

FLTSN-PXXXP

Passive temperature probe

Description

FLTSN-PXXXP are passive temperature probes (Resistance Temperature Detectors, RTDs) that measure temperature by detecting changes in the electrical resistance of a material. They have a positive linear temperature coefficient of resistance: when the temperature increases, the resistance increases proportionally.

The passive temperature probes FLTSN-PXXXP provide the following benefits:

- **Stability:** Accurate and reliable temperature measurements due to the platinum sensing element.
- **Robustness:** The sensing element is coated with a waterproof acrylic coating and enclosed in an Acrylonitrile Butadiene Styrene (ABS) plastic tube.
- **Easy to use:** Simple two-wire connection.

Combining simplicity and reliability, the FLTSN-PXXXP passive temperature probes can be implemented effortlessly in a wide range of HVAC applications.

Key Features

- Positive linear temperature coefficient
 - Enhanced readability of temperature changes
 - Relatively constant change of resistance per degree
 - No calibration required
 - Suitable for various applications
- Tinned connections
 - Improved solderability
 - Prevention of fraying of stranded wires
 - Reduced corrosion
- Cable sheath
 - Colour: white
- Plastic tube
 - Colour: black
 - Material: ABS (Acrylonitrile Butadiene Styrene) plastic
- Sensing element characteristics
 - Coated in acrylic and enclosed in a plastic tube
 - Standardised characteristics according to IEC 60751
 - Fast response time: $t_{0,9} \leq 5$ s (flowing air, 3 m/s)
 - Outstanding stability of temperature characteristic

Technical Specifications

Temperature coefficient (0–100°C) [ppm/K]	3850
Long-term stability [%]	$< \pm 0,04$
Flying leads length [m]	1
Flying leads cross section [mm ²]	0,5
Operating temperature [°C]	-20–60
Operating relative humidity [% rH]	< 95
Ingress protection	IP65

Area of Use

- Temperature measurement in HVAC applications
- Indoor and outdoor applications

Standards

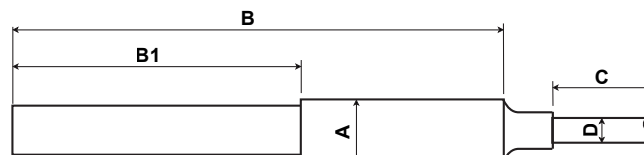
- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility (EMC) Directive 2014/30/EU
- WEEE Directive 2012/19/EU
- Commission Delegated Directive (EU) 2015/863 (RoHS 3) of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances



Article Codes

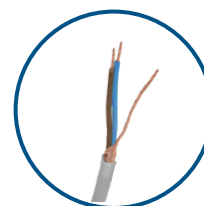
Article code	Cable length	PTC
FLTSN-P500P100	1 m	PT500
FLTSN-P500P400	4 m	
FLTSN-P500P800	8 m	
FLTSN-P500P1K6	16 m	
FLTSN-P1K0P100	1 m	PT1000

Fixing and Dimensions



Article code	A1	A	B1	B	C	D
FLTSN-P500P100	8 mm	9 mm	53 ± 2 mm	89 mm	1 m	4 mm
FLTSN-P1K0P100					4 m	
FLTSN-P500P400					8 m	
FLTSN-P500P800					16 m	
FLTSN-P500P1K6						

Wiring and Connections

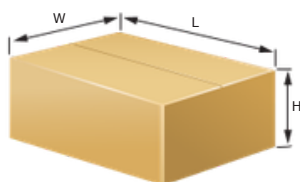


Cable	Function
Blue	Sensing element.
Brown	
Shield	Braided shield to reduce the impact of electromagnetic interference affecting sensor measurements.
Cable characteristics	
2-pole stranded wire, shielded, tinned connections, cable cross-section: 0,5 mm ²	

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Packaging



Article code	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight [kg]	Gross weight [kg]
FLTSN-P500P100	Unit (1 pc.)	-	-	-	0,04	0,04
	Carton (24 pcs.)	492	182	84	0,96	1,96
	Box (144 pcs.)	590	380	280	5,76	12,68
FLTSN-P500P400	Unit (1 pc.)	200	150	25	0,16	0,16
	Carton (10 pcs.)	492	182	84	1,60	1,79
	Box (60 pcs.)	9,60	11,73	590	380	280
FLTSN-P500P800	Unit (1 pc.)	270	190	30	0,32	0,32
	Carton (8 pcs.)	492	182	84	2,56	2,73
	Box (48 pcs.)	590	380	280	15,36	17,35
FLTSN-P500P1K6	Unit (1 pc.)	270	190	40	0,64	0,64
	Carton (4 pcs.)	492	182	84	2,56	2,72
	Box (24 pcs.)	590	380	280	15,36	17,30
FLTSN-P1K0P100	Unit (1 pc.)	-	-	-	0,04	0,04
	Carton (24 pcs.)	492	182	84	0,86	1,11
	Box (144 pcs.)	590	380	280	5,18	7,58

Resistance values

T [°C]	PT500 resistance [Ω]	PT1000 resistance [Ω]	Class F 0,3*
			Tolerance [°C]
-20	460,80	921,60	±0,40
-15	470,62	941,24	±0,38
-10	480,43	960,86	±0,35
-5	490,22	980,44	±0,33
0	500	1000	±0,30
5	509,76	1019,53	±0,33
10	519,51	1039,03	±0,35
15	529,25	1058,49	±0,38
20	538,97	1077,94	±0,40
25	548,67	1097,35	±0,43
30	558,36	1116,73	±0,45
35	568,04	1136,08	±0,48
40	577,70	1155,41	±0,50
45	587,35	1174,70	±0,53
50	596,99	1193,97	±0,55
55	606,60	1213,21	±0,58
60	616,21	1232,42	±0,60

Note: The table above shows the electrical resistance of Sentera's PT500 and PT1000 temperature probes at different temperatures. For example, at 0 °C, PT500 has a resistance of 500 Ω and PT1000 of 1000 Ω.

*Class F 0,3 tolerance according to IEC 60751, specifies the accuracy (tolerance) of the sensing element.

Global Trade Item Numbers (GTIN 14)

Article code	Unit	Carton	Box
FLTSN-P500P100	5401003019016	5401003303023	5401003504468
FLTSN-P500P400	-	-	-
FLTSN-P500P800	-	-	-
FLTSN-P500P1K6	-	-	-
FLTSN-P1K0P100	5401003019023	5401003303023	5401003504475

