

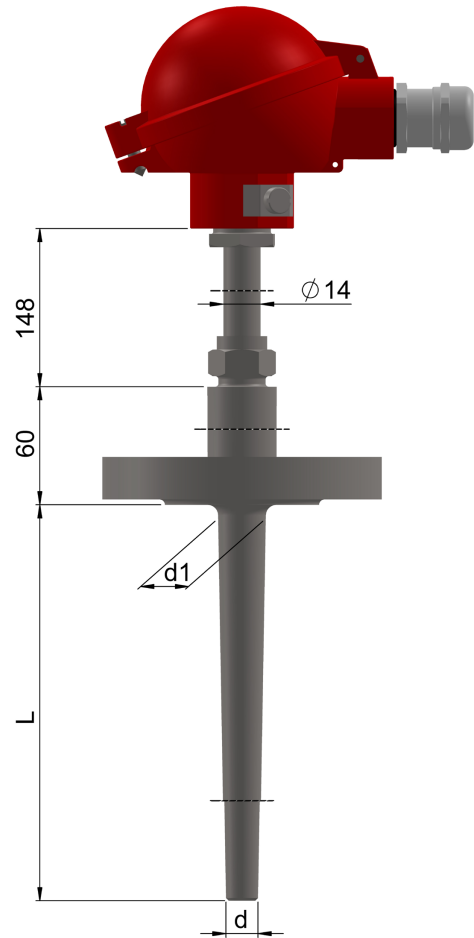
Intrinsically safe temperature sensors with replaceable measuring inserts

**TOPSWT-1...Exi,  
 TTJSWT-1...Exi,  
 TTKSWT-1...Exi**



**Technical description**

Measuring range / sensing element		
(-200 ÷ 600) °C	<b>Pt100</b>	class B
(-40 ÷ 700) °C	<b>J, K</b>	class 2
Measuring insert – p. 179		
– diameter [mm]: $\varnothing 6, \varnothing 8$ mm		
– 2-, 3-, 4-wire connection (for Pt100)		
– 2-, 3-wire connection (for 2xPt100)		
– insert length: L+233 mm		
Thermowell		
– drilled: straight $d_{min} = 15$ mm, tapered $d/d1, d_{min} = 12$ mm		
– material: steel 1.4541		
– inner thread: G½ (standard); M20x1,5; ½NPT		
– flange: np. DN25PN16B1 acc. to PN-EN 1092-1*		
– length: L [mm]: 50+700		
Connection head – p. 219		
– aluminium XE-DANA (S1-standard), XE-DAND(S2), XE-DANAW(W1), XE-DANDW(W2) or stainless steel XE-BE(N1), IP65, operating temperature up to 90 °C		
– cable gland ATEX II GD IP68 (for cable 5+10 mm)		
Construction version		
– Exi acc. to ATEX		
– WE Type-Examination Certificate: <b>KDB 07ATEX055</b>		
I M1 Ex ia I (only with connection head N1)		
II 1/2G Ex ia IIC T6; II 1D Ex ia IIIC T85 °C		
– 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		



TEMPERATURE SENSORS FOR FOOD INDUSTRY

**J**

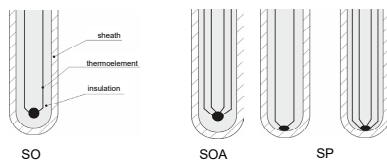
Resistors tolerance acc. to PN-EN 60751

Class	Wire wound resistor	
	Range [°C]	Tolerance [°C]
<b>AA</b>	(-50+250)	$\pm(0,1+0,0017 \cdot  t )$
<b>A</b>	(-100+450)	$\pm(0,15+0,002 \cdot  t )$
<b>B</b>	(-196+600)	$\pm(0,3+0,005 \cdot  t )$

Tolerance for thermocouples class acc to. PN-EN 60584

Thermocouple	Class 1		Class 2	
	Range [°C]	Tolerance [°C]	Range [°C]	Tolerance [°C]
<b>J</b> Fe-CuNi	(-40+375) (375+750)	$\pm 1,5$ $\pm 0,004  t $	(-40+333) (333+750)	$\pm 2,5$ $\pm 0,0075  t $
<b>K, Na</b> NiCr-NiAl	(-40+375) (375+1000)	$\pm 1,5$ $\pm 0,004  t $	from (-40+333) (333+1200)	$\pm 2,5$ $\pm 0,0075  t $

Types of measuring hot junction



**Ordering code**

Temperature sensor	...	...	T	...	SWT-1	...	Exi	-	...	...	...	...	...	...	...	...	...
Without transmitter																	
With transmitter																	
With two transmitters																	
Single																	
Double																	
Resistor Pt																	
Thermocouple Fe-CuNi; NiCr-NiAl																	
Thermocouple Cu-CuNi; NiCrSi-NiSi																	
Replaceable pipe insert																	
Replaceable mineral insulated insert																	
Type of head connection for II group (standard S1)																	
Type of head connection for I and II groups																	
Thermowell dimension dxL or d/d,xL [mm]																	
Thread or flange designation																	
Resistor type																	
Hot junction type for TC																	
Resistor class																	
Thermocouple class																	
Measuring circuit for RTD																	
Type of transmitter																	
Setting of transmitter temperature																	

\* or others acc. to requirements

**Ordering example**

AP2TOPSWT-12Exi-W2-15/20x160-G3/4-Pt100-B-3-248HAI- (0 ÷ 400) °C