

ELECTRONIC TEMPERATURE TRANSMITTERS

Type T19.10 Analog Temperature Transmitter

Standard Features

- Input: PT 100 OR thermocouples
- Configurable C° Ranges Using Solder Pads
- Output: 4 ...20 mA, 2 wire design
- Fault Signal: For sensor burnout and sensor short circuiting
- Temperature Range: Large ambient temperature range
- Size: Compact
- Guarantee: 5 years
- RTD or Thermocouple
- Programmable Ranges
- Economical



Type T19.10
Analog Temperature Transmitter

Datasheet: T19.01

Ready-To-Ship Temperature Transmitters	
Description	
Type	Part #
Type J Fe-CuNi	4338066
Type K Fe-CuNi	4338074
Type T Fe-CuNi	4338058
Pt100 Small Range	4338031
Pt100 Large Range	4338040

Type T19.30 Analog Temperature Transmitter

Standard Features

- Input: PT 100 OR thermocouples
- Configurable C° Ranges
- Output: 4 ...20 mA, 2 wire design
- Fault Signal: For sensor burnout and sensor short circuiting
- Temperature Range: Large ambient temperature range
- Size: Compact
- Guarantee: 5 years
- RTD or Thermocouple
- Programmable Ranges
- DIN Rail Mount



Type T19.30
Analog Temperature Transmitter

Datasheet T19.30

Ready-To-Ship Temperature Transmitters	
Description	
Type	Part #
Type J Fe-CuNi	4338111
Type K Fe-CuNi	4338121
Type T Fe-CuNi	4338103
Pt100 Small Range	4338082
Pt100 Large Range	4338091

Type T23.10 Digital Temperature Transmitter

Standard Features

- **Inputs:** Thermocouples: J, K, N, T, E, L, U, R, S, B, W3, W5
- **Accuracy:** Thermocouple: (Per DIN IEC 770, 23°C ±5°C)±0.5°C or 0.05%FS or ± 10µv
- **Thermocouple Break Protection:** Upscale (21 mA) or Downscale (3.6 mA)
- **Cold Junction Compensation:** Internal, Accuracy ±1.0°C
- **Measurement Update Time:** 2/second
- **Maximum Lead Wire Resistance:** Thermocouple: 250 Ohm
- **Output:** 4-20 mA
- **Maximum Output Load:** $R_{MAX} < (V_S - 9v) / 0.021 A$
- **Load Effect:** < 0.01% of span/100 Ohm
- **Power Supply:** 9 to 36 Vdc
- **Power Supply Effect:** < 0.005% of span/V
- **Isolation:** 1500 Vac, 60 s
Environmental: Operating Temperature: -40 to 185°F (-40 to 85°C); Humidity: 100%; Vibration: 10 Hz to 2 KHz, 5 g per DIN IEC 68 2-6; Warm-up time: 5 minutes
- **Construction:** Case Material: Plastic; Dimensions: refer to drawings; Weight: 2.4oz (0.07kg)
- **Warranty:** 5 years

[Datasheet: T23.10](#)

- Thermocouple Only
- Programmable
- Isolated



Type T23.10
Digital Temperature Transmitter

Ready-To-Ship Temperature Transmitters	
Description	
Type	Part #
Standard	4310853

Type T24.10 Temperature Transmitter

Standard Features

- Configurable with Windows PC without sensor simulation, remote configuration also possible from the control room via the current loop
- Analog signal processing, ideal for multiplex-systems
- For Pt 100 and resistance-sensors, 3 wire
- Analog output 4 ... 20 mA, 2 wire design
- EMC Conformity per EN 61 326 and NAMUR NE 21
- Sensor burnout monitoring in accordance with NAMUR NE 43
- Compact design suitable for any DIN connection head of form B

- RTD Only
- Programmable
- Potted Electronics



Type T24.10
Temperature Transmitters

Ready-To-Ship Temperature Transmitters	
Description	
Type	Part #
Standard	4363048

[Datasheet: T24.10](#)

Type T12.10 Digital Temperature Transmitter

Standard Features

- **Inputs:** Refer to table
- **Accuracy:** RTD: (Per DIN IEC 770, 23°C ±5°C) ±0.2 °C or 0.1°C + 0.05% of valve;
Thermocouple: (Per DIN IEC 770, 23°C ±5°C) 0.5°C or 10uV or 0.05% of value
- **Thermocouple Break Protection:** Programmable, Upscale (23 mA) or Downscale (3.8 mA)
- **Cold Junction Compensation:** Programmable internal or external (Pt 100), Accuracy ±1.0°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: 500 Ohm; RTD: 10 Ohm per lead
- **Output:** 4-20 mA
- **Maximum Output Load:** $R_{MAX} < (V_S - 9v) / 0.021 A$
- **Load Effect:** < 0.01% of span/100 Ohm
- **Power Supply:** 9 to 36 Vdc
- **Power Supply Effect:** < 0.005% of span/V
- **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

- Digital Temperature Transmitter
- Programmable
- CE Certified



Type T12.10

Input	T-12 Programmable Inputs and Ranges				
	Sensor	Standard	Range °C	Range °F	Min. Span
Thermocouple	J	IEC 584	-100 to 1200	-148 to 2192	50 K
	K	IEC 584	-180 to 1372	-292 to 2500	50 K
	N	IEC 584	-180 to 1300	-292 to 2372	100 K
	T	IEC 584	-200 to 400	-328 to 752	50 K
	E	IEC 584	-100 to 1000	-148 to 1832	50 K
	L	DIN 43710	-100 to 900	-148 to 1652	50 K
	U	DIN 43710	-180 to 600	-292 to 1112	75 K
	R	IEC 584	-50 to 1760	-58 to 3200	200 K
	S	IEC 584	-50 to 1760	-58 to 3200	200 K
	B	IEC 584	400 to 1820	752 to 3308	200 K
RTD	W3	ASTM E988	0 to 2300	32 to 4172	200 K
	W5	ASTM E988	0 to 2300	32 to 4172	200 K
	Pt 100	Pt 100	-200 to 850	-328 to 1562	25 K
	Ni 100	Ni 100	-60 to 250	-76 to 482	25 K
Linear Resistance			0 to 5K Ohm		30 Ohm
DC Voltage (Unipolar)			-10 to 800 mV		5 mV

Ready-To-Ship Temperature Transmitters	
Description	
Type	Part #
Standard	3616933
Rail Adapter	3593789
Configuration Set	3599490

Datasheet: T12.10

Type T12.30 Digital Temperature Transmitter

Standard Features

- **Inputs:** Refer to table
- **Accuracy:** RTD: (Per DIN IEC 770, 23°C ±5°C) ±0.2 °C or 0.025%FS + 0.1; Thermocouple: (Per DIN IEC 770, 23°C ±5°C) ±0.5 or 0.05%FS or ± 10µv Thermocouple Break Protection: Programmable, Upscale (23 mA) or Downscale (3.8 mA)
- **Cold Junction Compensation:** Programmable internal or external (Pt 100), Accuracy ±1.0°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: 500 Ohm; RTD: 10 Ohm per lead
- **Output:** 4-20 mA
- **Maximum Output Load:** $R_{MAX} < (V_s - 9v) / 0.021 A$
- **Load Effect:** < 0.01% of span/100 Ohm
- **Power Supply:** 9 to 36 Vdc
- **Power Supply Effect:** < 0.005% of span/V
- **Isolation:** 1500 Vac, 60 s
- **Environmental:** T12.30 Operating Temperature: -14 to 158°F (-25 to 70°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; Weight: T12.10: 2.4oz (0.07kg); T12.30: 7oz (0.2kg)
- **Warranty:** 5 years

- Digital Temperature Transmitter
- Programmable
- DIN Rail



Type T12.30

T-12 Programmable Inputs and Ranges					
Input	Sensor	Standard	Range °C	Range °F	Min. Span
Thermocouple	J	IEC 584	-100 to 1200	-148 to 2192	50 K
	K	IEC 584	-180 to 1372	-292 to 2500	50 K
	N	IEC 584	-180 to 1300	-292 to 2372	100 K
	T	IEC 584	-200 to 400	-328 to 752	50 K
	E	IEC 584	-100 to 1000	-148 to 1832	50 K
	L	DIN 43710	-100 to 900	-148 to 1652	50 K
	U	DIN 43710	-180 to 600	-292 to 1112	75 K
	R	IEC 584	-50 to 1760	-58 to 3200	200 K
	S	IEC 584	-50 to 1760	-58 to 3200	200 K
	B	IEC 584	400 to 1820	752 to 3308	200 K
RTD	W3	ASTM E988	0 to 2300	32 to 4172	200 K
	W5	ASTM E988	0 to 2300	32 to 4172	200 K
	Pt 100	Pt 100	-200 to 850	-328 to 1562	25 K
	Ni 100	Ni 100	-60 to 250	-76 to 482	25 K
Linear Resistance			0 to 5K Ohm		30 Ohm
DC Voltage (Unipolar)			-10 to 800 mV		5 mV

Ready-To-Ship Temperature Transmitters

Description

Type	Part #
Standard	3625321
Configuration Set	3599490

Datasheet: T12.30

Type T32.10/T32.30

Digital Temperature Transmitter

Standard Features

- **Inputs:** Refer to table
- **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 mV whichever is greater; Millivolt: ±5 mV 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

- Digital Temperature Transmitter
- Programmable
- HART® Communicator



Type T32.10



Type T32.30

Input	T-32 Programmable Inputs and Ranges				
	Sensor	Standard	Range °C	Range °F	Min. Span
Thermocouple	J	IEC 584	-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 whichever is greater
	Ni 100	DIN 43760	-60 to 250	-76 to 482	
Linear Resistance	0 to 700 / 0 to 5K Ohm			30 Ohm	
DC Voltage Millivolt	-400 to 1200 mV				2 to 32 mV

Ready-To-Ship Temperature Transmitters

Description	
Type	Part #
T32.10 - Standard	3599717
T32.30 - Standard	4266669

Datasheet: [T32.10 & T32.30](#)

Type T42.10 Temperature Transmitter

Standard Features

- Field bus protocol PROFIBUS PA
- Configurable for connection to RTDs, Thermocouples, Resistance - sensor, mV - sensor
- Customer specific linearisation with max. 30 points for sensors with W - or mV - output
- class protection, intrinsically safe per FISCO-Model II 1 G EEx ia II B / II C T4 / T5 / T6
II 2 G EEx ib II B / II C T4 / T5 / T6
- EMC Conformity per DIN EN 50 081 - 1, DIN EN 50 082 - 2, NAMUR NE 21
- Isolation voltage AC 1500 V between sensor and bus
- 100% Rh protection, moisture condensation permissible
- Increased ambient temperature
- Configurable via e.g. SIMATIC PDM or Freelance 2000
- Terminal connections with captive screws

- Profibus PA Transmitter
- Programmable
- Digital Temperature Transmitter



Type T42.10
Digital Temperature Transmitter

Ready-To-Ship Temperature Transmitters	
Description	
Type	Part #
Standard	4373019