



Digital Temperature Transmitters

For Thermocouple, RTD, Millivolt, and Resistance Inputs
with HART® Protocol • Type T32.30

Temperature Transmitters

Application

WIKA T32 digital temperature transmitter converts thermocouple, RTD (Platinum or Nickel 100 ohms), millivolt (1200 mv) or resistance inputs to a linearized 4-20 mA signal. The T32 features full galvanic isolation, custom linearization tables and thermocouple break protection. All have CE certification and meet stringent RFI protection requirements. The transmitter is designed to withstand vibration and shock found in harsh industrial environments. The compact size of the T32 will fit in a DIN head assembly with form B mounting (see drawings.)

For temperature applications the T32 features built-in cold junction compensation and linearization for 11 thermocouple types. RTDs are configurable for 2, 3 or 4 wire connections, with linearization for Platinum 100 (alpha 0.00385) or Nickel 100.

The T32's input type, range, and linearization parameters are programmable using a HART® Communicator model 275 or an FSK modem via the RS-232 of a standard PC.



T-32.30.000

General Specifications

Inputs

See Table 1

Accuracy

RTD: (Per DIN IEC 770, 23°C ±5°C) ±0.08 °C

Thermocouple: (Per DIN IEC 770, 23°C ±5°C)
±0.3°C or ±5 µV whichever is greater

Millivolt: ±5 µV or 0.006% of span

Thermocouple Break Protection

Programmable, Upscale (23 mA) or Downscale (3.8 mA)

Cold Junction Compensation

Programmable internal or external (Pt 100), Accuracy ±0.8°C

RTD Wiring Configuration

2, 3, or 4 wire

Response Time

Programmable 1 to 60 seconds

Measurement Update Time

2/second

Maximum Lead Wire Resistance

Thermocouple: 250 Ohm

RTD: 30 Ohm per lead

Output

4-20 mA

Maximum Output Load

$R_{MAX} \leq (V_s - 12V) / 0.022 A$

Power Supply

12 to 42 Vdc

Isolation

1500 Vac, 60 s

Environmental

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

Optional Operating Temperature:
-40 to 220°F (-40 to 105°C)
-58 to 185°F (-50 to 85°C)

Humidity: 100% non-condensing

Vibration: 10 Hz to 2 KHz, 5 g per DIN IEC 68 2-6

Warm-up time: 5 minutes

Construction

Case Material: Plastic

Dimensions: 1.95" dia. (49.5 mm), 1.12" ht. (28.5 mm)

Weight: 2.47 oz (0.07 kg.)

Warranty

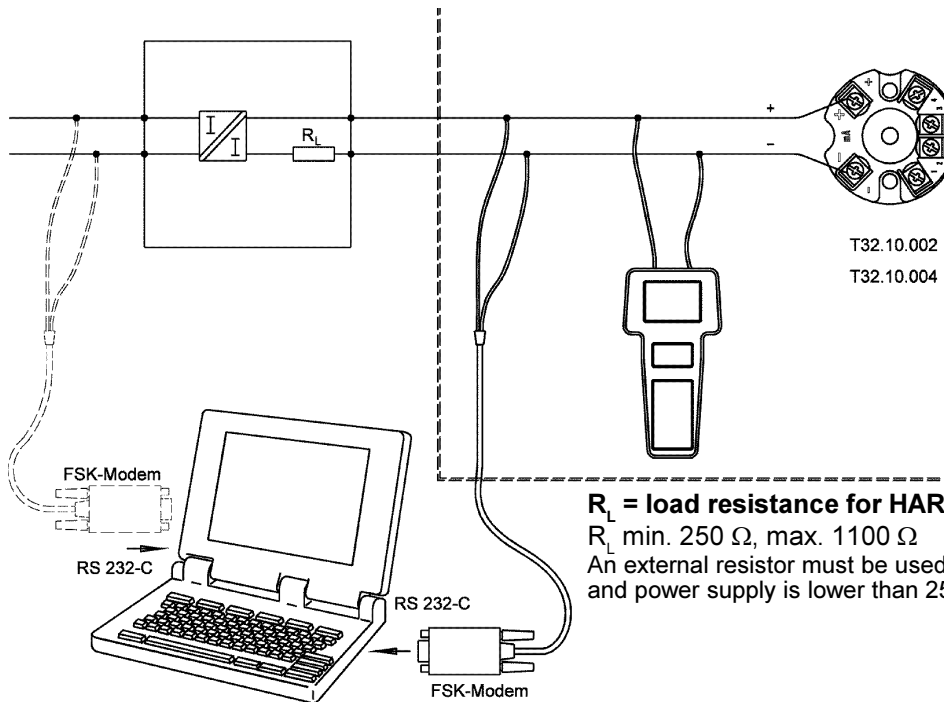
5 years

Configuration Set Model 3627404 (Optional)

Package includes:

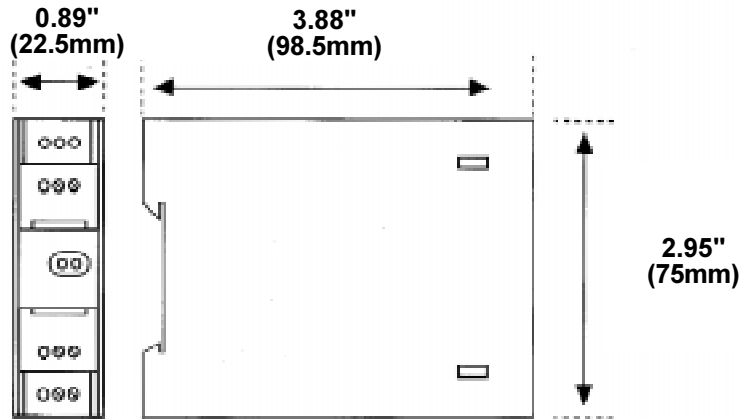
1-Configuration Software (3.5" disk, on-line Help)

1-FSK-Modem (9 volt battery included) with Connection cable (Programming Unit to T32)

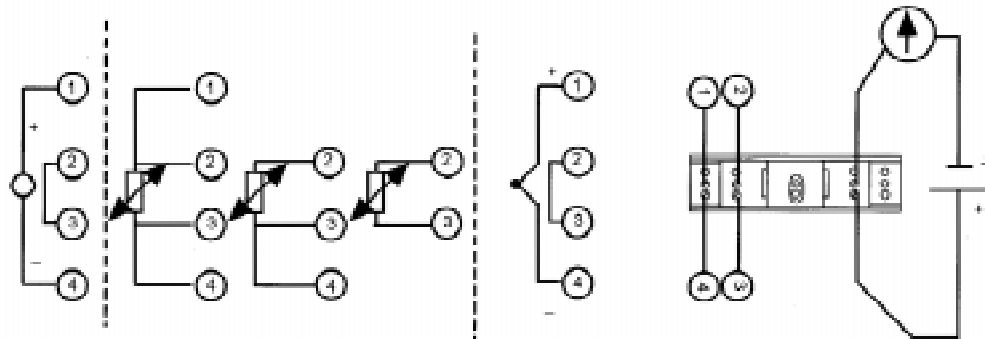


Input	T 32 Programmable Inputs and Ranges				Min. Span
	Sensor	Standard	RANGE °C	RANGE °F	
Thermocouple	J	IEC584	-210 to 1200	-346 to 2192	50°C or 2 mV whichever is greater
	K	IEC 584	-270 to 1372	-454 to 2502	
	N	IEC 584	-270 to 1300	-454 to 2372	
	T	IEC 584	-270 to 400	-454 to 752	
	E	IEC 584	-270 to 1000	-454 to 1832	
	L	DIN 43710	-200 to 900	-328 to 1652	
	U	DIN 43710	-200 to 600	-328 to 1112	
	R	IEC 584	-50 to 1768	-58 to 3214	
	S	IEC 584	-50 to 1768	-58 to 3214	
	B	IEC 584	0 to 1820	32 to 3308	
RTD	Pt 100	EN 60 751	200 to 850	-328 to 1562	10°C or 3.8 Ω whichever is greater
	Ni 100	DIN 43760	-60 to 250	-76 to 462	
Linear Resistance	0 to 700 / 0 to 5k Ohm				4 Ω 32 Ω
DC Voltage (Millivolts)	-400 to 1200 mV				2 to 32 mV

T32.30 Terminal Assignment



T32.30 Terminal Assignment



THE MEASURE OF
Total Performance™

Ordering Information:

State computer part number (if available) / type number / size / range / connection size and location / options required.

Specifications given in this price list represent the state of engineering at the time of printing. Modifications may take place and the specified materials may change without prior notice

05/01



WIKAI Instrument Corporation
 1000 Wiegand Boulevard
 Lawrenceville, Georgia 30043-5868
 Tel: 770-513-8200 Fax: 770-338-5118
<http://www.wika.com> e-mail: info@wika.com