

The selection is detailed on page 5



WTD-200-A

Digital Temperature Transmitter

Working principle

Through the temperature sensor, the ambient temperature is automatically sampled and monitored in real time. When the ambient temperature is higher than the control setting value, the control circuit starts and the control return difference can be set. If the temperature is still rising, when it rises to the set alarm temperature point, start the alarm function. When the controlled temperature can not be effectively controlled, in order to prevent the damage of the equipment, it can also stop the equipment from continuing to run through the function of tripping.

Product description

Thread thermometers are used for temperature measurement of 50+200°C[-592°F]-58+ liquid and gaseous media. ... It can be used for pressures up to 100 bar. All electrical components are splash resistant and designed to withstand vibration.

Warm bushings with fixed threaded connections or adjustable compression fittings can be installed directly into the process. All the wetted parts and enclosures are made of stainless steel.

The housing and the interchangeable measuring inserts are screwed together with knurled nuts. This makes it possible to exchange measurement inserts without having to remove the instrument from the process.

Through the plug connection, the installation of the transmitter is simple. The integrated electronics convert the temperature-dependent resistance signal of the measuring element into a linear unit signal. ... For the signal output, there is 4 20 mA and 0 10 V.

Product application

Mechanical construction, plant and ship construction

Propulsion technology, hydraulic systems

Heating and cooling circuit, air conditioning technology

Functional characteristics

The measurement range is -50+200°C[-58+392°F].....
Electrical connection via plug

connection
Output signal 4... 20 mA or 0... 10 V
Factory configuration
Measure interchangeability of inserts



Technical parameter

Thread thermometer		
Output signal	...4 20 mA	...0 10 V
Standard measuring range	-50 ... +200 °C	
	-20 ... +120 °C	
	0 ... 50 °C	
	0 ... 100 °C	
	0 ... 120 °C	
	0 ... 150 °C	
	0 ... 200 °C	
Special measuring range		
▪ The beginning of the measurement range	-50 ... +50 °C	
▪ End of measuring range	0 ... 200 °C	
▪ Minimum span	50 K	
Precision		
▪ Measuring element	3± (0 + 0.005 * t) °C (Class B according to IEC60751)	
▪ Electronic product	± is 0.5% of the measurement span Overall accuracy = accuracy + electronic accuracy of the measuring element example Medium temperature t = 150°C, measuring range 0... 200°C Accuracy: ± (0 + 0.005 * 150) + 0.5/100 * 200 = ±2.05°C.3	
Power source UB	DC 10 30 V...	DC 12 30 V...
Highest permissible residual ripple	< 10 %	< 10 %
Error signaling		
▪ Sensor disconnect	> 20.5 mA	> 10.5 V
▪ Sensor short circuit	< 3.8 A	0 V
Thermocouple group		
▪ Materials	Stainless steel	
▪ diameter	6 mm	
	8 mm	
Process connection	Fixed mounting thread Material: Stainless steel	Compress fittings, slide Material: Stainless steel ring Material: stainless steel
	G ¼	G ¼
	G ⅜	G ½
	G ½	¼ NPT
	G ¾	½ NPT
	M14 x 1.5	
	¼ NPT	
	½ NPT	
Insertion length U1	25, 50, 75, 100, 150, 200, 250, 300, 400, 500 mm	100, 150, 200, 250, 300, 400, 500 mm
Current consumption - Switch output	Thermocouple sleeve diameter 6mm: Max. 50bar	uppermost 50bar
	Thermocouple sleeve diameter 8mm: Max. 100bar	
Cervical canal	To protect the electronics at higher temperatures from unacceptably high temperatures and unfavorable installation conditions, the probe housing can be separated from the process connection via a neck tube. For models with compression fittings, the standard neck tube is 40 mm, so the desired insertion length can be achieved. As standard, models with fixed mounting threads do not come with a neck tube. Here, a neck tube with a choice of 50 mm or 100 mm.	

1) The actual accuracy that can be obtained depends mainly on the installation conditions (depth of immersion, probe length, operating conditions). This is especially true when there is a large temperature gradient between the medium and the environment.



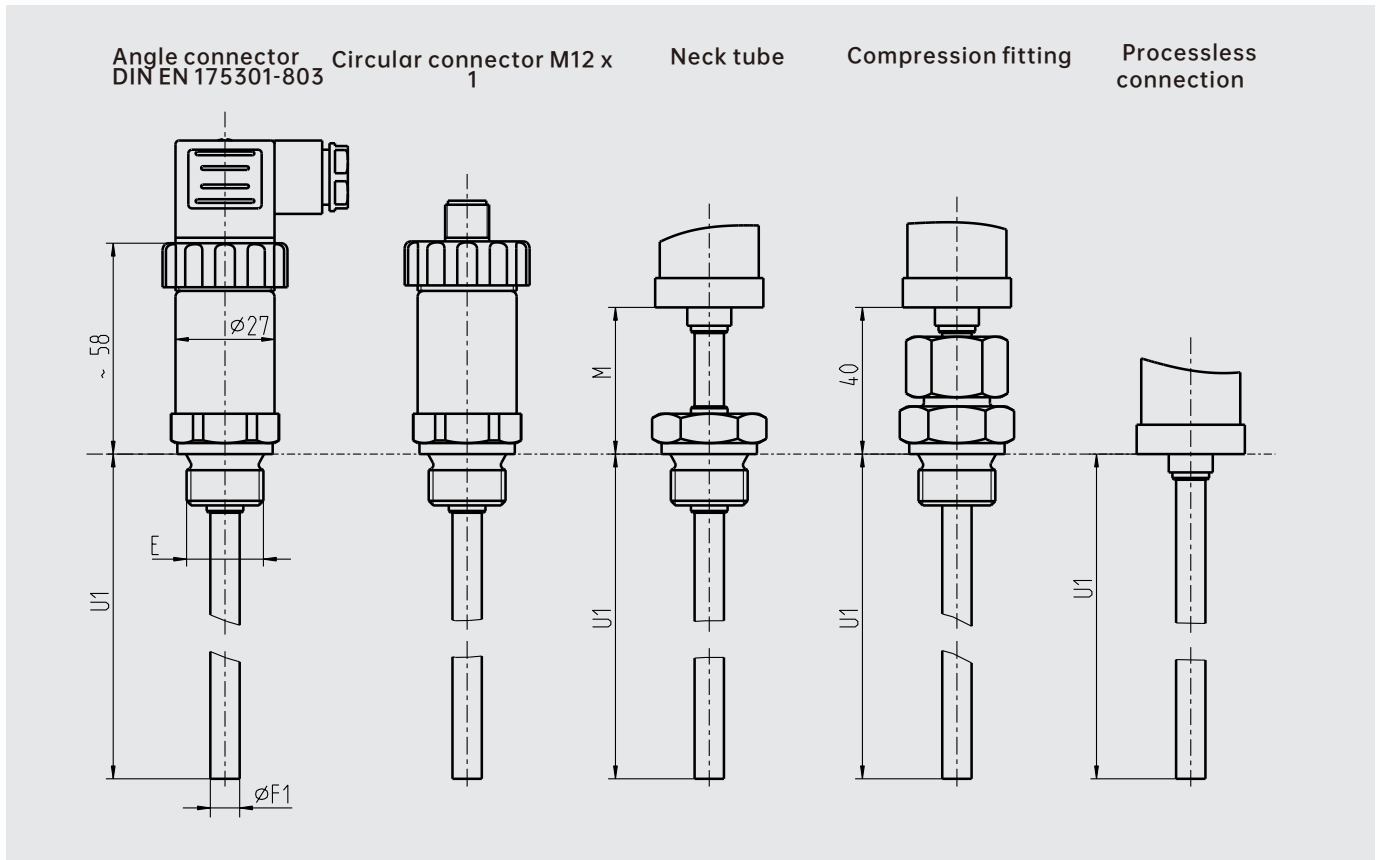
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Environmental condition	
Operating temperature	-50 ... +200 °C [-58 ... +392 °F]
Ambient temperature	-40 ... +85 °C [-40 ... +185 °F]
Storage temperature	-20 ... +70 °C [-4 ... +158 °F]
Vibration resistance ¹⁾	every EN 60068-2-6 10g
Seismic strength ¹⁾	to 100 g

Transmitter housing	
Materials	Stainless steel
diameter	27mm
Electrical connection	EN 175301-803 Standard type A corner connector
	Circular joint M12 x 1
Inlet protection	IP65

1) Vibration and impact resistance values are suitable for gauges with fixed welded mounting threads. Depending on the installation, medium, temperature, and geometry of the thermocouple bushing, Vibration and impact resistance may vary greatly. In order to meet the higher demand, we recommend testing the instrument in the application first.

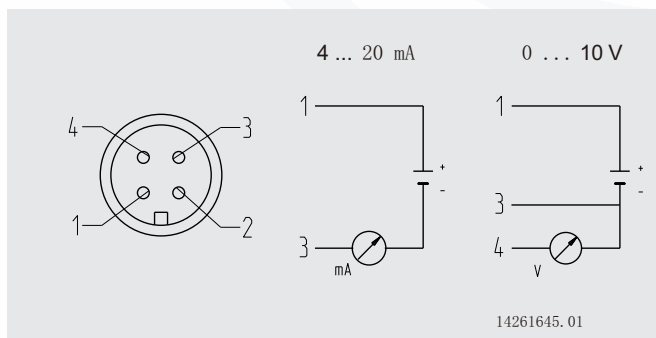
Size unit mm



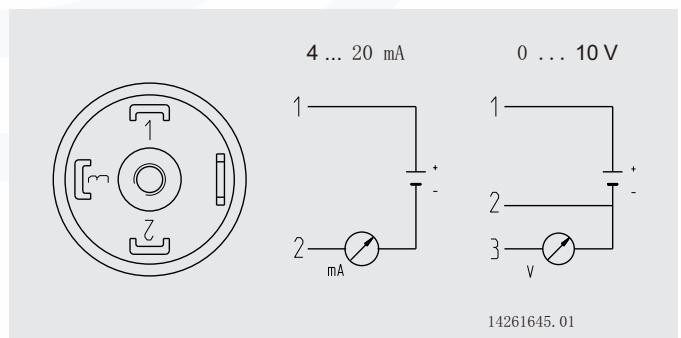
legend			
U1	ØF1	M	E
Insertion length	Diameter of thermocouple casing	Neck length	Process connection

Electrical connection

■ Circular connector M12 x 1



■ Angle connector DIN EN 175301-803, form A



WTD200-A-Selection composition

Selection example WTD200-A

1	A	2	G	3	D	4	N	5	X	6	Z	7	A	8	P	9	A	10	S	11	0-400
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1.Installation form	A	Digital temperature transmitter
	T()	Other types
2.Electrical interface	G	M16*1
	H	M12*1
	T()	Other electrical interfaces
3.Output signal	D	4-20mA
	F	0-10V
	T()	Other output signals
4.Input signal	N	Pt100, B level
	O	Pt100, A level
	P	Pt1000, B level
	Q	Pt1000, A level
	R	K(NiCr-Ni)
	S	E(NiCr-CuNi)
	W	N(NiCrSi-NiSi)
	U	J(Fe-CuNi)
	V	J(T-CuNi)
	T()	Other measuring elements
5.Switching output	X	Normally open
	Y	Normal close
6.Wire system	Z	2Wire system
	W	3Wire system
7.Specification of threaded connection	A	1/2NPT
	B	3/4NPT
	C	1/4NPT
	D	G1/2
	E	G3/4
	F	G1/4
	G	G1/8
	H	G3/8
	I	G1
	J	M8×1.0
	K	M10×1.0
	L	M12×1.5
	M	M14×1.5
N	M18×1.5	
O	M20×1.5	
T()	Other specifications	



WTD200-A-Selection composition

Selection example WTD200-A

1	A	2	G	3	D	4	N	5	X	6	Z	7	A	8	P	9	A	10	S	11	0-400
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8.Rod length(mm)	P	50	
	Q	100	
	R	150	
	S	200	
	Z	250	
	U	300	
	V	350	
	W	400	
	X	450	
	Y	500	
T()	Other lengths		
9.Rod diameter mm	A	3	
	B	4	
	C	5	
	D	6	
	E	8	
	F	10	
	T()	Other specifications	
10.Probe rod material	S	304SS	
	L	316L	
	T()	Other materials	
11.Temperature range	C()	Set temperature range (unit: °C)	
	F()	Set temperature range (unit: °F)	
12.Special requirements	X	Additional information	
	N	There is no	

Instructions:

It indicates that WTD-200-A temperature transmitter is digital display type, electrical interface M16*1, output 4-20mA(2-wire system), input signal is Pt100, class B, switch output normally open, 2-wire system, thread specification is G1/2, rod length is 150mm, rod diameter is 3mm, rod material 304 stainless steel. The temperature ranges from 0 to 400 °C. Item 12 in the table is optional.

Product Certification

Compliance and approval; Rodewig pressure gauges meet key standards and certifications for process measurement technology; Thus guaranteeing the highest reliability in such Settings;