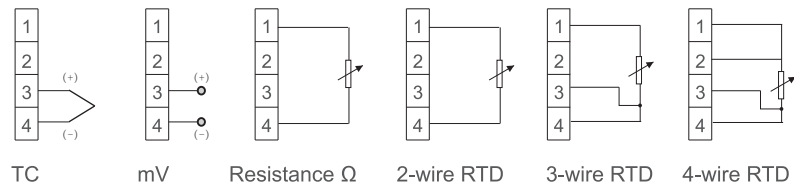
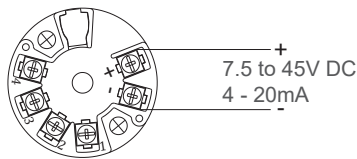


Taishio

Taishio High Accuracy Temperature Head Transmitter - TS323

Features

- Universal Input (RTD, TC, mV, Ω)
- 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



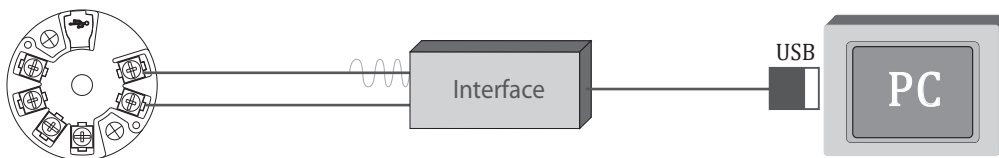
SPECIFICATIONS

Input	Type	Measurement Ranges	Min. Meas. Ranges	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	$\pm 0.1 \Omega$ or 0.02% $\pm 1.5 \Omega$ 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	$\pm 4 \mu\text{V}$ or 0.02% $\pm 4 \mu\text{V}$ or 0.02% $\pm 7.5 \mu\text{V}$ or 0.02% $\pm 7.5 \mu\text{V}$ 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	$R_{\text{max}} = [(U_{\text{supply}} - 7.5) / 0.022] \Omega$			
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) $\pm 5\text{K}$			
MODEL	DESCRIPTION			
TS 323	Programmable Temperature Head Transmitter, Galvanic Isolated; Input: Factory Preset (Pt100, 3-wire, 0 to 100C, Output: 4 to 20mA, 2-wire			

SPECIFICATIONS

Switch on Delay	≤ 2secs
Influence of Supply Voltage	≤ ± 0.01% / V deviation from 24V
Influence of Ambient Temperature (Total temperature drift)	Input temperature drift + Output temperature drift Input 0 to 2000 Ω, typ. 0.0015% of measured value Output 4 to 20mA, typ. 0.005% of measured value
Influence of Load	± 0.02% / 100 Ω, Values refer to the full scale value
Influence of Cold Junction (for TC)	Pt100 DIN IEC 60751 Cl. B
Long-term Stability	≤ 0.1 K/year or ≤ 0.05%/year The % refer to the set span
Self Stability Configuration	0 to 2%
Filter Configuration	0 to 160μA
Resolution	0.3μA
Environment Conditions	
Installation Instructions	Installation angle: no limit Installation area: Connection head according to DIN 43729 from B; TAF 10 field housing
Storage Temperature	
Ambient Temperature Limits	-40 to 85°C (-40 to 185°F)
Storage Temperature	-40 to 100°C (-40 to 212°F)
Condensation	Allowable
Degree of Protection	IP00 / IP66 installed
Shock and Vibration	4g / 2 to 150Hz as per IEC 60068-26
Electromagnetic Compatibility (EMC)	Interference immunity and interference emission according to IEC 61326-1:2006
Dimensions	44 x 24.5mm
Weight	Approx. 38g
Material	Housing: PC; Potting: Silicon
Certificate and Approvals	
CE-Mark	The device meets the legal requirements of the CE directives
Other Standards	IEC 60529: Degree of protection provided by housing (IP Code) IEC 61010: Safety requirements for electrical measurement, control and laboratory use IEC 61326: Electromagnetic compatibility (EMC requirements) NAMUR: Standard working group for measurement and control technology in the chemical industry

Programmable with Taishio Transmitter Interface



MODEL	DESCRIPTION
TS 323	Programmable Temperature Head Transmitter, Galvanic Isolated; Input: Factory Preset Pt100, 3-wire, 0 to 100C, Output: 4 to 20mA, 2-wire