast response type available
- High-density mounting

Typical Applications

- Tank levels
- Positions



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

ORDERING INFORMATION

- Code number: FMS-[1]-[2][3]
- Specify a code from below for each [1] through [3] (e.g. FMS-A-K/K)
- Special output range (For codes Z & 0)

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 1000 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 10 k Ω min.)
- 5W: -5 - +5 V DC (Load resistance 5000 Ω min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[2] POWER INPUT

AC Power

K: 85 - 132 V AC

(Operational voltage range 85 - 132 V, 47 - 66 Hz)

L: 170 - 264 V AC

(Operational voltage range 170 - 264 V, 47 - 66 Hz)

DC Power

R: 24 V DC

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

P: 110 V DC

(Operational voltage range 85 - 150 V, ripple 10 %p-p max.)

[3] OPTIONS

Response Time (0 - 90 %)

blank: Standard (\leq 0.5 sec.)

/K: Fast Response (Approx. 25 msec.)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

Isolation: Input to 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 \geq 0.5 V



INSTALLATION

Power input

- AC: Approx. 4.5 VA
- DC: 24 V approx. 70 mA
- 110 V approx. 20 mA

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

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

Mounting: Surface or DIN rail; Standard Rack Mounting

Frame BX-16H available

Weight: 200 g (0.44 lbs)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$

Temp. coefficient: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

Line voltage effect: $\pm 0.1\%$ over voltage range

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

Dielectric strength

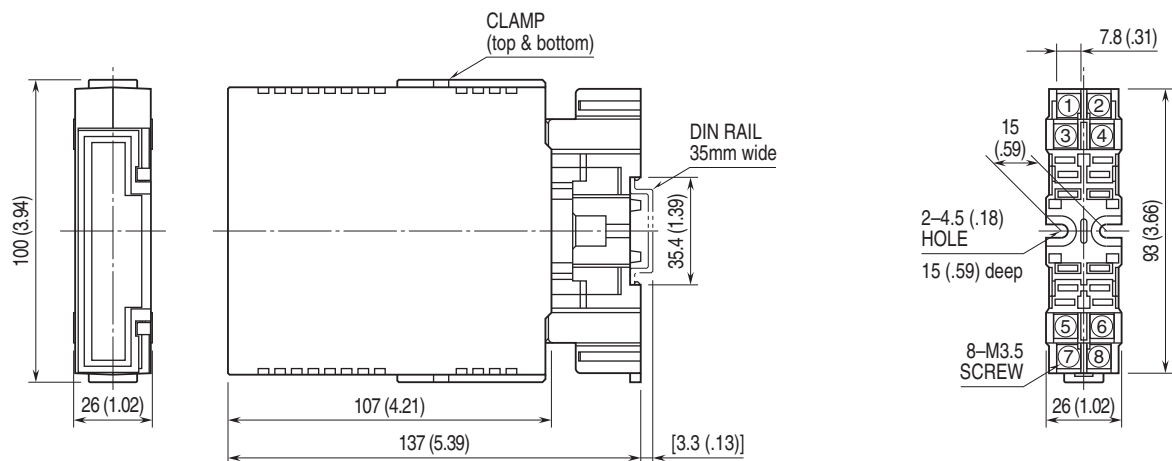
Power input code R:

- 1000 V AC @ 1 minute (input to output)
- 2000 V AC @ 1 minute (input or output or power to ground)
- 500 V AC @ 1 minute (I/O to power)

Power input code K, L, P:

- 1000 V AC @ 1 minute (input to output)
- 2000 V AC @ 1 minute (input or output or power to ground)
- 1500 V AC @ 1 minute (I/O to power)

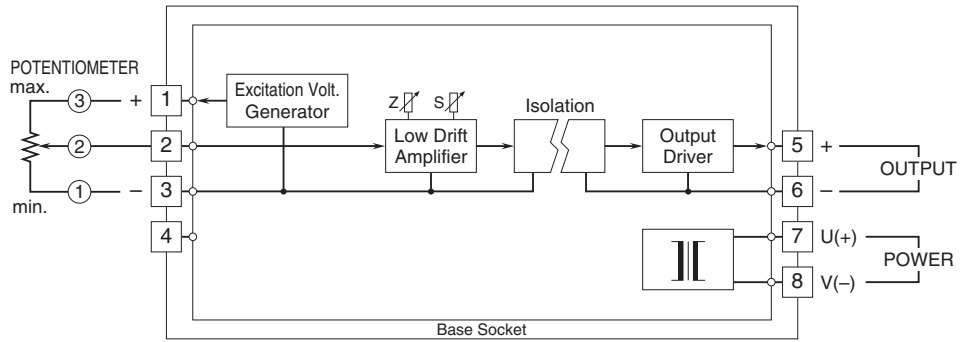
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.

