

All stainless steel gas actuated thermometer

Model S5500

According EN 13190
Nominal size 100 mm or 160 mm
With or without capillary/contacts
Accuracy: Class 1, optional class 0,5



Features

- Rugged stainless steel construction
- Fast response
- Protection IP65
- High repeatability and small hysteresis
- Dry or liquid filled
- Rigid stem or bulb with capillary

Ranges

-200 ... 50 °C up to 0 ... 800 °C
-330 ... 120 °F up to 50 ... 1450 °F

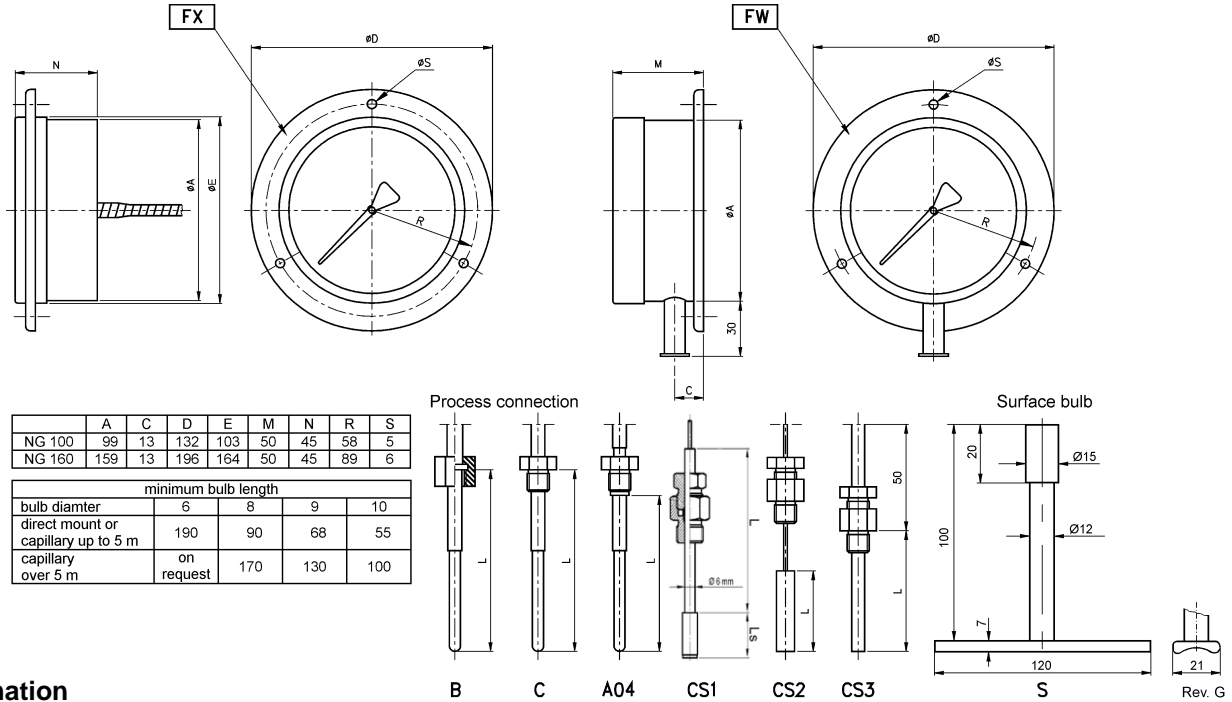
Applications

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



| Technical specification | Rigid stem | | With capillary | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|------------|------------------------------|---|------|------------------------------|-----------|---|-----------|--|-------|--|--------|---|--|------|--|--|---------|---|--|----------|---|--|
| | 100 | 160 | 100 | 160 | | | | | | | | | | | | | | | | | | | | | | | |
| Construction | Cylindrical case with bayonet ring (blow out at back is standard with ATEX) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measuring principle | Inert gas actuated | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Range in °C | 0/60 0/80 0/100 0/120 0/160 0/200 0/250 0/300 0/400 0/500 0/700 0/800 -10/50 -10/110 -20/40 -20/100 -20/120 -20/180 -30/50 -30/70 -30/170 -40/40 -40/60 -40/160 -50/50 -60/40 -80/40 -100/50 -120/40 -200/50 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Overtemperature limit | Ranges in °F and dual scales on request Max. 130 % F.S. but max. 800 °C, optional higher overtemperature limit on request | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stem or bulb diameter | 6 mm, 8 mm, 9 mm, 10 mm, others on request | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lengths | 55 ... 1000 mm, other length on request, min. length depends on bulb and range | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capillary length | N.A. | | Max. 100 m | | | | | | | | | | | | | | | | | | | | | | | | |
| Process connection | Plain G ½ B male, G ¾ B male, G 1 B male according ISO 228-1, ½ NPT male, ¾ NPT male, 1 NPT male according ANSI/ASME B1.20.1, M18x1,5 male, M20x1,5 male, M24x1,5 male, M27x2 male according ISO 68-1, others on request Fixed, adjustable union or with swivel nut | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Connection location | Back, lower, knee joint bendable (360°) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | <table border="0"> <tr> <td>Connection</td> <td>Stainless steel 304 (1.4301)</td> <td rowspan="5">Stainless steel 321 (1.4541) Flexible, 304 (1.4301), or 316 (1.4401) optional PVC covered</td> </tr> <tr> <td>Stem</td> <td>Stainless steel 321 (1.4541)</td> </tr> <tr> <td>Case/ring</td> <td>Stainless steel 304 (1.4301), optional 316 (1.4401)</td> </tr> <tr> <td>Capillary</td> <td></td> </tr> <tr> <td>Armor</td> <td></td> </tr> <tr> <td>Window</td> <td colspan="2">Instrument glass, optional laminated safety glass (standard with ATEX) or acrylic glass</td> </tr> <tr> <td>Dial</td> <td colspan="2">Aluminum, black markings on white background</td> </tr> <tr> <td>Pointer</td> <td colspan="2">Aluminum, black, optional micrometer pointer or maximum pointer</td> </tr> <tr> <td>Movement</td> <td colspan="2">Stainless steel 304/303 (1.4301/1.4305)</td> </tr> </table> | | | | Connection | Stainless steel 304 (1.4301) | Stainless steel 321 (1.4541) Flexible, 304 (1.4301), or 316 (1.4401) optional PVC covered | Stem | Stainless steel 321 (1.4541) | Case/ring | Stainless steel 304 (1.4301), optional 316 (1.4401) | Capillary | | Armor | | Window | Instrument glass, optional laminated safety glass (standard with ATEX) or acrylic glass | | Dial | Aluminum, black markings on white background | | Pointer | Aluminum, black, optional micrometer pointer or maximum pointer | | Movement | Stainless steel 304/303 (1.4301/1.4305) | |
| Connection | Stainless steel 304 (1.4301) | Stainless steel 321 (1.4541) Flexible, 304 (1.4301), or 316 (1.4401) optional PVC covered | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stem | Stainless steel 321 (1.4541) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Case/ring | Stainless steel 304 (1.4301), optional 316 (1.4401) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capillary | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Armor | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Window | Instrument glass, optional laminated safety glass (standard with ATEX) or acrylic glass | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dial | Aluminum, black markings on white background | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pointer | Aluminum, black, optional micrometer pointer or maximum pointer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Movement | Stainless steel 304/303 (1.4301/1.4305) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accuracy | Class 1 according to EN 13190 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zero adjustment | ±6 % externally; Accuracy class 0,5% with micrometer pointer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conformity according to RL 2014/34/EU appendix X for mechanical equipment in potential hazardous areas | Optional for thermometer without electrical contacts: Marking CE II 2 G c or II 2 D c (T _a -30°C ... 80°C) Optional for thermometers with inductive proximity switches: Marking CE II 2G Ex ia IIC T4 ... T6 Gb or CE II 2D Ex ia IIC T135°C ... T85°C Db (T _a -25°C ... 70°C) File No. 35087702 at notified body 0044, TÜV NORD CERT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Protection according EN 60 529/IEC 529 | IP65 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Filling liquids | Glycerin, silicone | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight dry/filled in kg | 0,8/1,0 (stem length 100 mm) | 1,2/3,0 (stem length 100 mm) | 1,0/1,2 (stem length 100 mm, capillary 1,5 m) | 1,4/3,2 (stem length 100 mm, capillary 1,5 m) | | | | | | | | | | | | | | | | | | | | | | | |
| Accessories, options | Thermowells, dual scales, magnet spring- or inductive contacts, built in microswitch 1 or 2 SPDT, calibration certification. 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



Order information

| Size | Bulb diameter | Length of bulb/stem | Length of capillary | Process connection | Connection size | Connection orientation | Range | Engineering units | Options |
|-------------------|-------------------|---------------------|----------------------------|---|-------------------|---------------------------------|----------|--|--|
| (100) 100 mm | (6) 6 mm | 55 to 1000 mm | length in mm ¹⁾ | (B) Turning nut | (50) G ½ B | (L) Lower | 0/ 60 | °C | (NH) Tagging wired |
| (160) >160 mm | (7) 7 mm | | | (C) Single nipple | (75) G ¾ B | (R) Back | 0/ 80 | | (DA) Dial marking |
| | (8) 8 mm | | | (A04) Turning nipple | (10) G 1 B | (E2) Knee joint bendable (360°) | 0/ 100 | | (CS) Dual scale |
| | (9) 9 mm | | | (CS1) Adjustable union connection sliding on tube ¹⁾ | (50N) ½ NPT | | 0/ 120 | | (AJ) Accuracy 0,5% |
| | (10) 10 mm | | | (CS2) Adjustable union connection sliding on capillary | (75N) ¾ NPT | | 0/ 160 | | (PD) Acrylic glass |
| | | | | (CS3) Adjustable union connection sliding on stem | (10N) 1 NPT | | 0/ 200 | (SG) Safety glass | |
| | | | | (S) Surface bulb ²⁾ | (M18) M18x1,5 | | 0/ 250 | (MP) Micro pointer | |
| | | | | | (M20) M20x1,5 | | 0/ 300 | (A4) Capillary st. st. armored ¹⁾ | |
| | | | | | (M24) M24x1,5 | | 0/ 400 | (A5) Capillary st. st. armored with PVC covering ¹⁾ | |
| | | | | | (M27) M27x2 | | 0/ 500 | (FX) Front flange | |
| | | | | | | | 0/ 700 | (FW) Back flange | |
| | | | | | | | 0/ 800 | (FH) Surface mounting bracket L = 90 mm | |
| | | | | | | | -10/ 50 | (UC) U-clamp | |
| | | | | | | | -10/ 110 | (EP) Maximum pointer | |
| | | | | | | | -20/ 40 | (TM) 2" pipe mounting bracket | |
| | | | | | | | -20/ 100 | (ATEX) ATEX approval | |
| | | | | | | | -20/ 120 | | |
| | | | | | | | -20/ 180 | | |
| | | | | | | | -30/ 50 | | |
| | | | | | | | -30/ 70 | | |
| | | | | | | | -30/ 170 | | |
| | | | | | | | -40/ 40 | | |
| | | | | | | | -40/ 60 | | |
| | | | | | | | -40/ 160 | | |
| | | | | | | | -50/ 50 | | |
| | | | | | | | -60/ 40 | | |
| | | | | | | | -80/ 40 | | |
| | | | | | | | -100/ 50 | | |
| | | | | | | | -120/ 40 | | |
| | | | | | | | -200/ 50 | | |
| others on request | others on request | others on request | max. length: 100 m | ¹⁾ length of bulb (LS) must be specified. ²⁾ only for bulb diameter (7) others on request | others on request | | | °F and dual scale on request | other options on request for contacts see data sheet K55 |

Order example

| | | | | | | | | | | |
|------|-------|---------------|---------------------|---------------------|--------------------|-----------------|------------------------|-------|------------------|---------|
| Size | Type | Bulb diameter | Length of bulb/stem | Length of capillary | Process connection | Connection size | Connection orientation | Range | Engineering unit | Options |
| 100 | S5500 | 8 | 100 | 1500 | CS2 | 50N | L | 0/100 | C | FW |

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