



Conical Sensor, Pt100/Pt1000

- Hygienic, without gasket
- Compact mounting
- Fast response time
- High accuracy
- Wide temperature range
- Acid-proof, stainless steel



Description

The wetted parts of the conical sensor are in acid-proof stainless steel. The sensor is available as a cable sensor with high-flexible, 4-wire silicone cable. As a part of the CombiTemp system the conical sensor can also be supplied for mounting at the $\varnothing 80$ mm stainless steel housing or a standard DIN-B housing.

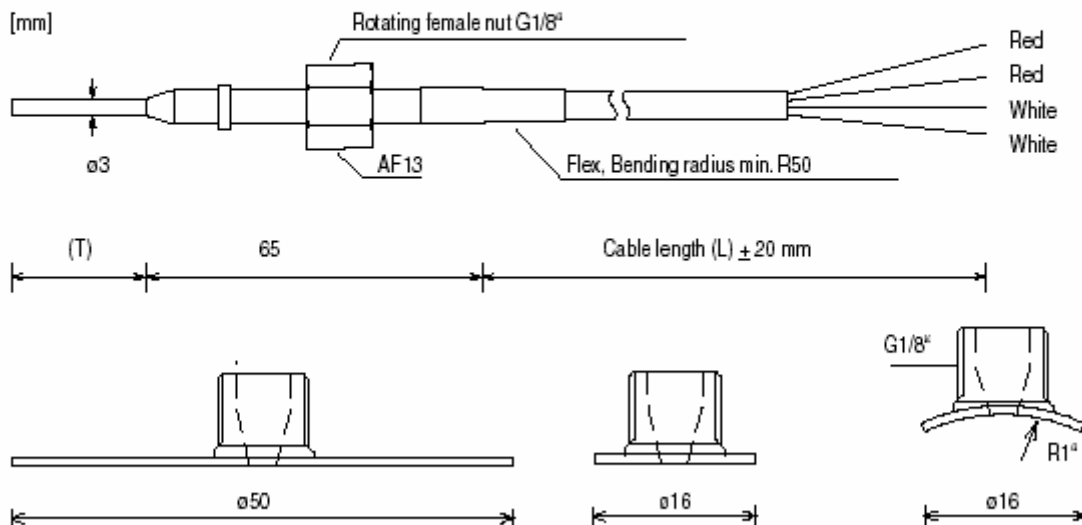
The conical sensor is ideal for measuring temperature in pipe systems and tanks. The sensor mounting is hygienic and without gasket in a male nipple part welded into the pipe or the tank wall. The nipple is available in both flat and curved versions.



Technical Data

Sensor with cable		Sensor with housing	
Sensor tube	Acid-proof stainless steel AISI 316L (W 1.4404)	Sensor tube	Acid-proof, stainless steel (AISI 316L/W.1.4404)
Time constant $\tau_{0.5}$	< 1.0 sec., measured in liquids 0.4 m/sec.	Time constant $\tau_{1.5}$	< 1.0 sec., measured in liquids 0.4 m/sec.
Media pressure	≤ 25 bar (water flow 3 m/sec.)	Media pressure	≤ 25 bar (water flow 3 m/sec.)
Sensor element		Sensor element	
Sensor type	Pt100, Class A or B	Sensor type	Pt100, Class A or B
Accuracy	DIN/EN/IEC 60751 1/1 DIN B: $\pm(0.3 + 0.005 \times t)$ °C 1/3 DIN B: $\pm 1/3 \times (0.3 + 0.005 \times t)$ °C 1/6 DIN B: $\pm 1/6 \times (0.3 + 0.005 \times t)$ °C 1/1 DIN A: $\pm(0.15 + 0.002 \times t)$ °C	Accuracy	DIN/EN/IEC 60751 $\pm(0.3 + 0.005 \times t)$ °C 1/3 DIN B: $\pm 1/3 \times (0.3 + 0.005 \times t)$ °C 1/6 DIN B: $\pm 1/6 \times (0.3 + 0.005 \times t)$ °C 1/1 DIN A: $\pm(0.15 + 0.002 \times t)$ °C
Sensor length	20 mm/25 mm	Housing	
Cable		$\varnothing 80$ mm	Stainless steel (AISI 304). IP 65 with cover or display.
Type	High-flexible silicone, grey	DIN B (DIN 43729)	Metal Alloy, grey lacquer, with M20 gland, incl. cover.
Wires	4 (2 x Red, 2 x white)	Environmental conditions	
Environmental conditions		Media temperature	-50...400°C
Media temperature	-50...205°C	Ambient temperature	-40...160°C (or temperature range for display/ transmitter)
Ambient temperature	-50...205°C	Humidity	< 100% RH, condensing (or max. humidity for display/ transmitter)
Marking label	-30...105°C	Protection class	DIN housing IP 65 $\varnothing 80$ mm housing IP 65 + IP 66
Humidity	< 95% RH, condensing	Vibrations	GL, test 2
Protection class	IP 65	Mechanical tolerances	ISO 2768-m
Vibrations	GL, test 2	Disposal of product and packing	
Mechanical tolerances	ISO 2768-m	According to national laws or by returning to Bourdon-Haenni	

Dimensional Drawings





Ordering Details - Conical Pt100 Cable Sensor

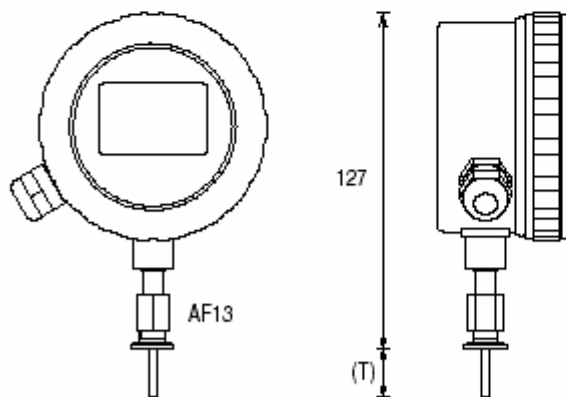
	8155	xx	xxxx
Tip length (T)	5' digit		
20 mm	2		
25 mm	3		
As customer specification (Max. 25 mm)	S		
Pt100 element (DIN/EN/IEC 60751)	6' digit		
1/1 DIN B	2		
1/1 DIN A	3		
1/3 DIN B	4		
1/6 DIN B	5		
Cable length (L)	7...10' digit		
Length in cm			xxxx

Accessories

Welding nipple, male	G 1/8, R=1°	Type no.	81 55-291
Welding nipple, male	G 1/8, flat, ø16 mm	Type no.	81 55-292
Welding nipple, male	G 1/8, flat, ø50 mm	Type no.	81 55-294
Blind plug		Type no.	81 55-293

Dimensional Drawings

[mm]



Ø80 mm housing mounted with the conical sensor
Shown with male welding nipple 81 55-292

Ordering Details - Please refer to the Next Page



Ordering Details - Conical Pt100/Pt1000 Sensor with Housing

	8142	R1x1	0xxx	xxx	xxxx
Sensor element	7' digit				
Pt100, 1/1 DIN B, single, specified accuracy -50...400°C	1				
Pt100, 1/3 DIN B, single, specified accuracy 0...150°C	3				
Pt100, 1/6 DIN B, single, specified accuracy 0...100°C	5				
Pt100, 1/1 DIN A, single, specified accuracy -50...400°C	7				
Pt1000, 1/3 DIN B, single, specified accuracy -50...400°C	A				
Pt1000, 1/1 DIN B, single, specified accuracy -50...400°C	B				
Housing	10' digit				
No housing	0				
ø80 mm stainless steel housing, Note {1}	2				
DIN B head with cover and M20 gland	5				
Cable gland	11' digit				
specified or std. DIN B head selected in the previous choice	0				
ø80 mm housing: 1 off M20 x 1.5 adaptor and 1 off blind plug (no gland incl.)	5				
ø80 mm housing: 2 off M20 x 1.5 adaptor (no gland incl.)	6				
ø80 mm housing: 2 off blind plugs	7				
ø80 mm housing: 1 off M16 gland and 1 off blind plug	A				
ø80 mm housing: 2 off M16 gland	B				
ø80 mm housing: 1 off M16 with shield connection terminal and 1 off blind plug	C				
DIN B head: 1 off M20 gland for marine applications	D				
As customer specification	S				
Cover or display	12' digit				
Not specified	0				
Cover for ø80 mm housing	1				
Display, Note {2}	2				
Terminal block or transmitter	13' digit				
Not specified	0				
Ceramic terminal block	1				
Transmitter, Note {2}	2				
Assembling	14' digit				
Not specified	0				
Assembled, process connection at the base	1				
Assembled, process connection at the rear (ø80 mm housing only)	2				
Welded, process connection at the base	3				
Welded, process connection at the rear (ø80 mm housing only)	4				
Certificates	15' digit				
Not specified	0				
Material 3.1.b (EN 10204)	1				
Calibration certificate	2				
Material 3.1.b (EN 10204) and calibration certificate	3				
Tip length (T)	16...19' digit				
Sensor 20 mm.					0020
Sensor 25 mm.					0025
As customer specification (Max. 25 mm)					XXXX

Notes:

- {1} Assembling is mandatory.
 {2} Refer to data sheet. Specify separate type number and configuration.