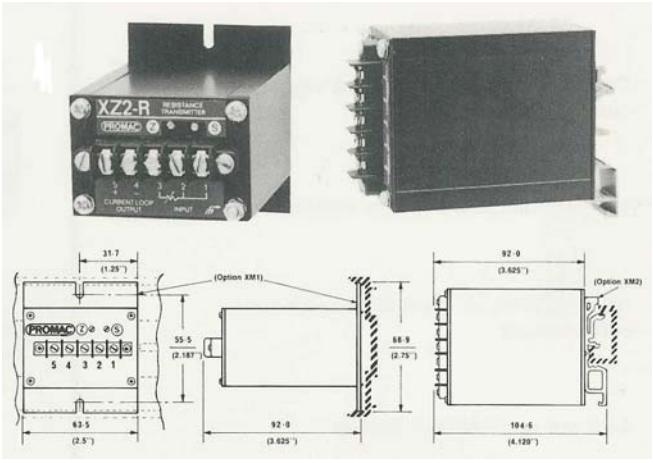
XZ2-R

RESISTANCE TRANSMITTER

A fully isolated loop powered unit designed to convert potentiometer or variable resistance inputs to current signals

- **Wide range of input resistance**
- **2 wire loop powered**
- **3-wire potentiometer/slidewire input**
- **4-20mA or 10-50mA output**
- **Constant-voltage excitation**
- **Input-output isolation (500Vrms)**
- **High accuracy**
- **High common mode rejection**



The XZ2-R wire resistance to current transmitter is designed using highly stable state of the art electronics to accept varying resistance inputs and to accurately convert to a proportional current output. Applications include measuring changing resistance from rotary or linear slidewire potentiometers.

The 12-60Vdc power needed to operate the XZ2-R 2-wire transmitter is obtained from the output current loop and is supplied from the load source, or a separate DC power supply source. The recommended output wiring is standard twisted or shielded copper wires.

All XZ2-R transmitters undergo stringent factory tests to ensure their correct specifications. Circuit boards are conformally coated and enclosed in a rugged compact aluminum housing, which can be surface, track or DIN 'G' rail mounted for location in controlled environments. Industrial or explosion proof enclosures are also available for harsh or restricted environments.

INPUT

Potentiometer or slidewire 0-100 ohms through 0-10,000 ohms range
Span Adjustment: 10-100% of range
Zero Adjustment: 0-90% of range
Impedance: 10M ohm min.
Bias Current: 25 nanoAmps max.
Excitation Voltage: 40-80mV

OUTPUT

Range: 4-20mA standard
(10-50mA optional)
Load Resistance (R_L)

$$R_L = \frac{\text{Supply Voltage} - 12V}{20mA\ (50mA)}$$

Current Limit:
34mA for input overrange
(85mA for 10-50mA)

PERFORMANCE

Accuracy: (Linearity & Repeatability)
±0.1% of span
Temperature Effect: (-20°C to 70°C)
0.012% of span/°C
Operating Temperature: - 40°C to 85°C
Response Time: 0.5 sec. for 98% change
Common Mode Rejection:
Better than 120dB at 60Hz

POWER

Range: 12 – 60Vdc (max. dissipation 1.2W)
Supply Voltage Effect:
0.002% of span/volt

ISOLATION

Input/Output: Transformer isolated to 500Vrms (tested to 1KVrms)

CLASSIFICATION

(General purpose)
Designed for non-incendive use in Class 1, Div. 2 Groups A, B, C, D and suitable for use in Class II, Div. 2 Group G and Class III, Divs. 1 & 2 Hazardous Areas

ELECTRICAL OPTIONS (applicable)

ZJ Reversed Output
ZO 10-50mA Output

MOUNTING BRACKET OPTIONS

XM1 Standard surface/Snap-in track
XM2 DIN 'G' rail
XM4 Explosion proof

ORDER INFORMATION

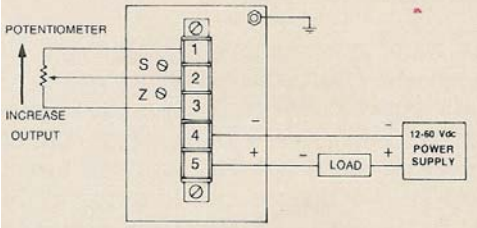
Please specify the following:

1. Model Number XZ2-R
2. Input range
3. Output range
4. Z options
5. X options

Model No. Examples:

XZ2-R/0-1K/4-20/XM1
XZ2-R/1-5K/10-50/ZJ/XM2
XZ2-R/1-10K/20-4/XM4

Typical Application Wiring Diagram



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Specifications are subject to change without notice.

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