

Hygienic Pt100 temperature switch for monitoring of process temperatures

Thermophant T TTR35



R 3702.-

11-35 pcs.



Complete product information:

www.e-direct.endress.com/ttr35

- Hygienic process connections
- Stainless steel housing 316L
- Fast response times without reduced tip

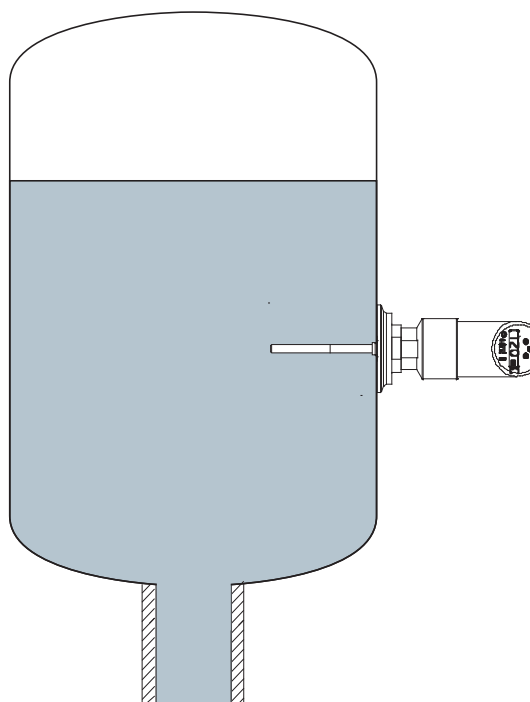
i Specs at a glance:

- **Temperature range:**
-50 to +150 °C (-58 to 302 °F)
- **Display:**
4 digit, 14 segments display with color change
- **Immersion length (diameter):**
50 / 100 / 200 mm (Ø 6 mm)
(1.97", 3.94", 7.87" (Ø 0.24"))
- **Response time**
<1.0 s (T₅₀); <2.0 s (T₉₀)
- **Surface finishing:**
R_a ≤ 0.8 µm
- **Accuracy:**
<0.1 %

Application The Thermophant T TTR35 is a Desina compliant temperature switch for the monitoring, display and control of process temperatures in hygienic applications.

Function A platinum sensor located at the measuring tip changes its resistance value depending on the temperature. This resistance value is recorded electronically. The conversion of the resistance value into a temperature measurement signal is defined by the international standard IEC 751.

Application example



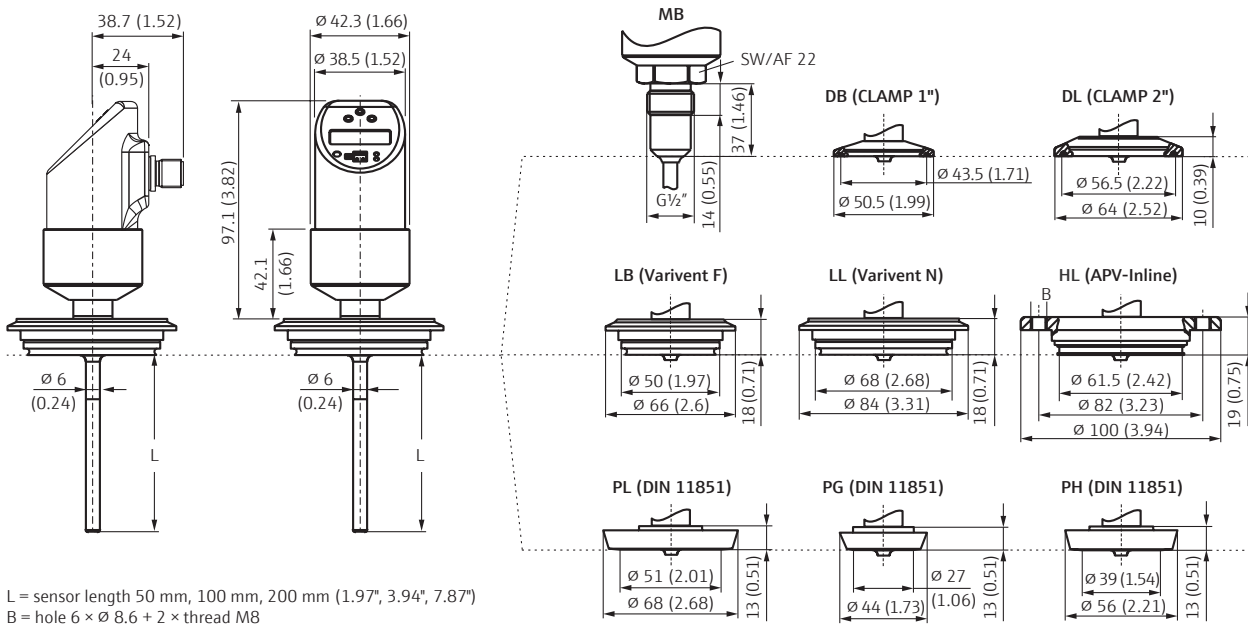
The Thermophant detects the temperature in the vessel and monitors the compliance with limit values.

Technical data

Supply voltage	
Supply voltage	12 to 30 V DC (reverse polarity protection)
Current consumption	Without load <60 mA, reverse polarity protection
Output	
Output signal	1 or 2 × PNP or PNP with 4 to 20 mA
Voltage drop PNP	≤2 V
Overload protection	Automatic testing of switching current
Performance characteristics	
Reference conditions	According to DIN IEC 60770/61003
Measured error	Electronics 0.2 K or 0.16 %; sensor Class A
Long-term drift	≤0.1 % per year
Sensor response time	T ₅₀ = <1.0 s; T ₉₀ = <2.0 s
Analog output	Non-linearity ≤0.2 %
Sensor	
Sensing element	1 × Pt100, four-wire
Tolerance	Class A to IEC 751
Medium temperature	-50 to +150 °C (-58 to 302 °F)
Diameter	6 mm (Ø 0.24")

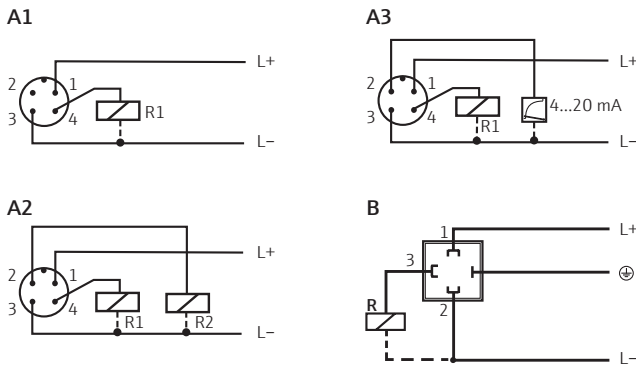
Operating conditions	
Ambient temperature	-40 to +85 °C (-40 to +185 °F)
Degree of Protection	IP 65 (complete housing)
EMC	Interference emission as per IEC 61326 Series, class B electrical equipment, interference immunity as per IEC 61326 Series, app. A (industrial use) and NAMUR Recomm. NE 21
Materials	
Process connection and protection pipe	316L/R _a ≤0.8 µm
Housing	316L
Operation	
Operating elements	3 buttons or PC and software
Approvals	
3-A	
Desina compliant	

Dimensions in mm (inches)



Installation according to instruction manual.

Electrical connection



DC Voltage version with M12 connector

- A1: 1 × PNP switch output
- A2: 2 × PNP switch output
- A3: PNP switch output with additional analog output

DC Voltage version with M16 × 1.5 connector

- B: 1 × PNP switch output

Price table

Electrical connection

Code	Plug
1	M12 × 1***
2	M16 × 1.5

Process connections

Code	TRI-CLAMP® or threaded connections
DB	Clamp ISO 2852 DN25-38 (1 to 1½"), 316L, 3-A, DIN 32676 DN25-40
DL	Clamp ISO 2852 DN40-51 (2"), 316L, 3-A, DIN 32676 DN50
DP	Clamp ISO 2852 2½", 316L, 3-A

Code	Hygienic connections
HL	APV-Inline DN50, PN40, 316L, 3-A
LB	Varivent® F pipe DN25-32, PN40, 316L, 3-A
LL	Varivent® N pipe DN40-162, PN40, 316L, 3-A
PG	DIN 11851, DN25, PN40, 316L, 3-A
PH	DIN 11851, DN40, PN40, 316L, 3-A
PL	DIN 11851, DN50, PN40, 316L, 3-A

More process connections on request.

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Output	Process connection	Length	Order no.	Price/pcs. in R		
				1 to 3	4 to 10	11 to 35
1 × PNP	TRI-CLAMP® or threaded connection	50 mm (1.97")	TTR35-A□A11□□1BAB	4207.-	3912.-	3702.-
		100 mm (3.94")	TTR35-A□A11□□2CAB	4207.-	3912.-	3702.-
		200 mm (7.87")	TTR35-A□A11□□2EAB	4351.-	4046.-	3829.-
	Hygienic connection	50 mm (1.97")	TTR35-A□A11□□1BAB	4781.-	4446.-	4207.-
		100 mm (3.94")	TTR35-A□A11□□2CAB	4781.-	4446.-	4207.-
		200 mm (7.87")	TTR35-A□A11□□2EAB	4925.-	4580.-	4334.-
2 × PNP	TRI-CLAMP® or threaded connection	50 mm (1.97")	TTR35-A1B11□□1BAB	4495.-	4180.-	3955.-
		100 mm (3.94")	TTR35-A1B11□□2CAB	4495.-	4180.-	3955.-
		200 mm (7.87")	TTR35-A1B11□□2EAB	4638.-	4314.-	4082.-
	Hygienic connection	50 mm (1.97")	TTR35-A1B11□□1BAB	5069.-	4714.-	4461.-
		100 mm (3.94")	TTR35-A1B11□□2CAB	5069.-	4714.-	4461.-
		200 mm (7.87")	TTR35-A1B11□□2EAB	5213.-	4848.-	4587.-
1 × PNP with analog output	TRI-CLAMP® or threaded connection	50 mm (1.97")	TTR35-A1C11□□1BAB	5154.-	4793.-	4536.-
		100 mm (3.94")	TTR35-A1C11□□2CAB	5154.-	4793.-	4536.-
		200 mm (7.87")	TTR35-A1C11□□2EAB	5298.-	4927.-	4662.-
	Hygienic connection	50 mm (1.97")	TTR35-A1C11□□1BAB	5728.-	5327.-	5041.-
		100 mm (3.94")	TTR35-A1C11□□2CAB	5728.-	5327.-	5041.-
		200 mm (7.87")	TTR35-A1C11□□2EAB	5872.-	5461.-	5168.-

* Please insert code for electrical connection. ** Please insert code for the process connection. *** Please order cable and plug separately.

Accessories

	Order no.	Price/pcs. in R
5 m cable with M12×1 plug	51005148	163.66
Configuration kit. USB connection	TXU10-AA	1698.72
Straight plug. without cable (self wired)	52006263	259.69
Angled plug. without cable (self wired)	51006327	173.01
Power supply 24 V DC. for DIN rail	RNB130-A1A	2319.46

Prices are applicable for South Africa until 30/06/2020, in Rand (R) per unit, net excluding value added tax (VAT), cost of packing and dispatch. Endress+Hauser retains the right to change or modify pricing at any time. The terms of sales and delivery of Endress+Hauser are applicable. Current prices and delivery times can be verified prior to ordering on www.e-direct.endress.com.

Complete product information:
www.e-direct.endress.com/trr35

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Easytemp TMR35



Data manager
Ecograph T RSG35