



Features

- Case and wetted parts of stainless steel
- Different connections can be supplied
- Accuracy class 1 or 2 per DIN 16196, depending on range
- Micro adjustment pointer for indication correction
- Switch functions (electrical contact device) per DIN 16196:
 - slow acting contact
 - magnetic snap contact
 - inductive contact devices

Options

- Explosion protection
- Material certificate per EN 10204
- Connection to Zone 0 with thermowells upon request

Application area

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

Technical Data

Case

high quality bayonet ring case NS 100
material: st. steel mat.-no. 1.4301 (304)

Degree of protection (EN 60529)
IP 66

Measuring element

helix from thermostatic bimetal per DIN 1715
with good adjusting power and fast acting,
thermally aged, base and connection piece
laser welded

Temperature detecting element

stainless steel mat. no. 1.4571 (316Ti).
Diameter 6 and 8 mm. Can be supplied in
standard lengths, see order details; other
sizes upon request.

Process connection

rigid temperature detecting element, vertical
resp. axial protruding at rear.
Different connections available, see order
details

Pointer shaft

stainless steel mat.-no. 1.4571 (316Ti), with
multiple bearings

Scale

pure aluminium, white with black inscription

Pointer

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

Window

instrument glass, alternatively macrolon with
contact lock

Case seal

sealing ring: Perbunan

Nominal ranges

per EN 13190
see order details. Special ranges upon request

Accuracy

see table on side 2.

Ambient temperature

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

Storage and transport temperature

per EN 13190
max. -20...+60 °C

**For measuring devices with inductive
contact type SJ2-S1N (NS 100, double
contact): For safe operation refer to
TA_044!**

Electrical connection

connection plug with cable gland M 20 x 1.5
and removable test cover, mat. Macrolon

Switch functions

Touch contacts or inductive contact devices
see order code.
Further technical details see operating
instructions BA_066 and TA_039.

Explosion protection

magnetic snap contact

Simple electrical apparatus per IEC/DIN
EN 60079-11 suitable for intrinsically safe
circuits Ex IIC TX.

inductive contact

contact device suitable for intrinsically safe
circuits

Ex II 2G Ex ia IIC T4/T5/T6 Gb

Reg.-no.: PTB 99 ATEX 2219X

PTB 00 ATEX 2049X

Further details see operating instructions
BA_066.

Weight

NS 100: approx. 0.6 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**

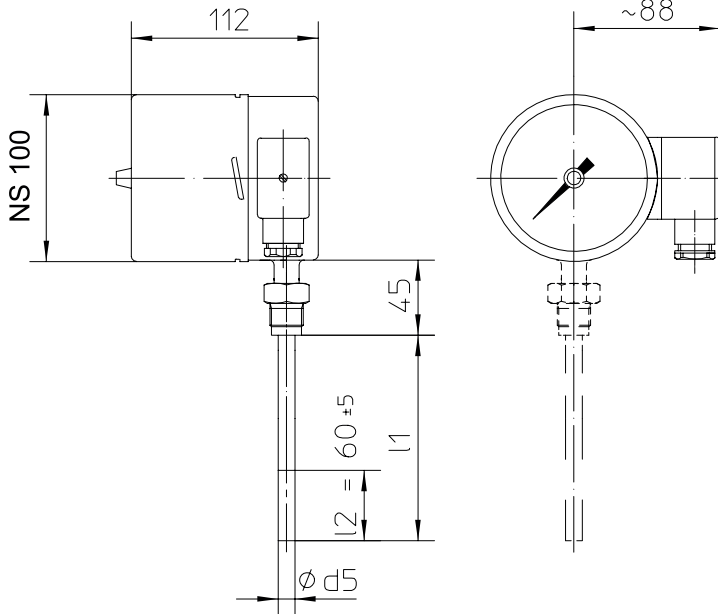
Accuracy

nominal size	tempera- ture detecting element	type of contact					
		touch contacts				inductive contacts	
		slow acting single	contact double	magnetic snap single	contact double	single	double
NS 100	Ø 8	class 1	class 2	class 2	class 2*	class 1	class 2
	Ø 6	class 2	class 2	class 2	> class 2	class 2	class 2

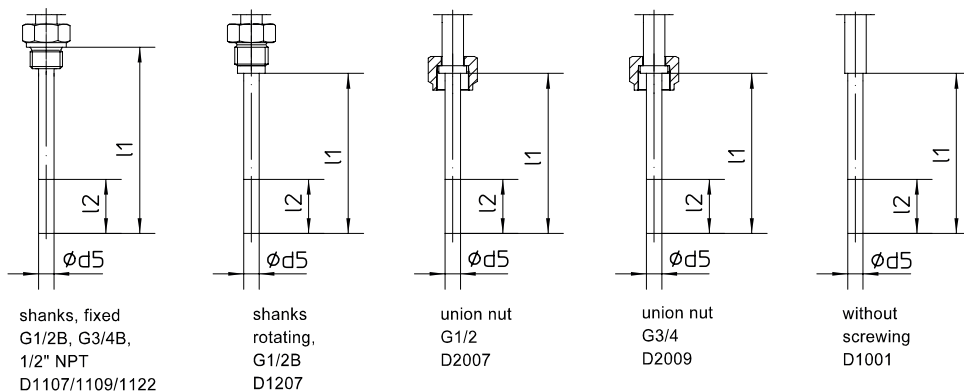
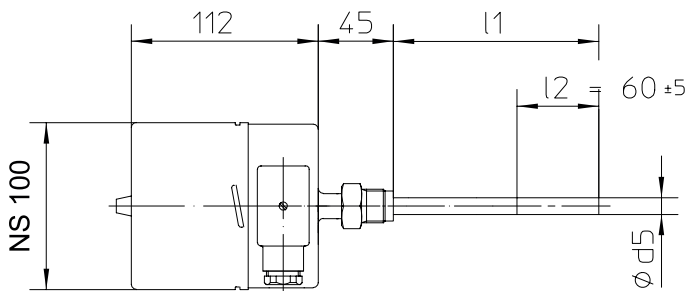
* pls indicate switch point, if no switch points are specified, the venfor will set 30 % or 70 % of the measuring range.

Dimensions

process connection radial vertical



process connection axial at rear



Order Details

- please give additional specifications for models not listed -

Bimetal thermometer with switch function, radial bottom or centre back connection									
case design	NS 100		· process connection axial			FP230 .			
	IP 66		· process connection vertical			FP240 .			
design	· standard					0			
	· ex-protection					1			
nominal range	· see table					A2...			
process connection	· shanks fixed		· G 1/2 B			D1107			
			· G 3/4 B			D1109			
			· 1/2" NPT			D1122			
	· shanks rotating		· G 1/2 B			D1207			
			· G 1/2			D2007			
	· union nut		· G 3/4			D2009			
· without screwing		· OV			D1001				
temperature detecting element Ø d5	· 6 mm (l2 ~ 60 mm) ³					F6 ...			
	· 8 mm (l2 ~ 60 mm) ³					F8 ...			
immersion length l1 (mm) ⁴	D 11... shanks fixed		D1207 shanks rotating G 1/2 B		D2007 union nut G 1/2		D2009 union nut 3/4		D1001 without screwing
	100		080		089		093		100
	160		140		126		130		160
	250		230		186		190		250
	400		380		276		280		400
	--		--		426		430		--
deviating length: pls specify									
999									
contact	<i>touch contact</i>								
	· slow acting contact					L2 ...			
	· magnetic snap contact					L4 ...			
	· slow acting contact, separated circuits					M2 ...			
	· magnetic snap contact, separated circuits					M4 ...			
	<i>inductive contact</i>								
	· standard initiator					N4 ...			
	· safety initiator SJ2 - SN / SJ3.5 - SN					N1 ...			
· safety initiator invers SJ2 - S1N / SJ 3.5 - S1N ²					N2 ...				
· with integrated switching amplifier ¹					N6 ...				
switch function	· single contact (1st figure per table)					.00			
	· double contact (1st + 2nd figure per table) ⁵					.0			
additional features (to be indicated in case of need, only):									
window	· macrolon					R11			
marking	· on scale (pls. specify)					T2			
Order code (example):									
FP2400 A2540 D1109 F8100 N4100									

standard measuring and nominal ranges °C per EN 13190		
nominal range °C	meas. range °C	order code
-20...+40	-10...+30	340
-20...+60	-10...+50	346
-30...+50	-20...+40	322
-40...+40	-30...+30	220
-40...+60	-30...+50	222
0...60	10...50	520
0...80	10...70	522
0...100	10...90	524
0...120	20...100	540
0...160	20...140	544
0...200	20...180	548
0...250	30...220	560
0...300	30...270	565
0...400	50...350	627
0...500	50...450	630
0...600	100...500	640

switch function	fig.
· increasing temperature makes contact	1
· increasing temperature breaks contact	2
· decreasing temperature makes contact	4
· decreasing temperature breaks contact	5

¹ not with ex-protection
² with NS 100: one contact device, only
³ 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.
⁴ standard immersion length to be specified in order code, e.g. l1 100 mm: order code 100
⁵ for NS 100, type SJ2-S1N: for safe operation refer to TA_044!