



### Main characteristics (20 °C)

|                              |   |
|------------------------------|---|
| Standard process temperature | -50 ... 400 °C  |
| Accuracy                     | Pt100 output as to DIN/EN/IEC 60751<br>Transmitter output<br><math>\pm 0.1 \text{ °C}</math> / <math>\pm 0.25 \text{ °C}</math> |
| Connections                  | Threaded  |

### Technical specification

|                          |   |
|--------------------------|---|
| Measuring principle      | Resistance Temperature Detector (RTD)                           |
| Measuring ranges         | -50...400 °C  |
| Immersion tube, diameter | Ø6 mm, Ø8 mm  |
| Immersion tube, length   | Min. 20 mm - Max. 3000 mm                                       |
| Immersion tube, tip      | Normal response - Ø6/Ø8 mm<br>Fast response - Ø6/Ø4 or Ø8/Ø4 mm |
| Process connections      | See page 4  |

### Environment

|                            |  |
|----------------------------|--|
| Temperature, Ambient       | -40...160 °C   |
| - w. transmitter           | -40...85 °C  |
| - w. display               | -30...80 °C  |
| Protection rating, IEC 529 | IP67 / IP69K, depending on electrical connection<br>With BattTemp : IP54                               |
| Humidity, IEC 68-2-38      | 98%, condensing  |
| Vibrations                 | DNV high vibration strain, class B<br>1.6 mm, 2...25 Hz<br>IEC60068-2-6, test FC<br>25...100 Hz, 4.0 g |

### Material

|                    |                      |
|--------------------|----------------------|
| Process connection | SS 1.4404, AISI 316L |
| Housing            | SS 1.4301, AISI 304  |
| Sealing            | See ordering table   |

### Approvals

|          |   |
|----------|---|
| Apply to | EMC directive 2004/108/CE in accordance with EN61000-6-2, EN 61000-6-3<br>Pressure directive 97/23/CE |
|----------|---|

### Main features

- Pt100 sensor element, 2- or 4-wire
- HART®, PA
- Built in graphical display, CombiView™ DFON optional
- Head mounted 4...20 mA transmitter, FlexTop type 22xx
- ATEX
- Programmable by touch screen
- Easy and full programmable with FlexProgrammer 9701

### Applications

- Oil and Gas
- Chemical
- Energy
- General Process Industrie

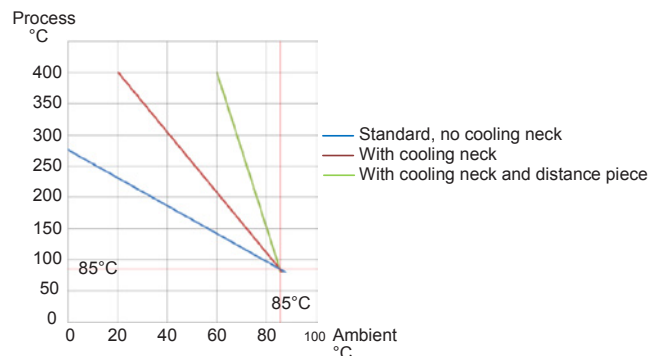
### Sensor element and electrical specification

|               |   |
|---------------|---|
| Sensor type   | RTD type Pt100 (acc. to DIN/EN/IEC 60751)<br>Single or Double<br>2-wire or 4-wire   |
| Accuracy      | Class 1/1 B $\pm(0,3 + (0,005 \times T)) \text{ °C}$<br>Class 1/3 B $\pm 1/3 \times (0,3 + (0,005 \times T)) \text{ °C}$<br>Class 1/6 B $\pm 1/6 \times (0,3 + (0,005 \times T)) \text{ °C}$<br>Class 1/1 A $\pm(0,15 + (0,002 \times T)) \text{ °C}$ |
| Analog output | 4-20 mA, 4-20mA+HART®, Profibus®<br>See separate data sheet, series 22xx  |

### Time constant, $\tau$ 0,5

| Medium   | Liquid             | Air                | Air                 |
|----------|--------------------|--------------------|---------------------|
| Velocity | 0,4 m/sec.         | 0 m/sec.           | 3 m/sec.            |
| Ø 6 mm   | <math>< 6,1</math> | <math>< 138</math> | <math>< 27,2</math> |
| Ø 6/4 mm | <math>< 1,5</math> | <math>< 136</math> | <math>< 21,4</math> |
| Ø 8 mm   | <math>< 7,6</math> | <math>< 201</math> | <math>< 47,7</math> |
| Ø 8/4 mm | <math>< 1,5</math> | <math>< 181</math> | <math>< 33,6</math> |

### Temperature curve



## Technical Data

### Transmitter, type FlexTop 2202 - Standard

|  |                          |
|--|--------------------------|
| Input  | Pt100                    |
| Output   | 4...20 mA                |
| Accuracy   |                          |
| Input  | <0.25°C                  |
| Output   | <0.1% signal span (16mA) |
| Range  | -200...850°C             |
| Minimum span   | 25°C                     |
| Supply   | 8...35 VDC               |
| Programmability  | By FlexProgrammer 9701   |
| For further information please see data sheet for FlexTop 2202 |                          |

### Transmitter, type FlexTop 2211 - Performance

|  |                            |
|--|----------------------------|
| Input  | Pt100 / Pt1000 (universal) |
| Output   | 4...20 mA                  |
| Accuracy   |                            |
| Input  | <0.1°C                     |
| Output   | <0.1% signal span (16mA)   |
| Range  | -200...850°C               |
| Minimum span   | 25°C                       |
| Supply   | 8...35 VDC                 |
| Programmability  | By FlexProgrammer 9701     |
| For further information please see data sheet for FlexTop 2211 |                            |

### Display DFON

|                 |   |
|-----------------|---|
| Type            | Graphically LCD   |
| Front glass     | Polycarbonate   |
| Display modes   | 8 modes, programmable, e.g. value, bar graph, analogue, tank illustration |
| Background      | White, green, red - programmable  |
| Measuring range | -9999...99999   |
| Digit height    | Max. 22 mm  |
| Accuracy        | 0,1% @ ambient -10...70 °C  |
| Voltage drop    | 4V...6.5 V  |
| Output          | 2 configurable relay output, 60 Vp, 75 mA                                 |
| Programming     | Touch screen or FlexProgrammer 9701                                       |

Further information can be found in separate data sheet for DFON, D21.09.

### Transmitter, type FlexTop 2221 - Standard

|  |  |
|--|--|
| Input  | Pt100 / Pt1000 (universal)                       |
| Output   | 4...20 mA / HART                                 |
| Accuracy   |  |
| Input  | <0.1°C   |
| Output   | <0.1% signal span (16mA)                         |
| Range  | -200...850°C                                     |
| Minimum span   | 25°C   |
| Supply   | 8...35 VDC                                       |
| Programmability  | By FlexProgrammer 9701<br>By HART terminal/modem |
| For further information please see data sheet for FlexTop 2221 |  |

### Transmitter, type FlexTop 2231 - Performance

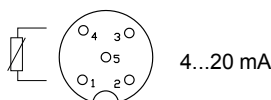
|  |                            |
|--|----------------------------|
| Input  | Pt100 / Pt1000 (universal) |
| Output   | Profibus PA                |
| Accuracy   |                            |
| Input  | <0.1°C                     |
| Range  | -200...850°C               |
| Minimum span   | 25°C                       |
| Supply   | 9...32 VDC                 |
| Programmability  | By FlexProgrammer 9701     |
| For further information please see data sheet for FlexTop 2231 |                            |

### BattTemp

|   |                                   |
|---|-----------------------------------|
| Type  | LCD                               |
| Front glass   | Polycarbonate                     |
| Temperature sensor  | Pt-100, 2-wire (DIN/EN/IEC 60751) |
| Power supply  | Battery 1,5 V, type AA            |
| Range   | -200...850°C                      |
| Measuring range   | -9999...9999                      |
| Unit  | °C                                |
| Digit height  | 11,5 mm.                          |
| Accuracy  |                                   |
| -200...-51°C  | +/- 0,6 +/- 1 digit               |
| -50...300°C   | +/- 0,3 +/- 1 digit               |
| 301...850°C   | +/- 0,6 +/- 1 digit               |
| For further information please see datasheet for BattTemp |                                   |

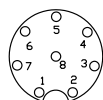
## Electrical connections

### M12, 5-wire

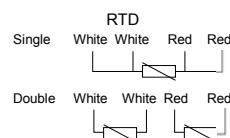
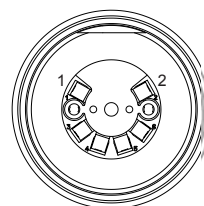


|            |           |   |                     |
|------------|-----------|---|---------------------|
| RTD Single | Double    | 1 | + supply, 4...20 mA |
| 1+2        | Pt100-1   | 2 | Common for relays   |
| 3+4        | Pt100-1   | 3 | - supply, 4...20 mA |
| 1          | Pt100 - 1 | 4 | Relay 1             |
| 2          | Pt100 - 1 | 5 | Relay 2             |
| 3          | Pt100 - 2 |   |                     |
| 4          | Pt100 - 2 |   |                     |
| 5          | N.C.      |   |                     |

### M12, 8-wire



|   |                     |
|---|---------------------|
| 1 | N.C.                |
| 2 | + supply, 4...20 mA |
| 3 | Relay 1             |
| 4 | Relay 1             |
| 5 | Relay 2             |
| 6 | Relay 2             |
| 7 | - supply, 4...20 mA |
| 8 | N.C.                |

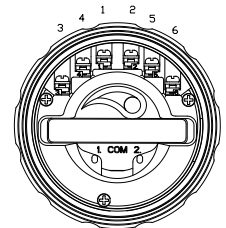


### Cable gland

|                    |                             |
|--------------------|-----------------------------|
| <b>Transmitter</b> |                             |
| 1                  | +24VDC / - 4...20mA         |
| 2                  | - 24VDC / +4...20mA         |
| 1                  | Red clip (FlexProgrammer)   |
| 2                  | Black clip (FlexProgrammer) |

### Display

|       |                             |
|-------|-----------------------------|
| 1     | + 4...20 mA                 |
| 2     | - 4...20 mA                 |
| 3     | Relay 1                     |
| 4     | Relay 1                     |
| 5     | Relay 2                     |
| 6     | Relay 2                     |
| Com 1 | Red clip (FlexProgrammer)   |
| Com 2 | Black clip (FlexProgrammer) |



## ATEX data for temperature transmitters and displays

### Transmitter, type FlexTop 2202 - ATEX



|                      |   |
|----------------------|---|
| Approval             | Ex ia IIC T5/T6, ATEX II 1G<br>Ex nA II T5, ATEX II 3G  |
| Supply               | 8...28 VDC  |
| Internal inductivity | $L_i \leq 10 \mu\text{H}$   |
| Internal capacity    | $C_i \leq 10 \text{nF}$   |
| Temperature class    | T1...T5: $-40 < T_{\text{amb}} < 85^\circ\text{C}$<br>T6: $-40 < T_{\text{amb}} < 50^\circ\text{C}$ |
| Barrier data         | U: $\leq 28 \text{VDC}$<br>I: $\leq 0.1 \text{A}$<br>P: $\leq 0.75 \text{W}$                        |

### Transmitter, type FlexTop 2211 - ATEX


|                      |   |
|----------------------|---|
| Approval             | Ex ia IIC T5/T6, ATEX II 1G<br>Ex nA II T5, ATEX II 3G  |
| Supply               | 6.5...30 VDC  |
| Internal inductivity | $L_i \leq 1.5 \mu\text{H}$  |
| Internal capacity    | $C_i \leq 5 \text{nF}$  |
| Temperature class    | T1...T5: $-40 < T_{\text{amb}} < 85^\circ\text{C}$<br>T6: $-40 < T_{\text{amb}} < 50^\circ\text{C}$ |
| Barrier data         | U: $\leq 30 \text{VDC}$<br>I: $\leq 0.1 \text{A}$<br>P: $\leq 0.75 \text{W}$                        |

### Display DFON - ATEX

#### ATEX Gas ia and for ATEX Dust ia

|                      |                                 |   |
|----------------------|---------------------------------|---|
| Approval             | Gas Zone 0/1<br>Dust Zone 20/21 |  II 1 G, Ex ia IIC T5 Ga<br> II 1 D, Ex ia IIIC T100°C Da |
| Voltage drop         | $U_{\text{Disp}}$               | 4.5 ... 6.5 VDC   |
| Temperature class    |                                 | $L_i \leq 1.5 \mu\text{H}$<br>$C_i \leq 5 \text{nF}$  |
| Temperature class    |                                 | T1...T5 Zone 0 and 20<br>$-20 \dots 60^\circ\text{C}$<br>Zone 1/2 and 21/22<br>$-40 \dots 65^\circ\text{C}$   |
| Internal inductivity | $L_i$                           | $< 10 \mu\text{H}$  |
| Internal capacity    | $C_i$                           | $< 15 \text{nF}$  |
| Barrier data         | $U_i$<br>$I_i$<br>$P_i$         | $< 30 \text{VDC}$<br>$< 0.1 \text{A}$<br>$< 0.75 \text{W}$  |

#### ATEX Gas nA

|                      |                   |   |
|----------------------|-------------------|---|
| Approval             | Gas Zone 2        |  II 3 G, Ex nA II T5 |
| Voltage drop         | $U_{\text{Disp}}$ | 4.5 ... 6.5 VDC   |
| Temperature class    |                   | T1...T5 $-30 < T_{\text{amb}} < 65^\circ\text{C}$   |
| Internal inductivity | $L_i$             | $< 10 \mu\text{H}$  |
| Internal capacity    | $C_i$             | $< 15 \text{nF}$  |
| Maximum voltage      | $U_{\text{max}}$  | $< 35 \text{VDC}$   |
| Maximum current      | $U_{\text{max}}$  | $< 35 \text{VDC}$   |

### Transmitter, type FlexTop 2221 - ATEX

|                      |   |
|----------------------|---|
| Approval             | Ex ia IIC T5/T6, ATEX II 1G<br>Ex nA II T5, ATEX II 3G  |
| Supply               | 8...30 VDC (Ex nA: 12...30 VDC)   |
| Internal inductivity | $L_i \leq 15 \mu\text{H}$   |
| Internal capacity    | $C_i \leq 5 \text{nF}$  |
| Temperature class    | T1...T5: $-40 < T_{\text{amb}} < 85^\circ\text{C}$<br>T6: $-40 < T_{\text{amb}} < 50^\circ\text{C}$ |
| Barrier data         | U: $\leq 30 \text{VDC}$<br>I: $\leq 0.1 \text{A}$<br>P: $\leq 0.75 \text{W}$                        |

### Transmitter, type FlexTop 2231 - ATEX

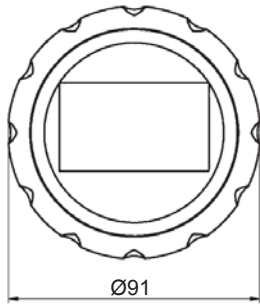
|                                |   |   |
|--------------------------------|---|---|
| Approval                       | Ex ia IIC T5/T6, ATEX II 1G<br>Ex nA II T5, ATEX II 3G  |   |
| Internal inductivity           | $L_i \leq 10 \mu\text{H}$   |   |
| Internal capacity              | $C_i \leq 2 \text{nF}$  |   |
| Temperature class              | T1...T4: $-40 < T_{\text{amb}} < 85^\circ\text{C}$<br>T5: $-40 < T_{\text{amb}} < 60^\circ\text{C}$ |   |
| Coupler/link<br>FISCO approved | $U_i \leq 17.5 \text{VDC}$<br>$P_i \leq 0.75 \text{W}$<br>$L_i \leq 10 \mu\text{H}$                 | $I_i \leq 0.275 \text{A}$<br>$C_i \leq 2 \text{nF}$ |
| Barrier data                   | $U_i \leq 20 \text{VDC}$<br>$P_i \leq 0.75 \text{W}$<br>$L_i \leq 10 \mu\text{H}$                   | $I_i \leq 0.1 \text{A}$<br>$C_i \leq 2 \text{nF}$   |

#### ATEX data for BattTemp

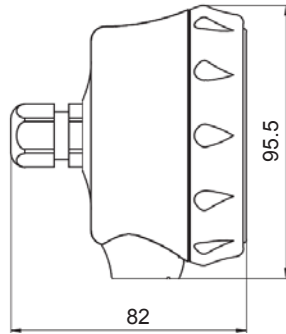
|  |   |
|--|---|
| Approval                                 | Ex ia IIC T5/T6, ATEX II 1G   |
| Temperature class                        |   |
| Battery: Energizer Lithium FR6 L91 AA    | T1...T4: $-10 < T_{\text{amb}} < 70^\circ\text{C}$<br>T5: $-10 < T_{\text{amb}} < 50^\circ\text{C}$ |
| Battery: Duracell Alkaline MN1500 LR6 AA | T1...T3: $-10 < T_{\text{amb}} < 70^\circ\text{C}$<br>T4: $-10 < T_{\text{amb}} < 60^\circ\text{C}$ |

**Dimensions (mm)**

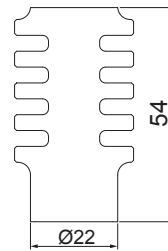
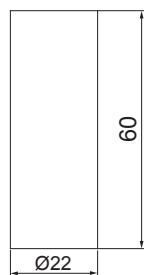
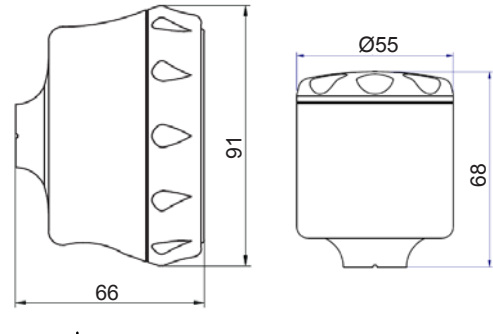
Ø80 mm housing front view



Ø80 mm housing bottom connection



Ø80 mm housing rear connection



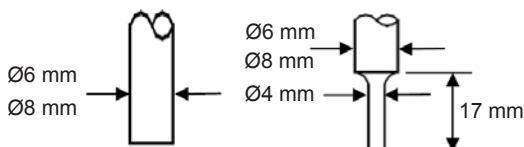
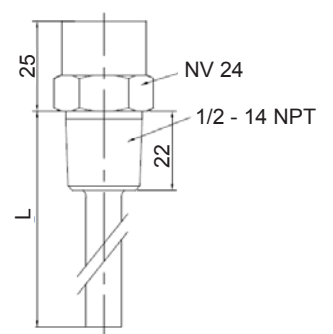
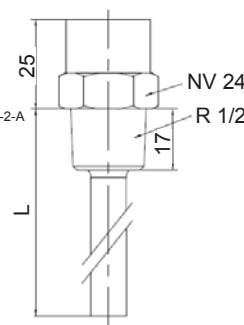
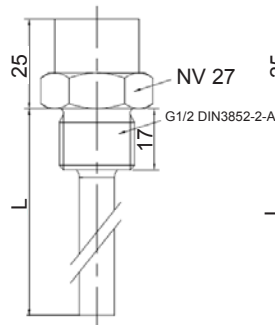
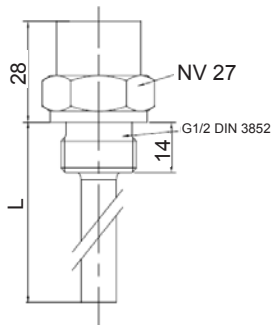
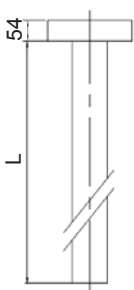
Tube without connection  
Code 10

G1/2A DIN 3852-E  
Code 11

G1/2A DIN 3852-A  
Code 12

R1/2  
Code 13

1/2" NPT  
Code 30



**Ordering details**

|  | - |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <b>Model</b>   |   | TFRN    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>CombiTemp™</i>  |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Housing material</b>  |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ø80 mm, Stainless steel, AISI 304 Bottom                       |   | 5       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ø80 mm, Stainless steel, AISI 304 Rear                         |   | 6       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Field housing Ø55, stainless steel, AISI 304                   |   | 7       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Electrical connection</b>                                   |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M12, 5 pins  |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M12, 8 pins  |   | 3       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cable gland, M16   |   | 5       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cable gland, M20   |   | B       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No electrical connection - for BattTemp only                   |   | 9       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Material el. connection</b>                                 |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| None - for BattTemp only                                       |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Plastic  |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AISI 304   |   | 3       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Display</b>   |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Without display, Ø55 housing                                   |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Without display  |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| With display No relays activated                               |   | 2       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| With display With activated relays                             |   | 4       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| With BattTemp  |   | 6       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Transmitter / socket</b>                                    |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Flying leads   |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ceramic socket Pt100   |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transmitter 2202 4-20 mA ±0,25 °C (Accuracy class)             |   | 2       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transmitter 2211 4-20 mA ±0,10 °C (Accuracy class)             |   | 3       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transmitter 2221 4-20 mA / HART® ±0,10 °C (Accuracy class)     |   | 4       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Transmitter 2231 Profibus® ±0,10 °C (Accuracy class)           |   | 5       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Safety</b>  |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Standard   |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ex ia IIC T4/T5 1G (Gas)                                       |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ex nA II T4/T5 3G (Gas)  |   | 3       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ex ia II 1 G Eex ia IIC, Zone 0, simple apparatus              |   | 9       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Configuration</b>   |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No configuration   |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Configuration of Range   |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Configuration of Range + Display                               |   | 2       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Configuration of Range + Display incl. 2x relays               |   | 3       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Sensor element (DIN/EN/IEC 60751)</b>                       |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| None (for cable sensor)  |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1x Pt100 Class 1/1 B   |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2x Pt100 Class 1/1 B   |   | 2       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1x Pt100 Class 1/3 B   |   | 5       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2x Pt100 Class 1/3 B   |   | 6       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1x Pt100 Class 1/6 B   |   | 7       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2x Pt100 Class 1/6 B   |   | 8       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1x Pt100 Class 1/1 A   |   | A       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2x Pt100 Class 1/1 A   |   | B       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1x Pt100 Class 1/1 B, < 600°C                                  |   | C       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Sensor insert type</b>                                      |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sensor tube with embedded sensor element 2-wire                |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sensor tube with embedded sensor element 4-wire                |   | 2       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cable sensor Pt100 Class 1/1 B (1xPt100 only, for ø 8 mm only) |   | A       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cable sensor Pt100 Class 1/3 B (1xPt100 only, for ø 8 mm only) |   | B       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cable sensor Pt100 Class 1/6 B (1xPt100 only, for ø 8 mm only) |   | C       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cable sensor Pt100 Class 1/1 A (1xPt100 only, for ø 8 mm only) |   | D       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cooling neck</b>  |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| None   |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cooling neck   |   | 4       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cooling neck + 1 spacer  |   | 5       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cooling neck + 2 spacers                                       |   | 6       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Process connection</b>                                      |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tube without connection  |   | 10      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| G½ Male DIN 3852 form E  |   | 11      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| G½ Male DIN 3852 form A  |   | 12      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| R½ Male ISO 7/1  |   | 13      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ½"-14 NPT Male ANSI/ASME B1.20.1                               |   | 30      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Seal</b>  |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No seal  |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Seal NBR For G½ DIN 3852 - E                                   |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Seal EPDM For G½ DIN 3852 - E                                  |   | 2       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Seal FKM (Viton®) For G½ DIN 3852 - E                          |   | 3       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Sensor diameter</b>   |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No sensor  |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ø 6 mm AISI 316  |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ø 8 mm AISI 316  |   | 2       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Sensor tip</b>  |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No sensor  |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Standard Normal response                                       |   | 1       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fast Fast response ø 4 mm tip Max sensor length : 300 mm       |   | 2       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Approvals</b>   |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| None   |   | 0       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Sensor tube length</b>                                      |   |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Length in mm (min. 20 mm)                                      |   | x x x x |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

If the product wanted is not available from above list please inquire.