

Bimetal thermometer adjustable angel stem, Type series FA . . .



Features

- Case and wetted parts of stainless steel
- Case NS 100/160, degree of protection IP 66
- Different connections can be supplied
- Accuracy class 1 as per EN 13190
- Micro adjusting pointer for indication correction
- Indicator damping (standard)

Options

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

Application area

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

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. The temperature detecting element is susceptible to bending, therefore, fitting with thermowell is recommended. See data sheets T5-... for suitable thermowells.

Techn. Data

Case

stainless steel material no. 1.4301 (304), nominal size 100 and 160 mm

Process connection

rigid temperature detecting element, centrally protruding at rear, with fitted 90° pivoted joint stem. Different connections can be supplied, see order details

Case design

degree of protection IP 66 per EN 60529, alternatively with liquid filling

Measuring element

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

Pointer shaft

stainless steel material no. 1.4571 (316Ti), with multiple bearings, with highly flexible joint helix

Temperature detecting element

stainless steel material no. 1.4571 (316Ti), diameter 8 or 6 mm, can be supplied in standard lengths, see order details, other sizes upon request

Scale

aluminium, white with black inscription

Pointer

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

Window

instrument glass, alternatively macrolon

Case seal

Perbunan

Measuring system damping

indicator damping as standard
additionally liquid filling for damping the whole system can be supplied optionally for nominal ranges -40 °C up to 160 °C

Nominal ranges

per EN 13190 from -40...+500 °C (with restrictions also 600 °C), other values upon request. For nominal ranges above 400 °C, we recommend the use of a thermowell per DIN 43772

Accuracy

per EN 13190, class 1. The classes do not take into account a possible error, which can be caused by altering the position of the joint. However, this possible error can be compensated for by re-adjusting with the adjustable pointer

Storage or transport temperature

max. -20...+60 °C, other values upon request

Weights

NS 100: approx. 0.6 kg
NS 160: approx. 0.9 kg

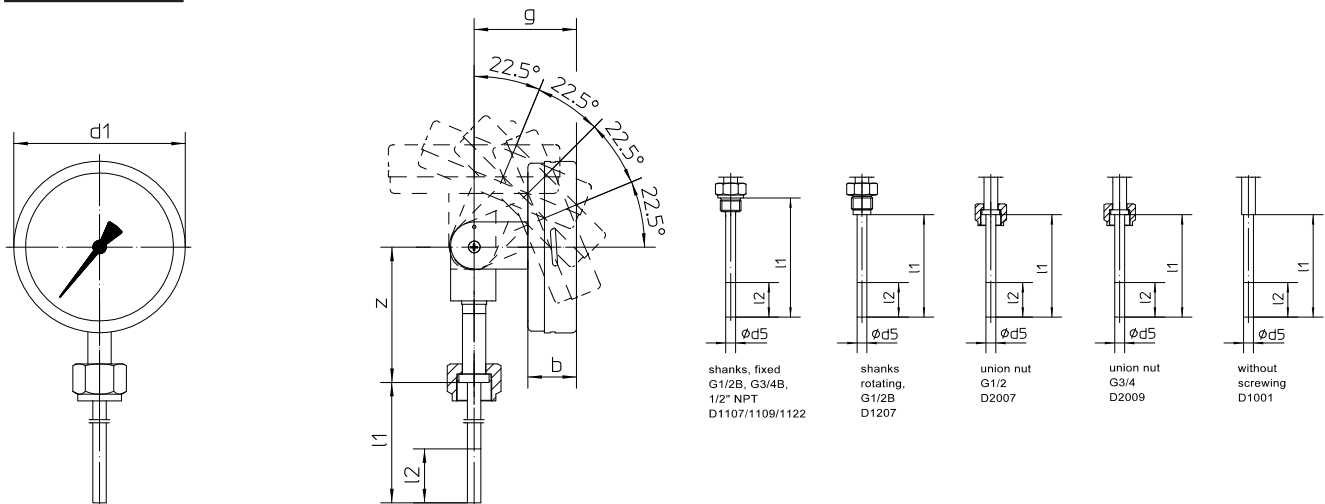
Instructions for use

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

The sensitive portion l2 shall reach the process temperature completely. The insertion length l1 should have adequate size.

Dimensions (mm)					z (up to sensor)					dimension z increases by 36 mm for nominal range > 300 °C
case	d1	b	g	l2	D1001	D1107/1109/1122	D1207	D2007	D2009	
NS 100	101	28	60	60 ± 5	76	60	80.5	80.5	80.5	
NS 160	161	29	60	60 ± 5	76	60	80.5	80.5	80.5	

Order Details - Please give additional specifications for models not listed -**Bimetal thermometer adjustable angel stem**

case	· NS 100					FA2 ...			
	· NS 160					FA3 ...			
case	· IP 66					310			
design	· IP 66 with liquid filling					510			
accuracy measuring range	· standard class 1 (full range)					A2			
	· per table					...			
process connection	· shanks, fixed G1/2 B					D1107			
	· shanks, fixed G3/4 B					D1109			
	· shanks, fixed 1/2 NPT					D1122			
	· shanks, rotating G1/2 B					D1207			
	· union nut G1/2					D2007			
	· union nut G3/4					D2009			
	· without screwing					D1001			
temperature detecting element Ø d5	· 6 mm					F6			
	· 8 mm					F8			
immersion length l1 (mm) ²	D 11.. shanks fixed	D1207 shanks rotating G1/2 B	D2007 union nut G1/2	D2009 union nut G3/4	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
additional features (to be indicated in case of need, only)									
window	· macrolon with adjustable reference pointer								
marking	· on scale (pls specify)								
Order code (example):						FA2310	A2222	D1109	F8100

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 ¹	30...270 ¹	565
0...400 ¹	50...350 ¹	627
0...500 ¹	50...450 ¹	630
0...600 ¹	100...500 ¹	640

¹ measuring range without case filling, only

² standard immersion length to be specified in order code, e.g. l1 80 mm: order code 080