



# XZ2-F

## FREQUENCY TO ANALOG CURRENT TRANSMITTER

A unit to convert frequency signals to standard current transmission signals with universal application flexibility

- High accuracy, stability & resolution
- 2 wire DC loop powered
- Wide range of input frequencies and waveforms (field selectable by DIP switches)
- 4-20mA or 10-50mA output
- Optional dry contact input
- Optional input/output isolation
- Reverse polarity protected

The XZ2-F is an accurate 2 wire transmitter that produces an output current proportional to the frequency of the input signal.

The input conditioning circuitry can accommodate any periodic signal with amplitudes between 10mV and 100V peak, and has an adjustable threshold level for high noise immunity. Any frequency range from 5Hz to 20KHz can be selected via internal DIP switches. Input options include dry contact, and input/output isolation. The standard output range is 4-20mA with an optional 10-50mA range.

The 12-60Vdc needed to operate any XZ2 series 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-F 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

Periodic signals of any wave shape.

Isolated model not to be used below 30Hz

**Span:** Select any span from 5Hz to 20KHz (80Hz to 20KHz isolated model) dipswitch and potentiometer adjustment

#### Frequency Spans

**Non Isolated:** 0 to 5Hz through 20KHz

**Isolated:** 0 to 80Hz through 20KHz

**Zero:** Adjustable from zero to + 10% of span

Isolated model not to be used below 30Hz

**Sensitivity:** Minimum/Maximum signal:

10mV/100V peak non-isolated

60mV/30V peak isolated above 50Hz

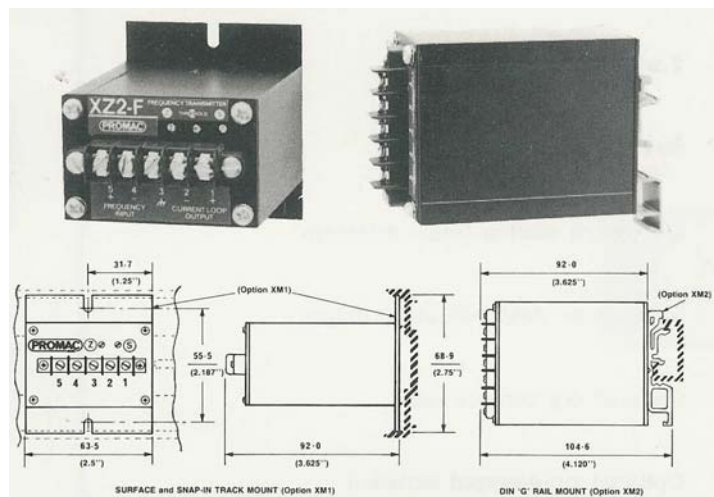
**Threshold:** Externally adjustable from 0 to 2.5V

**Impedance:**

1M ohm for signals from 10mV to 500mV peak

10K ohms for signals from 0.5V to 100V peak

minimum 1K ohm for isolated version



### OUTPUT

**Range:** 4-20mA standard

(10-50mA optional)

**Load Resistance ( $R_L$ )**

Supply Voltage – 12V

$R_L = 20mA (50mA)$

**Current Limit:**

34mA for input overrange (4-20mA)

(85mA for 10-50mA)

### PERFORMANCE

**Accuracy:** (Linearity & Repeatability)

$\pm 0.1\%$  of span

**Temperature Effect:** (-25°C to 85°C)

0.015% of span/°C

**Operating Temperature:** -40°C to 85°C

**Response Time:** For a slowly changing frequency, output is updated once per cycle. For a step change in frequency, response time is less than 100 cycles.

**Ripple:** Less than 0.1% of span

### POWER

**Range:** 12 – 60Vdc (max. dissipation 1.2W)

**Supply Voltage Effect:** 0.002% of span/volt

### 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)

ZO 10-50mA Output

ZH Input/Output transformer isolation

to 500Vrms

ZI Dry contact Input (Not available

with option ZH)

### 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-F
2. Input frequency range
3. Output range
4. Threshold Voltage (if known)
5. Z options
6. X options

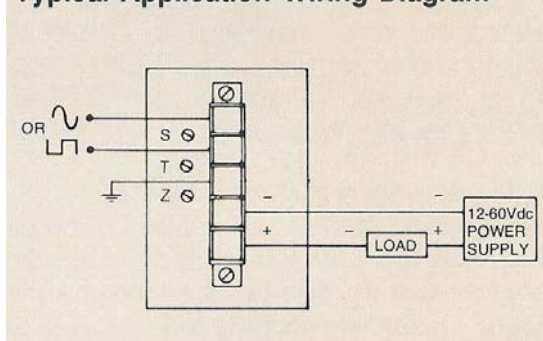
**Model No. Examples:**

XZ2-F/0.2-8KHz/4-20/2/ZH/XM1

XZ2-F/1-60Hz/10-50/5/XM2

XZ2-F/0-5KHz/4-20/1/Z1/XM1

### Typical Application Wiring Diagram



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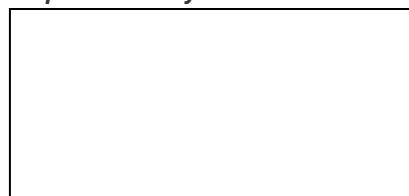
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### Represented By:



Specifications are subject to change without notice.

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