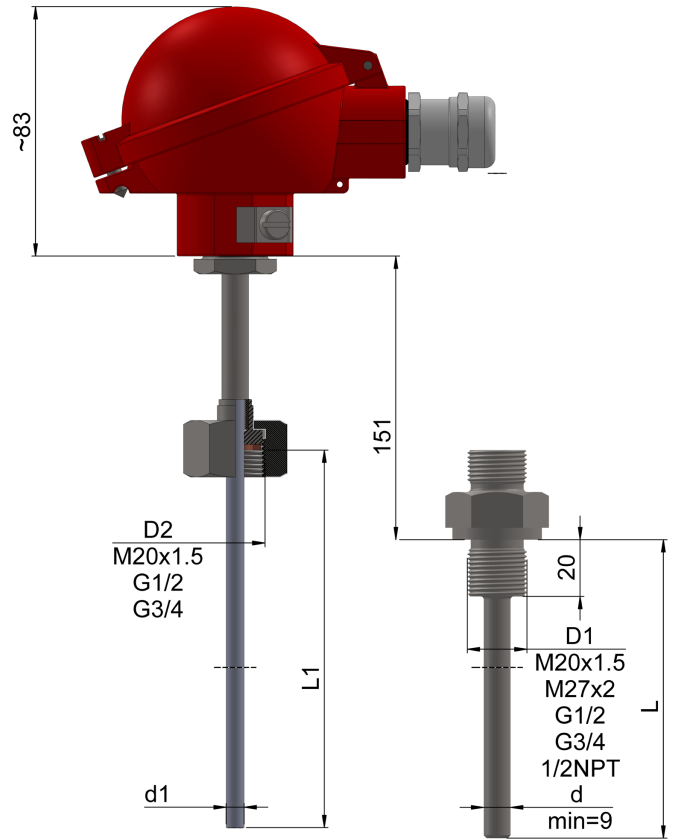


Intrinsically safe temperature sensors with replaceable measuring inserts **TOPGWN-5...Exi,**
TTJGWN-5...Exi, TTKGWN-5...Exi



Technical description

Measuring range / sensing element		
(-200 ÷ 550) °C	Pt100	class B
(-40 ÷ 550) °C	J, K	class 2
Measuring insert – p. 179		
– diameter d _i [mm]: ø3; ø4,5; ø6; ø8		
– 2-, 3-, 4-wire connection (for Pt100)		
– 2-, 3-wire connection (for 2xPt100)		
– insert length: L+177 mm or L _i +146 mm		
Thermowell		
– material: steel 1.4541,		
– x dxL with thread D ₁ , D ₂ = G1/2		
– without additional sheath, with threaded nut D ₂		
– diameter d [mm]: ø9, ø10, ø11, ø12, ø14		
– length L/L _i [mm]: 50+2000		
Connection head – p. 219		
– aluminium XE-DANA (S1-standard), XE-DAND (S2), XE-DANAW(W1), XE-DANDW(W2) or stainless steel XE-BE (N1)		
– cable gland ATEX II GD IP65 (for cable 5+10 mm)		
– operating temperature up to 90 °C		
Construction version		
– Exi acc. to ATEX		
– WE Type-Examination Certificate: KDB 07ATEX055		
⊕ I M1 Ex ia I (only with connection head N1)		
⊕ II 2G Ex ia IIC T6; II 1D Ex ia IIIC T85 °C (for d=9)		
⊕ II 1/2G Ex ia IIC T6; II 1D Ex ia IIIC T85 °C (for d>9)		
– 2AP version... and AP2... only with connection heads W1 and W2		
Options		
– Pt500, Pt1000, T, N		
– other threads (inch and metric) acc. to requirements		
– Pt100: class A (-50 ÷ 400) °C, class AA (0 ÷ 150) °C;		
TC: class 1		
Additional accessories		
– temperature transmitters with Exi version – p. 225+241		



Response time T05/T09

Sensor type	ø9	ø11
Pt	≤33/≤95	≤40/≤120
J, K insulated junction	≤22/≤62	≤27/≤90
J, K grounded junction	≤3/≤8	≤6/≤15

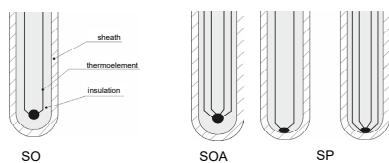
Resistors tolerance acc. to PN-EN 60751

Class	Wire wound resistor	
	Range [°C]	Tolerance [°C]
AA	(-50+250)	±(0,1+0,0017·|t|)
A	(-100+450)	±(0,15+0,002·|t|)
B	(-196+600)	±(0,3+0,005·|t|)

Tolerance for thermocouples class acc. to PN-EN 60584

Thermocouple	Class 1		Class 2	
	Range [°C]	Tolerance [°C]	Range [°C]	Tolerance [°C]
J Fe-CuNi	(-40+375) (375+750)	±1,5 ±0,004 |t|	(-40+333) (333+750)	±2,5 ±0,0075 |t|
K, Na NiCr-NiAl	(-40+375) (375+1000)	±1,5 ±0,004 |t|	from (-40+333) (333+1200)	±2,5 ±0,0075 |t|

Types of measuring hot junction



Ordering code

Temperature sensor	...	...	T	...	GWN-5	...	Exi	-	...	...	...	...	...	...	...	...
Without transmitter	no sign															
With transmitter	AP															
With two transmitters	2AP															
Single	no sign															
Double	2															
Resistor Pt																OP
Thermocouple Fe-CuNi; NiCr-NiAl																TJ; TK
Thermocouple Cu-CuNi; NiCrSi-NiSi																TT; TN
Replaceable pipe insert (ø6; ø8)																1
Replaceable mineral insulated insert (ø3; ø4,5; ø6)																2
Type of head connection for II group (standard S1)																S1, S2, W1, W2
Type of head connection for I and II groups																N1
Thermowell length / diameter (for version with outer thermowell) L/d [mm]																220/12*
Insert diameter / length (for version without outer thermowell) d ₁ /L ₁ [mm]																6/230*
Thread dimension D ₂ (without thermowell), D ₁ (with thermowell)																G ^{3/4} *
Resistor type																Pt100*
Hot junction type for TC																SO, SP, SOA
Resistor class																A, B*
Thermocouple class																1, 2
Measuring circuit for RTD																2, 3, 4
Type of transmitter																LTT01Ex*
Setting of transmitter temperature																(0 ÷ 100) °C*

* or others acc. to requirements

Ordering example

2TTKGWN-52Exi-S1-160/10-G^{3/4}-SOA-2