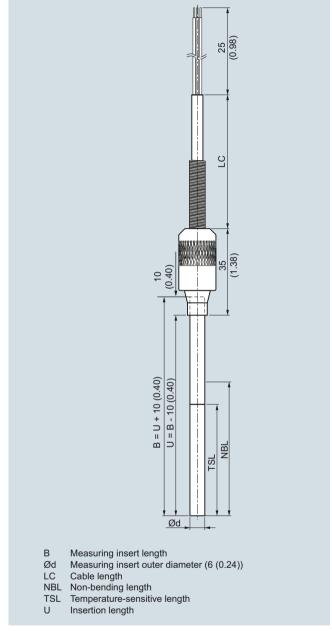
Temperature Measurement

SITRANS TS100

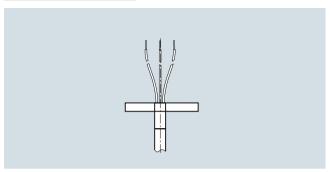
Cable mineral-insulated

Dimensional drawings

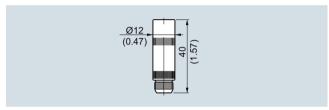


SITRANS TS100, temperature sensors in cable version, universal use, mineral-insulated version, for unfavorable space conditions, IP54 at sensor/cable transition, dimensions in mm (inch)

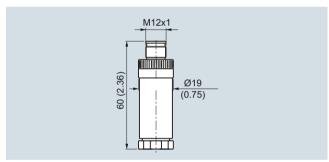
Design of connection side



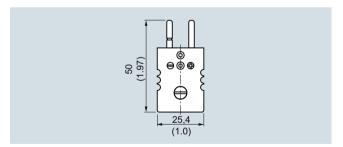
Flying leads, IP00, dimensions in mm (inch)



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



M12 plug, IP54, dimensions in mm (inch)



Thermocouple plug, IP20, dimensions in mm (inch)

Temperature Measurement SITRANS TS100

Cable mineral-insulated

Selection and ordering data SITRANS TS100 Temperature sensors in cable version, universal use, mineral-insulated version, for unfavorable space conditions Cick on the Article No. for the online configuration in the PIA Life Cycle Portal. Sensor diameter 6 mm (0.24 inch) Length of sensor element B, effective length U = B-10; see dimensional drawings page 2/38 200 mm (7.87 inch) Customer-specific length of sensor element B, effective length U = B-10; see dimensional drawings page 2/38 enter customer specific length with Y44, see Order codes below 70 100 mm (2.76 3.94 inch) 101 250 mm (3.94 inch) 101 250 mm (3.98 19.68 inch) 101 250 mm (3.98 19.68 inch) 101 250 mm (19.72 29.53 inch) Initial: 200 mm (7.87 inch) 251 500 mm (9.88 19.68 inch) Initial: 500 mm (19.72 39.37 inch) Initial: 500 mm (19.72 39.37 inch) Initial: 1500 mm (59.00 inch) Initial: 1500 mm (59.00 inch) Sensor Please note: The accuracy class range can be lower than the measuring range. For more information, see page 2/16 P1100, obasis, -50 +400 °C -68 +752 °F) P1100, expanded range, 196. 600 °C (-320.8 1 112 °F) Thermocouple Type K, -40 +1 000 °C -196 600 °C (-40 +1 382 °F) Sensor number/Accuracy Class /Class B) Single, increased accuracy Class /Class AA) Double, basic accuracy Class /Class AB) Double, increased accuracy Class AA) Double, increased accuracy Class AA) Double, inghest accuracy Class AA) Double, increased accuracy Class AB (12 connection side Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material 2xTC on request)	Salastian and Ordering data	Article No.
Temperature sensors in cable version, universal use, mineral-insulated version, for unfavorable space conditions 7 Click on the Article No, for the online configuration in the PIA Life Cycle Portal. Sensor diameter 6 mm (0.24 inch) Length of sensor element B, effective length U = B-10; see dimensional drawings page 2/38 200 mm (7.87 inch) 500 mm (19.68 inch) 750 mm (29.53 inch) Customer-specific length of sensor element B, effective length U = B-10; see dimensional drawings page 2/38 enter customer specific length with Y44, see Order codes below 70 100 mm (3.94 inch) 101 250 mm (3.98 9.84 inch) Initial: 100 mm (3.94 inch) 101 250 mm (3.98 9.84 inch) Initial: 500 mm (19.68 inch) 501 750 mm (19.72 29.53 inch) 101 100 mm (9.9.53 inch) 751 100 mm (19.72 39.37 inch) Initial: 1000 mm (39.37 inch) 101 1500 mm (39.37 inch) 101 1500 mm (39.37 inch) 101 1500 mm (39.4 59.00 inch) Initial: 1000 mm (19.00 inch) Sensor Please note: The accuracy class range can be lower than the measuring range. For more information, see page 2/16 P100, basis50 +400 °C (-58 +752 °F) P1100, vibration-resitant, -50 +400 °C (-58 +752 °F) P1100, expanded range, 196 600 °C (-320.8 1 1112 °F) Thermocouple Type K, -40 +1 000 °C (-40 +1 832 °F) Thermocouple Type K, -40 +1 000 °C (-40 +1 832 °F) Thermocouple Type K, -40 +1 000 °C (-40 +1 832 °F) Sensor number/Accuracy (Class 2/Class B) Single, increased accuracy (Class 1/Class A) Double, basic accuracy (Class 1/Class A) Double, basic accuracy (Class 1/Class A) Double, inghest accuracy (Class A) Design of connection side Flying leads 1 LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	Selection and Ordering data	Article No.
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ment B, effective length U = B-10; see dimensional drawings page 2/38 enter customer specific length with Y44, see Order codes below B 70 100 mm (2.76 3.94 inch) B Initial: 100 mm (3.94 inch) C Initial: 200 mm (7.87 inch) C 251 500 mm (9.88 19.68 inch) D Initial: 500 mm (19.68 inch) D Initial: 500 mm (19.72 29.53 inch) E Initial: 750 mm (29.53 inch) F 751 1 000 mm (19.72 39.37 inch) F Initial: 1 000 mm (39.37 inch) F 1 001 1500 mm (59.00 inch) G Initial: 1 500 mm (59.00 inch) G Initial: 1 500 mm (59.00 inch) G Initial: 1 500 mm (59.00 inch) G Sensor Please note: The accuracy class range can be lower than the measuring range. For more information, see page 2/16 A Pt100, basis, -50 +400 °C A (-58 +752 °F) Pt100, wibration-resitant, -50 +400 °C B (-58 +752 °F) Pt100, expanded range, -196 600 °C (-320.8 1 112 °F) Thermocouple Type J, only class 2, -40 +750 °C (-40 +1 382 °F) Sensor number/Ac	500 mm (19.68 inch)	D
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Sensor Please note: The accuracy class range can be lower than the measuring range. For more information, see page 2/16 Pt100, basis, -50 +400 °C (-58 +752 °F) Pt100, vibration-resitant, -50 +400 °C (-58 +752 °F) Pt100, expanded range, -196 600 °C (-320.8 1 112 °F) Thermocouple Type K, -40 +1 000 °C (-40 +1 832 °F) Thermocouple Type J, only class 2, -40 +750 °C (-40 +1 382 °F) Sensor number/Accuracy Single, basic accuracy (Class 2/Class B) Single, increased accuracy (Class 1/Class A) Single, highest accuracy (Class 2/Class B) Double, nicreased accuracy (Class 2/Class B) Double, increased accuracy (Class 1/Class A) Double, highest accuracy (Class 1/Class A) Double, highest accuracy (Class 1/Class A) Double, highest accuracy (Class AA) Design of connection side Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	1 001 1500 mm (39.4 59.00 inch)	G
Please note: The accuracy class range can be lower than the measuring range. For more information, see page 2/16 Pt100, basis, -50 +400 °C (-58 +752 °F) Pt100, vibration-resitant, -50 +400 °C (-58 +752 °F) Pt100, expanded range, -196 600 °C (-320.8 1 112 °F) Thermocouple Type K, -40 +1 000 °C (-40 +1 832 °F) Thermocouple Type J, only class 2, -40 +750 °C (-40 +1 382 °F) Sensor number/Accuracy Single, basic accuracy (Class 2/Class B) Single, increased accuracy (Class 1/Class A) Single, highest accuracy (Class 2/Class B) Double, basic accuracy (Class 2/Class B) Double, increased accuracy (Class 2/Class B) Double, increased accuracy (Class 1/Class A) Double, highest accuracy (Class 1/Class A) Double, highest accuracy (Class AA) Design of connection side Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	· · · · · · · · · · · · · · · · · · ·	
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(-58 +752 °F) Pt100, expanded range, -196 600 °C (-320.8 1 112 °F) Thermocouple Type K, -40 +1 000 °C (-40 +1 832 °F) Thermocouple Type J, only class 2, -40 +750 °C (-40 +1 382 °F) Sensor number/Accuracy Single, basic accuracy (Class 2/Class B) Single, increased accuracy (Class 1/Class A) Single, highest accuracy (Class AA) Double, basic accuracy (Class 2/Class B) Double, increased accuracy (Class 2/Class B) Double, increased accuracy (Class 1/Class A) Double, highest accuracy (Class 1/Class A) Double, highest accuracy (Class 1/Class A) Double, highest accuracy (Class AA) Double, highest accuracy (Class AA) Thermocouple coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	(-58 +752 °F)	
-196 600 °C (-320.8 1 112 °F) Thermocouple Type K, -40 +1 000 °C (-40 +1 832 °F) Thermocouple Type J, only class 2, -40 +750 °C (-40 +1 382 °F) Sensor number/Accuracy Single, basic accuracy (Class 2/Class B) Single, increased accuracy (Class 1/Class A) Single, highest accuracy (Class 2/Class B) Single, highest accuracy (Class 2/Class B) Souble, basic accuracy (Class 2/Class B) Souble, increased accuracy (Class 2/Class B) Souble, increased accuracy (Class 1/Class A) Double, highest accuracy (Class AA) Double, noreased accuracy (Class AA) Double, noreased accuracy (Class AA) Double, noreased accuracy (Class AB) Thermocouple coupling 1S Thermocouple coupling, from TC-material	(-58 +752 °F)	i i
Thermocouple Type J, only class 2, -40 +750 °C (-40 +1 382 °F) Sensor number/Accuracy Single, basic accuracy (Class 2/Class B) Single, increased accuracy (Class 1/Class A) Single, highest accuracy (Class AA) Double, basic accuracy (Class 2/Class B) Double, increased accuracy (Class 2/Class B) Double, increased accuracy (Class 1/Class A) Double, highest accuracy (Class 1/Class A) Double, highest accuracy (Class AA) Double, highest accuracy (Class AA) Design of connection side Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	-196 600 °C (-320.8 1 112 °F) Thermocouple Type K, -40 +1 000 °C	
Sensor number/Accuracy Single, basic accuracy (Class 2/Class B) Single, increased accuracy (Class 1/Class A) Single, highest accuracy (Class AA) Double, basic accuracy (Class 2/Class B) Double, increased accuracy (Class 1/Class A) Double, increased accuracy (Class 1/Class A) Double, highest accuracy (Class AA) Double, highest accuracy (Class AA) Design of connection side Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	Thermocouple Type J, only class 2,	J
(Class 2/Class B) 2 Single, increased accuracy 2 (Class 1/Class A) 3 Single, highest accuracy 3 (Class AA) 4 Double, basic accuracy 4 (Class 2/Class B) 5 Double, increased accuracy 5 (Class 1/Class A) 6 Double, hiphest accuracy 6 (Class AA) 6 Design of connection side Flying leads LEMO coupling 1S 2 M12 connector, not for double Pt100 3 Thermocouple coupling, from TC-material 4	Sensor number/Accuracy	
(Class 1/Class A) Single, highest accuracy (Class AA) Double, basic accuracy (Class 2/Class B) Double, increased accuracy (Class 1/Class A) Double, highest accuracy (Class AA) Design of connection side Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	(Class 2/Class B)	
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Double, increased accuracy (Class 1/Class A) Double, highest accuracy (Class AA) Design of connection side Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	Double, basic accuracy	4
Double, highest accuracy (Class AA) Design of connection side Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	Double, increased accuracy	5
Flying leads LEMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material 1 2 3 Thermocouple coupling at the second	Double, highest accuracy	6
LÉMO coupling 1S M12 connector, not for double Pt100 Thermocouple coupling, from TC-material 2 3 Thermocouple coupling to the state of the stat		
M12 connector, not for double Pt100 Thermocouple coupling, from TC-material 3 4	Flying leads LEMO coupling 1S	
	M12 connector, not for double Pt100 Thermocouple coupling, from TC-material	3

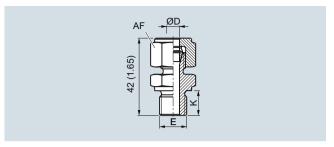
Selection and Ordering data	Order code
Further designs	
Add "-Z" to Article No. and specify Order code.	
Customer-specific length of sensor element B, effective length U = B-10 Select range, enter desired length in plain text (No entry = standard length)	Y44
Options	
Add "-Z" to Article No., add options, separate extensions with "+".	
Connection cable, type and length Cable type = 1st letter, Length 1 99 m (3.28 324.80 ft) = 2nd + 3rd place e.g.: 34 m (111.55 ft) connection cable PVC	
(PVC code is J34) with ?? meters connection cable (JJ) PVC/PVC, Operating temperature (-10+105°C) (14 221 °F) with ?? meters connection cable (SLFP)	J01 J99 S01 S99
Silicone/Fluorpolymer, operating temperature -10 +80 °C (-14 +356 °F) with ?? meters connection cable (TGLV) PTFE/glass fiber/reinforced with stainless steel), Operating temperature (-100+205°C (148 401°F))	L01 L99

Additional configurations on page after next page! You find ordering examples on page 2/37.

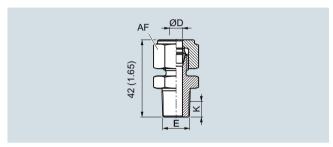
Temperature Measurement

SITRANS TS100

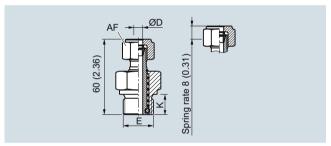
Cable mineral-insulated



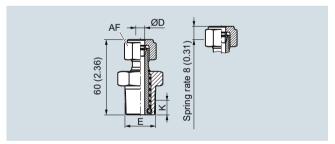
Compression fitting, dimensions in mm (inch)



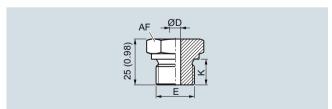
Compression fitting NPT, dimensions in mm (inch)



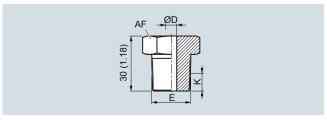
Spring-loaded compression fitting, dimensions in mm (inch)



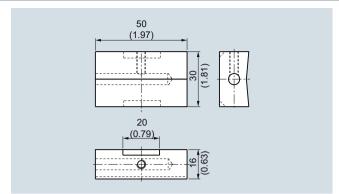
Spring-loaded compression fitting NPT, dimensions in mm (inch)



Soldering nipple, metric, dimensions in mm (inch)



Soldering nipple NPT, dimensions in mm (inch)



Surface connection piece, dimensions in mm (inch)

Temperature MeasurementSITRANS TS100

Cable mineral-insulated

Selection and Ordering data	Order code
Options	
Add "-Z" to Article No., add options, separate extensions with "+".	
Process connection	
Soldering nipple G1/4", enclosed	A20
Soldering nipple G½", enclosed	A21
Soldering nipple NPT1/2", enclosed	A22
Soldering nipple M18x1.5, enclosed	A23
Compression fitting G1/4", enclosed	A30
Compression fitting G½", enclosed	A31
Compression fitting NPT 1/2", enclosed	A32
Surface connection piece, enclosed (non Ex)	A50
Explosion protection	-
Intrinsic safety "ia", "ic"	E01
Certificates and approvals EN10204-3.1 Inspection certificate for materials coming into contact with media	C12
EN10204-3.1 Inspection certificate visual: measurement and functional inspection	C34
EN 10204-2.1: Declaration of compliance with the order	C35
ISO 9001 grease-free (cleaned for e.g. oxygen applications)	C51
Further options	
Stainless steel TAG plate , Enter lettering in plain text	Y15
Plant calibration per 1 point, enter temperature in plain text, Attention: For devices with built-in head transmitters, select test points within the set measurement range	Y33

You find ordering examples on page 2/37.