

Office:
 Bulgaria, 4023 Plovdiv, 3 Osvobojdenie Blvd., SPS complex, office 221
 Phone: +359 32 681-744, Fax: +359 32 647-700
 E-mail: vector1@infotel.bg www.vector1.bg



TEMPERATURE SENSORS

The temperature sensors produced from VECTOR 1 Ltd. are used for measurement in range (-50 ... 1100) °C and are 2 types - resistance thermometers or thermocouples.

Resistance thermometers are with Pt 100 sensitive element, class B (DIN EN 60751) and are used in range (-50 ... 600) °C.

Thermocouples are 2 types - type J (Fe-CuNi) for t° = (0 ... 600) °C and type K (Ni-CrNi) for t° = (0 ... 1100) °C

- Depending on construction type the sensors are:
- with extension cables
 - temperature inserts
 - with protection heads

1. PROBES WITH EXTENSION CABLE

The sensors sheaths are made from stainless steel № 14571.

The length of active part L1 = (50 ... 500) mm.

The length of extension cable L2 = (5 cm ... 20 m).

The active part diameter d = 5, 6 or 8 mm.

Number of used wires n = 2, 3 or 4.

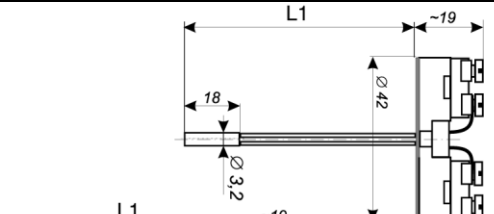
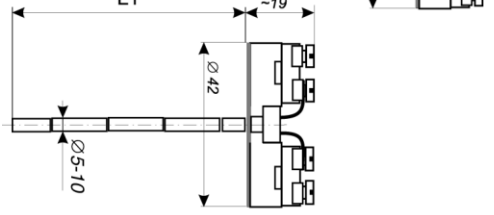
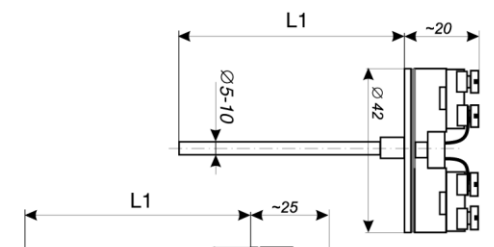
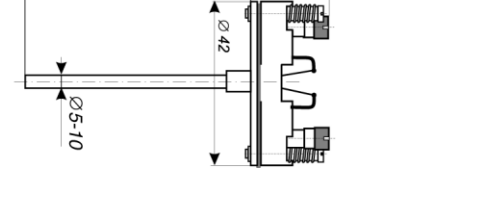
№	Construction	Range [°C]	Type	Cable (2 x 0.22) mm ²
1.		-50 ... +200 -50 ... +80 0 ... +400	Pt100 Pt100 TC type J,K	with silicone rubber insulation with PVC insulation with glass fibre insulation
2.		-50 ... +200 -50 ... +80 0 ... +400	Pt100 Pt100 TC type J,K	with silicone rubber insulation with PVC insulation with glass fibre insulation
3.		-50 ... +200 -50 ... +80	Pt100 Pt100	with silicone rubber insulation with PVC insulation
4.		0 ... +400	TC type J,K	with glass fibre insulation

<p>5.</p>		<p>-50 ... +200</p>	<p>Pt100</p>	<p>with silicone rubber insulation</p>
<p>6.</p>		<p>-50 ... +80</p>	<p>Pt100</p>	<p>with PVC insulation</p>
<p>7.</p>		<p>0 ... +400</p>	<p>TC type J,K</p>	<p>with glass fibre insulation</p>
<p>8.</p>		<p>-50 ... +200</p>	<p>Pt100</p>	<p>with silicone rubber insulation</p>
<p>9.</p>				

2. TEMPERATURE INSERTS

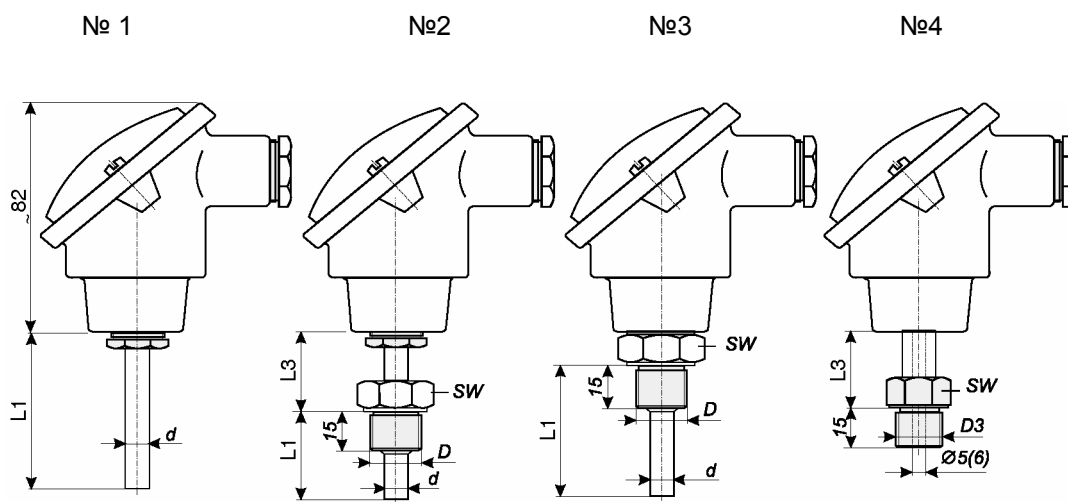
The exposed below inserts are with ceramic base. The sheath of inserts 2, 5, 7 and 6 are from stainless steel № 14571.

№	Construction	Range [°C]	Type	Cables
<p>1.</p>		<p>-50 ... +400</p>	<p>Pt100</p>	<p>Cu 0.5 mm² with glass fibre insulation</p>
<p>2.</p>		<p>-50 ... +600</p>	<p>Pt100</p>	<p>Special 0.5 mm² with glass fibre insulation</p>
		<p>0 ... +600</p>	<p>TC type J</p>	<p>(Fe-CuNi) 0.5 mm² with glass fibre insulation</p>

3.		-50 ... +400	Pt100	Cu 0.5 mm ² with glass fibre insulation
4.		-50 ... +600	Pt100	Special 0.5 mm ² with glass fibre insulation
5.		0 ... +400	TC type J	(Fe-CuNi) 0.5 mm ² with glass fibre insulation
6.		0 ... +800	TC type K	Ni-CrNi (0.5 – 1.38) mm ² with glass fibre insulation

3. SENSORS WITH PROTECTION HEAD

Active part of sensors sheaths is made from stainless steel № 14571, and protection head is from aluminium with varnish protection.



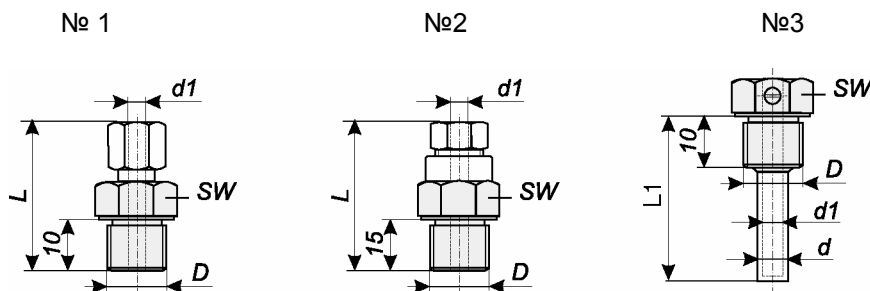
Diameter d (mm): 5, 6, 8, 10, 12, 16, 20

Thread: M10 x 1.5; M12 x 1.75; M16 x 2; M20 x 2.5; M24 x 3; M27 x 3;

G 1/2"; G3/4"; M16 x 1.5; M20 x 1.5

4. ACCESSOIRES FOR PROBES WITH EXTENSION CABLE

These accessories are nipples for mounting of probes with extension cable. They are made from stainless steel № 14571 and are used for mounting convenience by specific requirements of client.



Nipples dimensions::

DIMENSIONS	D1	D2	D3	D4	D5	D6	D7
Construction №	1		2		3		
Thread	M 8x1	G 1/4 "	G 1/4"	G 1/2"	G 1/4"	G 1/2"	G 3/4"
Hexagon nut	SW 12	SW 19	SW 19	SW 27	SW 19	SW 19	SW 19
L (mm)	30	40	40	70	50 ... 300	50 ... 300	50 ... 300

ORDER CODE FOR TEMPERATURE PROBES:

VST X - XX - X - X - XXX - X - X - XXX - X
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

(1) Sensor type

- Probe with extension cable 1
- Temperature insert 2
- Sensor with protection head 3

(2) Construction

It is the construction number for selected type of sensor

(3) Measurement range

- 50 ... +80 1
- 50 ... +200 2
- 50 ... +400 3
- 50 ... +600 4
- 0 ... +400 5
- 0 ... +800 6
- 0 ... +1100 7

(4) Type of sensitivity element

- Pt 100 1
- Fe-CuNi 2
- Ni-CrNi 3

(5) Length L1 (mm)

It is the length of active part of probe.

(6) Diameter d (mm)

It is the diameter of active part of probe.
d = 5, 6, 8,10 , 12, 14, 16, 20 mm.

(7) Cable type

Apply to probes with extension cable.

Cable with PVC insulation	1
Cable with silicone rubber insulation	2
Cable with compensation wire (only for thermocouples)	3

(8) Cable length L2 (cm)

Apply to probes with extension cable

It is the cable length from 5 cm to 20 m.

(9) Dimmensions of screw sockets D

Apply to sensors with screw sockets.

It is the type of thread.

ORDERING EXAMPLES:

Example 1: VST 1 - 02 - 2 - 1 - 080 - 5 - 2 - 150

This is probe with extension cable, without mounting accessoire,
construction № 2, range (-50 ... +200)°C, sensitive element is Pt 100, length L1 = 80 mm,
diameter d = 5 mm, cable with silicone rubber insulation, cable length 150 cm.

Example 2: VST 3 - 3 - 7 - 3 - 450 - 20 - G ¾"

This is probe with protection head, construction № 3, range (0 ... +1100)°C, sensitive element is
thermocouple type K (Ni-CrNi), operating length L1 = 450 mm, diameter d = 20 mm, screw G3/4".

REMARK:

**On customer request are produced probes with different constrictions,
temperature ranges and sensitivity elements.**