

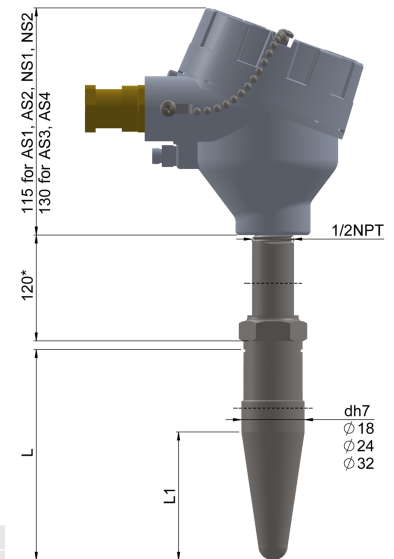
Flameproof temperature sensors with replaceable measuring inserts

**TOPSW-Exd, TTJSW-Exd,
TTKSW-Exd**



Technical description

Measuring range / sensing element		
(-50 ÷ 500) °C	Pt100	class B; ø18
(-200 ÷ 550) °C	Pt100	class B; ø24 and ø32
(-40 ÷ 550) °C	J, K	class 2
Measuring insert – p. 193		
– 3-, 4-wire connection (for Pt100)		
– 3-wire connection (for 2xPt100)		
– insert length: L+159 mm		
Thermowell		
– material: steel 1.7335 (15HM) or 1.4541		
– diameter dh7 [mm]: ø18, ø24, ø32		
– dimension L/L ₁ [mm]: 100/35, 140/65, 200/65, 260/125 (for ø18) 100/35, 140/65, 200/65, 260/125 (for ø24, ø32)		
– connection thread: M12x1,5 (for ø18), M14x1,5 (for ø24), ½NPT (for ø32)		
Connection head – p. 219		
– aluminium XD-AD (AS1 - one cable gland, AS2 - two cable glands), with display		
– XD-ADwin (AS3 - one cable gland, AS4 - two cable glands), stainless steel		
– XD-SD (NS1 - one cable gland, NS2 - two cable glands), cable gland: ATEX II 2 GD; ATEX I M2; IP 66+68 cable diameter: 3+14,3 mm (standard 6,1+11,7)		
Construction version		
– Exd acc. to ATEX		
– WE Type-Examination Certificate: KDB 08ATEX135		
– I M2 Ex d I; (only with connection head NS1, NS2)		
– II 2 GD Ex d IIC T6; Ex t IIIC T85 °C IP66		
Options		
– Pt500, Pt1000, T, N		
– Pt100: class A (-50 ÷ 400) °C, class AA (0 ÷ 150) °C; TC: class 1		
Additional accessories		
– temperature transmitters – p. 225+241		
– local display LPI-02 (connection head AS3 or AS4) – p. 221		



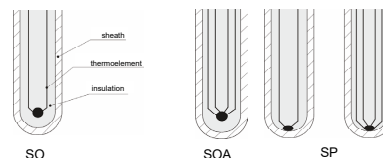
Resistors tolerance acc. to PN-EN 60751

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	...	SW-Exd	-	...	...	...	...	...	...	...	...	...	...	...	...
Single		no sign															
Double		2															
Single With transmitter		AP															
Resistor Pt				OP													
Thermocouple Fe-CuNi; NiCr-NiAl				TJ; TK													
Thermocouple Cu-CuNi; NiCrSi-NiSi				TT; TN													
Type of aluminium connection head				AS1, AS2, AS3, AS4													
Type of stainless steel connection head				NS1, NS2													
Material of the sheath				1.4541, 1.7335													
Immersion length / thermowell diameter L/d [mm]																	200/18*
Type** and resistor class																	aA, aB*
Thermocouple class																	1, 2
Measuring circuit for RTD																	3, 4
Hot junction type for TC																	SO, SP, SOA, SOB
Type of transmitter																	TxBlock*
Setting of transmitter temperature																	(0 ÷ 100) °C*
Cable diameter for cable gland: a (3,2 mm+8,7 mm), b: standard (6,1 mm+11,7 mm), c (6,5 mm+14 mm)																	a, b, c

* or others acc. to requirements
** a=1 for Pt100, a=5 for Pt500, a=10 for Pt1000

Ordering example

APTKSW-Exd-NS1-1.4541-140/24-1-SO-Tx-(0 ÷ 250) °C-b