

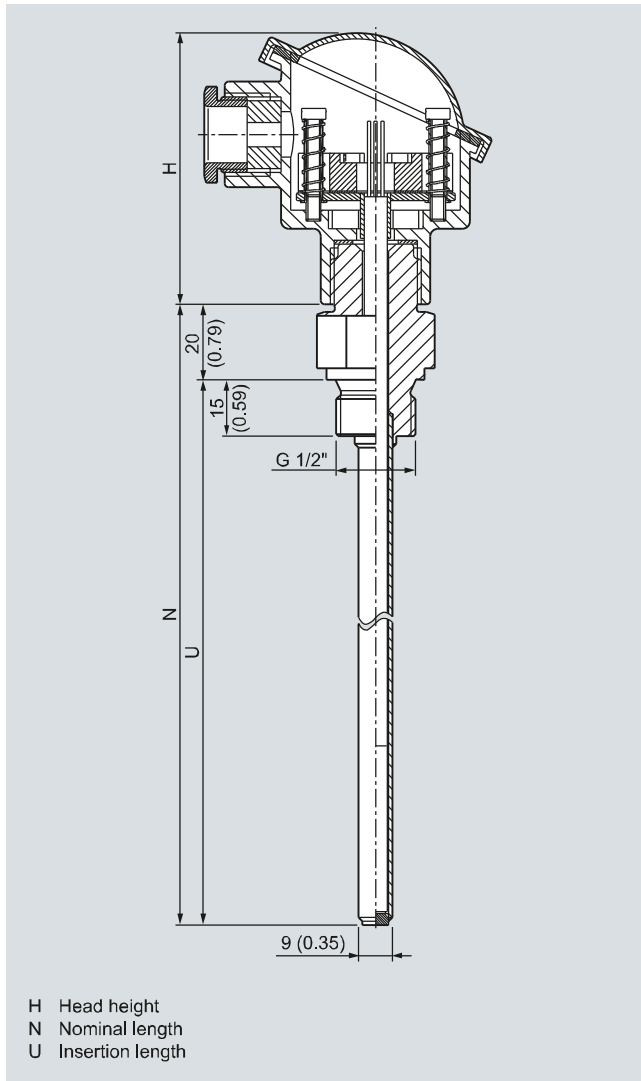
Temperature Measurement

SITRANS TS500

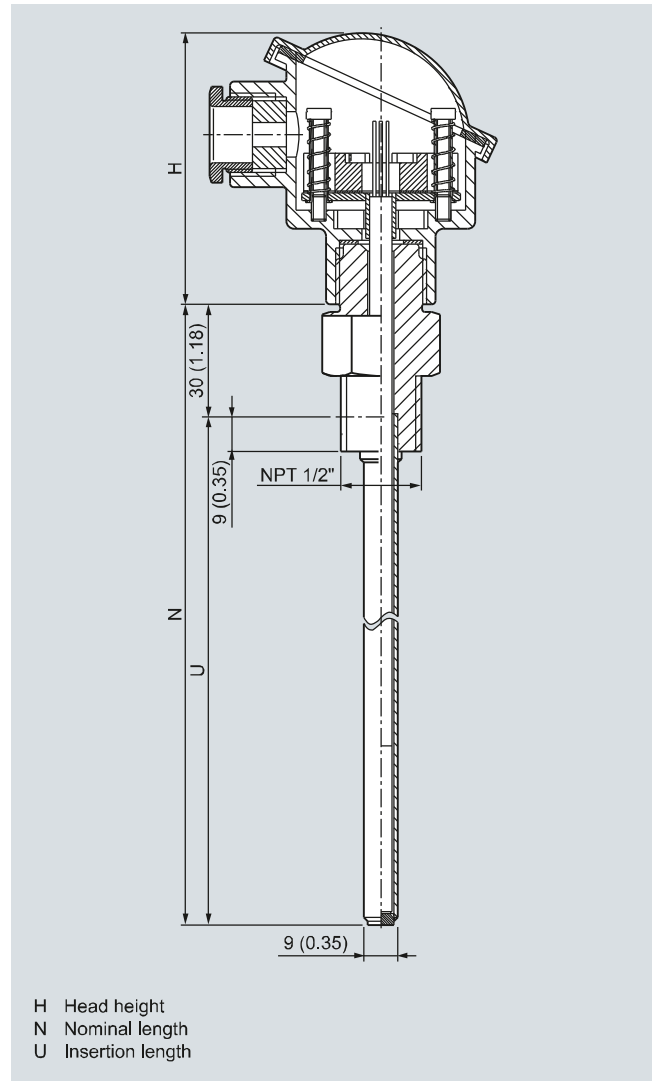
Type 2N, tubular version
with screw socket

Dimensional drawings

SITRANS TS500, temperature sensors for vessels and pipelines, tubular version for minimal to medium stress, thermowell Type 2N similar to DIN 43722, screwed in, without extension, for maximum process temperatures of 100 °C (212 °F).



Connection type "G", dimensions in mm (inch)



Connection type "NPT", dimensions in mm (inch)

Temperature Measurement

SITRANS TS500

Type 2N, tubular version
with screw socket

Selection and Ordering data		Order No.Ord. Code									
SITRANS TS500		7MC 7 5 1									
Tubular thermowell, minimal to medium stress, Type 2N similar to DIN 43722, screwed in, without extension, for maximum process temperatures of 100 °C											
Material, in contact with media											
• 316Ti (1.4571)		1									
• 316L (1.4404)		2									
• Special version		8									
Process connection											
• G ½" (½"BSPF)			1 C								
• ½" NPT			1 J								
• Special version			9 X							H 1 Y	
Thermowell form											
• 2N, 9 mm (0.35 inch)				A							
• Special version				Z						K 1 Y	
Standard insertion length											
• 100 mm (3.97 inch)						0 1					
• 160 mm (6.30 inch)						0 4					
• 230 mm (9.06 inch)						1 0					
• 360 mm 143.17 inch)						2 0					
• 510 mm (20.08 inch)						3 1					
Customer-specific insertion length											
enter customer specific length with Y44, see page 119 order codes											
• 80 ... 100 mm (3.15 ... 3.94 inch) Standard: 100 mm (3.94 inch)						0 1					
• 101 ... 120 mm (3.98 ... 4.72 inch) Standard: 120 mm (4.72 inch)						0 2					
• 121 ... 140 mm (4.76 ... 5.51 inch) Standard: 140 mm (5.51 inch)						0 3					
• 141 ... 160 mm (5.55 ... 6.30 inch) Standard: 160 mm (6.30 inch)						0 4					
• 161 ... 180 mm (6.34 ... 7.09 inch) Standard: 180 mm (7.09 inch)						0 5					
• 181 ... 200 mm (7.13 ... 7.87 inch) Standard: 200 mm (7.87 inch)						0 6					
• 201 ... 220 mm (7.91 ... 8.66 inch) Standard: 220 mm (8.66 inch)						0 7					
• 221...240 mm (8.70 ... 9.45 inch) Standard: 230 mm (9.06 inch)						1 0					
• 241...260 mm (9.49 ... 10.24 inch) Standard: 250 mm (9.84 inch)						1 2					
• 261...280 mm (10.28 ... 11.02 inch) Standard: 280 mm (11.02 inch)						1 3					
• 281...300 mm (11.06 ... 11.81 inch) Standard: 285 mm 11.22 inch)						1 4					
• 301...320 mm (11.85 ... 13.00 inch) Standard: 315 mm (12.40 inch)						1 5					
• 321...340 mm (12.64 ... 13.39 inch) Standard: 340 mm (13.39 inch)						1 6					
• 341...360 mm (13.43 ... 14.17 inch) Standard: 360 mm (14.17 inch)						2 0					
• 361...380 mm (14.21 ... 14.96 inch) Standard: 380 mm (14.96 inch)						2 1					
• 381...400 mm (14.99 ... 15.75 inch) Standard: 400 mm (15.75 inch)						2 2					
• 401...420 mm (15.79 ... 16.54 inch) Standard: 420 mm (16.54 inch)						2 3					
• 421...440 mm (16.57 ... 17.32 inch) Standard: 440 mm (17.32 inch)						2 4					
• 441...460 mm (17.36 ... 18.11 inch) Standard: 460 mm (18.11 inch)						2 5					
• 461...480 mm (18.15 ... 18.90 inch) Standard: 465 mm (18.30 inch)						2 6					
• 481...500 mm (18.94 ... 19.69 inch) Standard: 500 mm (19.69 inch)						2 7					
• 501...550 mm (19.72 ... 21.65 inch) Standard: 510 mm (20.08 inch)						3 1					
• 551...600 mm (21.69 ... 23.62 inch) Standard: 600 mm (23.62 inch)						3 2					

Selection and Ordering data	Order No.Ord. Code									
SITRANS TS500 Tubular thermowell, minimal to medium stress, Type 2N similar to DIN 43722, screwed in, without extension, for maximum process temperatures of 100 °C	7 MC 7 5 1									
• 601 ... 650 mm (23.66 ... 25.59 inch) Standard: 650 mm (25.59 inch)	3 3									
• 651 ... 700 mm (25.63 ... 27.56 inch) Standard: 700 mm (27.56 inch)	3 4									
• 701 ... 750 mm (27.60 ... 29.53 inch) Standard: 750 mm (29.53 inch)	3 5									
• 751 ... 800 mm (29.57 ... 31.50 inch) Standard: 800 mm (31.50 inch)	3 6									
• 801 ... 850 mm (31.54 ... 33.46 inch) Standard: 850 mm (33.46 inch)	3 7									
• 851 ... 900 mm (33.50 ... 35.43 inch) Standard: 900 mm (35.43 inch)	4 1									
• 901 ... 950 mm (35.47 ... 37.40 inch) Standard: 950 mm (37.40 inch)	4 2									
• 951 ... 1 000 mm (37.44 ... 39.37 inch) Standard: 1 000 mm (39.37 inch)	4 3									
• 1 001 ... 1 100 mm (39.41 ... 43.31 inch) Standard: 1 100 mm (43.31 inch)	4 4									
• 1 101 ... 1 200 mm (43.35 ... 47.24 inch) Standard: 1 200 mm (47.24 inch)	4 5									
• 1 201 ... 1 300 mm (47.28 ... 51.18 inch) Standard: 1 300 mm (51.18 inch)	4 6									
• 1 301 ... 1 400 mm (51.22 ... 55.12 inch) Standard: 1 400 mm (55.12 inch)	4 7									
• 1 401 ... 1 500 mm (55.16 ... 59.05 inch) Standard: 1 500 mm (59.05 inch)	5 1									
Insertion length for special length 1 500 ... 6 000 mm (59.05 ... 236.22 inch)	8 0									
Extension without neck tube, (not adjustable)	0									

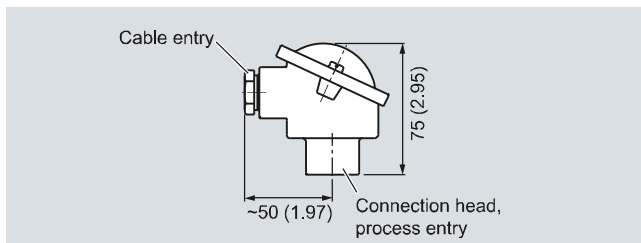
Additional configurations on page after next page!

You find ordering examples on page 33!

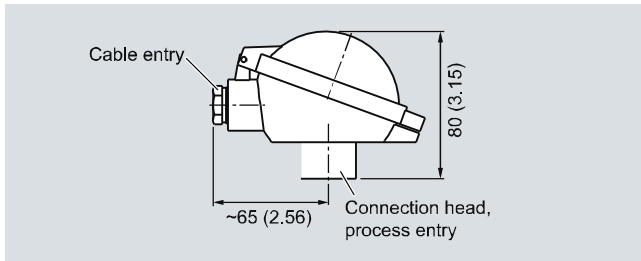
Temperature Measurement

SITRANS TS500

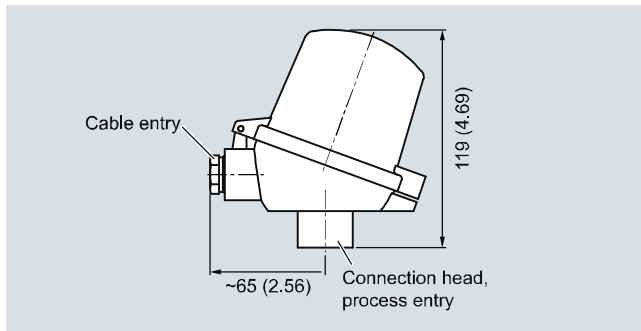
Type 2N, tubular version
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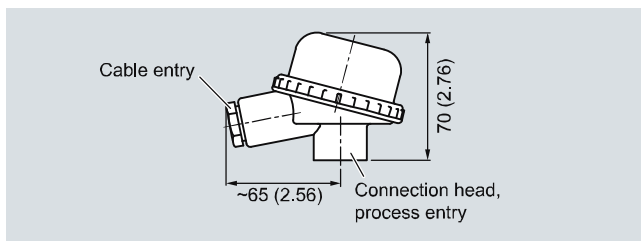
Connection head, aluminum, Type BA0, dimensions in mm (inch)



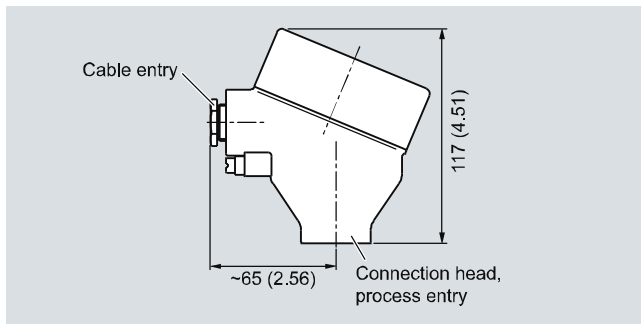
Connection head, aluminum, Type BB0, dimensions in mm (inch)



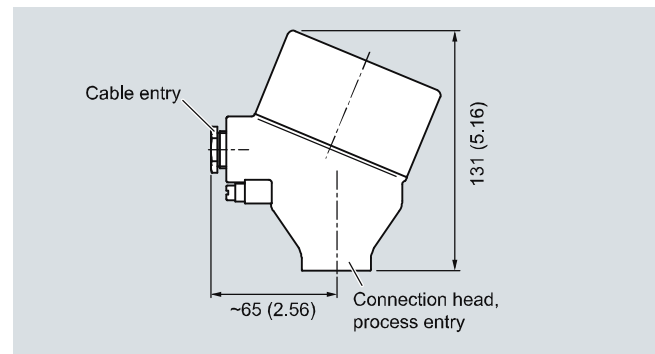
Connection head, aluminum, Type BC0, plastic, type BP0, dimensions in mm (inch)



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

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Selection and Ordering data	Order No.Ord. Code
SITRANS TS500 Tubular thermowell, minimal to medium stress, Type 2N similar to DIN 43722, screwed in, without extension, for maximum process temperatures of 100 °C	7 MC 7 5 1
Head	
• Without connection head	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, BP0high 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
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 ... +1 112 °F)	C
• Thermocouple Type K, -40 ... +1 000 °C (-40 ... +1 832 °F)	K
• Thermocouple Type J, -40 ... +750 °C (-40 ... +1 382 °F)	J
• 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 0 Q 1 Y

Selection and Ordering data	Order code
Further designs	
Add "-Z" to Order No. and specify Order Code.	
Enter thermowell material in plain text	G1Y
Enter process connection in plain text	H1Y
Enter thermowell form in plain text	K1Y
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

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 TH200 Ex (FM), 4 ... 20 mA, Universal	T23
• SITRANS TH300, HART, Universal	T30
• SITRANS TH300 Ex (ATEX), HART, Universal	T31
• SITRANS TH300 Ex (FM), HART, Universal	T33
• 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 Inspection certificate for materials coming into contact with media	C12
• EN10204-3.1 Inspection certificate for hydrostatic pressure test	C31
• EN10204-3.1 Inspection certificate for helium leak test	C32
• EN10204-3.1 Inspection certificate for surface tear test	C33
• EN10204-3.1 Inspection certificate: visual, measurement and functional inspection	C34
• NACE Standard MR-01-75 compliance	C50
• ISO 9001 grease-free (cleaned for e.g. oxygen applications)	C51
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!