

All stainless steel bimetal thermometer with stepped stem

Model ART and ERT

Nominal size 3", 5", 100 mm or 160 mm

Accuracy: Class 1 according to EN 13190 (100 mm and 160 mm)
Grade A (1 %) according to ASME B40.200 (3" and 5")



Features

- Rugged all welded stainless steel construction
- Protection IP65 / IP66
- Optional ATEX approved $\text{CE} \text{ II 2 GD c Tx}^\circ\text{C IP66}$
- Maxivision[®] dial allows readability from any angle without parallax error (model ERT)
- External adjustment permits zero reset from outside the case
- Dry or liquid filled
- Silicone coil dampening provides vibration dampening and improves response time

Ranges

-50 ... 50 °C up to 0 ... 500 °C

-80 ... 120 °F up to 200 ... 1000 °F

Applications

Chemical and petrochemical industry

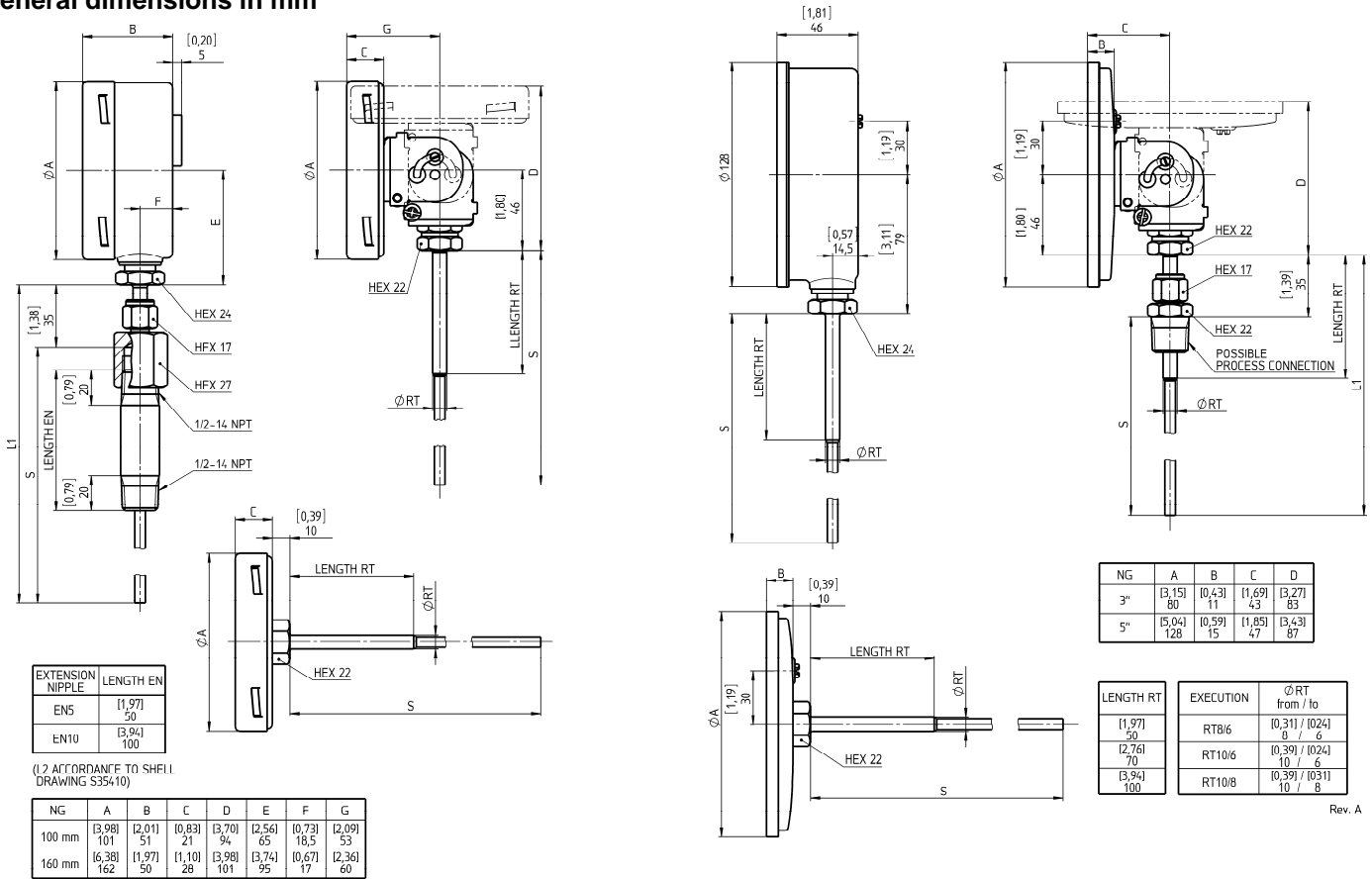
Machine and apparatus construction

Food and beverage industry

Pulp and paper industry

| Technical specification | ART | | | | | | ERT | | | | | |
|---|--|-------|-------------|--------|-------|-------------|--|-------|-------------|-------------|-------|-------------|
| | 100 mm | | | 160 mm | | | 3" (80 mm) | | | 5" (125 mm) | | |
| Dial size | | | | | | | | | | | | |
| Construction | Cylindrical case with bayonet ring | | | | | | Cylindrical case with crimp ring, hermetically sealed and external adjustment | | | | | |
| 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 | | | | | | | | | | | |
| | 10/150 50/300 50/450 100/500 -10/50 -10/110 -20/40 -20/60 -20/120 -20/180 | | | | | | | | | | | |
| Ranges in °F | -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 | | | | | | | | | | | |
| | -40/120 -40/160 -20/120 -80/120 -10/100 | | | | | | | | | | | |
| Temperature limits for ranges | < 120 °C | | | | | | ≥ 120 °C and < 290 °C | | | | | |
| Max. process overtemperature | 100 % of span | | | | | | 50 % of span | | | | | |
| Max. ambient temperature | 94 °C with dry case, 65 °C with liquid filling | | | | | | ≥ 290 °C max. 425 °C for continuous service | | | | | |
| Stem | | | | | | | | | | | | |
| Diameter | Stepped stem 8/6 mm, 10/6 and 10/8 mm, | | | | | | | | | | | |
| Length S | 75 ... 1500 mm, minimum length below RT is 60 mm | | | | | | | | | | | |
| Enlarged Length RT | 50, 70, 100 mm, other lengths on request | | | | | | | | | | | |
| Process connection | Plain | | | | | | | | | | | |
| | Adjustable union connection G ½ A male, G ½ female, ½ NPT male or ½ NPT female, G ¾ A male, G ¾ female, ¾ NPT male or ¾ NPT female, 1 NPT male, others on request | | | | | | | | | | | |
| Connection location | Back, lower (not for dial size 3") and every angle (rotatable) | | | | | | | | | | | |
| Material | | | | | | | | | | | | |
| Connection | Stainless steel 316L or 316Ti (1.4404 or 1.4571) | | | | | | | | | | | |
| Stem | Stainless steel 316L or 316Ti (1.4404 or 1.4571) | | | | | | | | | | | |
| Case/ring | Stainless steel 304 (1.4301), optional 316L (1.4404) for most case styles | | | | | | | | | | | |
| Window | Instrument glass, optional shatter proof glass or acrylic glass | | | | | | | | | | | |
| Dial | Aluminum, black markings on white background | | | | | | Aluminum, black markings on white background, anti parallax Maxivision [®] dial | | | | | |
| Pointer | Aluminum, black | | | | | | | | | | | |
| Accuracy | Class 1 (dry) and class 2 (liquid filled) according to EN 13190 | | | | | | Grade A (1 %) according to ASME B40.200 (former ASME B40.3) | | | | | |
| Protection according EN 60 529/IEC 529 | IP66, IP65 for variation "external zero adjustment" | | | | | | IP66 | | | | | |
| Conformity according to RL 94/9/EC appendix X for mechanical equipment in potential hazardous areas | Optional, Marking $\text{CE} \text{ II 2 GD c Tx}^\circ\text{C IP66}$ File no. 35088073 at notified body 0044, TUV NORD CERT (only with shatter proof glass and protection IP66) | | | | | | | | | | | |
| Filling liquids | Silicone, not for lower connection, not for ATEX, acrylic glass is standard, Maximum range up to 300 °C | | | | | | | | | | | |
| Weight in kg | | | | | | | | | | | | |
| Connection location | Back | Lower | Every angle | Back | Lower | Every angle | Back | Lower | Every angle | Back | Lower | Every angle |
| Dry | 0,35 | 0,55 | 0,55 | 0,7 | 0,9 | 0,9 | 0,2 | --- | 0,4 | 0,4 | 0,6 | 0,6 |
| Filled | 0,6 | --- | 0,8 | 1,0 | --- | 1,2 | 0,6 | --- | 0,7 | 0,7 | --- | 0,9 |
| 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



(12 ACCORDANCE TO SHFLL DRAWING S354.10)

S = STEM LENGTH (SPECIFY BY CUSTOMER)

Order information

| Size | Type and stem execution | Filling | Process connection | Connection orientation | Stem length S | Range | Options |
|---|---|---|--|-------------------------|----------------------|---|---|
| (100) 100 mm | (ART8/6) 8/6 mm | (=) Standard (no filling) | (040) Plain | (L) Lower ¹⁾ | 75 to 1500 mm | 0/ 50 ¹⁾ 0/ 60 ¹⁾ 0/ 80 ¹⁾ 0/100 0/120 0/150 0/160 0/200 0/250 ¹⁾ 0/300 ¹⁾ 0/400 ¹⁾ 0/500 ¹⁾ 10/150 50/300 ¹⁾ 50/450 ¹⁾ 100/500 ¹⁾ -10/ 50 ¹⁾ -10/110 -20/ 40 ¹⁾ -20/ 60 ¹⁾ -20/180 -25/ 25 ¹⁾ -30/ 50 ¹⁾ -30/ 70 -30/170 -40/ 40 ¹⁾ -40/ 60 -40/100 -40/160 -50/ 50 | (NH) Stainless steel tag wired (DA) Dial marking (CS) Dual scale (PD) Acrylic glass (SG) Shatter proof glass (EA) External zero adjustment (only for type ART, not for ATEX) (EN5) Extension nipple 50 mm (YW) 316L (1.4404) housing (not for lower connection or dial size 3") (C4) Individual calibration certificate (ATEX) ATEX approval |
| (160) 160 mm | (ART10/6) 10/6 mm | (L) Liquid filled with silicone max. range 300 °C (not for lower connection, ambient temperature maximum 65 °C) | (070) Adjustable union ½ NPT male | (R) Back | | 0/200 °F 0/250 °F ¹⁾ 0/300 °F ¹⁾ 0/350 °F ¹⁾ 0/500 °F ¹⁾ 20/120 °F ¹⁾ 30/130 °F ¹⁾ 30/240 °F ¹⁾ 50/300 °F 50/400 °F 50/550 °F ¹⁾ 80/180 °F 100/800 °F 160/360 °F 170/270 °F 200/400 °F 200/700 °F ¹⁾ 200/1000 °F ¹⁾ -40/120 °F -40/160 °F -20/120 °F ¹⁾ -80/120 °F -10/100 °F | (DA) Dial marking (CS) Dual scale (PD) Acrylic glass (SG) Shatter proof glass (EA) External zero adjustment (only for type ART, not for ATEX) (EN5) Extension nipple 50 mm (YW) 316L (1.4404) housing (not for lower connection or dial size 3") (C4) Individual calibration certificate (ATEX) ATEX approval |
| (EN 13190 type) with bayonet ring | (ART10/8) 10/8 mm | | (071) Adjustable union G ½ A male (072) Adjustable union ¾ NPT male (073) Adjustable union G ¾ male (074) Adjustable union ½ NPT female (075) Adjustable union ¾ NPT female (078) Adjustable union G ½ female (079) Adjustable union G ¾ female | (E) Every angle | | | |
| (30) 3" (80 mm) | ASME B40.200 type hermetically sealed | | | | | | |
| (50) 5" (125 mm) | (ERT8/6) 8/6 mm (ERT10/6) 10/6 mm (ERT10/8) 10/8 mm | | | | | | |

¹⁾ not for dial size 3"

Order example

| Size | Type and stem execution | Filling | Process connection | Connection orientation | Stem length S | Range | Engineering unit | Length L1 | Length RT | Options |
|------|-------------------------|---------|--------------------|------------------------|---------------|-------|------------------|-----------|-----------|---------|
| 50 | ERT10/6 | = | 074 | E | 365 | 0/200 | C | 400 | 70 | EN10 |

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