

XZ15 Series DIN Four-Wire Transmitter



Model XZ15 Input Options

Model XZ15 four-wire transmitters can accept the following input types:

- Thermocouple
- DC Current/Voltage
- AC Current/Voltage
- RTD
- Resistance
- Slidewire

mTech's DIN-Style Model XZ15 four-wire transmitter accepts all standard process inputs from field transmitters and transducers. Model XZ15 offers the following state-of-the-art four-wire signal conditioning features and options.

- **Easy-Access Zero and Span Settings.**

Potentiometer settings are located on the front panel to allow for easy set up, calibration and adjustment.

- **Input/Output Power Isolation and RFI/EMI Protection.**

Optional RFI / EMI protection and built-in input / output isolation maintain a high level of accuracy in noisy environments.

- **High Density Installations.**

Designed to save space, the housing clips quickly and easily onto a standard DIN rail and allows high density installations.

- **Input Linearization Option.**

Linearized 100 Ω Platinum RTDs.

Model XZ15-T Transmitter Specifications

Inputs

Thermocouple types:	All Thermocouple Types
Span:	2.6 mV to 80 mV ($\pm 10\%$ adjustable, factory configured)
Zero:	-14 mV to +20 mV ($\pm 10\%$ adjustable, factory configured)
Linearization:	Midpoint adjustable (factory configured)

Output

Standard:	4 – 20 mA
Optional:	10 – 50 mA, -1 to 1 mA, -10 to 10 Vdc, 0 to 5 Vdc, 0 to 10 Vdc

Performance

Accuracy:	$\pm 0.1\%$ of span @ zero, mid, and full-scale $\pm 0.25\%$ of span for spans < 5 mV $0.01\%/^{\circ}\text{C}$ of span + $1 \mu\text{V}/^{\circ}\text{C}$
Temperature Effect: (0°C to 70°C) (-20°C to 0°C)	$0.015\%/^{\circ}\text{C}$ of span + $1 \mu\text{V}/^{\circ}\text{C}$
Cold Junction Error:	0.03°C per $^{\circ}\text{C}$
Operating Temperature:	-20°C to 70°C
Response Time:	1 second for 98% change
CMRR:	Better than 120 dB (60 Hz)
RFI Protection (option):	Shielded case with all input & output connections de-coupled to ground

T/C Burnout Detection

Direction:	Upscale (standard) Downscale (optional, field changeable)
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Power Supply

Power Supply:	120 Vac $\pm 10\%$, 60 Hz 240 Vac $\pm 10\%$, 50 Hz (optional)
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Isolation

Isolation:	Input/Output isolated to 500 Vrms (tested to 1.2K Vrms)
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Classification

Classification:	General Purpose CSA approval pending
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Dimensions

Size:	WxHxL = 1.87"W x 3.15"H x 5.41"L (47.55mm x 80mm x 137.5mm)
Weight:	14 ounces (400 grams)

Model XZ15-D Transmitter Specifications

Inputs

Span:	2.6 mV to 150 V or 1 mA to 5 A ($\pm 10\%$ adjustable, factory configured)
Zero:	-10 V to +150 V or -1 mA to 5 A (10% adjustable, factory configured)
Burden Voltage: (current input)	200 mV maximum
Input Impedance: (voltage input)	100K Ω /volt, 10M Ω maximum

Model XZ15-D Transmitter Specifications

(continued)

Output

Standard:	4 – 20 mA
Optional:	10 – 50 mA, -1 to 1 mA, -10 to 10 Vdc, 0 to 5 Vdc, 0 to 10 Vdc

Performance

Accuracy:	(Linearity & Repeatability) $\pm 0.1\%$ of span $\pm 0.25\%$ of span for span < 5 mV $0.01\%/^{\circ}\text{C}$ of span + $1 \mu\text{V}/^{\circ}\text{C}$
Temperature Effect: (0°C to 70°C) (-20°C to 0°C)	$0.015\%/^{\circ}\text{C}$ of span + $1 \mu\text{V}/^{\circ}\text{C}$
Operating Temperature:	-20°C to 70°C
Response Time:	1 second for 98% change
CMRR:	Better than 120 dB (60Hz)
RFI Protection (option):	Shielded case with all input & output connections de-coupled to ground
Loop Power Supply:	24 Vdc Transmitter power supply

Power Supply

Power Supply:	120 Vac $\pm 10\%$, 60 Hz 240 Vac $\pm 10\%$, 50 Hz (optional)
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Isolation

Isolation:	Input/output isolated to 500 Vrms (tested to 1.2K Vrms)
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Classification

Classification:	General Purpose CSA approval pending
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Dimensions

Size:	WxHxL = 1.87"W x 3.15"H x 5.41"L (47.55mm x 80mm x 137.5mm)
Weight:	14 ounces (400 grams)

Model XZ15-A Transmitter Specifications

Inputs

Frequency Range:	50 – 400 Hz
Span:	100 mV to 250 V sine wave only or 20 mA to 5 A ($\pm 10\%$ adjustable, factory configured)
Zero:	-10 V to +150 V or -1 mA to 5 A ($\pm 10\%$ adjustable, factory configured)
Burden Voltage: (current input)	200 mV maximum
Input Impedance: (voltage input)	100K Ω /volt, 10M Ω maximum

Output

Standard:	4 – 20 mA
Optional:	10 – 50 mA, -1 to 1 mA, -10 to 10 Vdc, 0 to 5 Vdc, 0 to 10 Vdc

Performance

Accuracy:	(Linearity & Responsibility) $\pm 0.25\%$ of span
Temperature Effect:	$0.02\%/^{\circ}\text{C}$ of span

Model XZ15-A Transmitter Specifications

(continued)

Performance (continued)

Operating Temperature: -20°C to 70°C
 Response Time: 2 seconds for 98% change
 CMRR: Better than 120 dB (60 Hz)
 RFI Protection (option): Shielded case with all input & output connections de-coupled to ground

Power Supply

Power Supply: 120 Vac \pm 10%, 60 Hz
 240 Vac \pm 10%, 50 Hz (optional)

Isolation

Isolation: Input/output isolated to 500 Vrms (tested to 1.2K Vrms)

Classification

Classification: General Purpose CSA approval pending

Dimensions

Size: WxHxL = 1.87"W x 3.15"H x 5.41"L
 (47.55mm x 80mm x 137.5mm)
 Weight: 14 ounces (400 grams)

Model XZ15-V Transmitter Specifications
Inputs

RTD: 3-Wire Resistance Bulb Sensor
Pt100, Ni120, Cu10
 Span and Zero: 5 - 500
 (\pm 10% adjustable, factory configured)
 Minimum span (5)
Pt100 - 26°C
Ni120 - 18°C
Cu10 - 260°C
 Excitation Current: Constant current of 1 mA nominal
 (1.3 mA maximum)
 Linearization: \pm 0.2% of span (*Pt100* only)
 (optional)

Output

Standard: 4 - 20 mA
 Optional: 10 - 50 mA, -10 to 10 Vdc,
 0 to 5 Vdc, 0 to 10 Vdc

Performance

Accuracy: (Linearity & Responsibility)
 \pm 0.1% of span
 Temperature Effect: \pm (0.01%/°C of span + 1M /°C)
 Operating Temperature: -20°C to 70°C
 Storage Temperature: -40°C to 100°C
 Response Time: 1 second for 98% change
 CMRR: Better than 120 dB (60 Hz)
 RFI Protection (option): Shielded case with all input & output connections de-coupled to ground

Power Supply

Power Supply: 120 Vac \pm 10%, 60 Hz
 240 Vac \pm 10%, 50 Hz (optional)

Model XZ15-V Transmitter Specifications

(continued)

Isolation

Isolation: Input/output isolated to 500 Vrms (tested to 1.2K Vrms)

Classification

Classification: General Purpose CSA approval pending

Dimensions

Size: WxHxL = 1.87"W x 3.15"H x 5.41"L
 (47.55mm x 80mm x 137.5mm)
 Weight: 14 ounces (400 grams)

Model XZ15-R Transmitter Specifications
Inputs

Resistance: 3-Wire Resistance Potentiometer or
 Slidewire 0-100 through 0-10K
 Span: 10 - 100% of range
 Zero: 0 - 90% of range
 Impedance: 10M
 Excitation Voltage: 80 - 700 mV
 Bias Current: 0.7 mAmps maximum

Output

Standard: 4 - 20 mA
 Optional: 10 - 50 mA, -10 to 10 Vdc,
 0 to 5 Vdc, 0 to 10 Vdc

Performance

Accuracy: (Linearity & Repeatability)
 \pm 0.1% of span
 Temperature Effect: \pm 0.012%/°C of span
 Operating Temperature: -20°C to 70°C
 Storage Temperature: -40°C to 100°C
 Response Time: .5 seconds for 98% change
 CMRR: Better than 120 dB (60 Hz)
 RFI Protection (option): Shielded case with all input & output connections de-coupled to ground

Power Supply

Power Supply: 120 Vac \pm 10%, 60 Hz
 240 Vac \pm 10%, 50 Hz (optional)

Isolation

Isolation: Input/output isolated to 500 Vrms (tested to 1.2K Vrms)

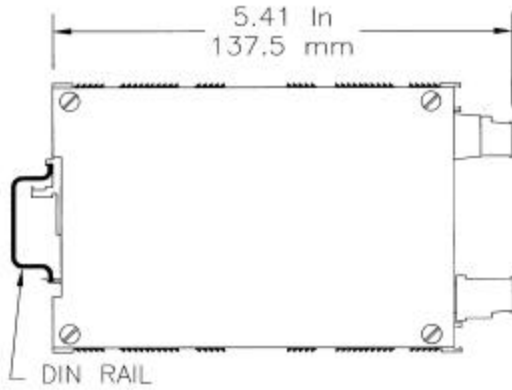
Classification

Classification: General Purpose CSA approval pending

Dimensions

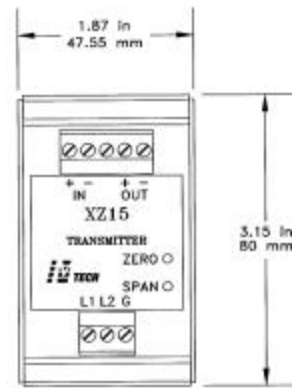
Size: WxHxL = 1.87"W x 3.15"H x 5.41"L
 (47.55mm x 80mm x 137.5mm)
 Weight: 14 ounces (400 grams)

Side View



(supports both 35mm and G DIN rail mounting)

Front View



Ordering Information

When ordering, specify the following:

XZ15- _____ - _____ - _____ - _____
input output option 1 option 2

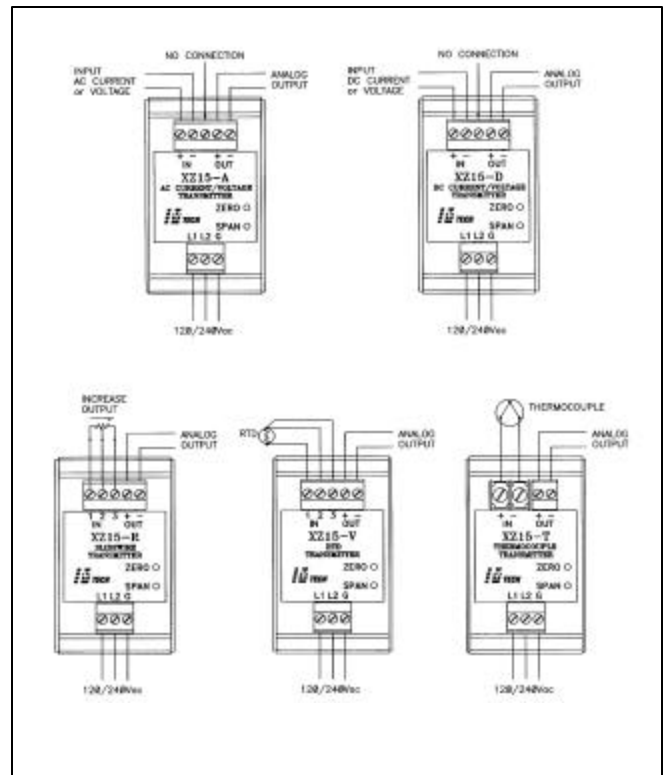
- Model: T = Thermocouple
(specify type: J, K, E, R, S, T, or N;
optional downscale burnout, -ZB option)
D = DC current or voltage
(specify zero and span)
A = AC current or voltage
(specify zero and span)
V = RTD (specify type: Pt100, Ni120, or Cu10)
R = Resistance (specify span and zero,
0 through 10K)

Output: 4 – 20 mA (standard),
10 - 50 mA, -10 to 10 Vdc
0 - 5 Vdc, 0 to 10 Vdc, or
-1 to 1 mA (not available on XZ15V or R)

Options:

- RFI Protection: -ZR
Downscale Burnout: -ZB (XZ15-T only)
Pt100 linearization -ZL (XZ15-V only)

Wiring Diagrams



Represented By:



Specifications are subject to change without notice.
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