

Miniature Temperature Transmitters



NB1TXA transmitter shown smaller than actual size.

TX90A Series



- ✓ 2-Wire Transmitter
- ✓ 4 to 20 mA_{dc} Output
- ✓ ±0.1% Accuracy
- ✓ Upscale Break Protection
- ✓ Non-Isolated
- ✓ Mountable in Any Standard Protection Head
- ✓ Accepts J, K, T, E Thermocouple or 100 Ω Platinum RTD Inputs

The non-isolated TX90A Series transmitters convert thermocouple or RTD signals into a 4 to 20 mA DC signal output that is directly referenced to the mV input of a thermocouple or resistance of a 100 Ω Platinum RTD.

For thermocouple transmitters, the 4 to 20 mA output is not linearized. thermocouple transmitters are available for Type K, J, T, and E with color coding for each thermocouple type. The transmitters for RTDs are available with the 4 to 20 mA output directly proportional to the input resistance or with the 4 to 20 mA output linearized to temperature.

Note, RTDs are slightly non-linear with the resistance diverging from actual temperature by approximately 1% at the mid point of full scale. (For linearized RTD transmitters, specify "RTD-L". Non-linearized transmitters are the more popular choice). The TX90A transmitters mount directly in OMEGA's standard protection heads for connection to your sensor. OMEGA also provides complete thermocouple and RTD assemblies.

Specifications

Output Range: 4 to 20 mA dc

Zero and Span Adjustment Range:
±25% for °F and ±10% for °C

Accuracy: ±0.1% of FS (includes effects of linearity, hysteresis and repeatability) referenced to the mV input

Operating Temperature Range:
-40 to 85°C (-40 to 185°F)

Storage Temperature Range:
-46 to 121°C (-50 to 250°F)

Max Loop Resistance: $V_s - 8$
0.020A

Supply Voltage: 8 to 50 Vdc,
24V nominal

Dimensions: 31.75 H x 44.5 mm D
(1.25 x 1.75"); height includes terminal strip



To Order

Model No.	Description
TX91A-(*)	Thermocouple transmitter (Type J, K, T, or E)
TX92A-(*)	RTD transmitter (100 Ω Pt100, alpha = 0.00385)
TX92A-(*)-L	RTD transmitter (100 Ω Pt100, alpha = 0.00385) with the 4 to 20 mA output linearized to temperature
Transmitter Assemblies	
RT	1.2 m (48") mounting track
TX90-BR	Mounting bracket for RT mounting track
NB1TXA-(*)	TX91A Transmitter in cast iron head with 12" L, ¼ OD, ungrounded junction, 304 SS sheath probe
NBSTXA-(*)	TX91A Transmitter in aluminum head with 12" L, ¼ OD, ungrounded junction, 304 SS sheath probe
PRTXA-(*)-12	TX92A Transmitter in cast iron head with 12" L, ¼ OD, ungrounded junction, 304 SS sheath RTD probe
Accessories	
PSR-24S	Regulated power supply, 24 Vdc, 400 mA, screw terminal
PSR-24L	Regulated power supply, 24 Vdc, 400 mA, UL, stripped leads
PSR-24L-230	Regulated power supply, 24 Vdc, 400 mA, stripped leads, 230 Vac input, CE

Comes complete with operator's manual. (*) Specify range code from chart below. Price per additional foot. Add suffix "-XX" in inches. **Example:** NB1TXA-JB-12.

Ordering Examples: TX91A-J2, specifies a Type J transmitter, with 0 to 200°F range. NB1TXA-JB, specifies a Type J transmitter assembly, with 0 to 150°C range.

Range Codes

TX91A				TX92A		Range °C (°F)
J	K	T	E	RTD	RTD-L	
-	-	-	-	1	1-L	-40 to 60 (-40 to 140)
J2	K2	T2	E2	2	2-L	-18 to 93 (0 to 200)
J3	K3	T3	E3	3	3-L	-18 to 149 (0 to 300)
J4	K4	T4	E4	4	4-L	-18 to 260 (0 to 500)
J5	K5	T5	E5	5	5-L	-18 to 399 (0 to 750)
J6	K6	-	E6	6	6-L	-18 to 538 (0 to 1000)
J7	K7	T7	E7	7	7-L	0 to 100 (32 to 212)
J8	K8	T8	E8	8	8-L	0 to 150 (32 to 302)
J9	K9	T9	E9	9	9-L	0 to 250 (32 to 482)
J10	K10	T10	E10	10	10-L	0 to 400 (32 to 752)
J11	K11	-	E11	-	-	0 to 500 (32 to 932)

Factory Scaling (-FS) is available for an additional charge. Please contact our engineering team for custom scaling.