

## RTD Transmitters - Field Configuration Options - High Density DIN Rail Packaging

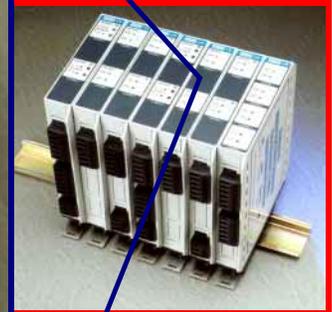
### X54-3202 2-Wire (output loop powered) Dual Channel Universal RTD Transmitter

- ◆ High Density Dual Channel Packaging
- ◆ Field Configurable Options Including:
  - four (4) RTD types, seven (7) standard input spans with selectable zero offsets (for non-linearized ranges only)
- ◆ Max. Loop Load = 700 ohms at 24 vdc Loop Power
- ◆ Full Input/Output/Power and Channel Isolation
- ◆ Front Access to Zero and Span Adjustments
- ◆ Standard 35 mm DIN Rail Mounting

**DESCRIPTION:** The X54-3202 is a dual channel RTD transmitter powered by the output 4-20 mA current loop. Features include: two piece plug-in connectors for easy wiring and maintenance; field configurable ranges and RTD types; optional linearized outputs; full 1000 vac isolation; and front panel access to ZERO and SPAN adjustments. RFI protection, wide operating temperature, and high accuracy are standard features. Custom inputs, outputs, scaling and linearization are available from the factory.



A Family of Products!!!



Transmitters  
Alarm Trips  
I/I Isolators

#### SPECIFICATIONS:

##### Input:

RTD sensor types: 100 ohm platinum, 120 ohm nickel, 10 ohm copper.  
(linearized outputs available for Platinum or Nickel only)

##### Input Impedance:

> 100 K ohms.

**Outputs:** 4-20 mA into 700 ohms with 24 vdc loop power  
i.e.: Max. Rload = (Vloop supply - 10 vdc) / 20 mA

##### Span Adjustment:

Front-accessible, multi-turn, infinite resolution potentiometer permits minimum +/- 5% adjustment.

##### Zero Adjustment:

Front-accessible, multi-turn, infinite resolution potentiometer permits minimum +/- 5% adjustment

##### Calibrated Accuracy:

+/- 0.1% of span (linearization errors additional on large span applications, consult factory)

##### Isolation:

1,000 vac between channels, input and output.  
Input and output circuits isolated by transformers.

##### Common Mode Rejection:

> 120 dB, DC at 60 Hz.

##### Common Mode Voltage:

1000 volts peak AC maximum without damage.

##### Ambient Temperature Coefficient:

Ambient temperature range: 32 to 158°F (0 to 70°C).

Gain: < +/- 0.01 % /°F.

Zero: < +/- 0.01 % /°F.

##### Ambient Temperature Range:

Operating: -20 to 158°F (-25 to 70°C).

Storage: -40 to 158°F (-40 to 70°C).

##### Power Supply Range:

10 to 40 vdc (max. allowable at X54)  
(reverse polarity protected)

##### Radio Frequency Effects:

< 0.4 mV (referred to input) + 0.2% of span (referred to output) when exposed to 5W transmitter with frequency range 20-460 MHz at a distance of 1 m.

##### Calibration:

Typically, factory calibrated to customer specified ranges.  
Customer configurable for non-linearized applications.

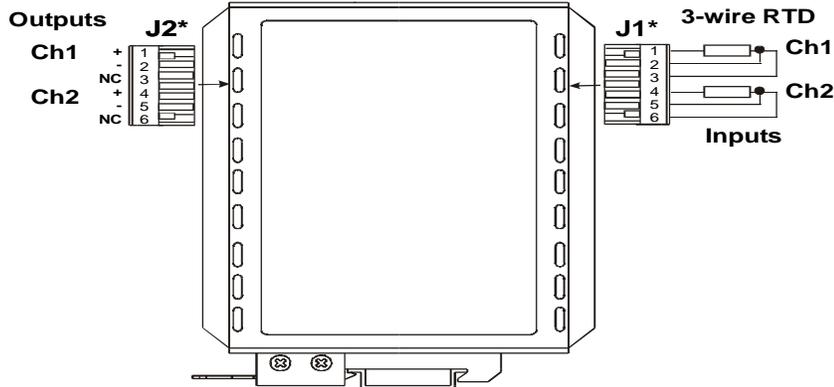
##### Terminals:

High temperature polyester type, wire size 12 AWG max., 10 A max., 300 V max.

*Specifications apply at 23 +/- 2°C (74 +/- 2°F) unless otherwise specified, and are subject to change without notice,*

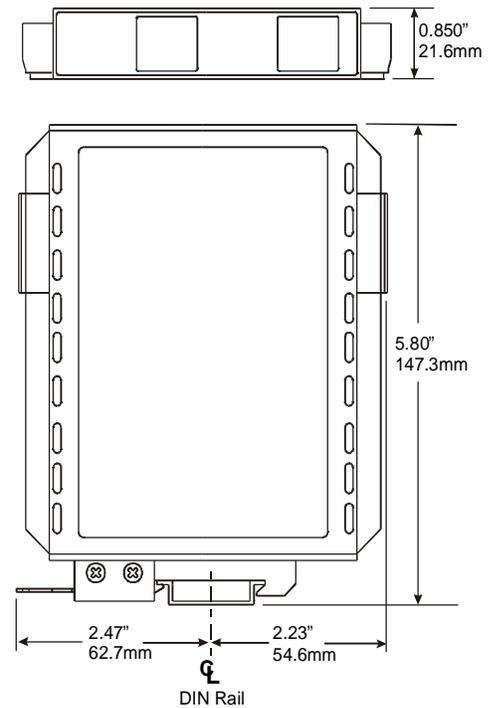
# X54-3202 2-Wire (loop powered) Dual Ch. Universal RTD Transmitter (continued)

## TERMINAL ARRANGEMENT:



- \*
- 1.) Plug-in connector design simplifies installation and maintenance.
  - 2.) Use up to 12 awg wiring.
  - 3.) When inserted, case back cover provides a mechanical cover for connector screws (as required by European standards).

## MECHANICAL DETAIL:



## ORDERING INFORMATION:

X54-3202-(I) (II) - (I) (II)



I = RTD type (100 = 100 ohm Platinum 0.00385)  
 (120 = 120 ohm Nickel)  
 ( 10 = 10 ohm Copper @ 0°C)  
 ( 9 = 10 ohm Copper @ 25°C)

II = Standard Range code (A - G) or  
 specify special range; e.g. 0-450°F linearized = (0/450°F)

Example: Standard Ranges 0-500°F linearized  
 X54-3202-100E-100E

Example: Special Range 0-450°F linearized  
 X54-3202-100L(0/450°F) - 100L(0/450°F)  
 (add "L" after RTD type to request linearized output)

## Accessories:

D2-35X7.5 35 mm X 7.5 mm "U" style DIN rail, sold per foot

## STANDARD INPUT RANGES:

Code	°F	°C	Sensor Types
A	-40 to +40	-40 to +4	100, 120
B	-40 to +104	-40 to +40	100, 120
C	32 to +100	0 to +38	100, 120, 10, 9
D	32 to +212	0 to +100	100, 120, 10, 9
E	0 to +500	-18 to +260	100, 120
F	32 to +932	0 to +500	100
G	0 to +1500	-18 to +815	100

Above ranges are standard offerings for fastest delivery, and they are linearized for Platinum and Nickel RTDs only. Contact Ronan for price and delivery of non-standard ranges with or without linearization.

These transmitters can be configured in the field or pre-configured at the factory to the customer's specific RTD type and temperature range. Factory configuration is only necessary if linearization is required. **Only the Platinum and Nickel RTDs have the linearized output option.**