

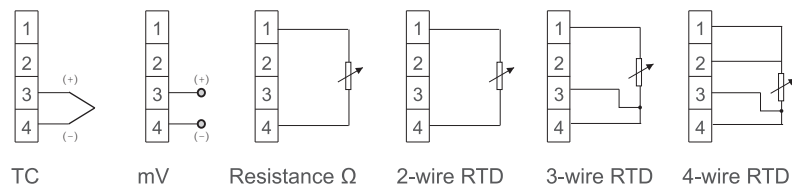
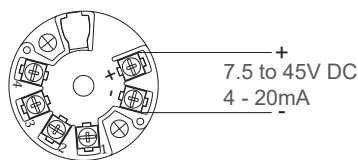
Taishio

Taishio High Accuracy Temperature Head Transmitter HART® - TS 325

Features

- Universal Input (RTD/TC/mV/Ω)
- Universal setting with HART®-protocol
- High accuracy in total ambient temperature range:
 - 0.02% of span for Pt100 sensor
 - 0.1% of span for TC sensor
- Programmable via PC-Software
- 2-wire technology, 4 to 20mA analogue output
- Galvanic isolation (2000V AC)
- Internal temperature sensor for active temperature compensation (for TC sensor)
- Fault signal on sensor break or short circuit, presettable to NAMUR NE 43

HART
COMMUNICATION PROTOCOL



SPECIFICATIONS

Input	Type	Measurement Ranges	Min. Span	Accuracy
Resistance Thermometer (RTD)	Pt100	-200 to 850°C (-328 to 1562°F)	10°C	0.02%
	Pt500	-200 to 250°C (-328 to 482°F)	10°C	0.05%
	Pt1000	-200 to 250°C (-328 to 482°F)	10°C	0.3%
	<i>acc. to IEC 60751 (a = 0.00385)</i>			
	Cu50	-50 to 150°C (-58 to 302°F)	10°C	0.2%
	Cu100	-50 to 150°C (-58 to 302°F)	10°C	0.3%
	Ni100	-60 to 180°C (-76 to 356°F)	10°C	0.02%
	Ni500	-60 to 180°C (-76 to 356°F)	10°C	0.05%
	Ni1000	-60 to 150°C (-76 to 302°F)	10°C	0.3%
	<i>acc. to DIN 43760 (a = 0.006180)</i>			
Resistance Transmitter	Resistance Ω	0 to 400 Ω 0 to 2000 Ω	10 Ω 10 Ω	±0.1 Ω or 0.02% ±1.5 Ω or 0.03%
Connector Type	2, 3 or 4-wire connection, Sensor current: <0.5 mA			
Thermocouples	B (PtRh30-PtRh6)	0 to +1820°C (32 to 3308°F)	500°C	typ. 0.1%
	E (NiCr-CuNi)	-270 to +1000°C (-454 to 1832°F)	50°C	typ. 0.1%
	J (Fe-CuNi)	-210 to +1200°C (-346 to 2192°F)	50°C	typ. 0.1%
	K (NiCr-Ni)	-270 to +1372°C (-454 to 2501°F)	50°C	typ. 0.1%
	N (NiCrSi-NiSi)	-270 to +1300°C (-454 to 2372°F)	50°C	typ. 0.1%
	R (PtRh13-Pt)	-50 to +1768°C (-58 to 3214°F)	500°C	typ. 0.1%
	S (PtRh10-Pt)	-50 to +1768°C (-58 to 3214°F)	500°C	typ. 0.1%
	T (Cu-CuNi)	-270 to +400°C (-454 to 752°F)	50°C	typ. 0.1%
Voltage	mV	-10 to 75mV -100 to 100mV -500 to 500mV -1000 to 1000mV	5mV 5mV 10mV 20mV	± 4 μV or 0.02% ± 4 μV or 0.02% ± 7.5 μV or 0.02% ± 7.5 μV or 0.02%
	Connection type	2-wire connection, Sensor current: <0.5 mA		
	Supply Voltage	7.5 to 45V DC		
	Output Signal	4 to 20mA		
Load	$R_{max} = [(U_{supply} - 7.5) / 0.022] \Omega$			
Signal on Alarm	Underranging: Linear drop to 3.8mA; Overranging: linear rise to 20.5mA; Sensor break; sensor open-circuit: 3.6mA or 22.0 mA			
Linearisation/ Transmission Behaviour	Temperature linear, resistance linear, voltage linear			
Galvanic Isolation	U=2000V AC (input/output)			
Response Time	0.25secs			
Reference Conditions	Calibration temperature: +23°C (73.4K) ± 5K			

MODEL

DESCRIPTION

TS 325

HART® Programmable Temperature Head Transmitter, Galvanic Isolated, with HART®-Protocol; Input: Factory Preset (PT100, 3-wire, 0 to 100°C, Output: 4 to 20mA, 2-wire)