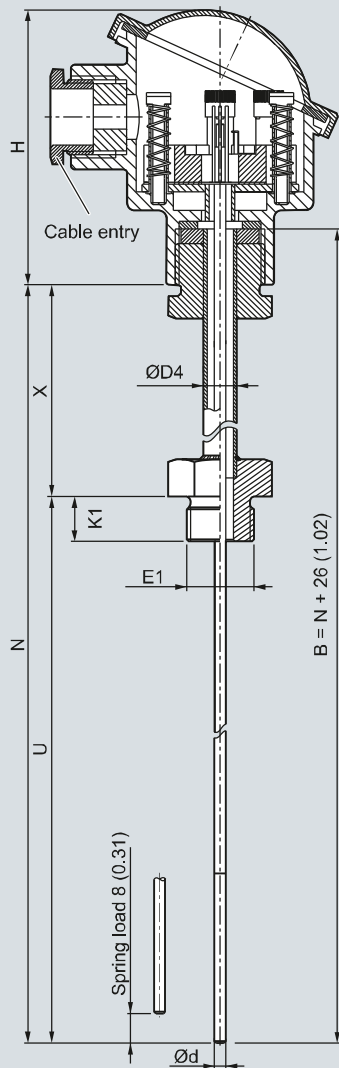


Temperature Measurement

SITRANS TS500

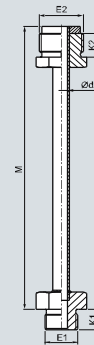
For the installation of existing protective tubes

Dimensional drawings

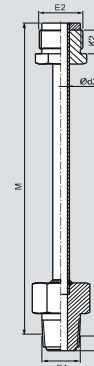


- B Measuring insert length
- Ød Measuring insert outer diameter
- ØD4 Extension outer diameter
- E1 Process connection, thread size
- H Head height
- K1 Screw depth
- N Nominal length
- U Insertion length
- X Extension length

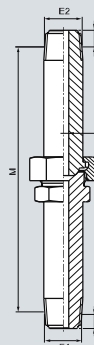
SITRANS TS500, temperature sensors for vessels and pipings, temperature sensors for installation in existing thermowells, suitable for thermowells as per DIN 43772 as well as ASME B40.9-2001 with extension European or American types, dimensions in mm (inch)



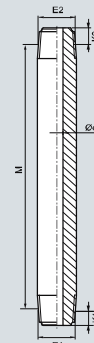
Neck tube, DIN G, dimensions in mm (inch)



Neck tube NPT, dimensions in mm (inch)



Neck tube NUN, dimensions in mm (inch)



Neck tube, nipple, dimensions in mm (inch)

Temperature Measurement

SITRANS TS500

For the installation of existing protective tubes

Selection and Ordering data	Order No.Ord. Code									
SITRANS TS500 Temperature sensors for installation in existing thermowells, suitable for thermowells as per DIN 43772 as well as ASME B40.9-2001 with extension European or American types	7	M	C	7	5	0				
Model existing thermowells	1									
Thread type • G½" (½" BSPF) (not for American type) • NPT½" • M14x1.5 (not for American type) • M18x1.5 (not for American type) • Special version	C J T U Z								J 1 Y	
Insertion length U free length, standard lengths • 110 mm (3.97 inch) • 140 mm (6.30 inch) • 200 mm (9.06 inch) • 260 mm (10.24 inch) • 410 mm (16.14 inch) • 2 ½" + 1/8" • 4" + 1/8" • 6" + 1/8" • 9" + 1/8" • 12" + 1/8" • 15" + 1/8" • 18" + 1/8" • 24" + 1/8"	B 1 B 2 C 1 C 2 E 1 A 5 B 5 B 6 C 5 D 5 D 6 E 6 G 5									
Insertion U free length, customer-specific enter customer specific length with Y44, see page 147 order codes • 10 ... 100 mm (0.39 ... 3.94 inch) Standard: 100 mm (3.94 inch) • 101 ... 200 mm (3.98 ... 7.87 inch) Standard: 200 mm (7.87 inch) • 201 ... 300 mm (7.91 ... 11.81 inch) Standard: 300 mm (11.81 inch) • 301 ... 400 mm (11.85 ... 15.75 inch) Standard: 400 mm (15.75 inch) • 401 ... 500 mm (15.79 ... 19.68 inch) Standard: 500 mm (19.68 inch) • 501 ... 600 mm (19.72 ... 23.62 inch) Standard: 600 mm (23.62 inch) • 601 ... 800 mm (23.66 ... 31.50 inch) Standard: 800 mm (31.50 inch) • 801 ... 1 000 mm (31.54 ... 39.37 inch) Standard: 1 000 mm (39.37 inch)	A 0 B 0 C 0 D 0 E 0 F 0 G 0 H 0									
Insertion length U free length, special length Special length > 3 000 mm (118.11 inch)	X 0									
Measurement tip diameter • 6 mm (0.24 inch) • 8 mm (0.31 inch) (with sleeve) • 10 mm (0.39 inch) (with sleeve) • Special version	6 8 0 9								M 1 Y	

Selection and Ordering data	Order No.Ord. Code									
SITRANS TS500 Temperature sensors for installation in existing thermowells, suitable for thermowells as per DIN 43772 as well as ASME B40.9-2001 with extension European or American types	7	M	C	7	5	0				
Extension • European type: X=65 (M=80 mm) (3.15 inch) adjustable • European type: X=139 mm (5.47 inch) (M=155 mm (6.10 inch)) adjustable (DIN standard length for L=110) • European type: X=149 mm (5.87 inch) (M=165 mm (6.50 inch)) adjustable • American type: X=150 mm (5.91 inch) not adjustable (NPT½") • American type: X=150 mm (5.91 inch) NUN adjustable (NPT½") • American type: X=74mm integrated sensor spring, not adjustable (NPT½") • American type: X=150 mm (5.91 inch) integrated sensor spring NUN adjustable (NPT½")	1 2 3 4 5 6 8									
Extension X, customer-specific enter customer specific length with Y45, see page 147 order codes Order code • 45 ... 150 mm (1.77 ... 5.91 inch) Standard: 150 mm (5.91 inch) • 151 ... 300 mm (5.95 ... 11.81 inch) Standard: 300 mm (11.81 inch) • 301 ... 450 mm (11.85 ... 17.72 inch) Standard: 450 mm (17.72 inch)	9 9 9								N 1 N 2 N 3	
Model • DIN type (M24 adjustable) • ANSI-Type spring loaded • Nipple 2x NPT not spring loaded • N-U-N 2x NPT not spring loaded									D A N U	
Extension special version Extension special version	9								N 9 Y	

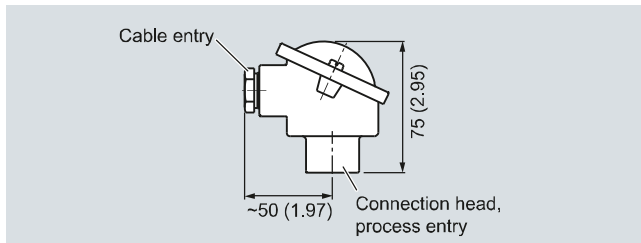
Additional configurations on page after next page!

You find ordering examples on page 33!

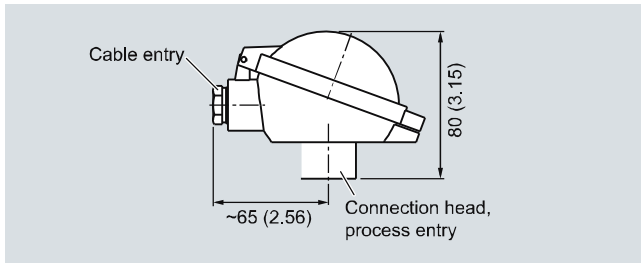
Temperature Measurement

SITRANS TS500

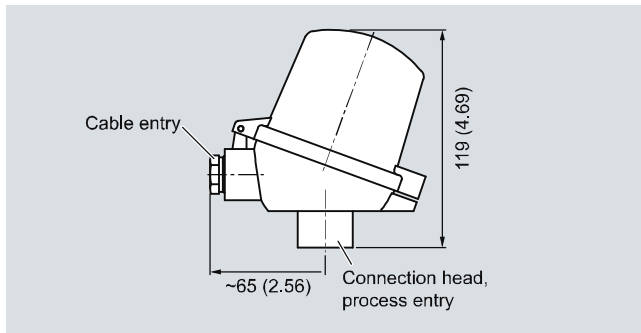
For the installation of existing protective tubes



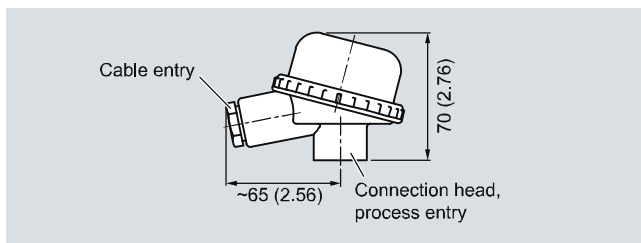
Connection head, aluminum, Type BA0, dimensions in mm (inch)



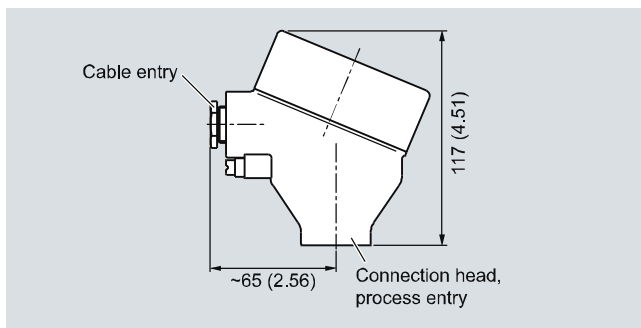
Connection head, aluminum, Type BB0, dimensions in mm (inch)



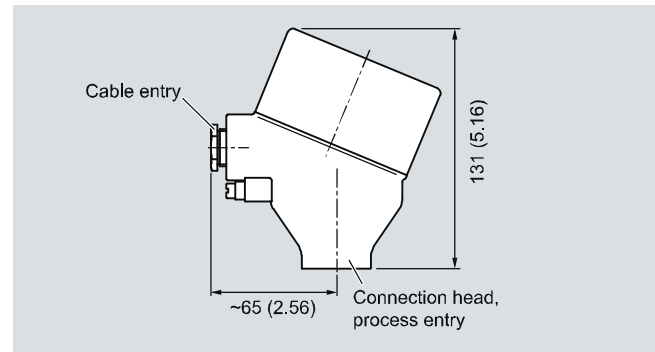
Connection head, aluminum, Type BC0, plastic, type BP0, dimensions in mm (inch)



Connection head, plastic, Type BM0, dimensions in mm (inch)



Connection head, aluminum, Type AG0, stainless steel, Type AU0, dimensions in mm (inch)



Connection head, aluminum, Type AH0, dimensions in mm (inch)

Temperature Measurement

SITRANS TS500

For the installation of existing protective tubes

Selection and Ordering data	Order No.	Ord. Code
SITRANS TS500 Temperature sensors for installation in existing thermowells, suitable for thermowells as per DIN 43772 as well as ASME B40.9-2001 with extension European or American types	7 MC 7 5 0	
Head		
• without connection head for American type sensors with integrated spring load	N	
• Aluminum head, BA0, flange cover, Standard	A	
• Aluminum head, BB0, low hinged cover, screw connection	B	
• Aluminum head, BC0, high hinged cover, screw connection	C	
• Aluminum head, AG0, screw cover, Ex d	G	
• Aluminum head, AH0, screw cover, Ex d, display (not for Ex i)	H	
• Plastic head, BM0, screw cover	M	
• Plastic head, BP0, high hinged cover, screw connection	P	
• Stainless steel head, AU0, screw cover, Ex d	U	
• Stainless steel head, AV0, screw cover, Ex d, display (not for Ex i)	V	
• Special version of connection head	Z	P 1 Y
Sensor		
• Pt100, Basis, -50 ... +400 °C (-58 ... +752 °F)	A	
• Pt100, vibration resistant, -50 ... +400 °C (-58 ... +752 °F)	B	
• Pt100, expanded range, -196 ... +600 °C (-321 ... +1112 °F)	C	
• Thermocouple Type J, only class 2, -40 ... +750 °C (-40 ... +1 382 °F)	J	
• Thermocouple Type K, -40 ... +1 000 °C (-40 ... +1 832 °F)	K	
• Thermocouple Type N, -40 ... +1 000 °C (-40 ... +1 832 °F)	N	
Sensor number/Accuracy		
• Single, basic accuracy (Class 2/Class B)	1	
• Single, increased accuracy (Class 1/Class A)	2	
• Single, highest accuracy (Class AA)	3	
• Double, basic accuracy (Class 2/Class B)	5	
• Double, increased accuracy (Class 1/Class A)	6	
• Double, highest accuracy (Class AA)	7	
• Specify special version in plain text	Z	Q 1 Y

Selection and Ordering data	Order code
Further designs	
Add "-Z" to Order No. and specify Order Code.	
Enter thread type in plain text	J1Y
Enter diameter of measurement in plain text	M1Y
Special version of extension Special version of extension, enter form and length in plain text	N9Y
Head Enter connection head in plain text	P1Y
Sensor number/Accuracy Enter connection head in plain text	Q1Y
Insertion length customer-specific Select range, enter desired length in plain text (No entry = standard length)	Y44
Extension length customer-specific Select range, enter desired length in plain text (No entry = standard length)	Y45

Selection and Ordering data	Order code
Options Add "-Z" to order number and add options, separate extensions with "+".	
Built-in head transmitter	
• SITRANS TH100, 4 ... 20 mA, Pt100	T10
• SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100	T11
• SITRANS TH100 Ex i (FM), 4 ... 20 mA, Pt100	T13
• SITRANS TH200, 4 ... 20 mA, Universal	T20
• SITRANS TH200 Ex (ATEX), 4 ... 20 mA, Universal	T21
• SITRANS TH300, HART, Universal	T30
• SITRANS TH300 Ex (ATEX), HART, Universal	T31
• SITRANS TH400 PA, Universal	T40
• SITRANS TH400 PA Ex, Universal	T41
• SITRANS TH400 FF, Universal	T45
• SITRANS TH400 FF Ex, Universal	T46
Explosion protection	
• Intrinsic safety "ia", "ic"	E01
• Flameproof enclosure "d"; Dust protection by enclosures "t" only in combination with connection heads code AG0, AH0, AU0, AV0, without cable gland	E03
• Non sparking "n"	E04
Certificates and approvals	
• EN10204-3.1 Factory certificate for surface tear test	C33
• EN10204-3.1 Factory certificate: visual, measurement and functional inspection	C34
• Factory calibration per 1 point: enter temperature in plain text	Y33
Designation, calibration	
• Stainless steel TAG plate, enter lettering in plain text	Y15
• Plant calibration per 1 point, enter temperature in plain text	Y33
Transmitter options	
• Transmitter, enter complete setting in plain text (Y01: +/-NNNN ... +/-NNNN C,F)	Y01
• Transmitter, enter HART address (max. 8 characters) in plain text	Y17
• Transmitter, enter measuring point description (max. 16 characters) in plain text	Y23
• Transmitter, enter measuring point text (max. 32 characters) in plain text	Y24
• Transmitter, enter bus address in plain text	Y25
• Transmitter, fail-safe value 3.6 mA (instead of 22.8 mA)	U36
• Transmitter with a SIL 2 conformity	C20
• Transmitter with a SIL 2/3 conformity	C23
• Transmitter test protocol (5 points)	C11
Further options	
• Connection form, flying leads (for the direct transmitter assembly, delivery without screws and springs)	G01
• M12 plug (in combination with 1x Pt100 and/or transmitter, Non-Ex)	G12
• Harting plug Han 7 D (Non Ex)	G13
• Connection head with 1/2" NPT thread without cable gland	G20
• Plastic cable gland	G21
• with spring lock for heads BB0 and BC0	A01
• with outer earth screw for heads AG0, AH0, AU0 and AV0	A02
• with inner earth screw for heads BC0, AG0, AH0, AU0 and AV0	A03
Option not found? Specify special version in plain text	Y99

You find ordering examples on page 33!