

Type 02807,02808



Description - use

The sensors are designed for temperature measuring. The sensor signal can be evaluated for temperature measuring registration or signalisation. Sensor **STSs Pt** forms a sensor Pt in stainless stem with outlets terminates in the head. The sensor with screwing is assembled directly in the weld-on-piece, design without screws is designed to well **Je**.

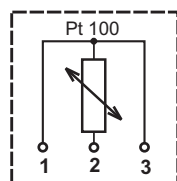
Temperature sensor **STSs Ni** comprises of measuring resistance Ni, its construction complies with the platinum sensor.

Sensor **STSs/I** comprises of measuring resistance Pt100 and contains current converter.

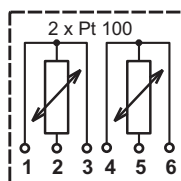
The extension length must be selected considering the permitted terminal block heating and potentially the applied converter.

Sensor connection

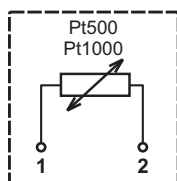
STSs.Pt



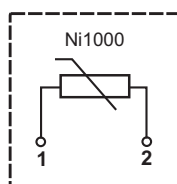
design 1x Pt100



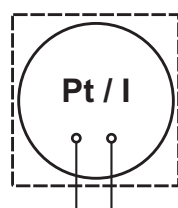
design 2x Pt100



STSs. Ni



STSs/I



4 ÷ 20 mA unipolar

Temperature sensors with terminal block STSs (Pt,Ni) and STSs/I

- with terminal block
- with terminal block and current output

Characteristics

STSs Pt

- sensor Pt 100, 2xPt100 3-wire connection
- sensor Pt 500, Pt 1000, 2-wire connection

STSs Ni

- sensor Ni 1000, 2-wire connection

STSs/I

- current output 4-20 mA

They are connected by means of terminal block in the head.

Technical data

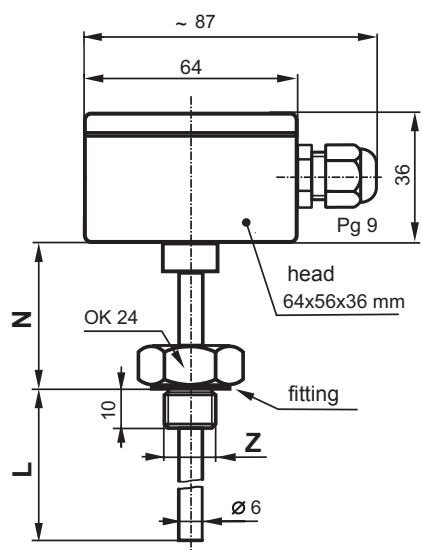
| | |
|-----------------------------|---|
| Sensor: | STSs Pt: 1x Pt 100, 2x Pt 100 Pt 500, Pt 1000 |
| | STSs Ni: Ni 1000 |
| Measuring range: | STSs Pt: -40 to +200°C, STSs Ni: -40 to +180°C |
| Measuring current: | 1 mA |
| Temperature coefficient: | Ni: 5 000, 6 180 ppm/K |
| Tolerance class: | Pt: B according to ČSN EN 60751 |
| Time stability: | 0,05 % (10 000 hour) |
| Terminal block temperature: | -30 to +80°C |

Sensors with converter STSs/I

| | |
|----------------------------------|------------------------------------|
| Sensor: | Pt100 |
| Measuring ranges: | -40°C to +200°C in 3 ranges |
| Current output: | 4-20 mA, passive, unipolar |
| Voltage: | 10 ÷ 36 V DC |
| Max current in the loop: | 34 mA (during sensor interruption) |
| Accuracy: | 1 % from measuring range |
| Converter operating temperature: | -25°C to +75°C |

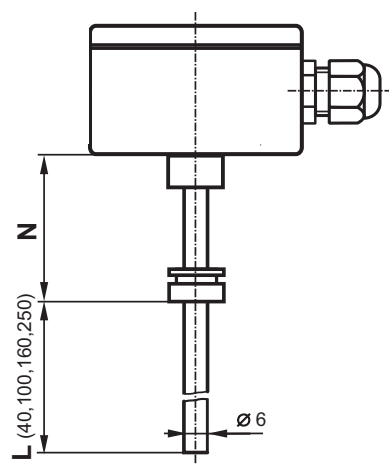
| | |
|---------------------|--|
| Connection: | cable: Ø 3.5 ÷ 8 mm wire: 0,75 mm² |
| Mounting: | into the weld-on-piece, into well |
| Time factor: | without well: water 8 s, air 45 s with well Je : water 35 s |
| Max. overpressure: | without well: 4 MPa/100°C, 3,1 MPa/180°C with well: 4 MPa/180°C |
| Ingress protection: | IP 65 |

Dimension drawing



Material: Stem and screwing from stainless steel 1.4541
Accessories: sealing washer.

Sensors STSs .. with screwing into the weld-on-piece.



Sensors STSs .. into well Je.

Ordering devices

| Code | Name |
|------------|---|
| 40 02807 9 | Temperature sensor with terminal block STSs |
| Code | Measuring resistance |
| 0 | 1x Pt100 |
| 1 | Pt 500 |
| 2 | 2 x Pt 100 |
| 3 | Pt 1000 |
| 4 | Ni 1000, 5000 ppm/K |
| 5 | Ni 1000, 6180 ppm/K |
| Code | Extension N [mm] |
| 1 | 37 |
| 2 | 100 |
| Code | Thread Z |
| 0 | no thread *) |
| 1 | G 1/4 |
| 2 | M 12 x 1,5 |
| 3 | G 1/2 |
| 4 | M 20 x 1,5 |
| Code | Stem L |
| 03 | 30 mm |
| 04 | 40 mm |
| 10 | 100 mm |
| 16 | 160 mm |
| 25 | 250 mm |

*) Sensors STSs without thread (to well) made only with stem from 40mm and more!

Order example: 1 temperature sensor, type 02807 (STSs), Pt500, extension 37 mm, thread G1/2, stem 100mm

| Code | Name |
|------------|---|
| 40 02808 9 | Temperature sensor with terminal block STSs/I |
| Code | Range |
| 3 | -40 to +60°C |
| 4 | 0 to +100°C |
| 5 | 0 to +200°C |
| Code | Extension N [mm] |
| 1 | 37 |
| 2 | 100 |
| Code | Thread Z |
| 0 | no thread *) |
| 1 | G 1/4 |
| 2 | M 12 x 1,5 |
| 3 | G 1/2 |
| 4 | M 20 x 1,5 |
| Code | Stem L |
| 03 | 30 mm |
| 04 | 40 mm |
| 10 | 100 mm |
| 16 | 160 mm |
| 25 | 250 mm |

*) Sensors STSs without thread (to well) made only with stem from 40mm and more!

Order example: 1 temperature sensor, type 02808 (STSs/I), range 0-100°C, extension 37 mm, thread, G1/2, stem 100mm

Type 02811, 02812



Description - use

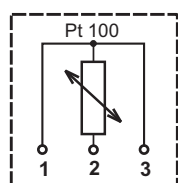
The sensors are designed for temperature measuring. The sensor signal can be evaluated for temperature measuring registration or signalisation. Sensor **STSk** comprises of sensor Pt embedded in copper casing and connected by silicone cable with terminal block in metal case. Embedded sensor casing is mounted in the well **Je** by means of **plastic clamping insert** (see Accessories), the case with the terminal block is mounted on the wall or the panel.

Temperature sensor **STSk Ni** comprises of sensor Ni, its mechanical construction complies with the Pt sensor.

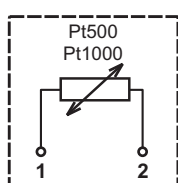
Design of **STSk/I** comprises of the sensor Pt100 and current converter in the case.

The sensors are supplied with the cable of various lengths.

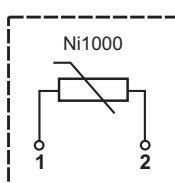
Terminal connection



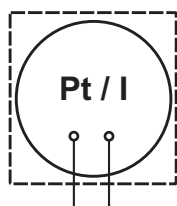
STSk Pt



STSk Ni



STSk/I



4 ÷ 20 mA (10 ÷ 36 V),
unipolar

Temperature sensor with terminal block and ca- ble outlet STSk (Pt,Ni) and STSk/I

- with terminal block and cable outlet
- with terminal block, cable outlet and current output

Characteristics

STSk Pt

- sensor Pt 100, 3-wire connection
- sensor Pt 500, Pt 1000, 2-wire connection

STSk Ni

- sensor Ni 1000, 2-wire connection

STSk/I

- current output 4-20 mA

They are connected by means of terminal block in the case.

Technical data

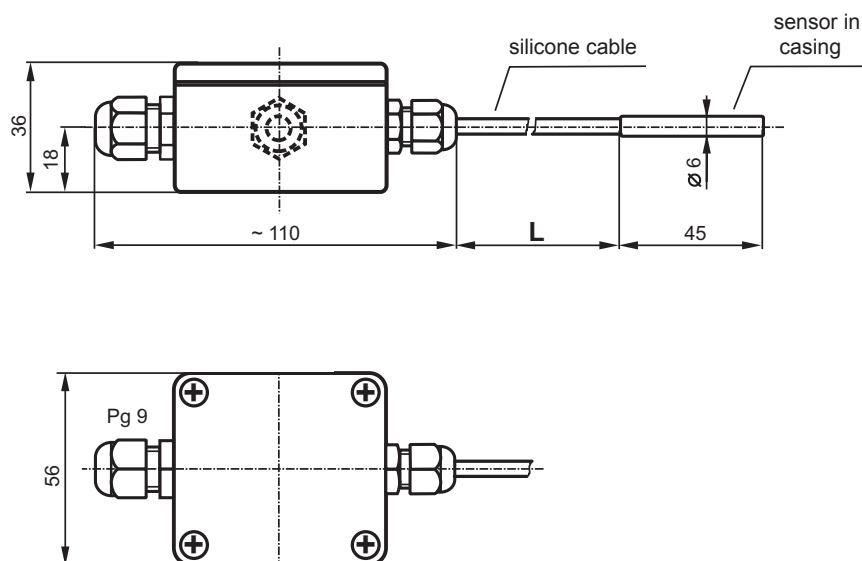
| | |
|-----------------------------|--|
| Sensor: | STSk Pt: Pt 100, Pt 500, Pt 1000 STSk Ni: Ni 1000 |
| Measuring range: | -40 to +180°C |
| Measuring current: | 1 mA |
| Temperature coefficient: | Ni: 5 000, 6 180 ppm/K |
| Tolerance class: | Pt: B according to ČSN EN 60751 |
| Time stability: | 0,05 % (10 000 hour) |
| Terminal block temperature: | -30 to +80°C |

Sensors with converter STSk/I

| | |
|----------------------------------|------------------------------------|
| Sensor: | Pt100 |
| Measuring ranges: | -40°C to +180°C in 3 ranges |
| Current output: | 4-20 mA, passive, unipolar |
| Voltage: | 10 ÷ 36 V DC |
| Max current in the loop: | 34 mA (during sensor interruption) |
| Accuracy: | 1 % from measuring scope |
| Converter operating temperature: | -25°C to +75°C |

| | |
|---------------------|--|
| Connection: | cable: Ø 3.5 ÷ 8 mm wire: 0,75 mm ² |
| Mounting: | without well, into the well |
| Time factor: | without well: water 8 s, air 45 s with well Je : water 35 s |
| Ingress protection: | IP 65 |

Dimension drawing



Materiál: sensor casing - Cu, cable - silicone, case - alloy Al

Ordering devices

| Code | Name |
|------------|-----------------------------|
| 40 02811 9 | ST with terminal block STSk |
| Code | Measuring resistance |
| 00 | Pt100 |
| 20 | Pt 500 |
| 30 | Pt 1000 |
| 40 | Ni 1000, 5000 ppm/K |
| 50 | Ni 1000, 6180 ppm/K |
| Code | Cable L [m] |
| 016 | 1,6 |
| 025 | 2,5 |
| 040 | 4,0 |
| 060 | 6,0 |

| | | | |
|------------|----|-----|-------------|
| 40 02811 9 | 00 | 016 | Ordered No. |
|------------|----|-----|-------------|

Order example: 1 temperature sensor, type 02811 (STSk), Pt100, cable length 1.6 m

| Code | Name |
|------------|-------------------------------------|
| 40 02812 9 | ST with terminal block cable STSk/I |
| Code | Range |
| 30 | -40 to +60°C |
| 40 | 0 to +100°C |
| 50 | 0 to +200°C |
| Code | Cable L [m] |
| 016 | 1,6 |
| 025 | 2,5 |
| 040 | 4,0 |
| 060 | 6,0 |

| | | | |
|------------|----|-----|-------------|
| 40 02812 9 | 40 | 025 | Ordered No. |
|------------|----|-----|-------------|

Order example: 1 temperature sensor, type 02812 (STSk/I), range 0-100°C, cable length 2,5 m

Type 02809, 02810



Description - use

The sensors are designed for temperature measuring. The sensor signal can be evaluated for temperature measuring registration or signalisation. Temperature sensor outdoor **STSV Pt** comprises of sensor Pt in copper stem with terminal block in metal case. Sensor STSV is fitted on the facility wall. It is suitable also for measuring internal temperatures where high ingress protection is required with high mechanical resistance.

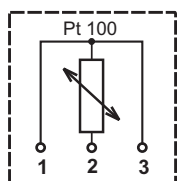
Temperature sensor **STSV Ni** comprises of sensor Ni, its mechanical construction complies with the Pt sensor.

Economy design of **STSVu** (sensor inside the case) is available with increased mechanical resistance.

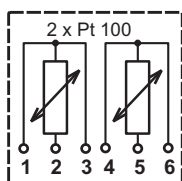
Sensor **STSV/I** comprises of sensor Pt 100 and current converter in a case.

Terminal connection

STSV (STSVu) Pt

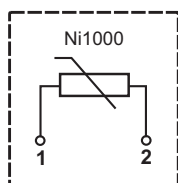


design 1x Pt100

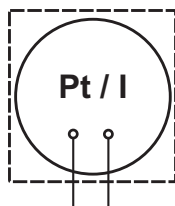


design 2x Pt100

STSV (STSVu) Ni



STSV/I



4 ÷ 20 mA (10 ÷ 36 V),
optional polarity

Temperature sensor with terminal block outdoor STSV and STSVu (Pt,Ni), STSV/I

- with terminal block outdoor
- with terminal block outdoor - simple
- with terminal block outdoor and current output

Characteristics

STSV (STSVu) Pt

- sensor 1x Pt 100, 2x Pt100, 3-wire connection
- sensor Pt 500, Pt 1000, 2-wire connection

STSV (STSVu) Ni

- sensor Ni 1000, 2-wire connection

STSV/I

- current output 4-20 mA

They are connected by means of terminal block in the case.

Technical data

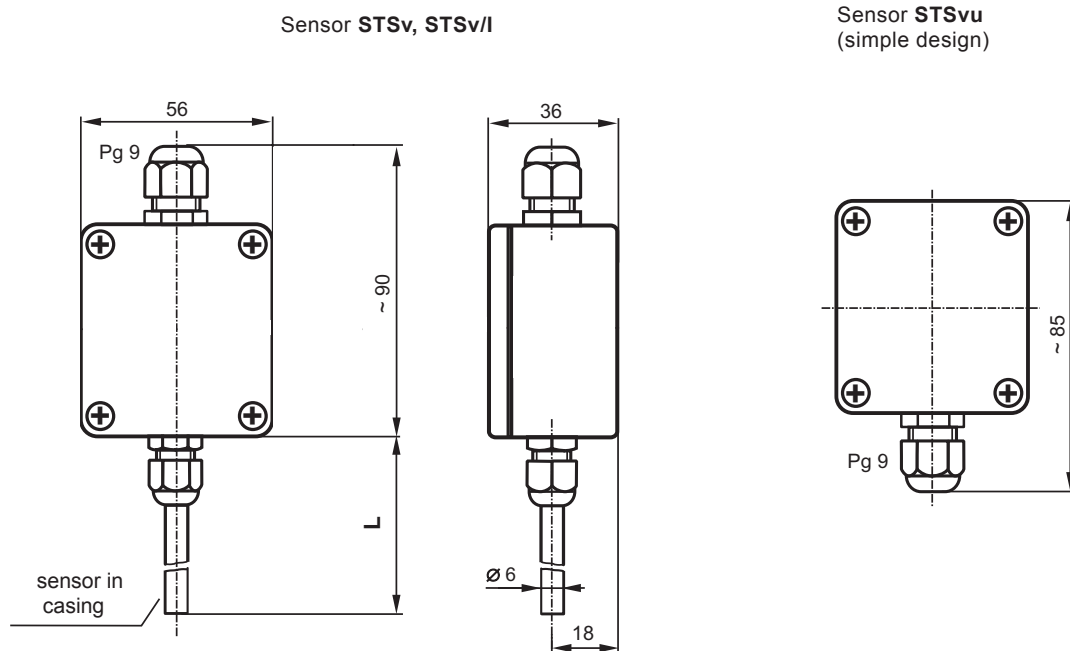
| | |
|--------------------------|--|
| Sensor: | STSV (STSVu) Pt: 1x or 2x Pt 100 Pt 500, Pt 1000 |
| | STSV (STSVu) Ni: Ni 1000 |
| Case temperature: | -30 to +80°C -30 to +120°C (metal outlets) |
| Measuring current: | 1 mA |
| Temperature coefficient: | Ni: 5 000, 6 180 ppm/K |
| Tolerance class: | Pt: B according to ČSN EN 60751 |
| Time stability: | 0,05 % (10 000 hour) |

Sensors with converter STSV/I

| | |
|----------------------------------|------------------------------------|
| Sensor: | Pt 100 |
| Measuring ranges: | -20°C to +50°C in 2 ranges |
| Current output: | 4-20 mA, passive, unipolar |
| Voltage: | 10 ÷ 36 V DC |
| Max current in the loop: | 34 mA (during sensor interruption) |
| Accuracy: | 1 % from measuring range |
| Converter operating temperature: | - 25°C to +75°C |

| | |
|---------------------|---|
| Connection: | cable: Ø 3.5 ÷ 8 mm wire: 0,75 mm ² |
| Mounting: | to wall |
| Time factor: | air: 45 s (240 s STSVu) |
| Ingress protection: | IP 65 |

Dimension drawing



L: 20 mm - STSv
80 mm - STSv/I

Material: sensor casing - Cu, box - alloy Al,
design up to 120°C - metal glands

Ordering device

| Code | Name | | | | | | | | | | | | | | |
|------------|---|------|----------------------|----|------------|----|----------------|----|--------|----|---------|----|---------------------|----|---------------------|
| 40 02809 9 | ST with terminal block outdoor STSv, STSvu | | | | | | | | | | | | | | |
| | <table> <tr> <th>Code</th><th>Measuring resistance</th></tr> <tr> <td>01</td><td>Pt 100</td></tr> <tr> <td>11</td><td>2 x Pt100</td></tr> <tr> <td>21</td><td>Pt 500</td></tr> <tr> <td>31</td><td>Pt 1000</td></tr> <tr> <td>41</td><td>Ni 1000, 5000 ppm/K</td></tr> <tr> <td>51</td><td>Ni 1000, 6180 ppm/K</td></tr> </table> | Code | Measuring resistance | 01 | Pt 100 | 11 | 2 x Pt100 | 21 | Pt 500 | 31 | Pt 1000 | 41 | Ni 1000, 5000 ppm/K | 51 | Ni 1000, 6180 ppm/K |
| Code | Measuring resistance | | | | | | | | | | | | | | |
| 01 | Pt 100 | | | | | | | | | | | | | | |
| 11 | 2 x Pt100 | | | | | | | | | | | | | | |
| 21 | Pt 500 | | | | | | | | | | | | | | |
| 31 | Pt 1000 | | | | | | | | | | | | | | |
| 41 | Ni 1000, 5000 ppm/K | | | | | | | | | | | | | | |
| 51 | Ni 1000, 6180 ppm/K | | | | | | | | | | | | | | |
| | <table> <tr> <th>Code</th><th>Case temperature</th></tr> <tr> <td>00</td><td>up to 80°C</td></tr> <tr> <td>03</td><td>up to 120°C</td></tr> </table> | Code | Case temperature | 00 | up to 80°C | 03 | up to 120°C | | | | | | | | |
| Code | Case temperature | | | | | | | | | | | | | | |
| 00 | up to 80°C | | | | | | | | | | | | | | |
| 03 | up to 120°C | | | | | | | | | | | | | | |
| | <table> <tr> <th>Code</th><th>Design</th></tr> <tr> <td>1</td><td>STSv</td></tr> <tr> <td>2</td><td>STSvu - simple</td></tr> </table> | Code | Design | 1 | STSv | 2 | STSvu - simple | | | | | | | | |
| Code | Design | | | | | | | | | | | | | | |
| 1 | STSv | | | | | | | | | | | | | | |
| 2 | STSvu - simple | | | | | | | | | | | | | | |
| 40 02809 9 | 01 00 1 Ordered No. | | | | | | | | | | | | | | |

Order example: 1 temperature sensor, type 02809
(STSv), Pt100, to 80°C

| Code | Name | | | | | | | | |
|--------------|--|------|-------|-----|--------------|-----|------------|-----|--------------|
| 40 02810 901 | ST with terminal block outdoor STSv/I | | | | | | | | |
| | <table> <tr> <th>Code</th><th>Range</th></tr> <tr> <td>030</td><td>-20 to +30°C</td></tr> <tr> <td>050</td><td>0 to +50°C</td></tr> <tr> <td>060</td><td>-40 to +60°C</td></tr> </table> | Code | Range | 030 | -20 to +30°C | 050 | 0 to +50°C | 060 | -40 to +60°C |
| Code | Range | | | | | | | | |
| 030 | -20 to +30°C | | | | | | | | |
| 050 | 0 to +50°C | | | | | | | | |
| 060 | -40 to +60°C | | | | | | | | |
| 40 02810 901 | 050 Ordered No. | | | | | | | | |

Order example: 1 temperature sensor, type 02810
(STSv/I), range 0-50°C

Type 02813, 02814



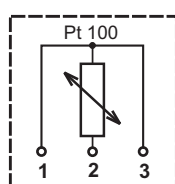
Description - use

The sensors are designed for temperature measuring. The sensor signal can be evaluated for temperature measuring registration or signalisation. Temperature sensor **STSp Pt** is designed for contact temperature measuring on metal piping with flowing substance. The sensor comprises of sensor Pt embedded in plastic material to the location designed for contact temperature measuring. The sensor outlets are terminated by terminal block in the connecting head. The sensor is attached on the piping by means of metal tape.

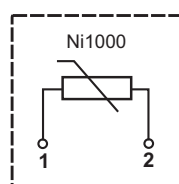
Temperature sensor **STSp Ni** comprises of sensor Ni, its construction complies with the Pt sensor.

Design of **STSp/I** comprises of the sensor Pt100 and current converter in the head.

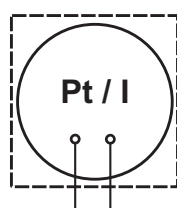
Terminal connection



STSp Pt



STSp Ni



STSp/I

4 ÷ 20 mA (10 ÷ 36 V),
unipolar

Temperature sensor with terminal block for contact measurements STSp (Pt,Ni) and STSp/I

- with terminal block
- with terminal block and current output

Characteristics

STSp Pt - sensor Pt 100, 3-wire connection

STSp Ni - sensor Ni 1000, 2-wire connection

STSp/I - current output 4-20 mA

Compact design.

They are connected by means of terminal block in the head.

Technical data

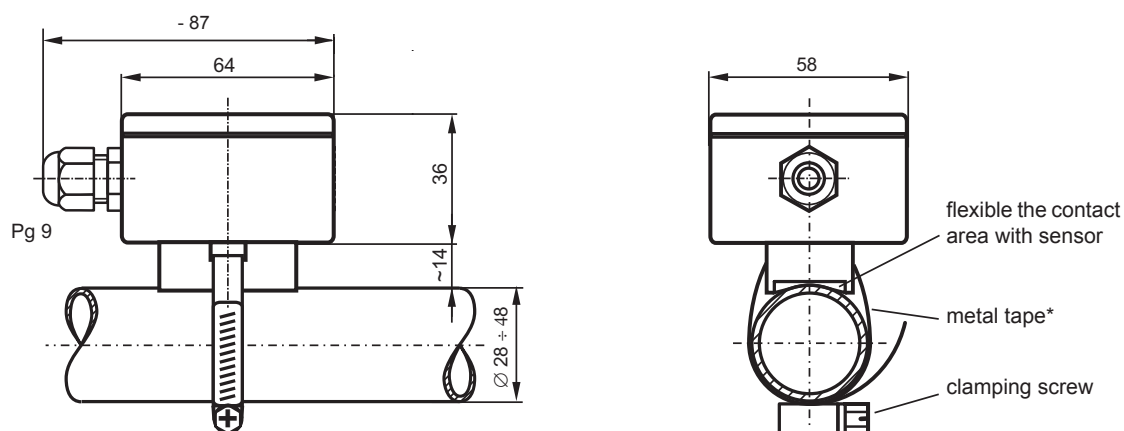
| | |
|--------------------------|---|
| Sensor: | STSp Pt: Pt 100 STSp Ni: Ni 1000 |
| Measuring range: | -40 to +120°C |
| Head temperature: | -30 to +80°C |
| Measuring current: | 1 mA |
| Temperature coefficient: | Ni: 5 000, 6 180 ppm/K |
| Tolerance class: | Pt: B according to ČSN EN 60751 |
| Time stability: | 0,05 % (10 000 hour) |

Sensors with transducer STSp/I

| | |
|-----------------------------------|------------------------------------|
| Sensor: | Pt 100 |
| Measuring range: | 0°C to +100°C |
| Current output: | 4-20 mA, passive, unipolar |
| Voltage: | 10 ÷ 36 V DC |
| Max current in the loop: | 34 mA (during sensor interruption) |
| Accuracy: | 1 % from measuring scope |
| Transducer operating temperature: | - 25°C to +75°C |

| | |
|---------------------|---|
| Connection: | cable: Ø 3.5 ÷ 8 mm wire: 0,75 mm ² |
| Mounting: | on piping by means of a tape |
| Ingress protection: | IP 65 |

Dimension drawing

Mounting method of sensors **STSp**....

* Metal tape (included in the supply) enables fastening on the piping at maximum diameter 48 mm. Stronger piping requires using adequate longer tape. Minimum piping diameter (28 mm) results from the ability of the sensor main surface to adapt to the piping shape.

Ordering devices

| Code | Name | | | | | | | | |
|------------|---|------|----------------------|-------|--------|-------|---------------------|-------|---------------------|
| 40 02813 9 | ST with terminal block contact STSp | | | | | | | | |
| | <table> <tr> <th>Code</th><th>Measuring resistance</th></tr> <tr> <td>01001</td><td>Pt 100</td></tr> <tr> <td>41001</td><td>Ni 1000, 5000 ppm/K</td></tr> <tr> <td>51001</td><td>Ni 1000, 6180 ppm/K</td></tr> </table> | Code | Measuring resistance | 01001 | Pt 100 | 41001 | Ni 1000, 5000 ppm/K | 51001 | Ni 1000, 6180 ppm/K |
| Code | Measuring resistance | | | | | | | | |
| 01001 | Pt 100 | | | | | | | | |
| 41001 | Ni 1000, 5000 ppm/K | | | | | | | | |
| 51001 | Ni 1000, 6180 ppm/K | | | | | | | | |
| 40 02813 9 | 01001 | | | | | | | | |
| | Ordered No. | | | | | | | | |

Order example: 1 temperature sensor, type 02813 (STSp), Pt100

| Code | Name | | | | |
|--------------|---|------|-------|-----|-------------|
| 40 02814 901 | ST with terminal block contact STSp/I | | | | |
| | <table> <tr> <th>Code</th><th>Range</th></tr> <tr> <td>001</td><td>0 to +100°C</td></tr> </table> | Code | Range | 001 | 0 to +100°C |
| Code | Range | | | | |
| 001 | 0 to +100°C | | | | |
| 40 02814 901 | 001 | | | | |
| | Ordered No. | | | | |

Order example: 1 temperature sensor, type 02814 (STSp/I), range 0-100°C

Warranty

24 months warranty is provided from the delivery date unless specified otherwise in the purchase contract.