



Fixing systems (connection types)

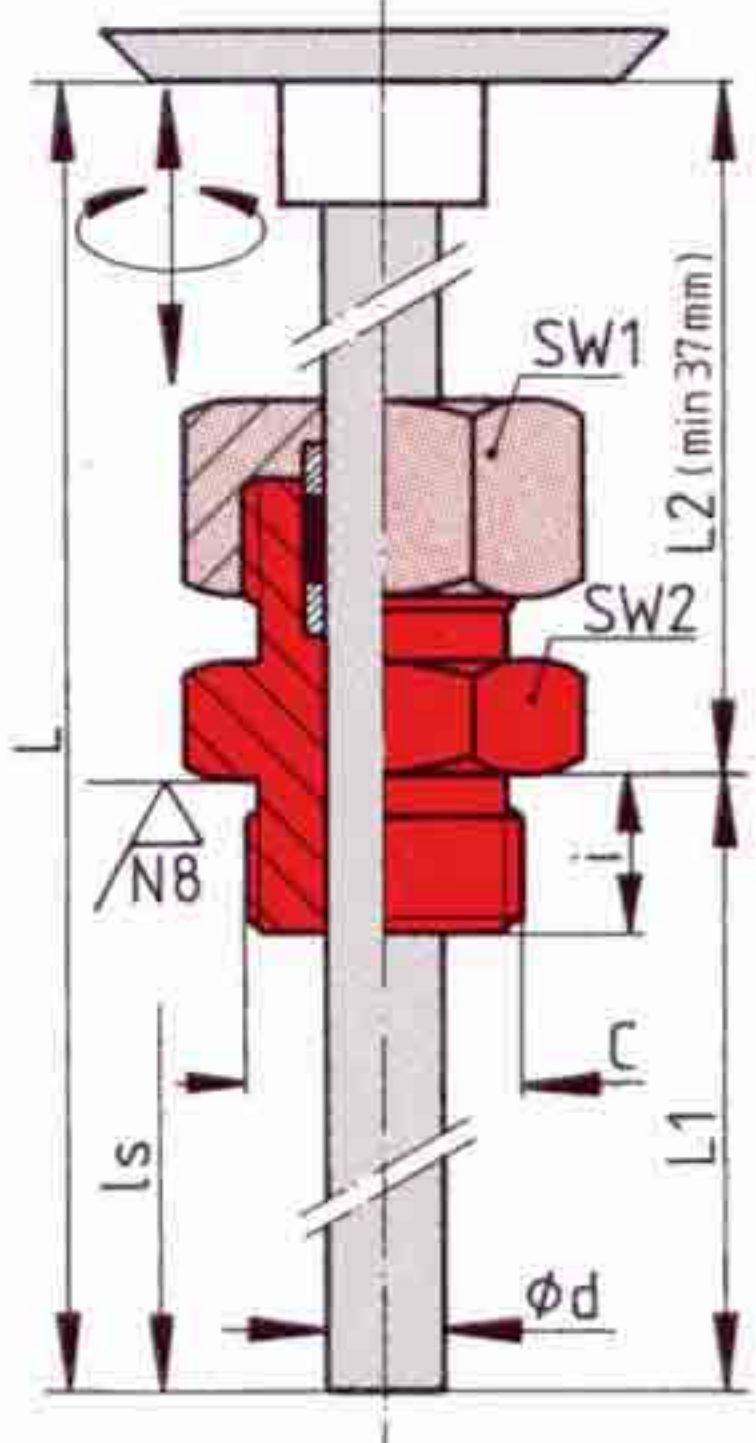
TA 1

Fixed connections for all types of thermometer with stem diameters 6, 8, 9 and 13 mm

Types A			S			T			U																							
Connection with unthreaded shoulder 			Fixed threaded connection 			Swivelling threaded connection 			Swivelling cap connection 																							
TS 1 – TH 2: Materials: see data sheets TS 1 and TH 2 TM 1 – TG 1: AISI 303/1.4305			TS 1 – TH 2: Materials: see data sheets TS 1 and TH 2 Ø 052-065: G 1/4 A ● G 3/8 A ○ G 1/2 A ○ 1/4" NPT ○ 1/2" NPT ○ Ø 080-150: G 1/2 A ● G 3/4 A ○ 1/2" NPT ○ TM 1 – TG 1 AISI <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td></td> <td>303/1.4305</td> <td>316/1.4401</td> </tr> <tr> <td>Ø 100-160</td> <td></td> <td></td> </tr> <tr> <td>G 1/2 A</td> <td>●</td> <td>○</td> </tr> <tr> <td>G 3/4 A</td> <td>○</td> <td>-</td> </tr> <tr> <td>M 20 x 1,5</td> <td>○</td> <td>-</td> </tr> <tr> <td>1/2" NPT</td> <td>○</td> <td>○</td> </tr> <tr> <td>3/4" NPT</td> <td>○</td> <td>-</td> </tr> </table>				303/1.4305	316/1.4401	Ø 100-160			G 1/2 A	●	○	G 3/4 A	○	-	M 20 x 1,5	○	-	1/2" NPT	○	○	3/4" NPT	○	-	TH 2 TM 1 – TG 1: Stainless steel AISI 303/1.4305 Ø 080-160: G 1/2 A ○ M 18 x 1,5 ○ M 20 x 1,5 ○ Supplementary connection TANX...: Stainless steel AISI 303/1.4305 G 1/2 A ○ G 3/4 A ○ M 20 x 1,5 ○ 1/2" NPT ○ 			TH 2 TM 1 – TG 1: Stainless steel AISI 303/1.4305 Ø 080-160: G 1/2 ○ G 3/4 ○ M 24 x 1,5 ○ M 27 x 2 ○		
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C	i	SW	C	i	SW	C	i	SW1	C	i	SW																					
15	10	(22)	G 1/4 A	10	17	G 1/2 A	15	22	G 1/2	9	27																					
			G 3/8 A	12	22	M 18 x 1,5	15	22	G 3/4	9	32																					
			G 1/2 A	12	27	M 20 x 1,5	15	22	M 24 x 1,5	12	32																					
			G 3/4 A	12	32			SW 2	M 27 x 2	12	32																					
			1/4" NPT	17	17	G 1/2 A	12	27																								
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						1/2" NPT	22	27																								

● = Standard model ○ = Optional «i» = sensitive length (see page 4)
 Other connections, threads and materials available on request (at extra cost).

Sliding connections for all types of thermometer with stem diameters 6, 8, 9 and 13 mm and for capillary tube dia. 2.5 mm



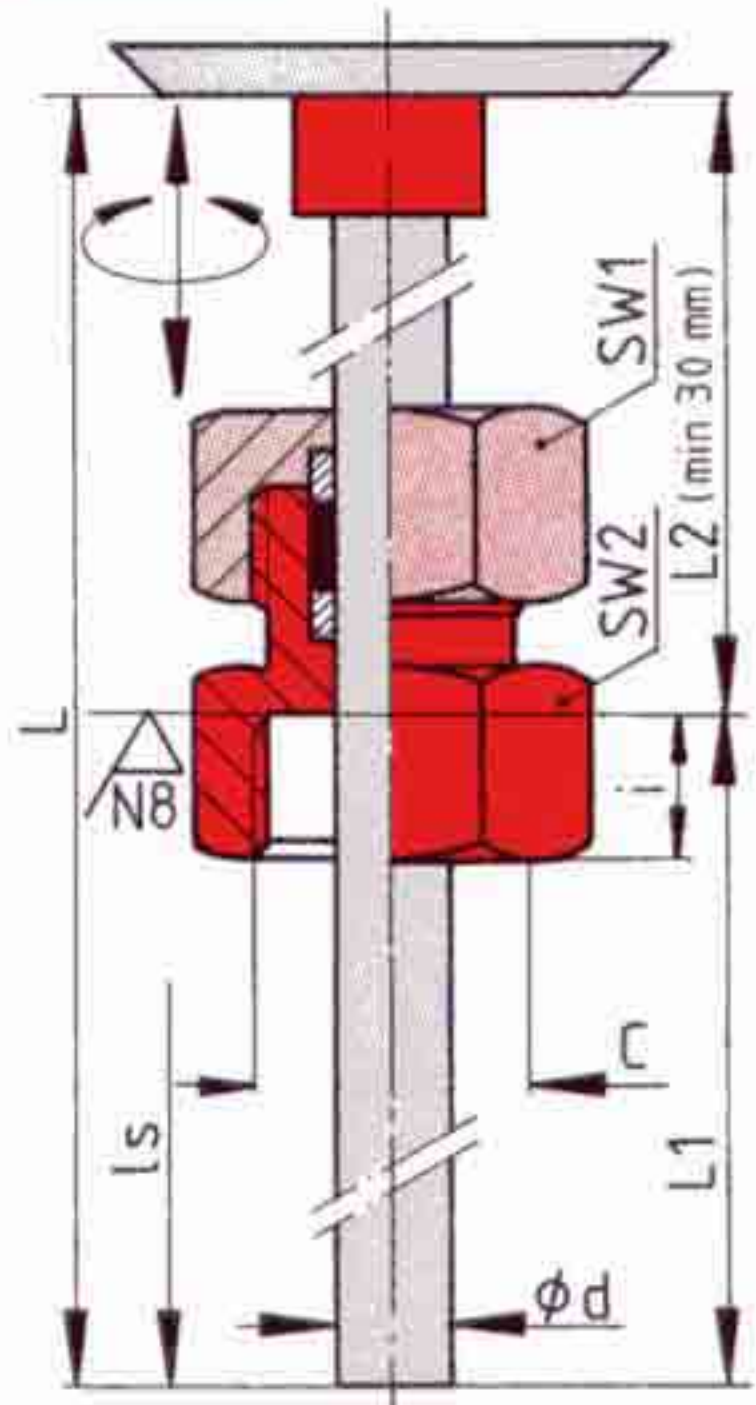
Type

«TAMX...I»

Swivelling and sliding threaded connections «TAMX...I»
in stainless steel AISI 303/1.4305.
Pressure sealed.



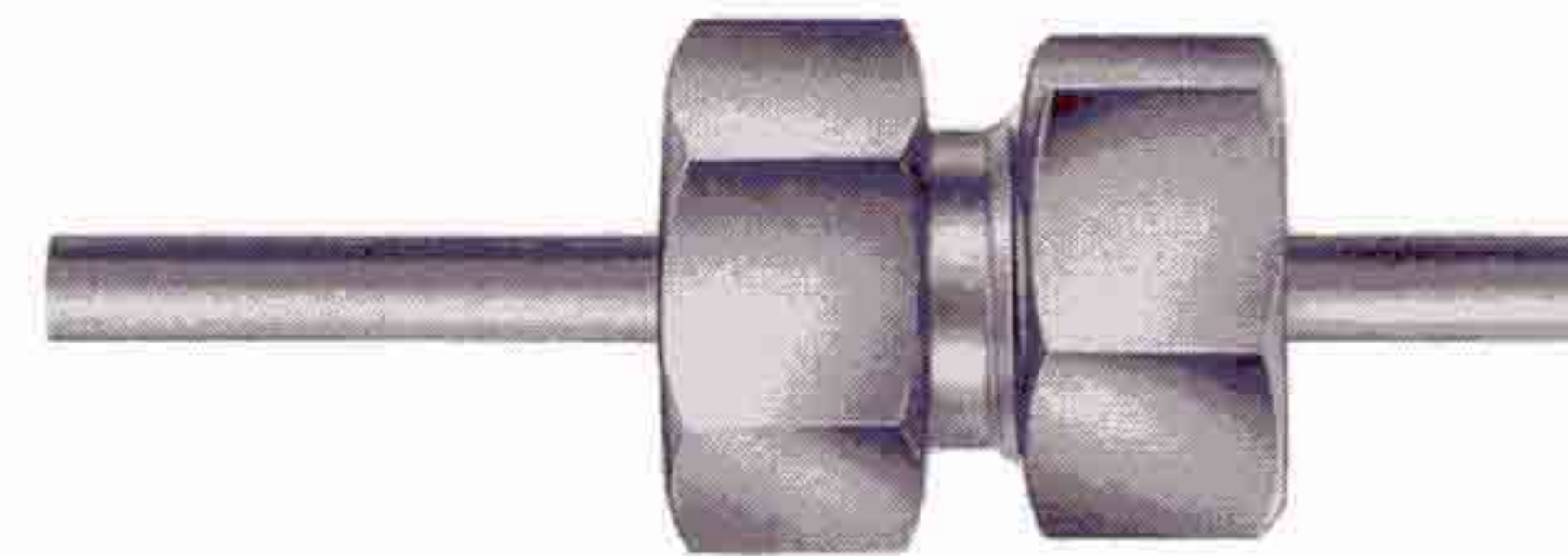
For stem dia.	mm	2,5*		6		8		9		13		
Types		TAMX025I	SAMX	TAMX060I		TAMX080I		TAMX090I		TAMX130I		
Max. temp.	°C	250	800	250**	250	600	250	600	250	800		
Sealing ring		PTFE (Teflon)	Copper	PTFE (Teflon)	PTFE (Teflon)	Copper	PTFE (Teflon)	Copper	PTFE (Teflon)	Copper		
C	i	SW1/2	Code N°									
G1/2A	12	27/27	212-088	212-309	212-155	212-108	212-166	212-172	212-266	212-178	212-291	212-056
G3/4A	12	27/32	212-114	212-310	212-156	212-109	212-167	212-173	212-267	212-179	212-292	212-058
1/2"NPT	22	27/27	212-089	212-312	212-157	212-112	212-168	212-174	212-269	212-180	212-294	212-057



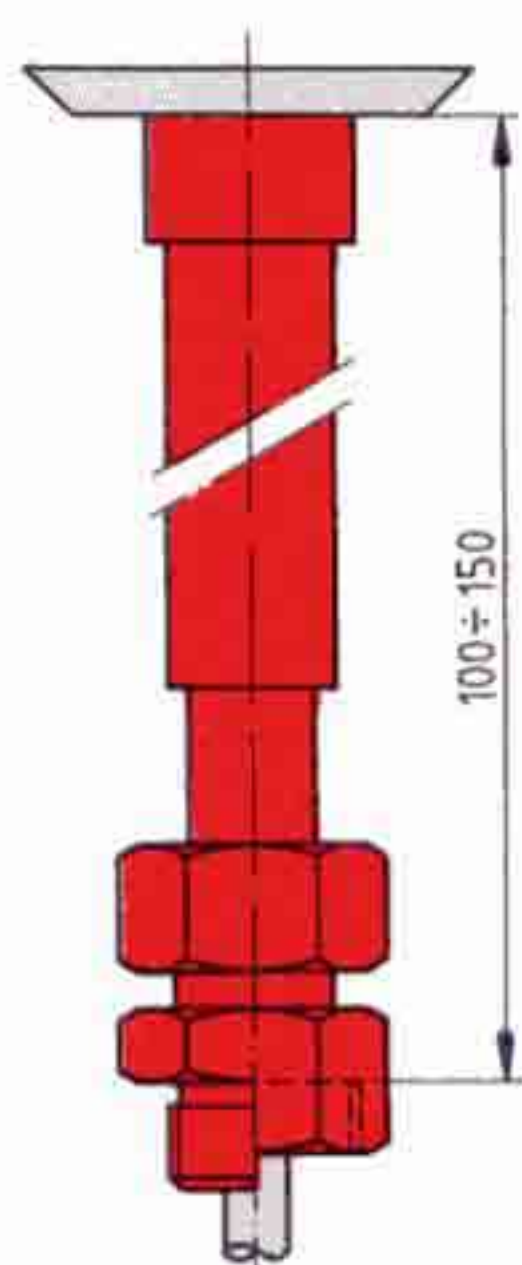
Type

«TAMU...I»

Swivelling and sliding cap connections «TAMU...I»
in stainless steel AISI 303/1.4305.
Pressure sealed.



For stem dia.	mm	2,5*		6		8		9		13		
Types		TAMU025I	SAMU	TAMU060I		TAMU080I		TAMU090I		TAMU130I		
Max. temp.	°C	250	800	250**	250	600	250	600	250	800		
Sealing ring		PTFE (Teflon)	Copper	PTFE (Teflon)	PTFE (Teflon)	Copper	PTFE (Teflon)	Copper	PTFE (Teflon)	Copper		
C	i	SW1/2	Code N°									
G1/2A	12	27/27	212-119	212-319	212-161	212-149	212-187	212-192	212-197	212-202	212-207	212-382***
G3/4A	12	27/32	212-120	212-320	212-162	212-150	212-188	212-193	212-198	212-203	212-208	212-383***
1/2"NPT	22	27/27	212-121	212-322	212-163	212-134	212-189	212-194	212-199	212-204	212-209	212-385***



Strengthening tube

For thermometers supplied with a sliding connection, we can easily adapt a telescopic strengthening tube between the head and the connection (length L2 comprised between 100 and 150 mm). This tube, supplied on request, is recommended for liquid filled thermometers, those subject to vibrations, as well as those with 6 mm dia. stem.

* = for capillary tube

** = for fitting to the capillary subsequently

*** = optional, with extra cost

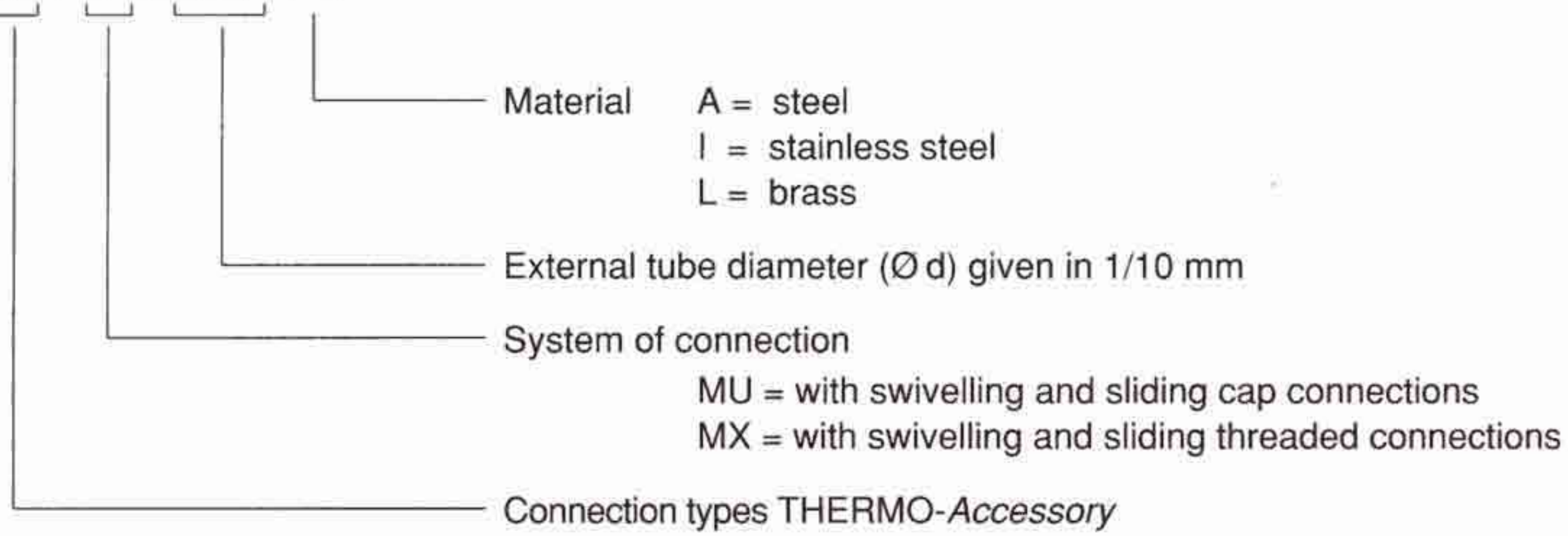
Other threads on request, with extra charge.

SW = Across flats (AF)

Ordering code structure

Connections types

T A M X 0 9 0 I



Additional information

- Threads C of connection types and ordering code number (Code N°)

Welded pockets

TPIE	TPAE	TPIA	TPEE																																		
<p>Internal diameter threaded to correspond to fixed threaded connection of thermometer, or special connection type used.</p>	<p>Internal diameter smooth to correspond to unthreaded shoulder of thermometer used.</p> <p>dia. 15 (10) × 10</p>	<p>Internal diameter threaded to correspond to fixed threaded connection of thermometer, or special connection type used.</p>	<p>External diameter threaded to correspond to swivelling cap connection of thermometer, or special connection type used.</p>																																		
<table border="1"> <thead> <tr> <th>C</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>G1/4</td> <td>G1/4A</td> </tr> <tr> <td>G1/2</td> <td>G1/2A</td> </tr> <tr> <td>G1/2"NPT</td> <td>G3/4A</td> </tr> <tr> <td></td> <td>G1/2"NPT</td> </tr> <tr> <td></td> <td>G3/4"NPT</td> </tr> </tbody> </table>	C	B	G1/4	G1/4A	G1/2	G1/2A	G1/2"NPT	G3/4A		G1/2"NPT		G3/4"NPT	<table border="1"> <thead> <tr> <th colspan="2">B</th> </tr> </thead> <tbody> <tr> <td>G1/4A</td> <td>G1/2"NPT</td> </tr> <tr> <td>G3/8A</td> <td>M18x1,5</td> </tr> <tr> <td>G1/2A</td> <td>M20x1,5</td> </tr> <tr> <td>G3/4A</td> <td></td> </tr> </tbody> </table>	B		G1/4A	G1/2"NPT	G3/8A	M18x1,5	G1/2A	M20x1,5	G3/4A		<table border="1"> <thead> <tr> <th>dia.</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>11 mm</td> <td>G1/4</td> </tr> <tr> <td>18 mm</td> <td>G1/2</td> </tr> <tr> <td></td> <td>G1/2"NPT</td> </tr> <tr> <td>20 mm</td> <td>G3/4</td> </tr> </tbody> </table>	dia.	C	11 mm	G1/4	18 mm	G1/2		G1/2"NPT	20 mm	G3/4	<table border="1"> <thead> <tr> <th>B1 = B</th> </tr> </thead> <tbody> <tr> <td>G1/2A</td> </tr> </tbody> </table>	B1 = B	G1/2A
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Standard length A

60, 120, 150, 200 mm

Material

steel, stainless steel, brass;

other materials, machined from solid and complementary informations, see data sheet THERMO-Well (TP 1, TP 2, TP 3).

Minimum immersion depths «Is» for 6, 8 and 9 mm diameter stems (exclusively for bimetallic thermometers in groups TS1, TH 2 and TM 1)

In order to give quick, accurate response, the thermometer stem must be immersed sufficiently deeply into the medium being measured. The minimum value for this depth depends on the temperature range involved. The temperature range also determines the choice of the bimetallic measuring systems to be used, either single or double wound. As a general rule the length «L» should equal the sensitive length «Is». In certain cases, the sensitive length «Is» may be shorter, and be equal to the length «L». Consult RÜEGER in these cases.

Ranges °C	Equivalent °F	Depths Is min.	Ranges °C	Equivalent °F	Depths Is min.
0... + 250	+ 50... + 500	Is = 35 mm			
- 30... + 170 0... + 160 * 0... + 200 *	+ 30... + 320 * + 50... + 400 *	Is = 40 mm	- 70... + 50** - 30... + 70**	- 100... + 100** + 40... + 160**	Is = 50 mm
0... + 120 * 0... + 400 0... + 500 0... + 600	0... + 250 * + 30... + 750 + 100... + 1100 *	Is = 45 mm	- 70... + 270 0... + 60** 0... + 320	+ 30... + 140** + 30... + 570	Is = 55 mm

* With these ranges, in the case of thermometers with electrical contacts, the sensitive length «Is» is increased by 10 mm.

** With these ranges, in the case of thermometers with electrical contacts, the sensitive length «Is» is increased by 20 mm.

The minimum lengths «L», «L1» and «A» vary according to the sensitive length «Is», and also according to the type of connection used and the thread. The table below serves as a quick way of determining these different lengths.

Connection type	Thread type	Min. lengths A	L1 min.	+	L2 min.*	=	L min.
A							Is + 10 mm
S	G...A						Is + 12 (10)
S	...NPT						Is + 22 (17)
T	G...A						Is
T	M...x...						Is
T + TANX	G...A						Is + 15
T + TANX	M...x...						Is + 15
T + TANX	...NPT						Is + 25
U	G...						Is + 12
U	M...x...						Is + 12
A + TAMX	G...A		Is + 12 mm		37 mm		Is + 49 mm
A + TAMX	...NPT		Is + 22		37		Is + 59
A + TAMU	G...A		Is + 12		30		Is + 42
A + TAMU	...NPT		Is + 18		30		Is + 48
A + TPAE	G...A	Is + 17 mm					L min. with TP = A + 10 mm
A + TPAE	M...x...	Is + 17					A + 10
A + TPAE	...NPT	Is + 27					A + 10
S + TPIE/TPIA	G...A	Is + 17					A + 12
S + TPIE/TPIA	...NPT	Is + 27					A + 22
X							
U + TPEE	G...	Is + 17					A + 23

* For thermometers types TSV100A and TSV150A, see data sheet **TS 1**; for types THV100A and THV130A, see data sheet **TH 2** (min. lengths L2 longer).

RÜEGER

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