Field-mounted Two-wire Signal Conditioners *6-UNIT*

POTENTIOMETER TRANSMITTER

MODEL **6M**

MODEL & SUFFIX CODE SELECTION

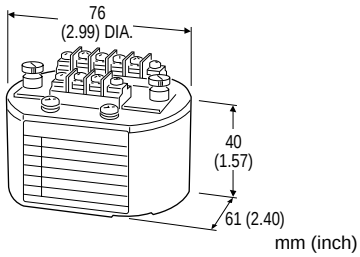
6M

MODEL

INPUT POTENTIOMETER
Total resistance 100Ω – 20kΩ

OUTPUT
4 – 20mA DC

SUPPLY VOLTAGE
13 – 28V DC



Functions & Features

• Providing a 4 – 20mA DC signal proportional to a potentiometer or slidewire position input • Constant voltage excitation allows use with pots with total resistances from 100Ω – 20kΩ without affecting accuracy • Minimal interaction between zero and span adjustments • Rugged enclosure

Typical Applications

• Tank levels • Positions

ORDERING INFORMATION

Specify code number. (e.g. 6M)

GENERAL SPECIFICATIONS

Connection: M3 screw terminals
(nickel-plated steel; torque ≤0.6 N·m)

Housing material: die cast aluminium

Adjustments: 3-turn screwdrivers behind the access cover

135Ω or above: 0 – 10% for zero; 50 – 100% for span

Below 135Ω: 0 – 10% for zero; 70 – 100% for span

Output limit: approx. 120%

INPUT & OUTPUT

■**INPUT**: potentiometer; 100Ω – 20kΩ

Minimum span: 50% of total resistance (≥135Ω); 70% of total resistance (<135Ω)

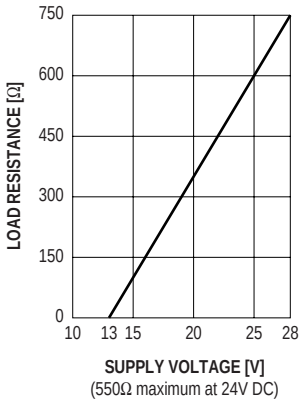
Excitation: 0.5V DC

■**OUTPUT**: 4 – 20mA DC

Load resistance vs. supply voltage:

$$\text{Load Resistance } (\Omega) = \frac{\text{Supply Voltage (V)} - 13\text{ (V)}}{0.02\text{ (A)}}$$

(including leadwire resistance)



INSTALLATION

Supply voltage: 13 – 28V DC
Operating temperature: -5 to +70°C (23 to 158°F)
Operating humidity: 30 to 90% RH (non-condensing)
Mounting: DIN rail with mounting plate A-31;
surface mounting with adapter plate A-01;
spring clip A-02 for 3-inch hub
Dimensions: W76×H52.5×D61 mm (2.99"×2.07"×2.40")
See General Spec. Sheet Figure A-1.
Weight: 220 g (0.49 lbs)
Terminal assignment: See General Spec. Sheet Figure B-1.

PERFORMANCE in percentage of span

Accuracy: ±0.2%
Linearity (En %) is added to the above
for potentiometer 2kΩ – 20kΩ.
En = 0.07R % where
R = potentiometer total resistance (kΩ)
Temp. coefficient: ±0.015%/°C (±0.008%/°F)
Response time: ≤0.5 seconds (0 – 90%)

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM