

## APPLICATIONS

- Chemical and petrochemical
- industry Machine and apparatus
- construction Food and beverage industry
- Pulp and paper industry

## SPECIAL FEATURES

- Rugged all welded stainless steel construction
- Protection IP65
- Optional external adjustment permits zero reset from outside the case.
- Dry or liquid filled
- Silicone coil dampening provides vibration dampening and improves response time



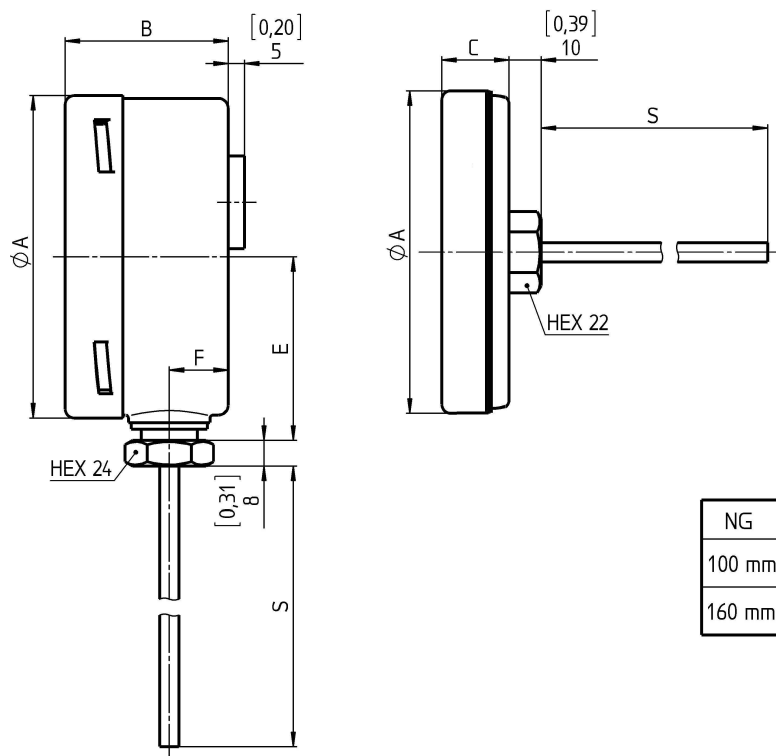
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## DESCRIPTION

- Rugged design for OEM applications
- Cost effective for high volume applications
- Retrofits existing applications
- Customizable for new applications

| Technical specification                |  | TZ80,TZ81                                                                                                                                                                                                                          |       |             |                      |       |                                    |  |
|----------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|----------------------|-------|------------------------------------|--|
| Dial size                              |  | 100 mm                                                                                                                                                                                                                             |       |             | 160 mm               |       |                                    |  |
| Construction                           |  | Cylindrical case with bayonet ring                                                                                                                                                                                                 |       |             |                      |       |                                    |  |
| Measuring principle                    |  | Bimetallic coil                                                                                                                                                                                                                    |       |             |                      |       |                                    |  |
| Range in °C                            |  | 0/50 0/60 0/80 0/100 0/120 0/150 0/160 0/200 0/250 0/300 0/400 0/500                                                                                                                                                               |       |             |                      |       |                                    |  |
| Ranges in °F                           |  | 10/150 50/300 50/450 100/500                                                                                                                                                                                                       |       |             |                      |       |                                    |  |
|                                        |  | -10/50 -10/110 -20/40 -20/60 -20/80 -20/120 -20/180                                                                                                                                                                                |       |             |                      |       |                                    |  |
|                                        |  | -25/25 -30/50 -30/70 -40/40 -40/60 -40/160 -50/50                                                                                                                                                                                  |       |             |                      |       |                                    |  |
|                                        |  | 0/100 0/150 0/200 0/250 0/300 0/350 0/500 20/120 30/130 30/240                                                                                                                                                                     |       |             |                      |       |                                    |  |
|                                        |  | 50/300 50/400 50/550 80/180 100/800 160/360 170/270 200/400 200/700 200/1000                                                                                                                                                       |       |             |                      |       |                                    |  |
| Temperature limits for ranges          |  | Dual scales on request                                                                                                                                                                                                             |       |             |                      |       |                                    |  |
| Max. process overtemperature           |  | < 120 °C                                                                                                                                                                                                                           |       |             | ≥ 120 °C and < 290°C |       | ≥ 290 °C                           |  |
| Max. ambient temperature               |  | 100 % of span                                                                                                                                                                                                                      |       |             | 50 % of span         |       | max. 425 °C for continuous service |  |
| Stem                                   |  | 94 °C with dry case, 65 °C with liquid filling                                                                                                                                                                                     |       |             |                      |       |                                    |  |
| Diameter                               |  | 6 mm, 8 mm, ¼" (6,4 mm), 3/8" (9,6 mm)                                                                                                                                                                                             |       |             |                      |       |                                    |  |
| Length                                 |  | 63 ... 1000 mm, minimum length depends on range                                                                                                                                                                                    |       |             |                      |       |                                    |  |
| Process connection                     |  | Plain<br>G ½ A male, G ½ female, ½ NPT male or ½ NPT female<br>G ¾ A male, G ¾ female, ¾ NPT male or ¾ NPT female<br>G 1 A male, G 1 female, 1 NPT male or 1 NPT female, others on request<br>Fixed, adjustable or with swivel nut |       |             |                      |       |                                    |  |
| Connection location                    |  | Back, lower and every angle (rotatable)                                                                                                                                                                                            |       |             |                      |       |                                    |  |
| Material                               |  |                                                                                                                                                                                                                                    |       |             |                      |       |                                    |  |
| Connection                             |  | Stainless steel 316L (1.4404) or 1.4571 (316Ti)                                                                                                                                                                                    |       |             |                      |       |                                    |  |
| Stem                                   |  | Stainless steel 316L (1.4404) or 1.4571 (316Ti)                                                                                                                                                                                    |       |             |                      |       |                                    |  |
| Case/ring                              |  | Stainless steel 304 (1.4301), optional 316L (1.4404)                                                                                                                                                                               |       |             |                      |       |                                    |  |
| Window                                 |  | Instrument glass, optional shatter proof glass or acrylic glass                                                                                                                                                                    |       |             |                      |       |                                    |  |
| Dial                                   |  | Aluminum, black markings on white background                                                                                                                                                                                       |       |             |                      |       |                                    |  |
| Pointer                                |  | Aluminum, black                                                                                                                                                                                                                    |       |             |                      |       |                                    |  |
| Accuracy                               |  | KL1.0,KL1.6,KL2.5                                                                                                                                                                                                                  |       |             |                      |       |                                    |  |
| Protection according EN 60 529/IEC 529 |  | IP65                                                                                                                                                                                                                               |       |             |                      |       |                                    |  |
| Filling liquids                        |  | Silicone, not for lower connection, not for ATEX, acrylic glass is standard<br>Maximum range up to 300 °C                                                                                                                          |       |             |                      |       |                                    |  |
| Weight in kg                           |  |                                                                                                                                                                                                                                    |       |             |                      |       |                                    |  |
| Connection location                    |  | Back                                                                                                                                                                                                                               | Lower | Every angle | Back                 | Lower | Every angle                        |  |
| Dry                                    |  | 0,35                                                                                                                                                                                                                               | 0,55  | 0,55        | 0,7                  | 0,9   | 0,9                                |  |
| Filled                                 |  | 0,6                                                                                                                                                                                                                                | ---   | 0,8         | 1,0                  | ---   | 1,2                                |  |
| Accessories                            |  | Thermowells must be used on all pressure or velocity applications, to protect the stem of thermometer from corrosion and physical damage, and to facilitate removal of the thermometer without disturbing the process.             |       |             |                      |       |                                    |  |

## GENERAL DIMENSIONS in mm



| NG     | A             | B            | C            | E            | F              |
|--------|---------------|--------------|--------------|--------------|----------------|
| 100 mm | [3,98]<br>101 | [2,01]<br>51 | [0,83]<br>21 | [2,24]<br>57 | [0,73]<br>18,5 |
| 160 mm | [6,38]<br>162 | [1,97]<br>50 | [1,10]<br>28 | [3,46]<br>88 | [0,67]<br>17   |

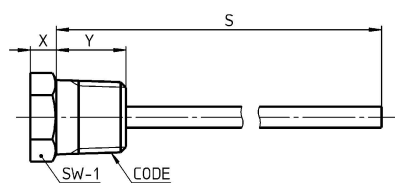
### Fixed connection

Length S is fixed.

Code N ½ NPT male

Code G G ½ A male

Code M M20X1.5 male



| CODE<br>1/2-14 NPT       | SW-1 | X          | Y         |
|--------------------------|------|------------|-----------|
| L                        | 24   | 8 [0,31]   | 20 [0,79] |
| E                        | 22   | 9,8 [0,39] | 20 [0,79] |
| R                        | 22   | 7,5 [0,30] | 20 [0,79] |
| CODE<br>G 1/2 A<br>L/E/R | SW-1 | X          | Y         |
|                          | 27   | 12 [0,47]  | 12 [0,47] |