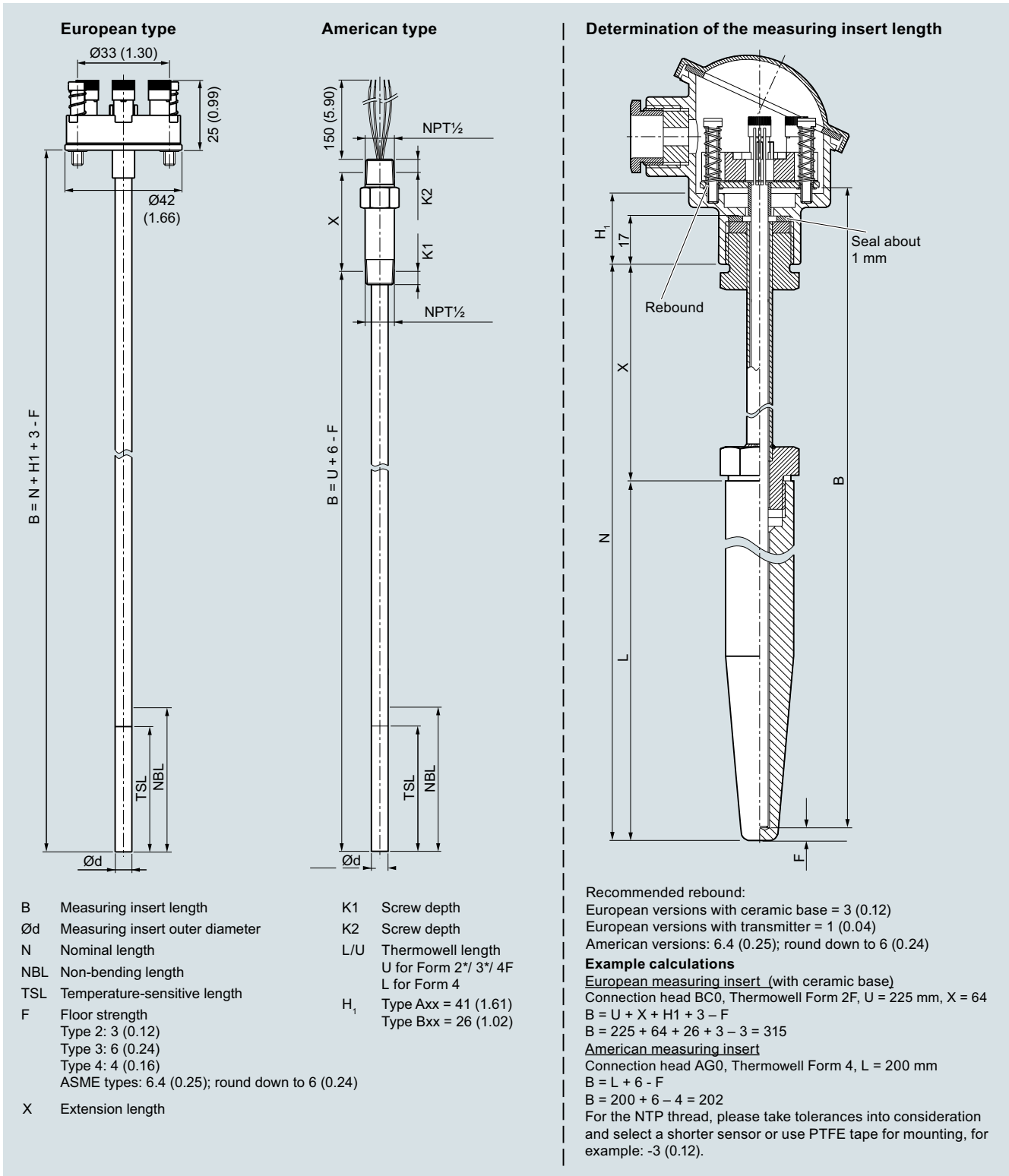


Dimensional drawings



SITRANS TSinsert measuring inserts for temperature sensors, replaceable, mineral-insulated design
European type (DIN ceramic base), spring load approx. 6 mm (0.24 inch)/3 mm (0.12 inch) with transmitter
American type, spring load approx. 21 mm (0.83 inch); determination of measuring insert length, dimensions in mm (inch);
Cold End types: see drawings on page 2/103

Temperature Measurement

SITRANS TSinsert

Measuring inserts for retrofits and upgrades European and American type

2

Selection and Ordering data	Article No.
SITRANS TSinsert for temperature sensors, replaceable, mineral-insulated design, European or American type	7MC701 - ■ ■ ■ ■ ■
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Measurement tip diameter	
6 mm (0.24 inch)	6
8 mm (0.31 inch) (with sleeve)	8
10 mm (0.39 inch) (with sleeve)	0
Type	
European type - DIN ceramic base	1
European type - DIN flying leads, absolutely necessary with built-on transmitter	2
American type - ANSI (nipple spring)	5
Sensor¹⁾	
Please note: The accuracy class range can be lower than the measuring range. For more information, see page 2/18	
Pt100, basis, -50 ... +400 °C (-58 ... +752 °F)	A
Pt100, vibration-resistant, -50 ... +400 °C (-58 ... +752 °F)	B
Pt100, expanded range, Umin = 100 mm -196 ... +600 °C (-321 ... +1 112 °F)	C
Thermocouple Type J, -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	
Circuit Pt 100: 1 x 4-wire circuit or 2 x 3-wire circuit, see "Measuring technique: Connection types", page 2/20	
Single, basic accuracy (Class 2/Class B)	A
Single, increased accuracy (Class 1/Class A)	B
Single, highest accuracy (Class AA)	C
Double, basic accuracy (Class 2/Class B)	D
Double, increased accuracy (Class 1/Class A)	E
Double, highest accuracy (Class AA)	F
Measuring insert length B, standard	
145 mm (6.89 inch)	1 3
205 mm (8.07 inch)	1 7
275 mm (10.83 inch)	2 1
315 mm (12.40 inch)	2 3
345 mm (13.58 inch)	2 4
375 mm (14.76 inch)	2 5
405 mm (15.94 inch)	2 7
435 mm (17.13 inch)	2 0
555 mm (21.85 inch)	3 5
585 mm (23.03 inch)	3 6

Selection and Ordering data	Article No.
SITRANS TSinsert for temperature sensors, replaceable, mineral-insulated design, European or American type	7MC701 - ■ ■ ■ ■ ■
Measuring insert length B, customer-specific	
specify length with Y44, s. page 2/93	
85 ... 100 mm (3.37 ... 3.94 inch)	1 1
Initial: 100 mm (3.94 inch)	
101 ... 150 mm (3.98 ... 5.91 inch)	1 3
Initial: 145 mm (5.71 inch)	
151 ... 200 mm (5.95 ... 7.87 inch)	1 5
Initial: 200 mm (7.87 inch)	
201 ... 250 mm (7.91 ... 9.84 inch)	1 7
Initial: 205 mm (8.07 inch)	
251 ... 300 mm (9.88 ... 11.81 inch)	2 1
Initial: 275 mm (10.83 inch)	
301 ... 350 mm (11.85 ... 13.78 inch)	2 3
Initial: 315 mm (12.40 inch)	
351 ... 400 mm (13.82 ... 15.75 inch)	2 5
Initial: 375 mm (14.76 inch)	
401 ... 450 mm (15.79 ... 17.72 inch)	2 7
Initial: 405 mm (15.94 inch)	
451 ... 500 mm (17.76 ... 19.68 inch)	3 1
Initial: 500 mm (19.68 inch)	
501 ... 550 mm (19.72 ... 21.65 inch)	3 3
Initial: 525 mm (20.67 inch)	
551 ... 600 mm (21.69 ... 23.92 inch)	3 5
Initial: 555 mm (21.85 inch)	
601 ... 700 mm (23.66 ... 27.56 inch)	3 7
Initial: 655 mm (25.79 inch)	
701 ... 800 mm (27.60 ... 31.50 inch)	4 1
Initial: 735 mm (28.94 inch)	
801 ... 900 mm (31.54 ... 35.43 inch)	4 3
Initial: 825 mm (32.48 inch)	
901 ... 1 000 mm (35.47 ... 39.37 inch)	4 5
Initial: 950 mm (37.40 inch)	
1 001 ... 1 500 mm (39.41 ... 59.05 inch)	4 7
Initial: 1 250 mm (49.21 inch)	
1 501 ... 2 000 mm (59.09 ... 78.74 inch)	4 8
Initial: 1 700 mm (66.93 inch)	

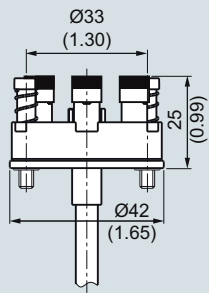
¹⁾ Pt1000 versions are also available. To find these, please switch to Online Configuration in the PIA Life Cycle Portal: www.siemens.com/pia-portal

Additional configurations on page after next page!

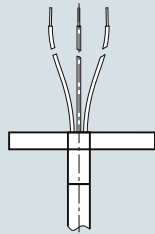
You find ordering examples on page 2/41!

Measuring inserts for retrofits and upgrades European and American type

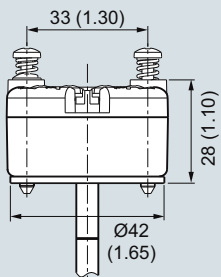
2



Cold end type, ceramic base, dimensions in mm (inch)



Cold end type, free wire ends, dimensions in mm (inch)



European type:
cold end type, built-on transmitter, dimensions in mm (inch)

Temperature Measurement

SITRANS TSinsert

Measuring inserts for retrofits and upgrades European and American type

Selection and Ordering data	Order code	Selection and Ordering data	Order code
Further designs		Marine approvals	
Add "-Z" to Article No. and specify Order code.		Det Norske Veritas Germanischer Lloyd (DNV GL)	D01
Measuring insert length B	Y44	Bureau Veritas (BV)	D02
Select range, enter desired length in plain text (No entry = standard length)		Lloyd's Register of Shipping (LR)	D04
Options		American Bureau of Shipping (ABS)	D05
Add "-Z" to Article No. and add options, separate extensions with "+".		Designation, calibration	
Built-in head transmitter		Stainless steel TAG plate , enter lettering in plain text	Y15
Measuring range to be set must be specified with plain text data "Y01".		Plant calibration per 1 point, enter temperature in plain text	Y33
SITRANS TH100, 4 ... 20 mA, Pt100	T10	Transmitter options	
SITRANS TH100 Ex i (ATEX), 4 ... 20 mA, Pt100	T11	Transmitter, enter complete setting in plain text (Y01:+/-NNNN ... +/-NNNN C,F)	Y01
SITRANS TH200, 4 ... 20 mA, Universal	T20	Enter measuring point (max. 8 characters) in plain text	Y17
SITRANS TH200 Ex i(ATEX), 4 ... 20 mA, Universal	T21	Transmitter, enter measuring point description (max. 16 characters) in plain text	Y23
SITRANS TH300, HART, Universal	T30	Transmitter, enter measuring point text (max. 32 characters) in plain text	Y24
SITRANS TH300 Ex i (ATEX), HART, Universal	T31	Transmitter, enter bus address in plain text	Y25
SITRANS TH400 PA, Universal	T40	Transmitter, fail-safe value 3.6 mA (instead of 22.8 mA)	U36
SITRANS TH400 PA Ex i, Universal	T41	Transmitter with a SIL 2 conformity	C20
SITRANS TH400 FF, Universal	T45	Transmitter with a SIL 2/3 conformity	C23
SITRANS TH400 FF Ex i, Universal	T46	Transmitter test protocol (5 points)	C11
Explosion protection			
Without explosion protection requirements (Europe, Australia, New Zealand)	E00		
Intrinsic safety "i"/"IS ¹⁾ " according to ATEX and IECEx (Europe, Australia, New Zealand)	E01		
For SITRANS TS500 in flameproof enclosure "d"/"XP" type of protection; dust protection through housing "t"/"DIP ²⁾ " according to ATEX and IECEx (Europe, Australia, New Zealand)	E03		
For SITRANS TS500 in non-sparking "nA"/"NI" according to ATEX and IECEx type of protection (Europe, Australia, New Zealand)	E04		
Without explosion protection requirements (USA, Canada) Basis FM	E10		
Flameproof enclosure "d"/"XP; dust protection through housing "t"/"DIP ²⁾ " according to cFMus (USA); NPT connections at the enclosure are mandatory	E13		
Flameproof enclosure "d"/"XP; dust protection through housing "t"/"DIP ²⁾ " according to cFMus (USA, Canada); other connections (M,G,R)	E14		
Non-sparking "nA"/"NI" according to cFMus (USA, Canada)	E16		
Without explosion protection requirements (USA, Canada), Basis CSA	E17		
Intrinsic safety "i"/"IS ¹⁾ " according to cCSAus (USA, Canada)	E18		
For SITRANS TS500 in flameproof enclosure "d"/"XP" type of protection; dust protection through housing "t"/"DIP ²⁾ " according to cCSAus (USA, Canada); NPT connections at the enclosure are mandatory	E20		
For SITRANS TS500 in flameproof enclosure "d"/"XP" type of protection; dust protection through housing "t"/"DIP ²⁾ " according to cCSAus (USA); other connections (M, G, R)	E21		
For SITRANS TS500 in non-sparking "nA"/"NI" type of protection according to cCSAus (USA, Canada)	E23		
Without explosion protection requirements (China)	E54		
Intrinsic safety "i"/"IS ¹⁾ " according to NEPSI (China)	E55		
For SITRANS TS500 in flameproof enclosure "d" type of protection; dust protection through housing "t ²⁾ " according to NEPSI (China)	E56		
For SITRANS TS500 in non-sparking "nA"/"NI" type of protection according to NEPSI (China)	E57		
Without explosion protection requirements (EAC)	E80		
Intrinsic safety "i"/"IS ¹⁾ " according to EACEx (EAC)	E81		
For SITRANS TS500 in flameproof enclosure "d"/"XP" type of protection; dust protection through housing "t"/"DIP ²⁾ " according to EACEx (EAC)	E82		
For SITRANS TS500 in non-sparking "nA"/"NI" type of protection according to EACEx (EAC)	E83		

1) Please select Ex i version of the optional transmitter.

2) Only with connection heads code AG0, AH0, AU0, AV0, without cable gland (please select non-Ex version of the optional transmitter).

You find ordering examples on page 2/41.
Accessories, see page 2/238.