

Selection and ordering data

SITRANS TS100	Article No.				
Temperature sensors in cable version, for universal use, mineral-insulated version, for unfavorable space conditions	7MC7111-	●	●	●	●
Click the article number for online configuration in the PIA Life Cycle Portal.					
Sensor diameter					
6 mm (0.24 inches)		6			
Length of the basic sensor B					
Effective length U = B-10, see "Dimensional drawings"					
200 mm (7.87 inches)			C		
500 mm (19.68 inches)			D		
750 mm (29.53 inches)			E		
Customer-specific length of the basic sensor B					
Effective length U = B-10, see section "Dimensional drawings"					
Specify customer-specific length with Y44, see order codes					
70 ... 100 mm (2.76 ... 3.94 inches)				B	
Initial: 100 mm (3.94 inches)					
101 ... 250 mm (3.98 ... 9.84 inches)				C	
Initial: 200 mm (7.87 inches)					
251 ... 500 mm (9.88 ... 19.68 inches)				D	
Initial: 500 mm (19.68 inches)					
501 ... 750 mm (19.72 ... 29.53 inches)				E	
Initial: 750 mm (29.53 inches)					
751 ... 1 000 mm (19.72 ... 39.37 inches)				F	
Initial: 1 000 mm (39.37 inches)					
1 001 ... 1 500 mm (39.4 ... 59.00 inches)				G	
Initial: 1 500 mm (59.00 inches)					
Special length: < 70 mm (2.76 inches) or > 1 500 mm (59.00 inches)				X	
Sensor¹⁾					
Note: The accuracy class range can be lower than the measuring range. For more detailed information, see "Configuration"/"Measuring technology: Measuring accuracy"					
Pt100, Basic, -50 ... +400 °C (-58 ... +752 °F)				A	
Pt100, vibration-resistant, -50 ... +400 °C (-58 ... +752 °F)				B	
Pt100, extended range, -196 ... +600 °C (-320.8 ... +1 112 °F)				C	
Type K thermocouple, -270 ... +1 100 °C (-167 ... +2 012 °F)				K	
Thermocouple type J, -40 ... +750 °C (-40 ... +1 382 °F)				J	
Number/precision of sensors					
Pt100 connection: 1 × 4-wire connection or 2 × 3-wire connection see "Configuration"/"Measuring technology: Connection types"					
Single, basic accuracy (Class 2/Class B)					1
Single, increased accuracy (Class 1/Class A)					2
Single, maximum accuracy (Class AA)					3
Double, basic accuracy (Class 2/Class B)					4
Double, increased accuracy (Class 1/Class A)					5
Double, maximum accuracy (Class AA)					6
Type of connection end					
Flying leads					1
Coupling LEMO 1S					2
M12 device plug, not for double Pt100					3
Thermocouple coupling, made of thermal material (2 × TC on request)					4

¹⁾ Pt1000 versions are also available.

To find these, switch to Online Configuration in the PIA Life Cycle Portal: www.siemens.com/pia-portal

Options	Order code
Add "-Z" to article number and specify options; separate multiple expansions with "+"	
Process connection	
Soldering nipple enclosed	
• G¼"	A20
• G½"	A21
• NPT½"	A22
• M18x1.5	A23
Compression fitting enclosed	
• G¼"	A30
• G½"	A31

Temperature Measurement

Temperature sensors

SITRANS TS100 cable version

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Options	Order code
• NPT $\frac{1}{2}$ "	A32
• NEW: Spring-loaded G $\frac{1}{2}$ "	A41
• NEW: Spring-loaded NPT $\frac{1}{2}$ "	A42
Surface connection piece	
• Aluminum, enclosed (non-Ex)	A50
Certificates and approvals	
DELETE: Inspection certificate EN 10204-3.1: Wetted material	C12
NEW: Callendar Van Dusen coefficients calibrated at 0/+50/+100 °C	C25
NEW: Callendar Van Dusen coefficients calibrated at 0/+100/+150 °C	C26
NEW: Callendar Van Dusen coefficients calibrated at 0/+100/+200 °C	C27
Inspection certificate EN 10204-3.1: Visual, dimensional and function check	C34
Inspection certificate EN 10204-2.1: Declaration of compliance with the order	C35
ISO 9001 grease-free (cleaned for oxygen applications, for example)	C51
Marine approvals	
Det Norske Veritas Germanischer Lloyd (DNV GL)	D01
Type of protection (Ex)	
Without explosion protection requirements (Europe, Australia, New Zealand)	E00
Intrinsic safety "i"/"IS" ¹⁾ according to ATEX and IECEx (Europe, Australia, New Zealand)	E01
Without explosion protection requirements (USA, Canada), Basis CSA	E17
Intrinsic safety "i"/"IS" ¹⁾ according to cCSAus (USA, Canada)	E18
Without explosion protection requirements (China)	E54
Intrinsic safety "i"/"IS" ¹⁾ according to NEPSI (China)	E55
NEW: Intrinsic safety ia,"ic" according to KCC/KCS (Korea)	E70
Without explosion protection requirements (EAC)	E80
Intrinsic safety "i"/"IS" ¹⁾ according to EACEx (EAC)	E81
Connecting cable, type and length	
• Cable type = 1st letter,	
• Length 1 ... 99 m (3.28 ... 324.80 ft) = 2nd+3rd place For example: 34 m (111.55 ft) connecting cable PVC (PVC has the order code J34)	
With X meter connecting cable (JJ) PVC/PVC, operating temperature: -10 ... +105 °C (14 ... 221 °F)	J01 - J99
With X meter connecting cable (SLFP) silicone/fluoropolymer, operating temperature: -50 ... +180 °C (-58 ... 356 °F)	S01 - S99
With X meter connecting cable (TGLV) PTFE/glass silk/stainless steel reinforced), operating temperature: -100 ... +205 °C (-148 ... +401 °F)	L01 - L99
Device settings	
Tag plate made of stainless steel, specify label in plain text	Y15
Perform factory calibration at one point, specify desired temperature in plain text. Notice: For devices with built-in head transmitter, select test points within the set measuring range.	Y33
Special length of the basic sensor B Effective length U = B-10, see "Dimensional drawings" Select range, plain text specification of desired length (no specification = standard length)	Y44
Customer-specific plain text	
Handling number of the special design	Y99

¹⁾ Select Ex i version of the optional transmitter.

Selection and ordering data (continued)

For ordering examples, see "Temperature sensors"/"Ordering examples".

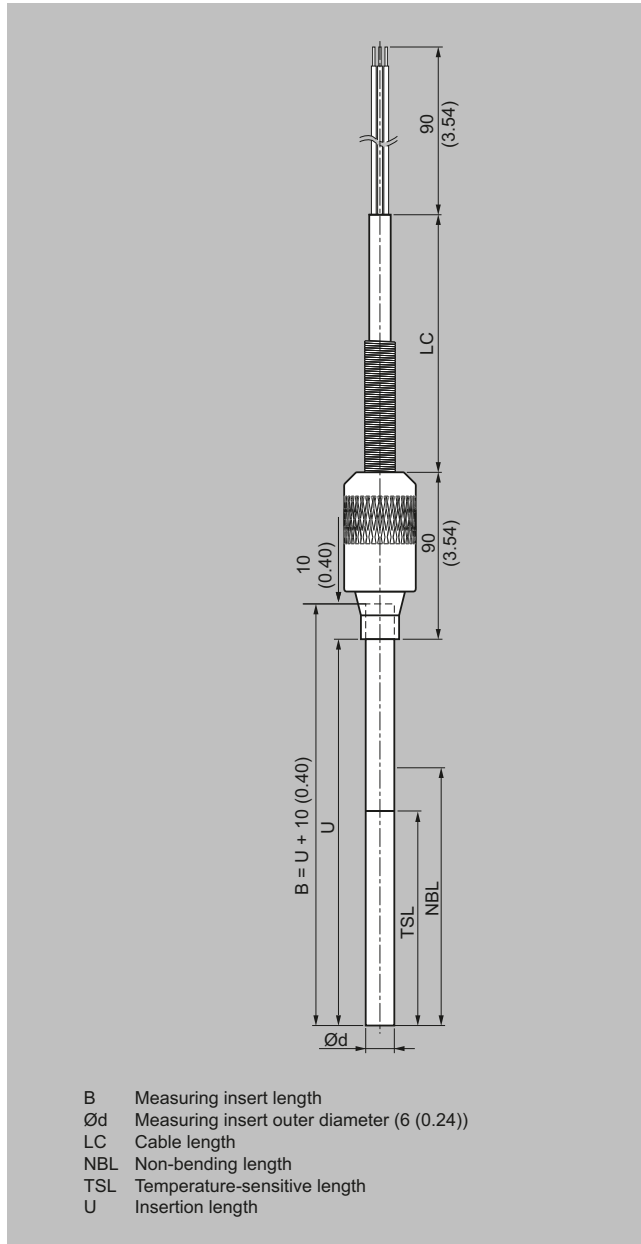
For accessories, see "Accessories"/"Additional accessories for assembly, connection and transmitter configuration".

Temperature Measurement

Temperature sensors

SITRANS TS100 cable version

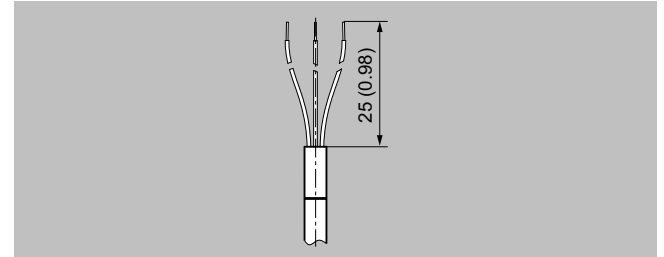
Dimensional drawings



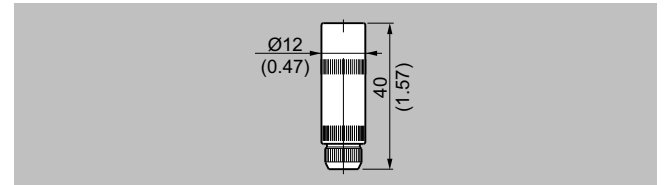
SITRANS TS100, temperature sensors in cable version, for universal use, mineral-insulated version, for unfavorable space conditions, IP54 at sensor/cable transition, dimensions in mm (inch)

Dimensional drawings (continued)

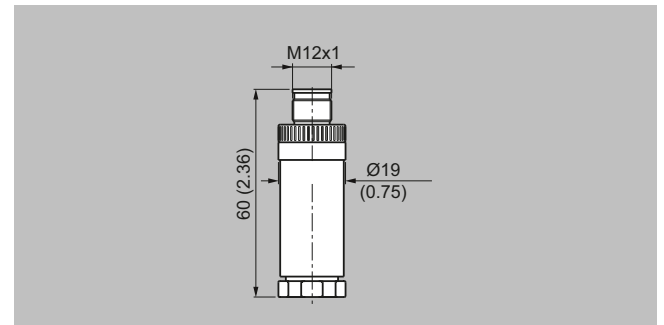
Types of connection end



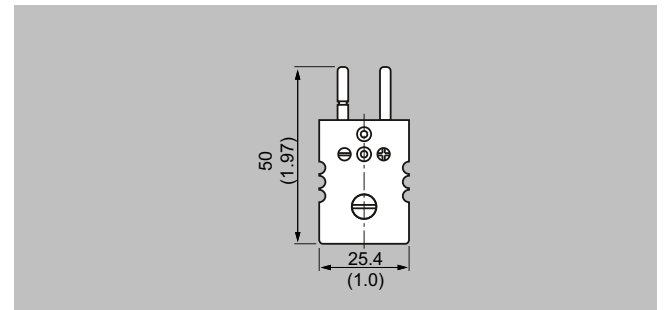
Flying leads, IP00, dimensions in mm (inch)



LEMO 1S coupling, IP50, dimensions in mm (inch)



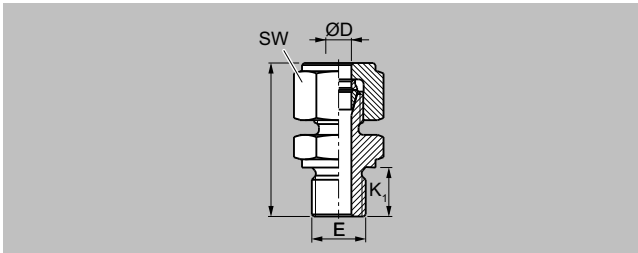
M12 device plug, IP54, dimensions in mm (inch)



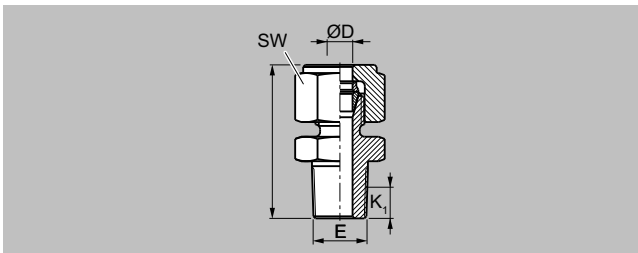
Thermocouple plug, IP20, dimensions in mm (inch)

Dimensional drawings (continued)

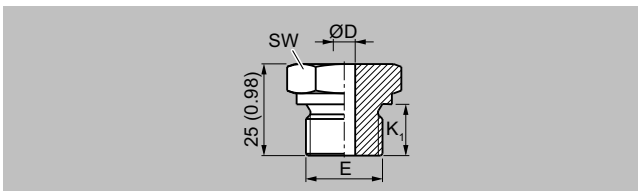
Process connection



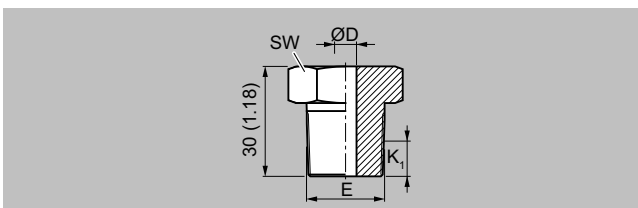
Compression fitting, metric (A30, A31), dimensions in mm (inch)



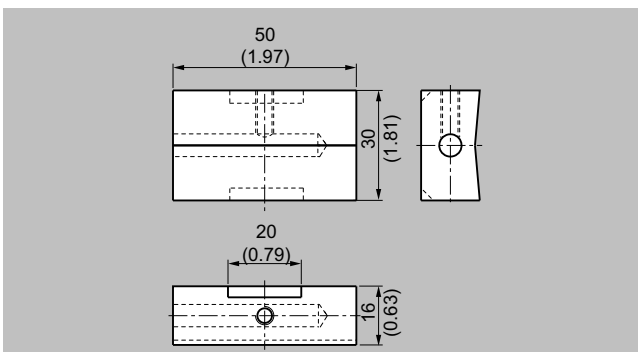
Compression fitting, NPT (A32), dimensions in mm (inch)



Soldering nipple, metric (A20, A21, A23), dimensions in mm (inch)



Soldering nipple NPT (A22), dimensions in mm (inch)



Surface connection piece (A50), dimensions in mm (inch)