

Thermometer

stainless steel with capillary
with outside mounted contact device

E 10.08.05

Ed.17.02

Design	Thermometer in stainless steel with capillary for mounting in thermowell or for direct mounting
Type	F73
Case diameter	Dim 100 mm or 160 mm
Accuracy	Class 1,0% DIN EN 13190
Case	Stainless steel with bayonet type bezel Option with liquid filled case Option with liquid filled case (Food compatible)
Glass	Laminated safety glass
Dial	White dial of aluminium with unit Celsius °C Option dial with unit °F or unit °C+F
Mounting	Back flange for wall mounting Mounting bracket for wall mounting Frontflange for panel mounting Panel ring and clamp for panel mounting
Temperature element	Inert gas expansion system
Working temperature	100% of range by permanent measuring The endvalue can be exceeded 20% by short time
Capillary	Capillary of stainless steel (dim Ø2 mm) Length 1 meter to max 15 meter
Stem	Ø 6, 8, 10 or 12 mm of stainless steel
Length of stem	Stem length from 60 mm to 300 mm
Connection	Type 1 = Plain stem without thread Type 2 = Male nut Type 3 = Union nut Type 4 = Compression fitting on stem Type 6 = Compression fitting on capillary
Connection thread	G1/2", G3/4", 1/2"NPT, 3/4"NPT or M18x1,5
Working pressure	Max pressure rating without thermowell = 25 bar
Ingress protection	IP 65 per EN 60529. Option IP 66
Ambient temperature	Max 40+60°C
Contacts	The contact values are set from the outside through the hood by means of a key and they can be set optionally all over the scale.
Functions	Max- and/or minfunction, se table next side
Electrical connection	1 m cable is connected to a socket on the hood front
Thermowell	Fabricated or solid machined thermowell as accessorie. See page 5.
ATEX	Option with Ex acc.to ATEX protection Cat 2G and 2D
Certificate	Certificate EN 10204 as option Test report material EN 10204-2.2 Material certificate EN 10204-3.1 Test certificate EN 10204-3.1 with 3 measuring points



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Scale range	Measuring range	Scale spacing	Error
-200 + 100°C	-170 + 70°C	60 divisions	+/- 5°C
-80 + 60°C	-60 + 40°C	70 divisions	+/- 2°C
-40 + 60°C	-30 + 50°C	100 divisions	+/- 1°C
-30 + 50°C	-20 + 40°C	80 divisions	+/- 1°C
-20 + 60°C	-10 + 50°C	80 divisions	+/- 1°C
-20 + 80°C	-10 + 70°C	100 divisions	+/- 1°C
0 + 60°C	+10 + 50°C	60 divisions	+/- 1°C
0 + 80°C	+10 + 70°C	80 divisions	+/- 1°C
0 + 100°C	+10 + 90°C	100 divisions	+/- 1°C
0 + 120°C	+10 + 100°C	60 divisions	+/- 2°C
0 + 160°C	+20 + 140°C	80 divisions	+/- 2°C
0 + 200°C	+20 + 180°C	100 divisions	+/- 2°C
0 + 250°C	+30 + 220°C	50 divisions	+/- 2,5°C
0 + 300°C	+30 + 270°C	60 divisions	+/- 5°C
0 + 400°C	+50 + 350°C	80 divisions	+/- 5°C
0 + 500°C	+50 + 450°C	100 divisions	+/- 5°C
0 + 600°C	+100 + 500°C	60 divisions	+/- 10°C
0 + 700°C	+100 + 600°C	70 divisions	+/- 10°C

The measuring range is indicated on the dial by two triangular marks.
Only within this range is the stated error limit valid per EN 13190.

Mounting



F73 backflange
for wall mounting



F73 frontflange
for panel mounting



F73 panel ring
for panel mounting



F73 mounting bracket
for wall mounting

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Magnetic snap-action contact type 821

Electrical adjustable contacts

Voltage max 250 VAC, maximum load 30W, 50 VA

Contact material silver-nickel alloy(80/20) Hysteresis 2-4% of full scale range

Option extra also Gold-silver or Platinum-Iridium

1 meter cable

Dual contacts				
	821.11	821.12	821.21	821.22
	2 x max	min - max	max - min	2 x min
	contact makes by rising temp	contact breaks by falling and rising	contact makes by falling and rising	contact breaks by rising temp
Dim 100	98300001	98300002	98300003	98300004
Dim 160	98300501	98300502	98300503	98300504



Inductive contact type 831

Electrical adjustable contacts

The inductive contact is well suited to severe operating conditions, such as extremely swift changes or when an explosion safe design is necessary. The contacts are completely protected from touch and the hysteresis is less than 0,5%

1 meter cable

Dual contacts				
	831.21	831.11	831.12	831.22
	max - min	2 x max	min - max	2 x min
	contact makes by falling and rising	contact makes by rising temp	contact breaks by falling and rising	contact breaks by rising temp
Dim 100	98301003	Base design type 831.21 Other functions possible with control unit		
Dim 160	98301503			

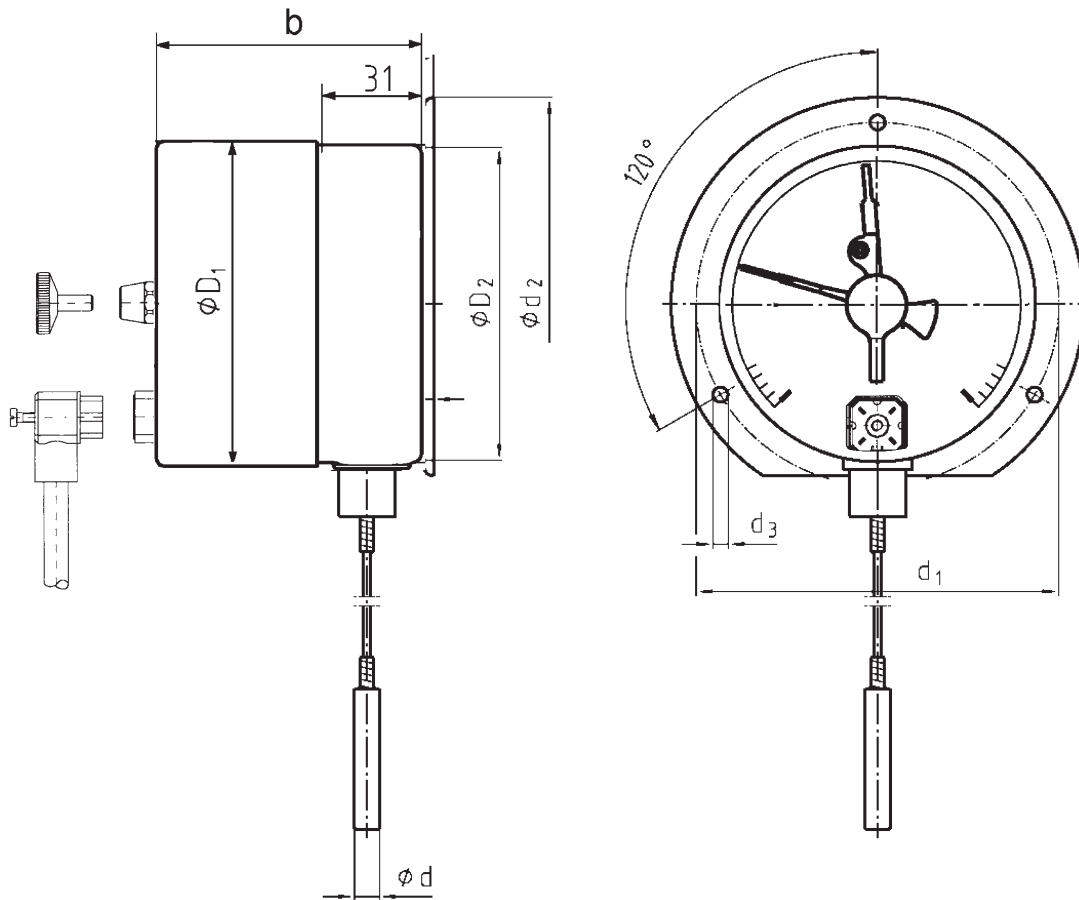


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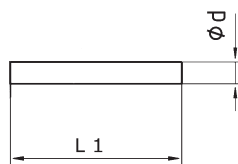
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Type 7308 with back flange

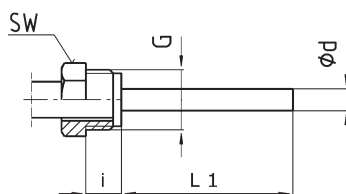


Case	b	d	d1	d2	d3	D1	D2
100	90	6, 8, 10	116	132	4,8	101	99
160	199	6, 8, 10	178	196	5,8	161	159



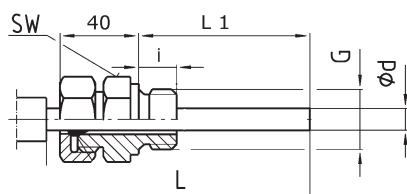
Connection typ 1

Plain stem without thread
Immersion length L_1 and
stem diameter d must be stated



Connection typ 2

Male nut
Connection G , immersion length L_1 and
stem diameter d must be stated



Connection typ 4

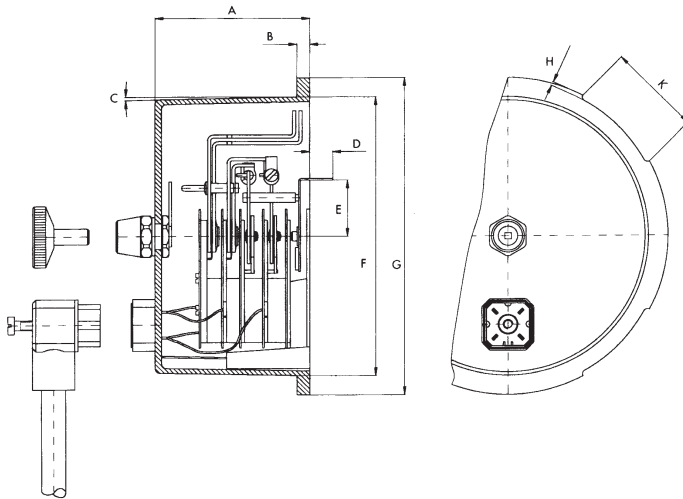
Compression fitting on stem
Connection G , immersion length L_1 and
stem diameter d must be stated

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Contact device with electrical contact and cable



Case	A	B	C	D	E	F	G	H	K
100	47,5	4,0	1,0	6,0	17,5	86,5	98,5	1,25	29,0
160	56,2	4,0	1,0	6,0	22,5	146,5	158,0	1,25	29,0