Pyropress Temperature Measuring System

Flexible building block concept

All wetted parts in acid-proof, stainless steel

Pt100 or Pt1000 sensors, 2- or 4-wire

DIN A or B (1/1, 1/3, 1/6) elements

Sensor tubes

Cable sensors

Flush mounted surface sensor

ø80 mm stainless steel housing

DIN head, form B

Hygienic connections

Standard or fast response time

Display and 4...20 mA transmitter

(Standard and Ex versions)

Description

CombiTemp comprises a series of basic elements which can be combined to various temperature sensors and transmitters. The system includes 4-wire Pt100 cable sensors.

Being a building block system CombiTemp offers a great flexibility in respect to modification, service and maintenance.

A wide range of process connections according to national and international standards, sensor elements and transmitters, can be selected to meet the actual requirements.

The parts can be assembled by the user or delivered assembled and calibrated, if relevant.

Provided an 80 mm dia. housing is used, options are also a 4...20 mA configurable display or, for stand alone indicating purposes, a battery powered display.

CombiTemp is particularly suitable for use in food, beverage, pharmaceutical and chemical industries.

A complete temperature sensor can be ordered on one type number. Please refer to CombiTemp Accessories data sheet for a comprehensive range of accessories.

Please refer to the separate data sheets for information and ordering details for transmitters and displays.

Technical Data

Environmental conditions

Media temperature, std.	-50...400°C
Surface sensor	-40...150°C
Ambient temperature	-40...160°C
(or max. temperature range for display/transmitter)	
Humidity	< 100% RH, condensing
(or max. humidity for display/transmitter)	
Protection class	DIN housing IP 65
	ø80 mm housing IP 65 + IP 66
Vibrations	GL, test 2
	(sensor tubes < 200 mm only)

Disposal of product and packing

According to national laws or by returning to Bourdon-Haenni

Sensor tube and connection

Material	Acid-proof, stainless steel
	(AISI 316L/W.1.4404)
Media pressure	Max. 16 bar
Time constant $t_{0.5}$	See table below
Mechanical tolerances	ISO 2768-m

Sensor element

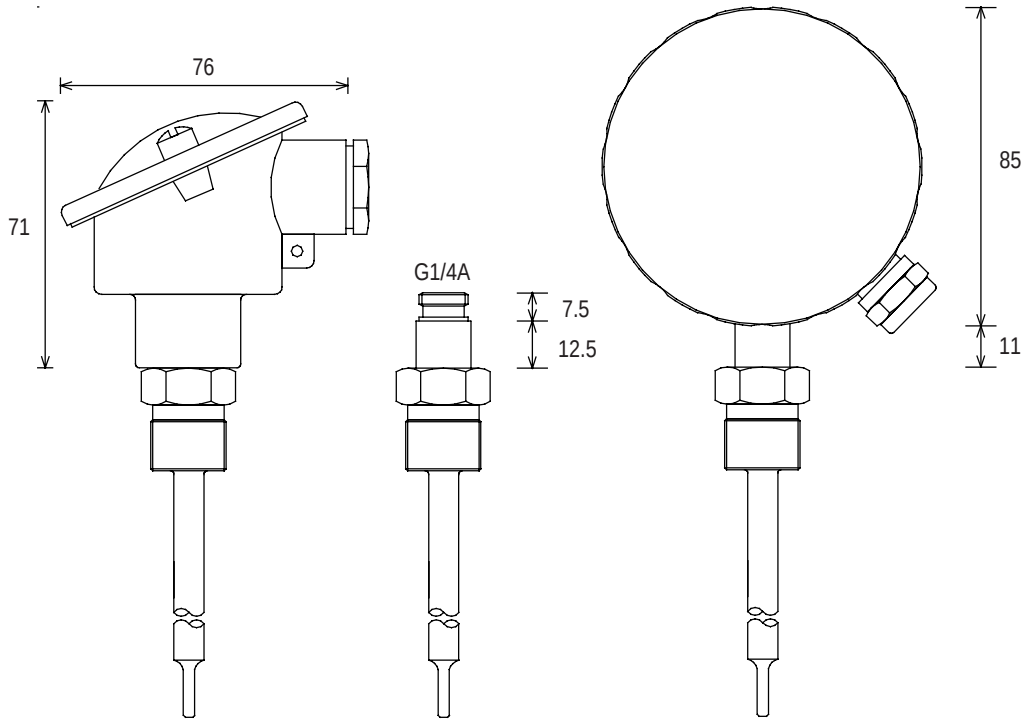
Sensor type	Pt100, Class A or B
	Pt1000, Class B
Accuracy	DIN/EN/IEC 60751
1/1 DIN B:	±(0.3 + 0.005 x t) °C
1/3 DIN B:	±1/3 x (0.3 + 0.005 x t) °C
1/6 DIN B:	±1/6 x (0.3 + 0.005 x t) °C
1/1 DIN A:	±(0.15 + 0.002 x t) °C

Time Constant $\tau_{0.5}$

Sensor type			Liquids	Air	
Dimension	**Response**	**Insert**	**0.4 m/sec.**	**3 m/sec.**	**0 m/sec.**
ø6 mm tube	fast		< 1.5 sec.	< 21.4 sec.	< 135.6 sec.
ø8 mm tube	fast		< 1.5 sec.	< 33.6 sec.	< 181.0 sec.
ø10 mm tube	fast		< 1.5 sec.	< 46.8 sec.	< 238.9 sec.
ø12 mm tube	fast		< 1.5 sec.	< 59.9 sec.	< 311.4 sec.
ø6 mm tube	normal		< 6.1 sec.	< 27.2 sec.	< 137.8 sec.
ø8 mm tube	normal		< 7.6 sec.	< 47.7 sec.	< 200.9 sec.
ø10 mm tube	normal		< 11.1 sec.	< 57.8 sec.	< 270.6 sec.
ø12 mm tube	normal		< 16.2 sec.	< 70.8 sec.	< 319.8 sec.
ø8 mm tube	normal	5.6 mm	< 13.6 sec.	< 51.1 sec.	< 253.1 sec.
ø10 mm tube	normal	5.6 mm	< 28.1 sec.	< 67.0 sec.	< 271.1 sec.
ø12 mm tube	normal	5.6 mm	< 31.3 sec.	< 82.3 sec.	< 289.3 sec.
Surface sensor, flush mounted		---	< 1.0 sec.	---	---

Dimensional Drawings - Mounting Details

[mm]



Male Nipple G1/2A
mounted on DIN B housing

Male Nipple G1/2A

Male Nipple G1/2A
mounted on ø80 mm housing