



Application area

- Chemical and petrochemical industry
- Machinery construction
- General process technology
- Shipping

Techn. Data

Case

bayonet-ring case of stainless steel material no. 1.4301 (304), nominal size 100 and 160 mm

Process connection

rigid temperature detecting element, radially protruding at bottom, alternatively centrally at rear.

Different connections can be supplied, see order details

Case design

degree of protection IP 66 per EN 60529, liquid filling optional

Measuring element

bourdon tube dead zone free with noble gas filling

Temperature detecting element

stainless steel material no. 1.4404 (316L). Diameter 6, 8 and ≥ 10 mm. See order details for standard lengths and active lengths, other values upon request

Movement

stainless steel with compensation

Scale

aluminium, white with black inscription. Alternatively with marking resp. fixed reference pointer. Scale may be positioned as required, at the factory.

Pointer

aluminium, black with micro adjusting device for zero-point correction

Window

safety glass, alternatively macrolon with adjustable reference pointer

Case seal

Buna N

Measuring system damping

liquid filling for damping vibrations

Nominal ranges

per EN 13190
max. $-100 \dots 700$ °C, measuring spans ≥ 60 °C

Accuracy

per EN 13190, class 1

Ambient temperature

per EN 13190
ambient temperatures that deviate from EN are to be specified

Storage and transport temperature

per EN 13190
max. $-20 \dots +60$ °C

Features

- Case, measuring system and wetted parts of stainless steel
- Case DN 100/160, degree of protection IP 66,
- Different connections can be supplied
- Stem diameter 6, 8 and ≥ 10 mm
- Short immersion lengths of the stem may be used
- Accuracy class 1 as per EN 13190
- Micro adjusting pointer for indication correction

Options

- Case with liquid filling
- Calibration certificate per DIN EN 10204
- Connection to zone 0 with thermowells

Application

These thermometers are suitable for use outdoors and in aggressive environments. The devices can also be supplied with additional liquid damping for use in extreme conditions. Further information on mounting see operating instructions BTA-017, see data sheets T5-... for suitable thermowells.

Weights (without screwing and temperature detecting element)

DN 100, without filling:	approx. 0.6 kg
DN 100, with filling:	approx. 0.8 kg
DN 160, without filling:	approx. 1.1 kg
DN 160, with filling:	approx. 1.9 kg

Instructions for use

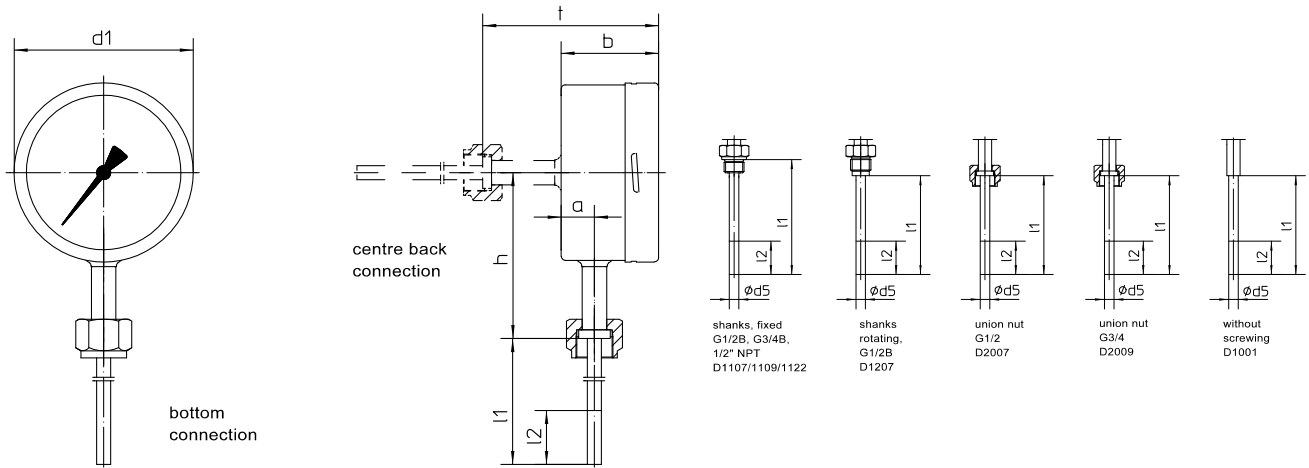
The loading capacity of the temperature detecting element depends on the following parameters:

1. measured medium
2. measured medium pressure
3. measured medium temperature
4. flow velocity
5. immersion length
6. material

A technical test is necessary where required

Information on other models upon request or see order details

Dimensions



Temperature detecting element diameter d5, immersion length l1 and active length l2 see order details

dimensions (mm)				h *					t *				
case	d1	b	a	D1001	D1107/1109/1122	D1207	D2007	D2009	D1001	D1107/1109/1122	D1207	D2007	D2009
DN 100	100	60	15	98	83	98	98	98	108	93	108	108	108
DN 160	160	60	15	128	113	128	128	128	108	93	108	108	108

* dimension increases by 36 mm for nominal ranges > 160 °C

Order Details - Please give additional specifications for models not listed -

Gas expansion thermometer radial bottom or centre back connection													
case	· DN 100		FN2 ...										
	· DN 160		FN3 ...										
case design	· IP 66 process connection radial		400										
	· IP 66 process connection rear		300										
	· IP 66 process connection radial with filling		600										
	· IP 66 process connection rear with filling		500										
accuracy ¹	· standard class 1 (full range)		A2										
measuring range	· per table		...										
process connection	· shanks, fixed G 1/2 B		D1107										
	· shanks, fixed G 3/4 B		D1109										
	· shanks, fixed 1/2 NPT		D1122										
	· shanks, rotating G 1/2 B		D1207										
	· union nut G 1/2		D2007										
	· union nut G 3/4		D2009										
	· without screwing		D1001										
temperature detecting element Ø d5	· 6 mm (l2 ≥ 180 mm) ²		F6										
	· 8 mm (l2 ≥ 80 mm) ²		F8										
	· 10 mm (l2 ≥ 50 mm) ²		F10										
immersion length l1 (mm) ³	D 11..	D1207	D2007	D2009	D1001								
	shanks fixed	shanks rotating G 1/2 B	union nut G 1/2	union nut G 3/4	without screwing								
	100	080	089	093	100								
	160	140	126	130	160								
	250	230	186	190	250								
	400	380	276	280	400								
deviating length: pls specify					999								
additional features (to be indicated in case of need, only)													
window	· macrolon with adjustable reference pointer		R13										
marking	· on scale (pls specify)		T2										
	· fast reference pointer (pls specify)		T3										
Order code (example):					FN2400	A2540	D1109	F8100					

¹ ambient temperatures that deviate from EN pls specify
² the active length l2 must completely reach the process temperature that is to be measured. The depth of immersion length l1 should be increased accordingly.
³ standard immersion length to be specified in order code, e.g. l1 100 mm: order code 100