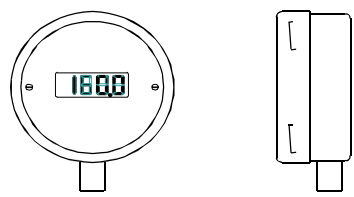
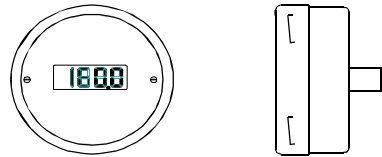
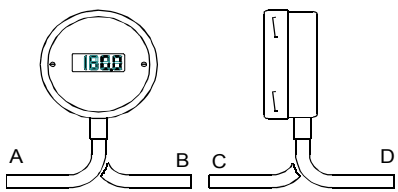
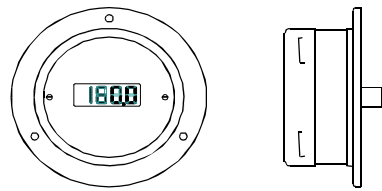


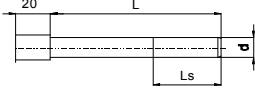
RIGID STEM DIGITAL THERMOMETERS

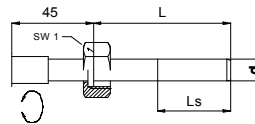
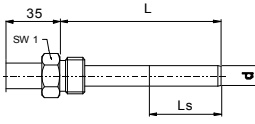
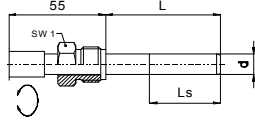
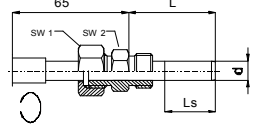
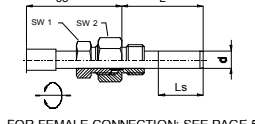
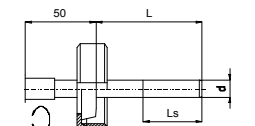
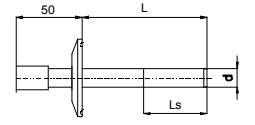
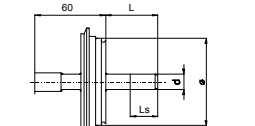
Type TTER, with LCD display, battery powered

STANDARD MODEL:

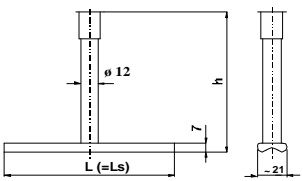
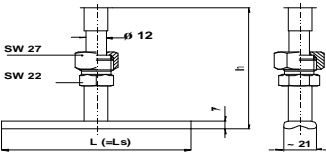
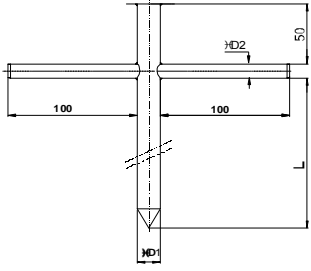
CASE	: Ø100 mm, bayonet lock, AISI304/1.4301, IP-65	RANGE	: -200...+600°C, see page 9
STEM AND BULB	: AISI321/1.4541, see page 4 and 5	BATTERY LIFETIME	: >7.5 year (3s), >10 year (10s)
WINDOW	: mineral glass 4 mm	SENSING ELEMENT	: PT100
DIAL	: aluminium, white	ACCURACY TYPE LX	: < 0.15%, ± 1 digit
DISPLAY	: 3½ - digit LCD, 12 mm high	TYPE HX	: < 0.1%, ± 1 digit
CONNECTION	: brass or AISI321, see page 4 and 5	AMBIENT TEMPERATURE	: -20...+70°C
POWER SUPPLY	: ultra long life battery	TEMPERATURE DRIFT	: < ±0,005% /°C over Tambient
UPDATE TIME	: 3s or 10s, selectable by solderlink	IMMUNITY	: IEC-801-2/3/4
		EMISSION	: EN-55022, class B

TYPE	MODEL	xx = Range	
		LX - 50.0 / + 150.0°C	HX - 200 / + 600°C
A		TER100XA-LX	TER100XA-HX
E		TER100XE-LX	TER100XE-HX
T		TER100XT-x-LX	TER100XT-x-HX
F		TER100XF-LX	TER100XF-HX
OPTION			
-TT2	built-in transmitter, 4...20mA power supply 13...35Vdc, 2 wire	TER100Xx-LX-TT2	TER100Xx-HX-TT2

BULB LENGTH AND DIAMETER FOR TYPE TTER				
TYPE	STANDARD MODEL L _s = 15 mm	bulb diameter Ø d (mm)	bulb length L AISI321/1.4541	
A <i>PLAIN STEM</i>		9, 10, 12	per 100 mm	
		6, 6.35, 8, 11, 12.5, 13, 14	per 100 mm	
		7, 15, 16, 17, 18, 20	per 100 mm	
OPTIONS ON BULB LENGTH AND DIAMETER: SEE P				

CONNECTIONS FOR RIGID STEM MODELS TYPE TTER						
TYPE	MODEL options on connections: see page 5; L _s =15 mm	DIMENSIONS			BRASS max 400°C	STAINLESS STEEL AISI304/1.4301
		connection	SW1	SW2		
B <i>coupling nut</i>		1/2" BSP	27	-		
		3/4" BSP	32	-		
		1" BSP	41	-		
C <i>fixed nipple</i>		1/2" BSP/NPT	22	-		
		3/4" BSP/NPT	30	-		
		1" BSP/NPT	36	-		
A 04 <i>turning nipple</i>		1/2" BSP	22	-		
		3/4" BSP	30	-		
		1" BSP	36	-		
B 01 <i>coupling nut + double nipple</i>		1/2" BSP/NPT	27	22		
		3/4" BSP/NPT	27	27		
		1" BSP/NPT	27	36		
CS 3 <i>adjustable connection, sliding on stem</i>		1/2" BSP/NPT	22	27		
		3/4" BSP/NPT	22	32		
		1" BSP/NPT	22	36		
WITH POLISHED BULB, L_s = 15 mm		DIMENSIONS			STAINLESS STEEL AISI316/1.4401	
CM <i>sanitary coupling acc. to DIN 11851 (also available in SMS, RJT, IDF etc.)</i>		1" - NW25				
		1 1/2" - NW40				
		2" - NW50				
		3" - NW75				
TC <i>TRI CLAMP sanitary connection acc. to ISO 2852</i>		1" - NW25				
		1 1/2" - NW40				
		2" - NW50				
TV <i>TUCHENHAGEN® sanitary Varivent® In-Line connection</i>		DN50 For In Line housing DN25				
		DN68 For In Line housing DN40 and up				

SPECIAL BULBS FOR RIGID STEM MODELS TYPE TTER

TYPE	MODEL	DIMENSIONS (mm)				STAINLESS STEEL AISI321/1.4541
		L	h	D1	D2	
S <i>surface bulb: fixed type</i>	 <p style="text-align: center;">h = 107 mm : FOR EVERY 100 MM EXTENSION: SEE PAGE 4</p>	120	107			
SA <i>surface bulb: adjustable type</i>	 <p style="text-align: center;">h = 107 mm : FOR EVERY 100 MM EXTENSION: SEE PAGE 4</p>	120	107			
HP <i>with handle and point</i>	 <p style="text-align: center;">L = 1000 mm : FOR EVERY 100 MM EXTENSION: SEE PAGE 4</p>	1000		14	8	
		1000		16	10	
		1000		18	12	

OPTIONS FOR BULB AND STEM

OPTION		PER 100 MM
BULB AND STEM AISI316/1.4401	for diameter 6, 8, 9, 10, 12, 13, 14, 15, 16 or 18 mm	
BULB AND STEM POLISHED (MECHANICAL)	for all diameters	
BULB AND STEM PTFE® LINING (max.250°C)	MAXIMUM 1000 mm (longer: ON DEMAND)	
BULB AND STEM HALAR® COATED (max.120°C)		

OPTIONS FOR CONNECTIONS

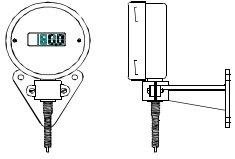
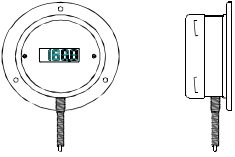
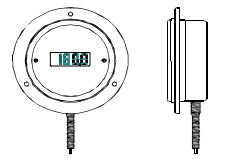
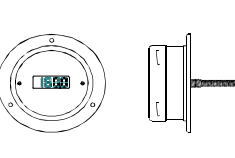
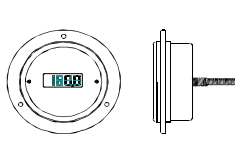
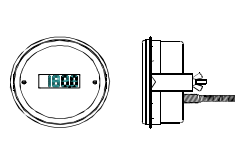
OPTION		
CONNECTION: 1/2" BSP female (i.o. male)		
CONNECTION: 3/4" BSP female (i.o. male)		
CONNECTION: 1" BSP female (i.o. male)		
CONNECTION : M24x1.5		
CONNECTION : M20x1.5		
CONNECTION : M18x1.5		
CONNECTION : 3/8" BSP		
CONNECTION : 1/4" BSP		
OTHERS		

REMOTE READING DIGITAL THERMOMETERS

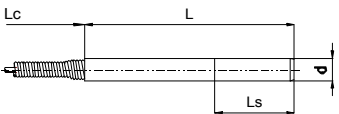
Type TTEC, with LCD display, battery powered

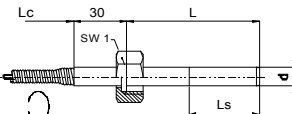
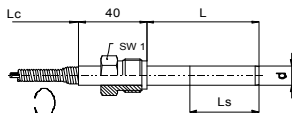
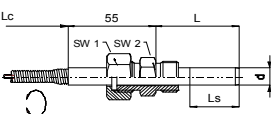
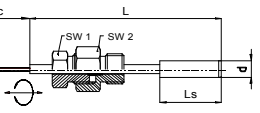
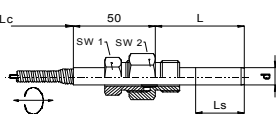
STANDARD MODEL:

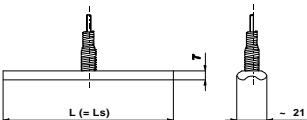
CASE	: Ø100 mm, bayonet lock, AISI304/1.4301, IP-65	RANGE	: -200...+600°C, see page 9
STEM AND BULB	: AISI321/1.4541, see page 7 and 8	SENSING ELEMENT	: PT100
WINDOW	: mineral glass 4 mm	ACCURACY TYPE LX	: < 0.15%, ± 1 digit
DIAL	: aluminium, white	TYPE HX	: < 0.1%, ± 1 digit
DISPLAY	: 3½ - digit LCD, 12 mm high	AMBIENT TEMPERATURE	: -20...+70°C
CONNECTION	: brass or AISI321, see page 7 and 8	TEMPERATURE DRIFT	: < ±0,005% /°C over T ambient
POWER SUPPLY	: ultra long life battery	IMMUNITY	: IEC-801-2/3/4
UPDATE TIME	: 3s or 10s, selectable by solderlink	EMISSION	: EN-55022, class B
BATTERY LIFETIME	: >7.5 year (3s), >10 year (10s)		

TYPE	MODEL	xx = Range	
		LX - 50.0 / + 150.0°C	HX - 200 / + 600°C
A		TEC100XA-LX	TEC100XA-HX
B		TEC100XB-LX	TEC100XB-HX
D		TEC100XD-LX	TEC100XD-HX
F		TEC100XF-LX	TEC100XF-HX
G		TEC100XG-LX	TEC100XG-HX
H		TEC100XH-LX	TEC100XH-HX
OPTION			
-TT2	built-in transmitter output 4...20 mA, 2-wire	TEC100xx-LX-TT2	TEC100xx-HX-TT2

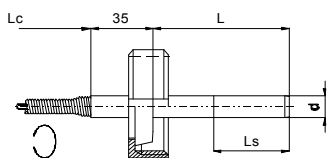
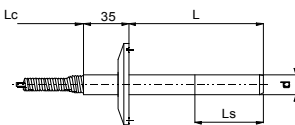
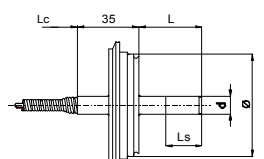
WIRE FOR REMOTE READING MODELS, TYPE TTEC				
SENSOR TYPE	COVERING	Ø d (mm)	WIRE LENGTH Lw	
			FIRST 1000 MM	PER 1000 MM EXTRA
LX	AISI304	2,5		
HX	AISI304, SILICON WIRE	2,5		

BULB LENGTH AND DIAMETER FOR REMOTE READING MODELS, TYPE TTEC				
TYPE	STANDARD MODEL Ls = 15 mm	bulb diameter Ø d (mm)	bulb length	
A PLAIN STEM		9, 10, 12	per 100 mm	
		6, 6.35, 8, 11, 12½, 13, 14	per 100 mm	
		7, 15, 16, 17, 18, 20	per 100 mm	
		FOR OPTIONS ON BULB LENGTH AND DIAMETER: SEE PAGE 8		

CONNECTIONS FOR REMOTE READING MODELS, TYPE TTEC						
TYPE	MODEL options on connections see page 8; Ls = 15 mm	DIMENSIONS			BRASS	STAINLESS STEEL
		connection	SW1	SW2	maximum 400°C	AISI304/1.4301
B coupling nut		1/2" BSP	27	-		
		3/4" BSP	32	-		
		1" BSP	41	-		
A 04 turning nipple		1/2" BSP	22	-		
		3/4" BSP	30	-		
		1" BSP	36	-		
B 01 coupling nut + double nipple		1/2" BSP/NPT	27	22		
		3/4" BSP/NPT	27	27		
		1" BSP/NPT	27	36		
CS 1 adjustable connection, sliding on extension	 FOR FEMALE CONNECTION: SEE PAGE 9	1/2" BSP/NPT	22	27		
		3/4" BSP/NPT	22	32		
		1" BSP/NPT	22	36		
CS 3 adjustable connection, sliding on stem	 FOR FEMALE CONNECTION: SEE PAGE 9	1/2" BSP/NPT	22	27		
		3/4" BSP/NPT	22	32		
		1" BSP/NPT	22	36		

SPECIAL BULB FOR REMOTE READING MODELS, TYPE TTEC			
TYPE	MODEL	DIMENSIONS (mm)	STAINLESS STEEL AISI321/1.4541
		L	
S surface bulb		120	

SANITARY CONNECTIONS FOR REMOTE READING MODELS TYPE TTEC

TYPE	MODEL with polished bulb, Ls = 15 mm	DIMENSIONS	STAINLESS STEEL AISI316/1.4401
CM <i>sanitary coupling acc. to DIN 11851 (also available in SMS, RJT, IDF etc.)</i>		1" - NW25	
		1½" - NW40	
		2" - NW50	
		3" - NW75	
TC TRI CLAMP sanitary connection acc. to ISO 2852		1" - NW25	
		1½" - NW40	
		2" - NW50	
TV TUCHENHAGEN® sanitary Varivent® In-Line connection		DN50 For In Line housing DN25	
		DN68 For In Line housing DN40 and up	

OPTIONS ON BULB AND STEM FOR REMOTE READING MODELS TYPE TTEC

OPTION	PER 100 MM
BULB AND STEM AISI316/1.4401	for diameter 6, 8, 9, 10, 12, 13, 14, 15, 16 or 18 mm
BULB AND STEM POLISHED (MECHANICAL)	for all diameters
BULB AND STEM PTFE® LINING (max. 250°C)	MAXIMUM 1000 mm (longer: ON DEMAND)
BULB AND STEM HALAR® COATED (max.120°C)	

OPTIONS ON CONNECTIONS FOR REMOTE READING MODELS TYPE TTEC

OPTION	
CONNECTION: 1/2" BSP female (i.o. male)	ONLY FOR TYPE: CS 1, CS 2 AND CS 3
CONNECTION: 3/4" BSP female (i.o. male)	
CONNECTION: 1" BSP female (i.o. male)	
CONNECTION : M24x1.5	
CONNECTION : M20x1.5	
CONNECTION : M18x1.5	
CONNECTION : 3/8" BSP	
CONNECTION : 1/4" BSP	
OTHERS	

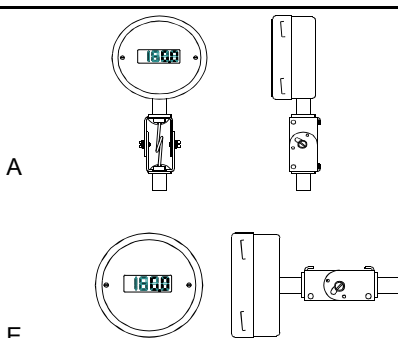
MARKING FOR TEMPERATURE GAUGES

OPTION	
TAG number on dial	
TAG number on AISI304/1.4301 TAG plate 55x25 mm	
Lettering on dial	

CERTIFICATES FOR TEMPERATURE GAUGES

TYPE OF CERTIFICATE	
Certificate of Conformity acc. to EN 10204 2.2.	
Calibration certificate (Traceable to N.K.O.)	
Material certificate wetted parts acc. to EN 10204 3.1	

OPTIONS FOR DIGITAL THERMOMETERS, TYPE TTER, TTEC

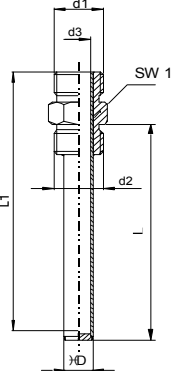
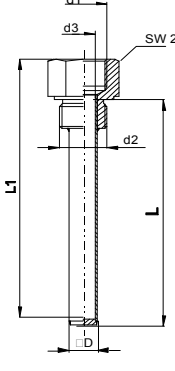
OPTION		
CASE MATERIAL AISI316/1.4401 (i.o. AISI304/1.4301)	CASE + BAYONETRING FRONT- OR BACKFLANGE	
KNEE-JOINT AISI304/1.4301 for model: TER, Type A and E K360	 <p>A</p> <p>E</p>	BENDABLE OVER 360°
PLEXIGLASS	PMMA	
SECURIT" GLASS	SAFETY GLASS	

STANDARD TEMPERATURE RANGES

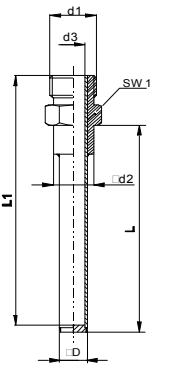
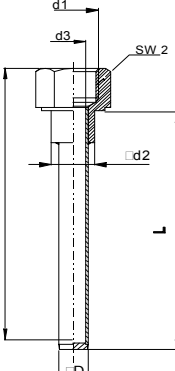
(in °C)	RESOLUTION	TYPE	(in °C)	RESOLUTION	TYPE
-200...+50	1	HX	-20...+100	0.1	LX
-120...+40	1	HX	-20...+120	0.1	LX
-110...+50	1	HX	-20...+180	1	HX
-100...+100	1	HX	-15...+45	0.1	LX
-100...+50	1	HX	-10...+15	O.D.	O.D.
-80...+40	1	HX	-10...+30	O.D.	O.D.
-60...+40	1	HX	-10...+50	0.1	LX
-60...+60	1	HX	-10...+110	0.1	LX
-50...+50	0.1	LX	-10...+150	0.1	LX
-40...+20	0.1	LX	0...+25	O.D.	O.D.
-40...+40	0.1	LX	0...+40	O.D.	O.D.
-40...+60	0.1	LX	0...+60	0.1	LX
-40...+80	0.1	LX	0...+80	0.1	LX
-40...+110	0.1	LX	0...+100	0.1	LX
-40...+120	0.1	LX	0...+120	0.1	LX
-40...+150	0.1	LX	0...+150	0.1	LX
-30...+30	0.1	LX	0...+200	1	HX
-30...+50	0.1	LX	0...+250	1	HX
-30...+70	0.1	LX	0...+300	1	HX
-30...+170	1	HX	0...+400	1	HX
-20...+40	0.1	LX	0...+500	1	HX
-20...+60	0.1	LX	0...+600	1	HX
-20...+80	0.1	LX	OTHER		O.D.

STAINLESS STEEL POCKETS (WELDED)

WELDED POCKETS (THREADED), $P_{max} = 25 \text{ bar}$

TYPE		STANDARD DIMENSIONS (in mm)									
02	03	BULB DIA.	L pocket	d1	d2	d3	D	SW-1	SW-2		
		10	100	1/2"BSP	1/2"BSP	10,5	12,5	22	27		
		10	100	1/2"BSP	3/4"BSP	10,5	12,5	27	32		
		10	100	1/2"BSP	1"BSP	10,5	12,5	41	41		
		12,5	63	1/2"BSP	1/2"BSP	13	15	22	27		
		12,5	63	1/2"BSP	3/4"BSP	13	15	27	32		
		12,5	63	1/2"BSP	1"BSP	13	15	41	41		

WELDED POCKETS FOR WELDING, $P_{max} = 25 \text{ bar}$

TYPE		STANDARD DIMENSIONS (in mm)									
04	05	BULB DIA.	L pocket	d1	d2	d3	D	SW-1	SW-2		
		10	100	1/2"BSP	18	10,5	12,5	22	27		
		10	100	1/2"BSP	23	10,5	12,5	27	32		
		10	100	1/2"BSP	28	10,5	12,5	36	41		
		12,5	63	1/2"BSP	18	13	15	22	27		
		12,5	63	1/2"BSP	23	13	15	27	32		
		12,5	63	1/2"BSP	28	13	15	36	41		

L1 = BULB LENGTH THERMOMETER "L" FOR CONNECTION TYPE "B", "C" AND "CS 3"
FOR TYPE "A 04": L1 = L + 15 mm

**OTHER DESIGNS AND MATERIALS ARE AVAILABLE TO CUSTOMER SPECIFICATIONS E.G. BAR-STOCK
ALSO AVAILABLE WITH MATERIAL CERTIFICATE ACC. TO EN 10204 3.1**