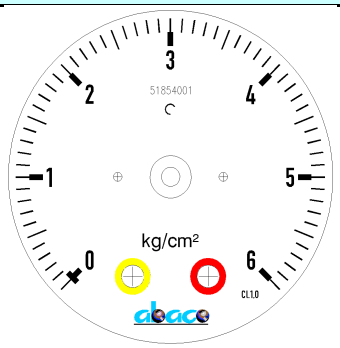
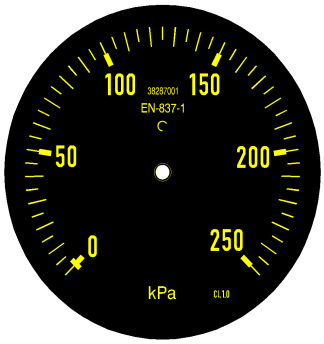
• INDEX

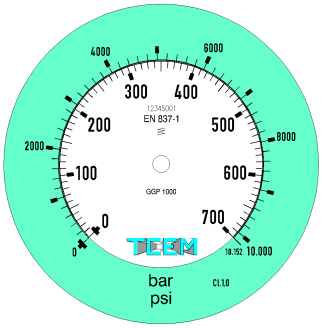
DOCUMENTATION : DIAL THERMOMETERS

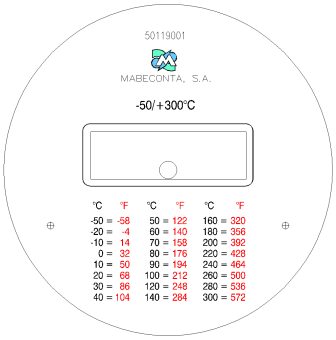
All STIKO instruments can be designed with dials in any colour and in any style. We have more than 265 colours available. Your company name and logo can be printed on the dial in full colour and these features are done with one print only.

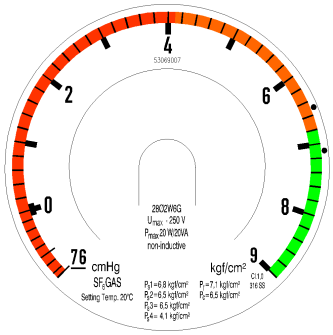
Once only set up costs : EUR 180,00 (NET) No minimum order quantity.

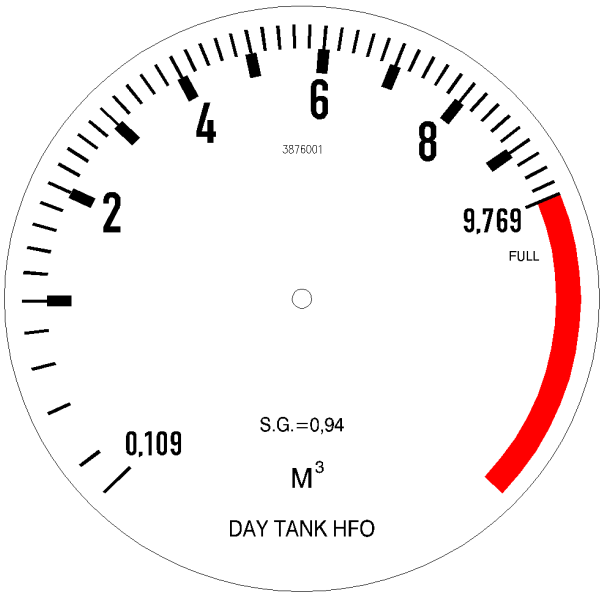


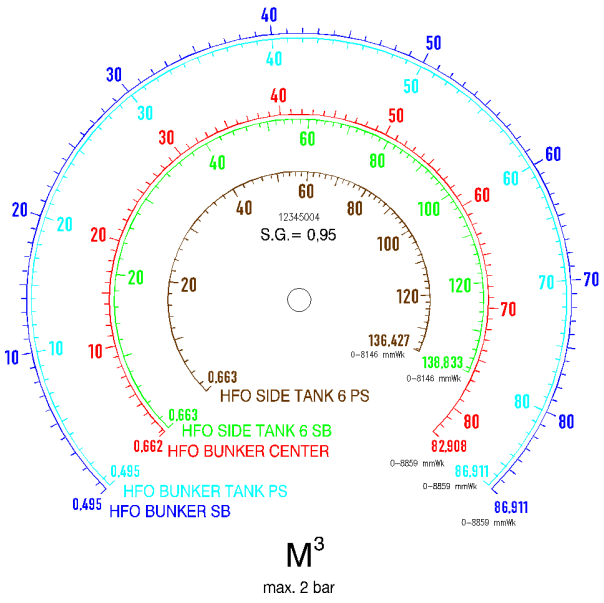


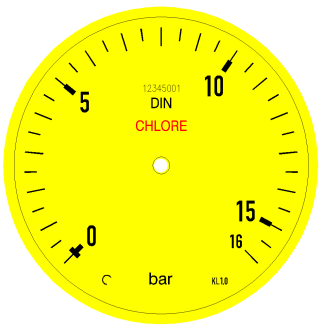


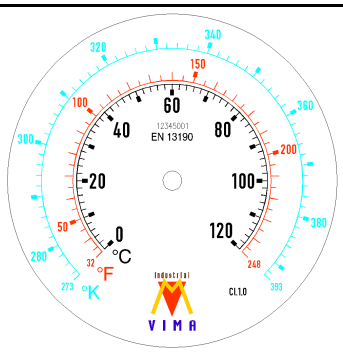












■ GENERAL INFORMATION

- This price-list is for **temperature gauges** with nitrogen (N2) filled system manufactured by:

  STIKO Meetapparatenfabriek B.V., RODEN, The Netherlands.

- STIKO® is a manufacturer of instruments since 1963 for measuring temperature and pressure either mechanical and/or electronic e.g. temperature and pressure gauges, PT-100, pressure and temperature, transmitters etc. We develop and manufacture all our instruments to ISO-9001-2000 standards.

- **The mentioned prices are in EURO NET for delivery EX WORKS, EXCL. PACKING and according to our delivery and payment conditions (see enclosure).**

- Price are under usual reserve.

- To find the total price for **RIGID STEM THERMOMETERS** add the prices of the following:

	EXAMPLE :	**PAGE:**
1 Basic price (head)	TXR100XA	3
2 Glycerine filling	X→L: TXR100LA	3
3 Temperature range	0 + 250°C	28
4 Bulb length and diameter	100x10 mm, AISI321	8
5 Connection	½"BSP, Type B, AISI304	8-11
6 Electrical device	--	33-39

- To find the total price for **CAPILLARY TUBE THERMOMETERS** add the prices of the following:

	EXAMPLE :	**PAGE:**
1 Basic price (head)	TXC160XA	18
2 Temperature range	0 + 100°C	28
3 Capill tube	1.500 mm, st.steel	24
4 Bulb length and diameter	150x10 mm, AISI321	25
5 Connection	½"BSP, Type CS3, AISI304	25-27
6 Electrical device	--	
7 Any options	drag pointer	32

- Abbreviations used in this price list: O.D. = ON DEMAND; N.A. = NOT AVAILABLE

- Dimensions used in this price list are in: millimeters (mm).

- Your order will be confirmed by fax.

- Other variations which are not mentioned in this price-list are on demand (if possible).

■ CERTIFICATION AND REPAIR SERVICE

- Certificates of Conformity to the company's published specifications are available on request for all STIKO® manufactured products according to EN 10204 2.2.

- Certificates of Calibration for all STIKO® manufactured products are also available. These certificates indicate deviations from standards traceable to N.K.O. or D.K.D. (Dutch/German National Standards).
  The results are recorded in a certificate which include calibration date, instrument serial number, type number and the N.K.O. or D.K.D. standard used.

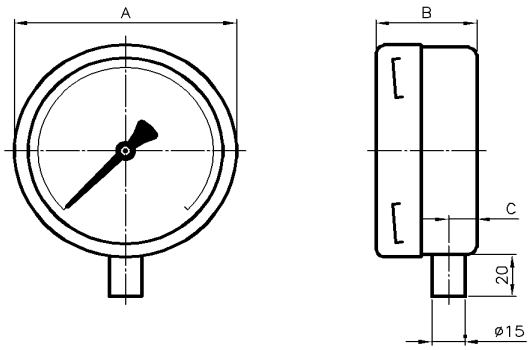
- Material Certificates according to EN 10204 3.1.B. for all STIKO® manufactured products are also available. These certificates indicate specifications of the materials used.

- An efficient repair and sparepart service is available at competitive rates for STIKO® products and products of other manufacturers. Instruments for repair should be sent carriage paid and labelled with the senders name and address, together with a brief description of the work required. Within two days after receiving the instruments you will get a full detailed offer for the repair job.

RIGID STEM DIAL THERMOMETERS TYPE TXR

A

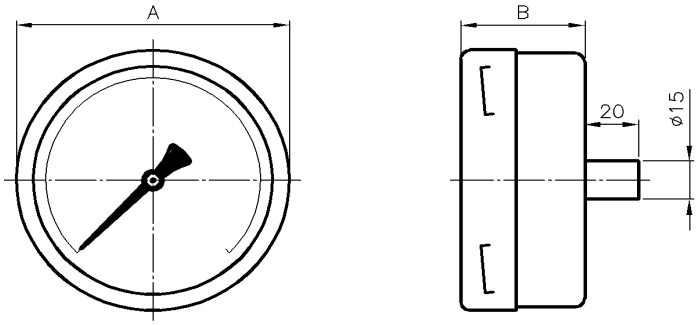
TXRxxxXA



DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55
C	13	13	13	13	13

E

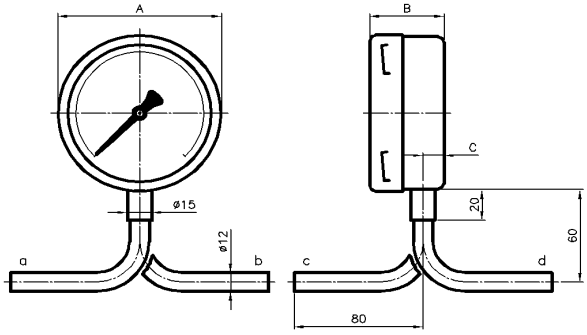
TXRxxxXE



DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55

T

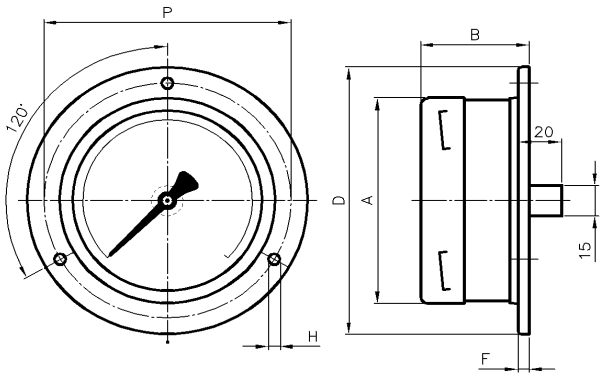
TXRxxxXT-x



DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55
C	13	13	13	13	13

F

TXRxxxXF



DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	41	40	51	51	57
D	86	110	132	196	285
F	5	5	5	5	2
H	3.5	4	5.5	6	6
P	75	95	116	178	270

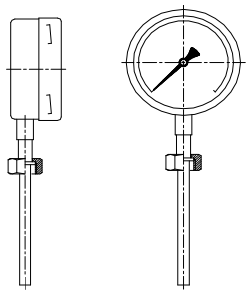
RIGID STEM DIAL THERMOMETERS

Type TXR, with stainless steel case according to EN 13190

STANDARD MODEL:

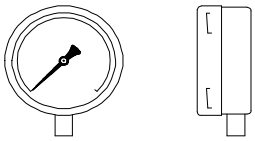
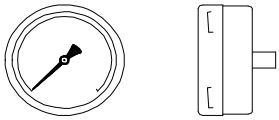
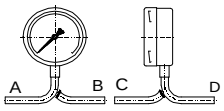
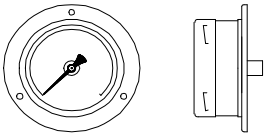
CASE	: bayonet lock, AISI304/1.4301, IP-65
STEM - BULB	: AISI321/1.4541, see page 8 - 11
WINDOW	: mineral glass 4 mm
DIAL	: aluminium, black figures on white
POINTER	: aluminium, black
CONNECTION	: see page 8 - 11
RANGES	: from -200 upto +800℃, see page 28 - 30

EXAMPLE:

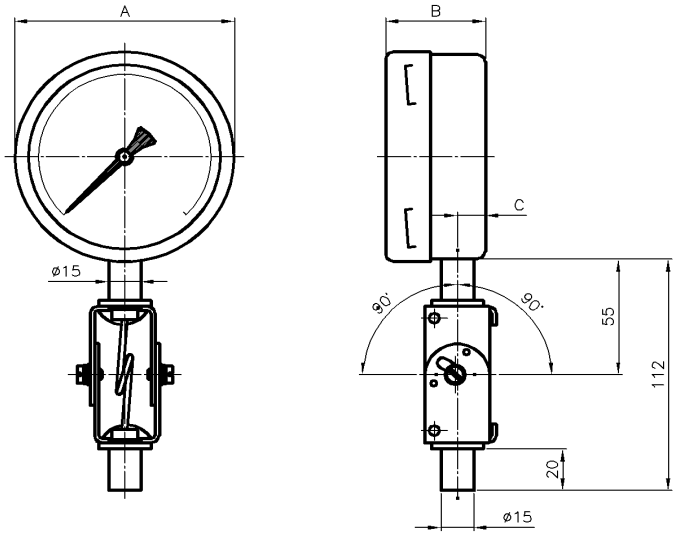
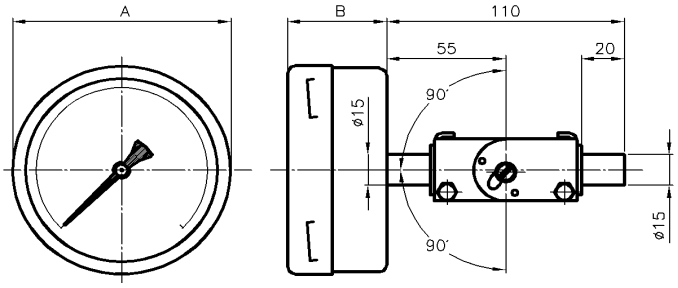
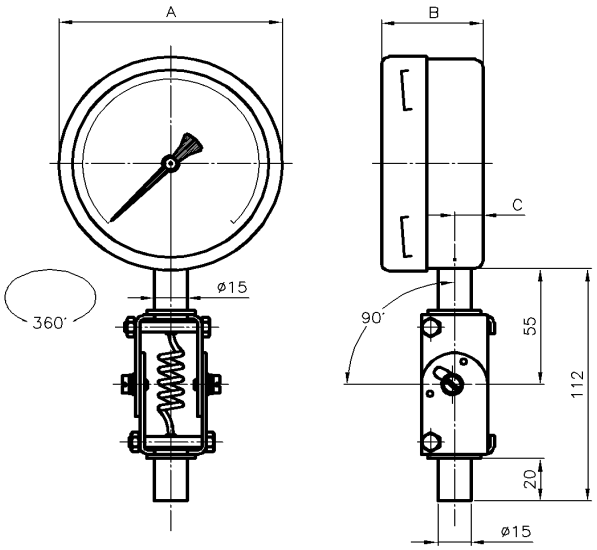
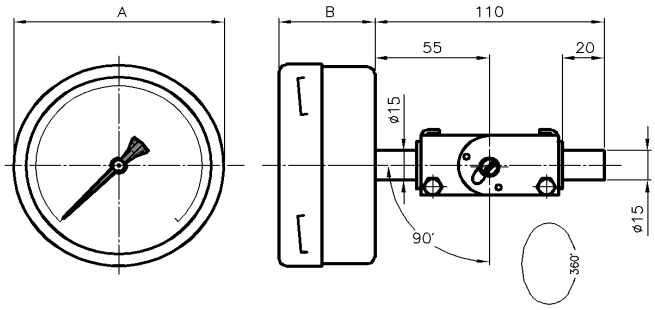


TXR100XA

OVERLOAD	: up to 30% F.S. (but max. 800℃)
ACCURACY	: ±1% F.S. / class 1
MOVEMENT	: brass
OPTIONS	: see page 32
CONTACTS	: see page 33-37
PT-100	: see page 42
TRANSMITTER	: see page 42

TYPE	MODEL	CASE DIAMETER (Ø in mm) 63	80	100	160	250
A 1130		TXR063XA	TXR080XA	TXR100XA	TXR160XA	TXR250XA
E 1131		TXR063XE	TXR080XE	TXR100XE	TXR160XE	TXR250XE
T 1133-x (x=A,B,C or D)		TXR063XT-x	TXR080XT-x	TXR100XT-x	TXR160XT-x	TXR250XT-x
F 1138		TXR063XF	TXR080XF	TXR100XF	TXR160XF	TXR250XF
OPTION		**EXTRA COSTS**				
Lx	**LIQUID FILLED CASE: GLYCERINE (in combination with electrical device: Ondina oil, (see page 43)**	TXR063Lx	TXR080Lx	TXR100Lx	TXR160Lx	TXR250Lx

EVERY ANGLE DIAL THERMOMETERS TYPE TXR

TYPE	DRAWING	DIMENSIONS mm
A ***knee joint 180°***		
E ***knee joint 180°***		
A ***knee joint 360°***		
E ***knee joint 360°***		

DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55
C	13	13	13	13	13

DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55

DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55
C	13	13	13	13	13

DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55

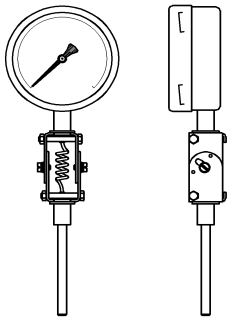
EVERY ANGLE DIAL THERMOMETERS

Type TXR, with KNEE JOINT and stainless steel case acc. to EN 13190

STANDARD MODEL:

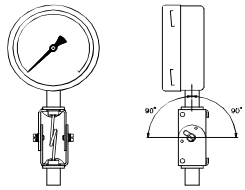
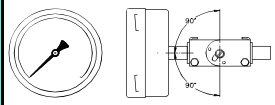
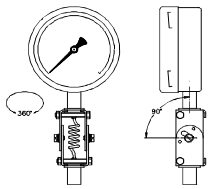
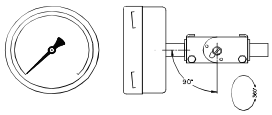
CASE	: bayonet lock, AISI304/1.4301, IP-65
KNEE JOINT	: AISI304/1.4301, 180° or 360° see below
180°	: bending only
360°	: bending and turning
STEM - BULB	: AISI321/1.4541, see page 8 - 11
WINDOW	: mineral glass 4 mm
DIAL	: aluminium, black figures on white
POINTER	: aluminium, black

EXAMPLE:

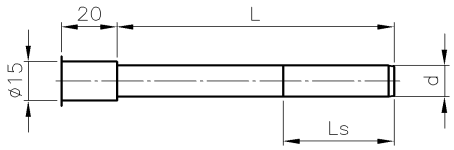


TXR100XA + K360°

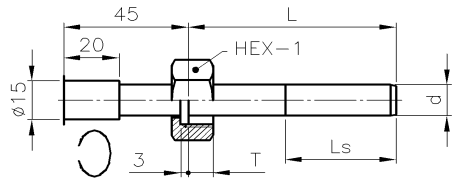
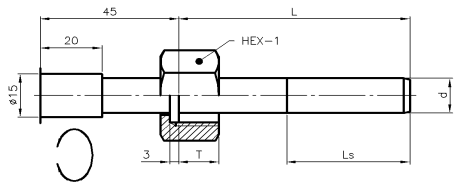
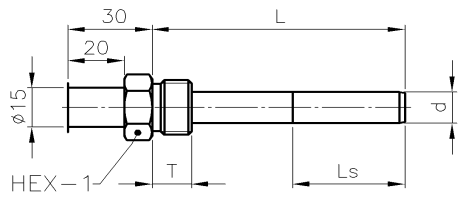
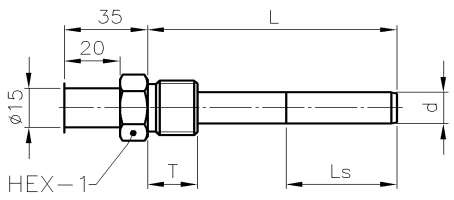
CONNECTION	: see page 8 - 11
RANGES	: -200 upto +800°C
	see page 28 - 30
OVERLOAD	: up to 30% F.S.
	(but max. 800°C)
ACCURACY	: ±1% F.S. / class 1
MOVEMENT	: brass
OPTIONS	: see page 33
CONTACTS	: see page 33 - 41,43

TYPE	MODEL	CASE DIAMETER (Ø in mm) 63	80	100	160	250
A 180°		TXR063XA+K180°	TXR080XA+K180°	TXR100XA+K180°	TXR160XA+ K180°	TXR250XA+K180°
E 180°		TXR063XE+K180°	TXR080XE+K180°	TXR100XE+K180°	TXR160XE+ K180°	TXR250XE+K180°
A 360°		TXR063XA+K360°	TXR080XA+K360°	TXR100XA+K360°	TXR160XA+ K360°	TXR250XA+K360°
E 360°		TXR063XE+K360°	TXR080XE+K360°	TXR100XE+K360°	TXR160XE+ K360°	TXR250XE+K360°
OPTION				**EXTRA COSTS**		
Lx	**LIQUID FILLED CASE: GLYCERINE (in combination with electrical device: Ondina oil, (see page 43)**	TXR063Lx+K	TXR080Lx+K	TXR100Lx+K	TXR160Lx+K	TXR250Lx+K

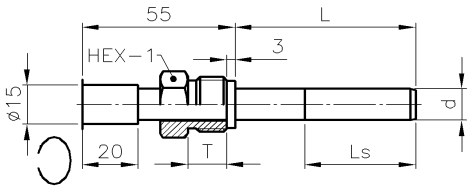
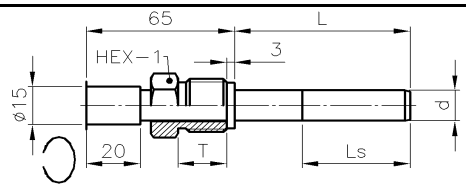
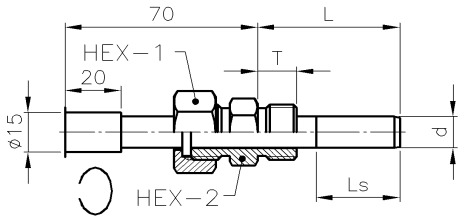
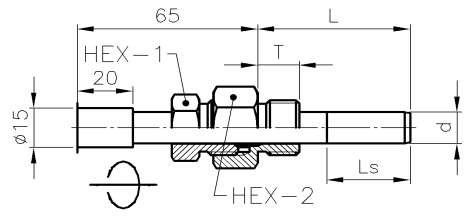
BULB LENGTH AND DIAMETER FOR TYPE TXR

TYPE	STANDARD MODEL	bulb diameter Ø d	EXTRA COSTS per 100 mm STAINLESS STEEL AISI321/1.4541
A *plain stem*		**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
	FOR SHORTEST SENSITIVE PART "Ls": SEE PAGE 31	FOR OPTIONS ON BULB LENGTH AND DIAMETER: SEE PAGE 11	

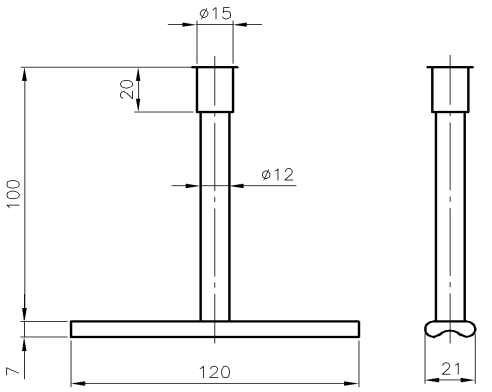
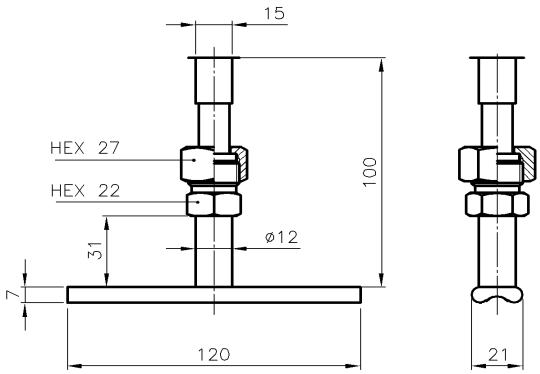
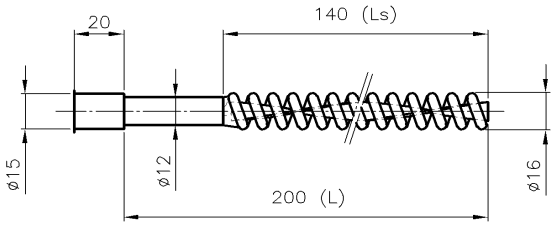
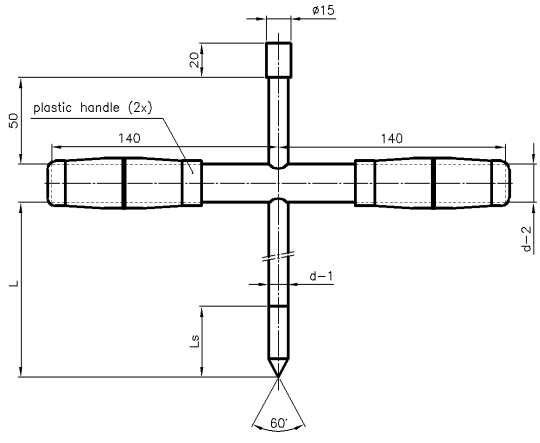
CONNECTIONS FOR RIGID STEM MODELS TYPE TXR

TYPE	MODEL	DIMENSIONS					EXTRA COSTS
	FOR OPTIONS ON CONNECTIONS: SEE PAGE 11	connection	HEX-1	HEX-2	T	d max	STAINLESS STEEL AISI304/1.4301
B *coupling nut (standard model)*		**1/4"BSP**	**22**	**-**	**7**	**Ø 8**	
		3/8"BSP	**27**	**-**	**9**	**Ø 11**	
		1/2"BSP	**27**	**-**	**9**	**Ø 15**	
		3/4"BSP	**32**	**-**	**9**	**Ø 20**	
		1"BSP	**41**	**-**	**13**	**Ø 20**	
		M18x1.5	**27**	**-**	**8**	**Ø 12**	
		M20x1.5	**27**	**-**	**9**	**Ø 14**	
		M24x1.5	**32**	**-**	**9**	**Ø 18**	
BL *coupling nut (long model)*		**1/2"BSP**	**27**	**-**	**14**	**Ø 15**	
		3/4"BSP	**32**	**-**	**16**	**Ø 20**	
		1"BSP	**41**	**-**	**18**	**Ø 20**	
C *fixed nipple (standard model)*		**1/4"BSP**	**17**	**-**	**12**	**Ø 8**	
		3/8"BSP	**22**	**-**	**12**	**Ø 11**	
		1/2"BSP	**22**	**-**	**14**	**Ø 15**	
		3/4"BSP	**30**	**-**	**16**	**Ø 20**	
		1"BSP	**36**	**-**	**18**	**Ø 20**	
		1/4"NPT	**17**	**-**	**14**	**Ø 8**	
		1/2"NPT	**22**	**-**	**20**	**Ø 15**	
		3/4"NPT	**30**	**-**	**20**	**Ø 20**	
		1"NPT	**36**	**-**	**25**	**Ø 20**	
		M18x1.5	**22**	**-**	**12**	**Ø 12**	
		M20x1.5	**22**	**-**	**14**	**Ø 14**	
		M24x1.5	**27**	**-**	**14**	**Ø 18**	
CL *fixed nipple (long model)*		**1/2"BSP**	**22**	**-**	**20**	**Ø 15**	
		3/4"BSP	**30**	**-**	**20**	**Ø 20**	
		1"BSP	**36**	**-**	**25**	**Ø 20**	

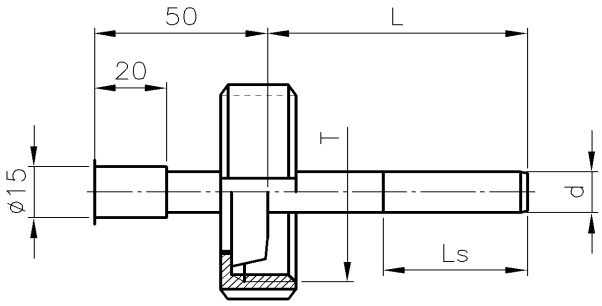
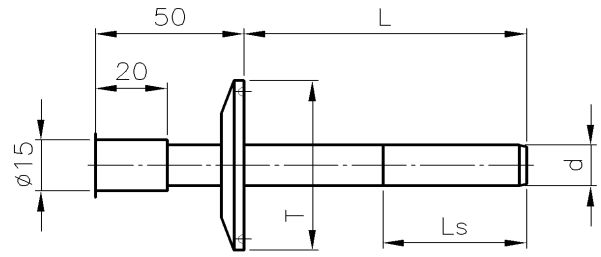
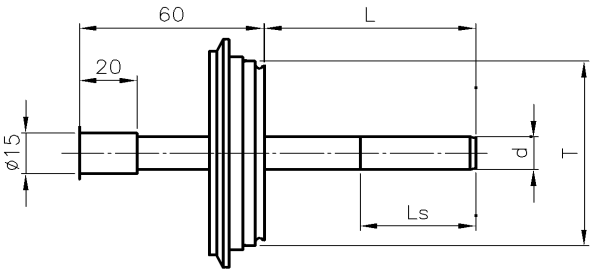
CONNECTIONS FOR RIGID STEM MODELS TYPE TXR

TYPE	MODEL FOR OPTIONS ON CONNECTIONS: SEE PAGE 11	DIMENSIONS					EXTRA COSTS STAINLESS STEEL AISI304/1.4301
		connection	HEX-1	HEX-2	T	d max	
A 04 *turning nipple (standard model)*		1/4"BSP	17	-	12	Ø 8	
		3/8"BSP	22	-	12	Ø 11	
		1/2"BSP	22	-	14	Ø 15	
		3/4"BSP	30	-	16	Ø 20	
		1"BSP	36	-	18	Ø 20	
		M18x1.5	22	-	12	Ø 12	
		M20x1.5	22	-	14	Ø 14	
		M24x1.5	27	-	14	Ø 18	
AL04 *turning nipple (long model)*		1/2"BSP	22	-	20	Ø 15	
		3/4"BSP	30	-	20	Ø 20	
		1"BSP	36	-	25	Ø 20	
B 01 *coupling nut + double nipple*	 THREAD BETWEEN HEX-1 and HEX-2: 1/2"BSP	1/4"BSP	27	22	12	Ø 8	
		3/8"BSP	27	22	12	Ø 11	
		1/2"BSP	27	22	14	Ø 15	
		3/4"BSP	27	27	16	Ø 20	
		1"BSP	27	36	18	Ø 20	
		1/4"NPT	27	22	14	Ø 8	
		1/2"NPT	27	22	20	Ø 15	
		3/4"NPT	27	27	20	Ø 20	
		1"NPT	27	36	25	Ø 20	
		M18x1.5	27	22	12	Ø 12	
		M20x1.5	27	22	14	Ø 14	
		M24x1.5	27	27	14	Ø 18	
CS 3 *adjustable connection, sliding on stem*	 THREAD BETWEEN HEX-1 and HEX-2: 1/2"BSP	1/4"BSP	22	27	12	Ø 8	
		3/8"BSP	22	27	12	Ø 11	
		1/2"BSP	22	27	14	Ø 15	
		3/4"BSP	22	32	16	Ø 20	
		1"BSP	22	36	18	Ø 20	
		1/4"NPT	22	27	14	Ø 8	
		1/2"NPT	22	27	20	Ø 15	
		3/4"NPT	22	27	20	Ø 20	
		1"NPT	22	36	25	Ø 20	
		M18x1.5	22	27	12	Ø 12	
		M20x1.5	22	27	14	Ø 14	
		M24x1.5	22	27	14	Ø 18	

CONNECTIONS FOR RIGID STEM MODELS TYPE TXR

TYPE	MODEL	DIMENSIONS L	DIMENSIONS d-1	DIMENSIONS d-2	EXTRA COSTS STAINLESS STEEL AISI321/1.4541
S *surface bulb: fixed type*	 for L longer than 100 see page 8	-	-	-	
SA *surface bulb: adjustable type*	 for L longer than 100 see page 8 THREAD BETWEEN HEX-1 AND HEX-2: 1/2"BSP	-	-	-	
HA *helical air bulb*	 for L longer than 200 see page 8	-	-	-	
HP *with handle and point*	 for L longer than 1000 see page 8	1000	10 12	22	
		1000	14 16	22	
		1000	18	22	

SANITARY CONNECTIONS FOR RIGID STEM MODELS TYPE TXR

TYPE	MODEL WITH POLISHED BULB	DIMENSIONS connection	T	EXTRA COSTS STAINLESS STEEL AISI316/1.4401
CM *acc. to DIN 11851*	 (also available in SMS, RJT, IDF etc.)	1" - DN25	rd 52x1/6	
		1 1/2" - DN40	rd 65x1/6	
		2" - DN50	rd 78x1/6	
		3" - DN80	rd 104x1/6	
TC *TRI CLAMP acc. to ISO 2852*		1"	Ø 50.5	
		1 1/2"	Ø 50.5	
		2"	Ø 64	
TV *Varivent® In-Line*		DN50	Ø 50	
		DN68	Ø 68	

OPTIONS FOR BULB AND STEM

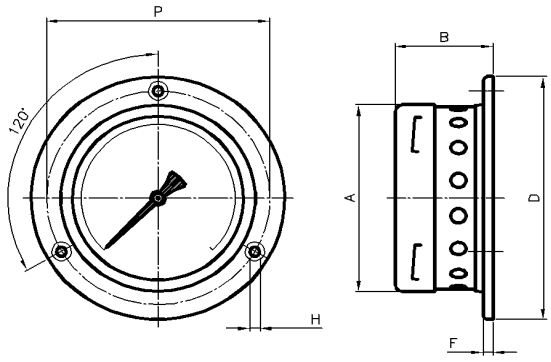
OPTION		EXTRA COSTS PER 100 MM
BULB AND STEM AISI316/1.4401	for diameter 6, 8, 9, 10, 12, 13, 14, 15, 16, 18	
BULB AND STEM POLISHED (MECHANICAL)	for all diameters	
BULB AND STEM PTFE® LINING (max.250°C)	MAXIMUM 1000 mm (longer: ON DEMAND)	first 100 mm: per 100 mm extra:
BULB AND STEM HALAR® COATED (max.120°C)		

ROOM THERMOMETERS TYPE RTX

TYPE	DRAWING	DIMENSIONS mm

R

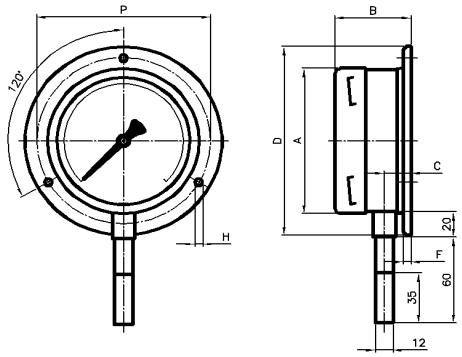
RTXxxxXR



DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	41	40	51	51	57
D	86	110	132	196	285
F	5	5	5	5	2
H	3.5	4	5.5	6	6
P	75	95	116	178	270

B

RTXxxxXB



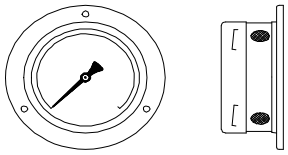
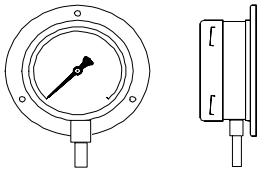
DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	41	40	51	51	57
C	13	13	13	13	13
D	86	110	132	196	285
F	5	5	5	5	2
H	3.5	4	5.5	6	6
P	75	95	116	178	270

ROOM THERMOMETERS

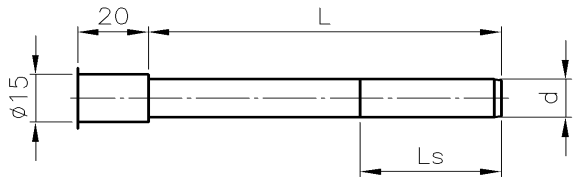
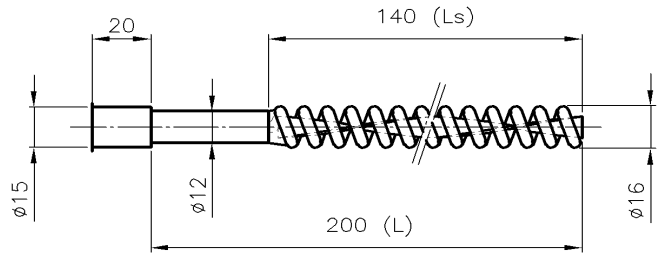
Type RTX, with stainless steel case according to EN 13190

STANDARD MODEL

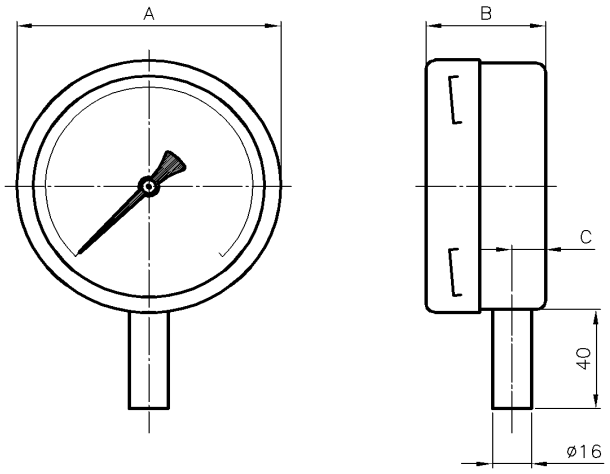
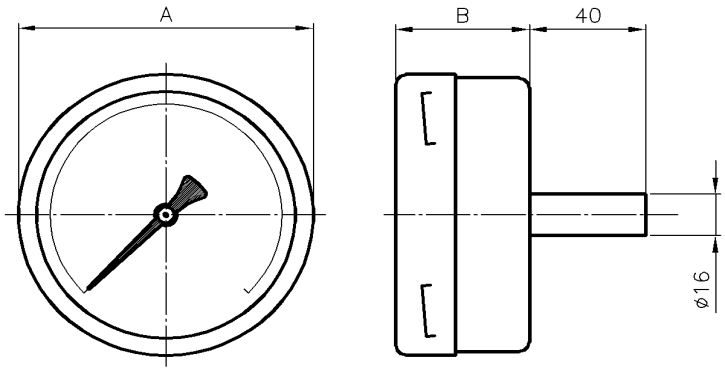
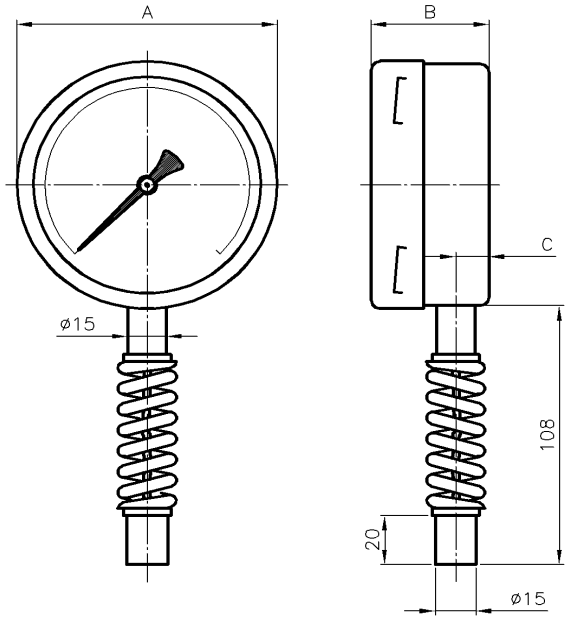
CASE	: bayonet lock, AISI304/1.4301, type R with vent holes (for indoor use), type B: IP65	**RANGES**	: for measuring ambient temperatures: minimum -50 upto +80°C, see page 28
STEM AND BULB	: AISI321/1.4541, for type R: bulb inside case and for type B: plain stem type A or helical air-bulb type HA (see below)	**OVERLOAD**	: up to 30% F.S. (but max. 80°C)
WINDOW	: mineral glass 4 mm	**ACCURACY**	: ±1% F.S. / class 1
DIAL	: aluminium, black figures on white	**MOVEMENT**	: brass
POINTER	: aluminium, black	**OPTIONS**	: see page 32, electrical device: page 33 - 41, 43

TYPE	MODEL	CASE DIAMETER (R in mm) 063	080	100	160	250
R 1142		N.A.	N.A.	RTX100XR	RTX160XR	RTX250XR
B 1142-SPECIAL		RTX063XB	RTX080XB	RTX100XB	RTX160XB	RTX250XB
OPTION		**EXTRA COSTS**				
LB not for type R	LIQUID FILLED CASE: GLYCERINE (in combination with electrical device: Ondina oil, see page 43)	RTX063LB	RTX080LB	RTX100LB	RTX160LB	RTX250LB

BULB TYPES FOR TYPE B

TYPE	MODEL	BULB AISI321/1.4541	EXTRA COSTS
A PLAIN STEM	 FOR STANDARD SENSITIVE PART "Ls": SEE PAGE 31	L=60 d=12 Ls=35	STANDARD
HA HELICAL AIR BULB		L=200	

DIESEL EXHAUST DIAL THERMOMETERS

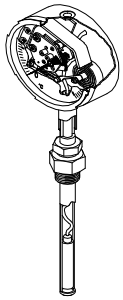
TYPE	DRAWING	DIMENSIONS mm
A *TXRxxxLA-DIESEL*		
E *TXRxxxLE-DIESEL*		
+AVS *TXRxxxLA-DIESEL+AVS*		

DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55
C	13	13	13	13	13

DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55

DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55
C	13	13	13	13	13

DIESEL EXHAUST DIAL THERMOMETERS

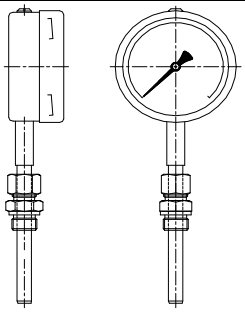


3-D view SECUTHERM® DIESEL

GENERAL INFORMATION

DIAL THERMOMETERS SPECIAL DESIGNED FOR:

- Diesel engines; for monitoring:
  exhaust gas, cooling water, oil, air-inlet temperatures
- Compressors,
- Turbochargers,
- other machines subjected to severe vibrations
- max. temperature 800℃

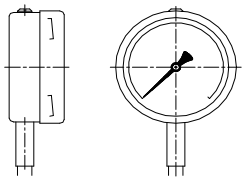
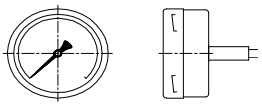


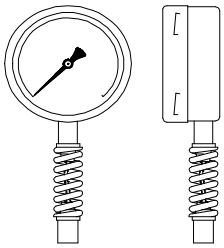
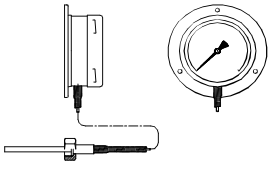
SECUTHERM® DIESEL THERMOMETER

Type TXR-DIESEL, with stainless steel case according to EN 13190

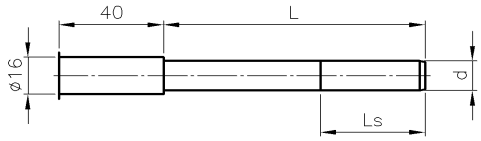
STANDARD MODEL:

CASE	*: bayonet lock, AISI304/1.4301, IP-67 silicone oil filled*	***RANGES***	*: 0+600, 0+650, +50/+650℃, see page 29*
STEM AND BULB	*: 150 x Ø12 mm, AISI321/1.4541, see page 16*	***ADJUSTMENT***	*: +/- 6% F.S. with adjustment screw*
WINDOW	*: mineral glass 4 mm*	***OVERLOAD***	*: up to 30% F.S. (but max. 800℃)*
DIAL	*: aluminium, black figures on white*	***ACCURACY***	*: ±1% F.S. / class 1*
POINTER	*: aluminium, black*	***MOVEMENT***	*: brass*
CONNECTION	*: AISI304/1.4301, see page 16 - 17*	***OPTIONS***	*: see page below + page 32*

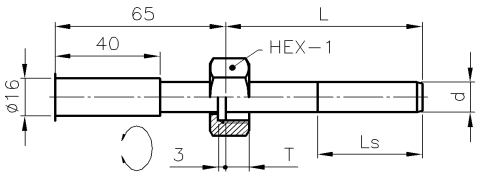
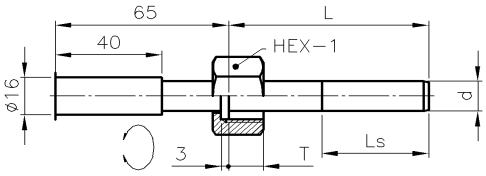
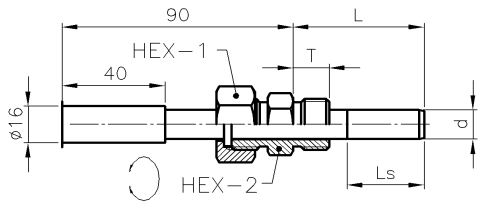
TYPE	MODEL	CASE DIAMETER (Ø in mm) 63	80	100
A *1130*		*TXR063LA-DIESEL*	*TXR080LA-DIESEL*	*TXR100LA-DIESEL*
E *1131*		*TXR063LE-DIESEL*	*TXR080LE-DIESEL*	*TXR100LE-DIESEL*

OPTION		CASE DIAMETER (Ø in mm) 63	80	100
+AVS ***ANTI-VIBRATION SPRING***	***EXAMPLE:*** 	*TXR063Lx-DIESEL+AVS*	*TXR080Lx-DIESEL+AVS*	*TXR100Lx-DIESEL+AVS*
CAPILLARY ***CAPILLARY TYPE DIESEL THERMOMETER***	***EXAMPLE:*** 	SEE PAGE 19	SEE PAGE 19	SEE PAGE 19

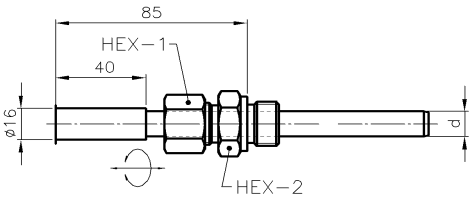
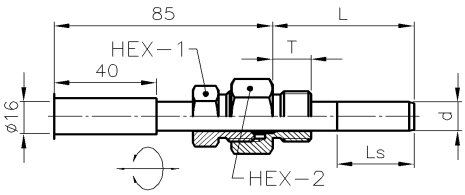
BULB LENGTH AND DIAMETER FOR TYPE TXR-DIESEL

TYPE	STANDARD MODEL	bulb and stem L=150 mm x Ø d AISI321/1.4541	EXTRA COSTS per 50 mm extra
A *plain stem*		10 and 12	
		13 and 14	
		16 and 18	

CONNECTIONS FOR TYPE TXR-DIESEL

TYPE	MODEL	DIMENSIONS connection	HEX-1	HEX-2	T	d max	EXTRA COSTS
B *coupling nut (standard model)*		1/2"BSP	27	-	9	Ø 15	
		3/4"BSP	32	-	9	Ø 20	
		1"BSP	41	-	13	Ø 20	
		M18x1.5	27	-	8	Ø 12	
		M20x1.5	27	-	9	Ø 14	
		M24x1.5	32	-	9	Ø 18	
BL *coupling nut (long model)*		1/2"BSP	27	-	14	Ø15	
		3/4"BSP	32	-	16	Ø 20	
		1"BSP	41	-	18	Ø 20	
B 01 *coupling nut + double nipple*	 THREAD BETWEEN HEX-1 AND HEX-2: 1/2"BSP	1/2"BSP	27	22	14	Ø15	
		3/4"BSP	27	27	16	Ø 20	
		1"BSP	27	36	18	Ø 20	
		1/2"NPT	27	22	20	Ø 15	
		3/4"NPT	27	27	20	Ø 20	
		1"NPT	27	36	25	Ø 20	
		M18x1.5	27	22	12	Ø 12	
		M20x1.5	27	22	14	Ø 14	
		M24x1.5	27	27	14	Ø 18	

CONNECTIONS FOR TYPE TXR-DIESEL

TYPE	MODEL	DIMENSIONS					EXTRA COSTS
		connection	HEX-1	HEX-2	T	d max	
CS 3 *adjustable connection, sliding on stem STEEL*	 THREAD BETWEEN HEX-1 and HEX-2: 1/2"BSP	1/2"BSP only for d=Ø10 and Ø12	22	27	14	Ø 10 and Ø 12	
		3/4"BSP only for d=Ø10, Ø12 and Ø16	22	32	16	Ø 10, Ø12 and Ø16	
CS 3 *adjustable connection, sliding on stem AISI304/1.4301*	 THREAD BETWEEN HEX-1 and HEX-2: 1/2"BSP	1/2"BSP	22	27	14	Ø 15	
		3/4"BSP	22	32	16	Ø 20	
		1"BSP	22	36	18	Ø 20	
		1/2"NPT	22	27	20	Ø 15	
		3/4"NPT	22	32	20	Ø 20	
		1"NPT	22	36	25	Ø 20	
		M18x1.5	22	27	12	Ø12	
		M20x1.5	22	27	14	Ø 14	
		M24x1.5	22	27	14	Ø 18	

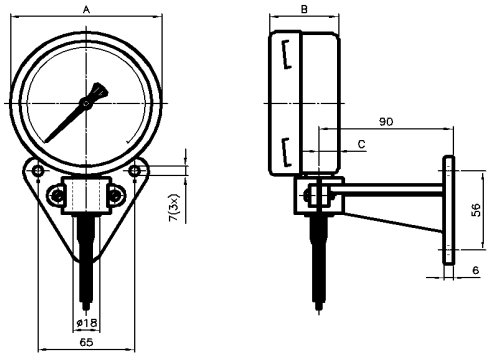
NOTE: FOR POCKETS AND THERMOWELLS; SEE PAGE 44 - 47

CAPILLARY DIAL THERMOMETERS TYPE TXC

TYPE	DRAWING	DIMENSIONS mm

A

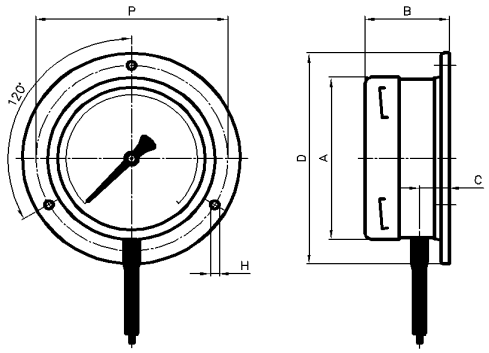
TXCxxxXA



DIM.	CASE DIAMETER				
	63	80	100	160	250
A	65	83	101	161	252
B	38	37	45	45	55
C	13	13	13	13	13

B

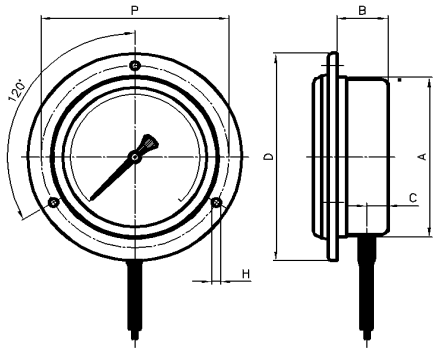
TXCxxxXB



DIM.	CASE DIAMETER				
	63	80	100	160	250
A	65	83	101	161	252
B	41	40	51	51	57
C	13	13	13	13	13
D	86	110	132	196	285
H	3.5	4	5.5	6	6
P	75	95	116	178	270

D

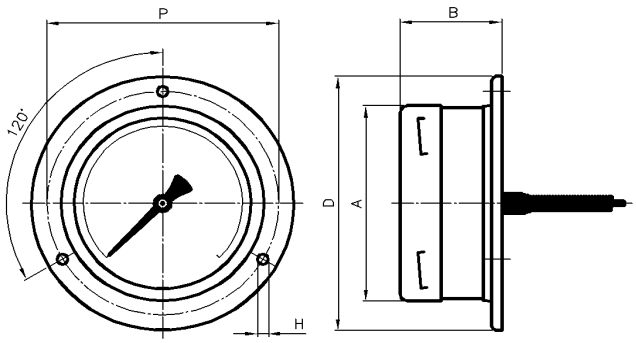
TXCxxxXD



DIM.	CASE DIAMETER				
	63	80	100	160	250
A	65	83	101	161	252
B	33	29	31	32	45
C	13	13	13	13	13
D	86	110	132	196	285
H	3.5	4	5.5	6	6
P	75	95	116	178	270

F

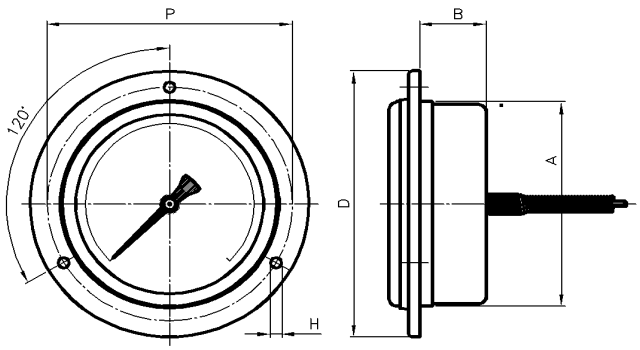
TXCxxxXF



DIM.	CASE DIAMETER				
	63	80	100	160	250
A	65	83	101	161	252
B	41	40	51	51	57
D	86	110	132	196	285
H	3.5	4	5.5	6	6
P	75	95	116	178	270

G

TXCxxxXG



DIM.	CASE DIAMETER				
	63	80	100	160	250
A	65	83	101	161	252
B	33	29	31	32	45
D	86	110	132	196	285
H	3.5	4	5.5	6	6
P	75	95	116	178	270

TYPE H AND I SEE PAGE 20

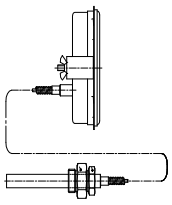
CAPILLARY DIAL THERMOMETERS

Type TXC, with stainless steel case according to EN 13190

STANDARD MODEL:

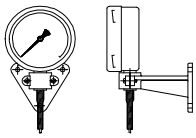
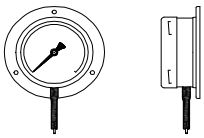
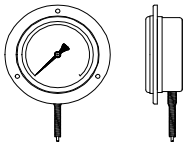
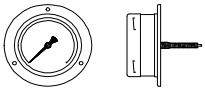
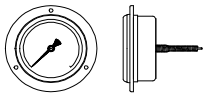
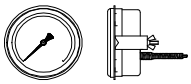
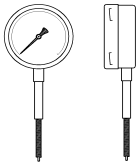
CASE	: bayonet lock, AISI304/1.4301, IP-65
CAPILLARY TUBE	: see page 24 (upto 100 meters)
STEM AND BULB	: AISI321/1.4541, see page 25, 27
CONNECTION	: AISI304/1.4301, see page 25 -27
WINDOW	: mineral glass 4 mm
DIAL	: aluminium, black figures on white
POINTER	: aluminium, black
RANGES	: from -200 upto +800°C, see page 28 - 30

EXAMPLE:



TXC160XH

ADJUSTMENT	: +/- 6 % F.S. with adj. screw at the side
OVERLOAD	: up to 30% F.S. (but max. 800°C)
ACCURACY	: ±1% F.S. / class 1
MOVEMENT	: brass
OPTIONS	: see page 32
CONTACTS	: see page 33 - 41,43
PT-100	: see page 42
TRANSMITTER	: see page 34,42

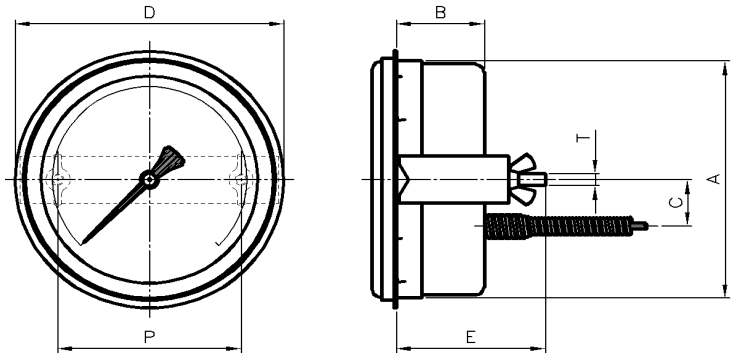
TYPE	MODEL	CASE DIAMETER (Ø in mm) 63	80	100	160	250
A 1140		TXC063XA	TXC080XA	TXC100XA	TXC160XA	TXC250XA
B 1142		TXC063XB	TXC080XB	TXC100XB	TXC160XB	TXC250XB
D 1141		TXC063XD	TXC080XD	TXC100XD	TXC160XD	TXC250XD
F 1148		TXC063XF	TXC080XF	TXC100XF	TXC160XF	TXC250XF
G 1145		TXC063XG	TXC080XG	TXC100XG	TXC160XG	TXC250XG
H 1146		TXC063XH	TXC080XH	TXC100XH	TXC160XH	TXC250XH
I -		TXC063XI	TXC080XI	TXC100XI	TXC160XI	TXC250XI
OPTION (see also page 32)				**EXTRA COSTS**		
Lx	**LIQUID FILLED CASE: GLYCERINE (in combination with electrical device: Ondina oil, see page 43)**	TXC063Lx	TXC080Lx	TXC100Lx	TXC160Lx	TXC250Lx

CAPILLARY DIAL THERMOMETERS TYPE TXC

TYPE	DRAWING	DIMENSIONS mm

H

TXCxxxXH



DIM.	CASE DIAMETER				
	63*	**80**	**100**	**160**	**250+**
A	65	83	101	161	252
B	30	35	35	35	45
C	20**	25	20	20	0
D	70	85	112	180	270
E	50	55	60	60	70
P	33	59	75	139	+
T	M5	M5	M5	M5	M5

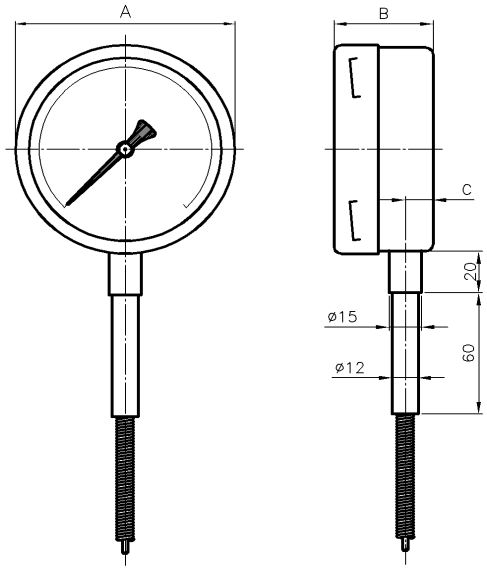
* U-clamp vertical mounted

** 20 mm to the left (front vieuw)

\+ with 3 clamps under 120 degr.

I

TXCxxxXI

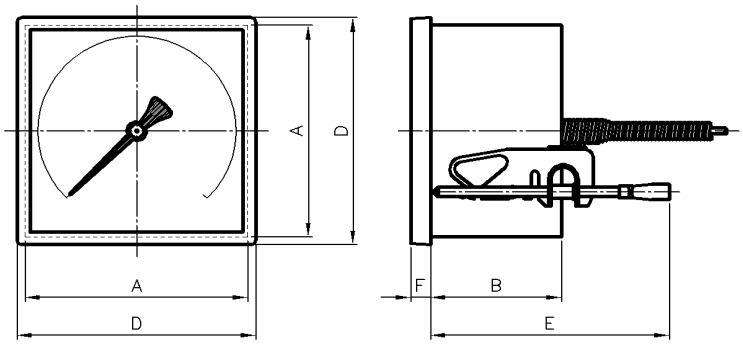


DIM.	CASE DIAMETER				
	63	**80**	**100**	**160**	**250**
A	65	83	101	161	252
B	38	37	45	45	55
C	13	13	13	13	13

CAPILLARY DIAL THERMOMETERS TYPE TPC

S

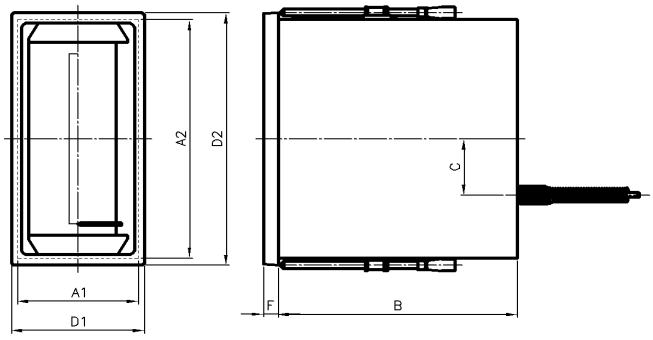
TPCxxxxxXS



DIM.	CASE DIAMETER			
	72 x 72	**96 x 96**	**144x 144**	**192x192**
A	66	90	136	183
B	53	53	53	89
D	72	96	144	195
E	95	95	95	95
F	8	8	8	8

V/H

TPCxxxxxXV
TPCxxxxxXH



DIM.	CASE DIAMETER	
	144x72	**192x96**
A1	66	91
A2	136	184
B	130	155
C	30	30
D1	72	96
D2	144	192
F	8	8

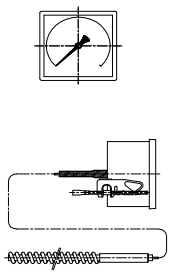
CAPILLARY DIAL THERMOMETERS

Type TPC, with glassfibre reinforced black Noryl case

STANDARD MODEL:

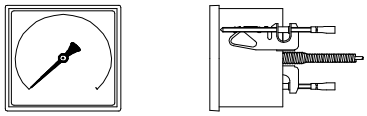
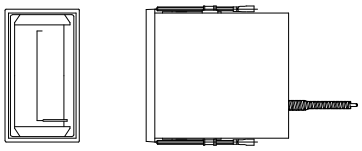
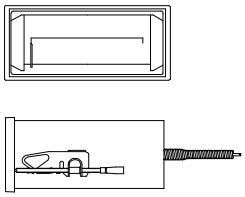
CASE	: glassfibre reinforced black Noryl, IP45
	square or rectangular shaped for panel mounting
CAPILLARY TUBE	: see page 24 (upto 100 meter)
STEM AND BULB	: AISI321/1.4541, see page 25 - 27
CONNECTION	: AISI304/1.4301, see page 25 - 27
WINDOW	: plexi-glass PMMA 3 mm
DIAL	: aluminium, black figures on white
POINTER	: aluminium, black

EXAMPLE:



TPC96x96XS

RANGES	: from -200 upto +800℃, see page 28 - 30
ADJUSTMENT	: +/- 6 % F.S. with adj. screw at the side
OVERLOAD	: up to 30% F.S. (but max. 800℃)
ACCURACY	: ±1% F.S. / class 1
MOVEMENT	: brass
OPTIONS	: see page 32
CONTACTS	: see page 33 - 41,43
PT-100	: see page 42
TRANSMITTER	: see page 42

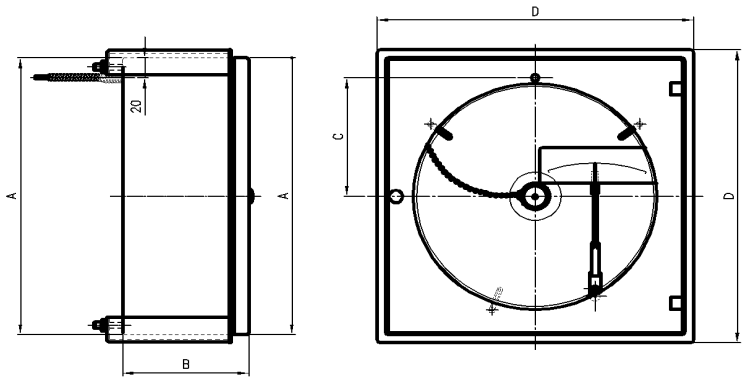
TYPE	SQUARE MODEL	CASE DIMENSIONS (in mm) 72x72	96x96	144x144	192x192
S 1201...1204		TPC72x72XS	TPC96x96XS	TPC144x144XS	TPC192x192XS
TYPE	**VERTICAL MODEL**	**72x144**		**96x192**	
V 1211...1212		TPC72x144XV		TPC96x192XV	
TYPE	**HORIZONTAL MODEL**	**144x72**		**192x96**	
H 1211...1212		TPC144x72XH		TPC192x96XH	

NOTE: LIQUID FILLING FOR TYPE TPC IS NOT POSSIBLE (USE E.G. TXC WITH SPECIAL SQUARE FRONTFLANGES : O.D.)

TEMPERATURE RECORDERS

H

RTCxxxXH

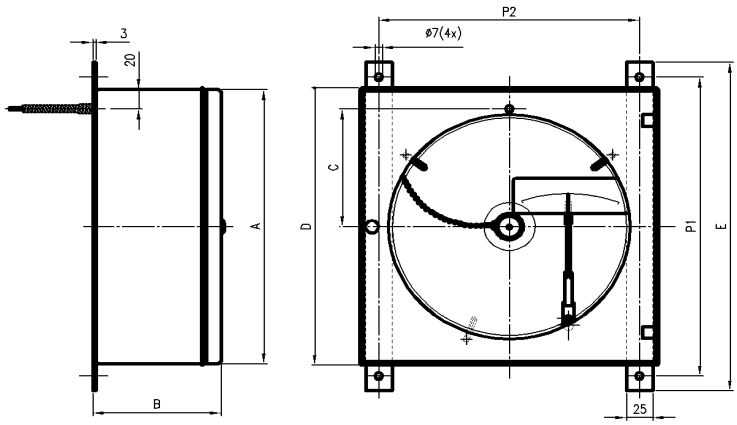


DIM.	CASE SIZE		
	192x192	**280x280**	**380x380**
A	185x185	280x280	380x380
B	119	119	125
C	80 down*	120	172 down*
D	197x197	293x293	418x418

* capillary lower back entry

B

RTCxxxXB

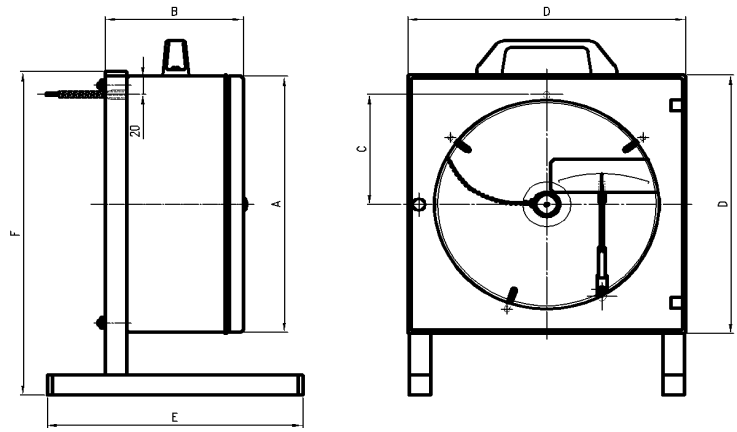


DIM.	CASE SIZE		
	192x192	**280x280**	**380x380**
A	185x185	280x280	380x380
B	122	122	125
C	80 down*	120	172 down*
D	189x189	283x283	418x418
E	252	335	470
P1	222	305	440
P2	152	247	440

* capillary lower back entry

T

RTCxxxXT



DIM.	CASE SIZE		
	192x192	**280x280**	**380x380**
A	185x185	280x280	380x380
B	141	141	125
C	80 down*	120	172 down*
D	189x189	283x283	418x418
E	188	260	280
F	260	354	465

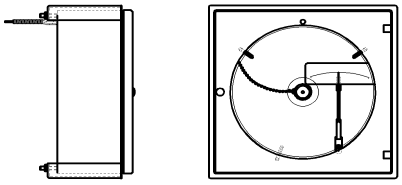
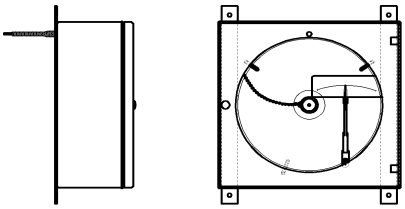
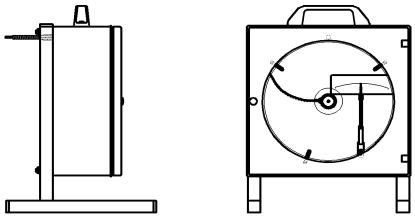
* capillary lower back entry

TEMPERATURE RECORDERS

Type RTC, with capillary

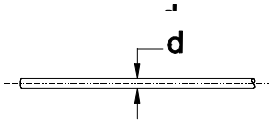
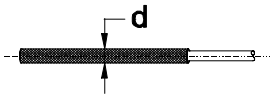
STANDARD MODEL:

CASE	: stainless steel AISI316/1.4401	***CHARTS***	: 50 pcs, Ø163mm for 192x192mm,
WINDOW	: plexiglass		Ø223 for 280x280mm
DIAL	: transparent with black figures		Ø300 for 380x380mm
PEN OPERATION	: single or double-pen (option), writing	***STEM & BULB***	: see page 25 - 27
	with long-life fiber pens on disc	***CAPILLARY***	: see page 24
CLOCKWORK	: mechanical spring wound, 1-, 4-, 12-, 24 hours	***CONNECTION***	: see page 25 -27
	or 7 day rotation, with start/stop button.	***MOVEMENT***	: brass
	Electric clockworks on demand.	***ACCURACY***	: ±1%F.S./class 1
	Switchable clockworks on demand.	***OPTIONS***	: double pen writing
RANGES	: see page 28 - 30		combination temperature / pressure

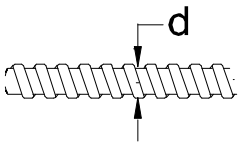
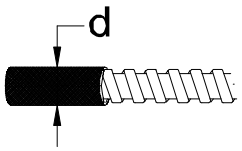
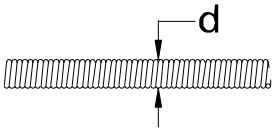
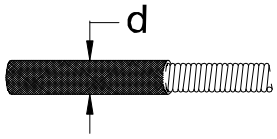
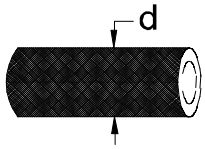
TYPE	**SQUARE MODELS**	**CASE DIMENSIONS (in mm)**		
		192x192 mm	**280x280 mm**	**380x380 mm**
H ***PANEL MOUNTING***		*RTC192x192XH*	*RTC280x280XH*	*RTC380x380XH*
B ***SURFACE MOUNTING***		*RTC192x192XB*	*RTC280x280XB*	*RTC380x380XB*
T ***TRANSPORTABLE***		*RTC192x192XT*	*RTC280x280XT*	*RTC380x380XT*

OPTIONS (see also page 29)		**CASE DIMENSIONS (in mm)**		
		192x192 mm	**280x280 mm**	**380x380 mm**
RTC-DUPLEX	*DOUBLE MEASURING SYSTEM (calculate also 2x capillary and bulb)*			
CHARTS	*Ø163, Ø223 or Ø300mm; price per chart (minimum order quantity 300 charts)*			
SPARE PENS	*PER 5 PCS, black, red or violet*			

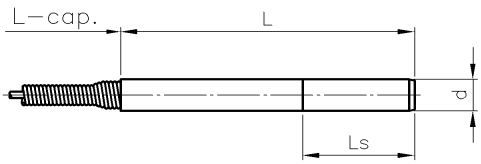
CAPILLARY

MATERIAL	MODEL	Ø d (mm)	Tmin ℃	Tmax ℃	CAPILLARY LENGTH Lc EXTRA COSTS	
STAINLESS STEEL AISI321 / 1.4541		2	-260	+800	per 1000 mm	
STAINLESS STEEL AISI321 / 1.4541 + PVC		4	-60	+120	per 1000 mm	

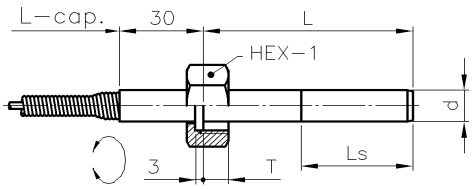
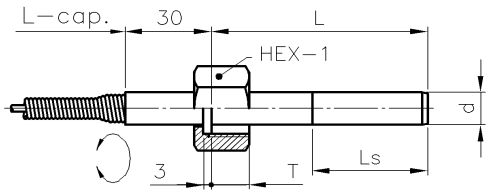
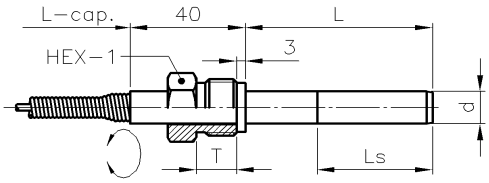
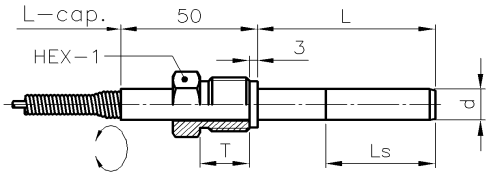
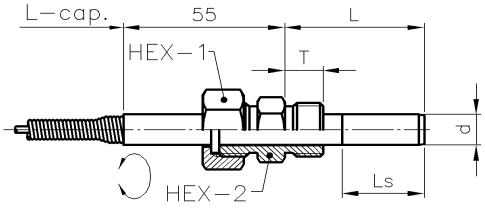
CAPILLARY COVERINGS for above mentioned capillary

MATERIAL	MODEL	Ø d (mm)	Tmin ℃	Tmax ℃	CAPILLARY LENGTH Lc FIRST 1000 MM	FURTHER PER 1000 MM
FLEXIBLE STAINLESS STEEL AISI304/1.4301		6	-260	+800		
FLEXIBLE STAINLESS STEEL AISI304/1.4301 +PVC		7,5	-60	+120		
FLEXIBLE STAINLESS STEEL AISI316/1.4401		6	-260	+800		
FLEXIBLE STAINLESS STEEL AISI316/1.4401 +PVC		7,5	-60	+120		
PLUMB (Pb)		16	-20	+200		

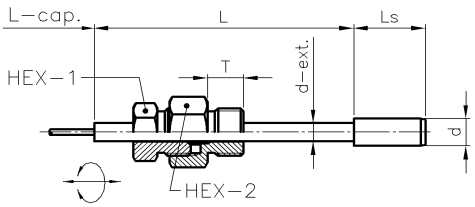
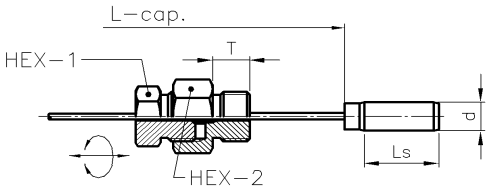
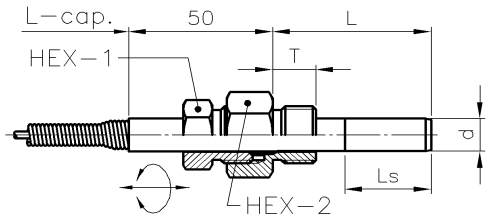
BULB LENGTH AND DIAMETER FOR TYPE TXC

TYPE	STANDARD MODEL	bulb diameter Ø d	EXTRA COSTS per 100 mm STAINLESS STEEL AISI321/1.4541
A *plain stem*		**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
	FOR SHORTEST SENSITIVE PART "Ls": SEE PAGE 31	FOR OPTIONS ON BULB LENGTH AND DIAMETER: SEE PAGE 27	

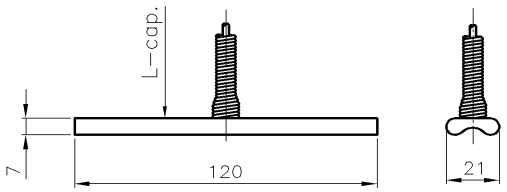
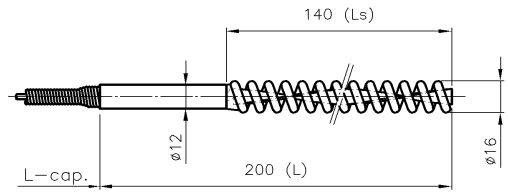
CONNECTIONS FOR CAPILLARY MODELS TYPE TXC

TYPE	MODEL	DIMENSIONS					EXTRA COSTS STAINLESS STEEL AISI304/1.4301
		connection	HEX-1	HEX-2	T	d max	
B *coupling nut (standard model)*		1/4"BSP	22	-	7	Ø 8	
		3/8"BSP	27	-	9	Ø 11	
		1/2"BSP	27	-	9	Ø 15	
		3/4"BSP	32	-	9	Ø 20	
		1"BSP	41	-	13	Ø 20	
		M18x1.5	27	-	8	Ø 12	
		M20x1.5	27	-	9	Ø 14	
		M24x1.5	32	-	9	Ø 18	
BL *coupling nut (long model)*		1/2"BSP	27	-	14	Ø 15	
		3/4"BSP	32	-	16	Ø 20	
		1"BSP	41	-	18	Ø 20	
A04 *turning nipple (standard model)*		1/4"BSP	17	-	12	Ø 8	
		3/8"BSP	22	-	12	Ø 11	
		1/2"BSP	22	-	14	Ø 15	
		3/4"BSP	30	-	16	Ø 20	
		1"BSP	36	-	18	Ø 20	
		M18x1.5	22	-	12	Ø 12	
		M20x1.5	22	-	14	Ø 14	
		M24x1.5	27	-	14	Ø 18	
AL04 *turning nipple (long model)*		1/2"BSP	22	-	20	Ø 15	
		3/4"BSP	30	-	20	Ø 20	
		1"BSP	36	-	25	Ø 20	
B 01 *coupling nut + double nipple*	 THREAD BETWEEN HEX-1 and HEX-2: 1/2"BSP	1/4"BSP	27	22	12	Ø 8	
		3/8"BSP	27	22	12	Ø11	
		1/2"BSP	27	22	14	Ø 15	
		3/4"BSP	27	27	16	Ø 20	
		1"BSP	27	36	18	Ø 20	
		1/4"NPT	27	22	14	Ø 8	
		1/2"NPT	27	22	20	Ø 15	
		3/4"NPT	27	27	20	Ø 20	
		1"NPT	27	36	25	Ø 20	
		M18x1.5	27	22	12	Ø 12	
		M20x1.5	27	22	14	Ø 14	
		M24x1.5	27	27	14	Ø 18	

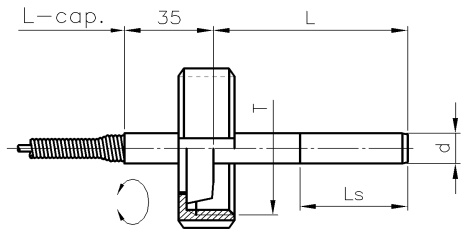
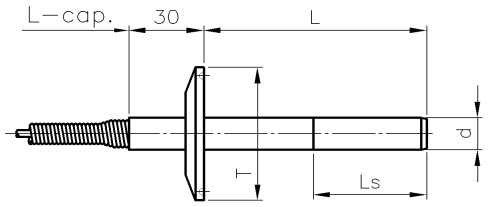
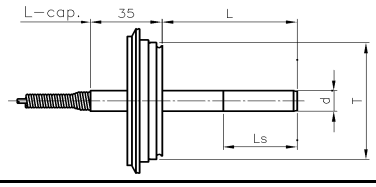
CONNECTIONS FOR CAPILLARY MODELS TYPE TXC

TYPE	MODEL	DIMENSIONS					EXTRA COSTS
		connection	HEX-1	HEX-2	T	d max	STAINLESS STEEL AISI304/1.4301
CS 1 *adjustable connection, sliding on extension tube*	 THREAD BETWEEN HEX-1 and HEX-2: 1/2"BSP	1/4"BSP	22	27	12	Ø 11	
		3/8"BSP	22	27	12	Ø 14	
		1/2"BSP	22	27	14	Ø 18	
		3/4"BSP	22	32	16	Ø 23	
		1"BSP	22	36	18	Ø 30	
		1/4"NPT	22	27	14	Ø 13	
		1/2"NPT	22	27	20	Ø 20	
		3/4"NPT	22	27	20	Ø 25	
		1"NPT	22	36	25	Ø 32	
		M18x1.5	22	27	12	Ø 16	
		M20x1.5	22	27	14	Ø 18	
		M24x1.5	22	27	14	Ø 22	
CS 2 *adjustable connection, sliding on capillary*	 THREAD BETWEEN HEX-1 and HEX-2: 1/2"BSP	1/4"BSP	22	27	12	Ø 11	
		3/8"BSP	22	27	12	Ø 14	
		1/2"BSP	22	27	14	Ø 18	
		3/4"BSP	22	32	16	Ø 23	
		1"BSP	22	36	18	Ø 30	
		1/4"NPT	22	27	14	Ø 13	
		1/2"NPT	22	27	20	Ø 20	
		3/4"NPT	22	27	20	Ø 25	
		1"NPT	22	36	25	Ø 32	
		M18x1.5	22	27	12	Ø 16	
		M20x1.5	22	27	14	Ø 18	
		M24x1.5	22	27	14	Ø 22	
CS 3 *adjustable connection, sliding on stem*	 THREAD BETWEEN HEX-1 and HEX-2: 1/2"BSP	1/4"BSP	22	27	12	Ø 8	
		3/8"BSP	22	27	12	Ø 11	
		1/2"BSP	22	27	14	Ø 15	
		3/4"BSP	22	32	16	Ø 20	
		1"BSP	22	36	18	Ø 20	
		1/4"NPT	22	27	14	Ø 8	
		1/2"NPT	22	27	20	Ø 15	
		3/4"NPT	22	27	20	Ø 20	
		1"NPT	22	36	25	Ø 20	
		M18x1.5	22	27	12	Ø 12	
		M20x1.5	22	27	14	Ø 14	
		M24x1.5	22	27	14	Ø 18	

CONNECTIONS FOR CAPILLARY MODELS TYPE TXC

TYPE	MODEL	DIMENSIONS L	DIMENSIONS D-1	DIMENSIONS D-2	EXTRA COSTS STAINLESS STEEL AISI321/1.4541
S *surface bulb*	 for L longer than 100 see page 25	-	-	-	
HA *helical air bulb*	 for L longer than 200 see page 25	-	-	-	

SANITARY CONNECTIONS FOR CAPILLARY MODELS TYPE TXC

TYPE	MODEL WITH POLISHED BUB	DIMENSIONS connection	DIMENSIONS T	EXTRA COSTS STAINLESS STEEL AISI316/1.4401
CM *acc. to DIN 11851*	 (also available in SMS, RJT, IDF etc.)	**1" - DN25**	rd 52 x 1/6	
		1 1/2" - DN40	rd 65 x 1/6	
		2" -DN50	rd 78 x 1/6	
		3" - DN80	rd 104 x 1/6	
TC *TRI CLAMP acc. to ISO 2852*		**1"**	**Ø 50.5**	
		1 1/2"	**Ø 50.5**	
		2"	**Ø 64**	
TV *Varivent® In-Line*		**DN50**	**Ø 50**	
		DN68	**Ø 68**	

OPTIONS FOR BULB AND STEM

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

TEMPERATURE RANGES for all types:

TEMPERATURE RANGES		SCALE DIVISION		EXTRA COSTS											
				CASE DIMENSIONS (in mm)											
(in ℃)		cl. 1	option cl. 0.6	Ø 63	Ø 80	Ø 100	Ø 160	Ø 260	72x72	96x96	144x144	192x192	288x288	72x144 144x72	192x96 96x192
-200	...+50	5	2												
-120	...+40	2	1												
-110	...+50	5	1												
-100	...+100	5	1												
-100	...+50	5	1												
-80	...+40	2	1												
-60	...+40	2	0.5												
-60	...+60	2	1												
-50	...+50	2	0.5												
-50	...+100	5	1												
-40	...+20	1	0.5												
-40	...+40	1	0.5							•					
-40	...+60	2	0.5												
-40	...+80	2	1												
-40	...+110	5	1												
-40	...+120	2	0.5												
-40	...+160	5	1												
-30	...+30	1	0.5							•					
-30	...+50	1	0.5												
-30	...+70	2	0.5												
-30	...+170	5	1												
-20	...+40	1	0.5												
-20	...+60	1	0.5												
-20	...+80	2	0.5												
-20	...+100	2	1												
-20	...+120	2	1												
-20	...+180	5	1												
-15	...+45	1	0.5												
-10	...+15	0.5	0.2							×					
-10	...+30	1	0.2							×					
-10	...+50	1	0.5												
-10	...+110	2	1												
-10	...+150	5	1												
0	...+25	0.5	0.2							×					
0	...+40	1	0.2							×					
0	...+60	1	0.5							•					
0	...+80	1	0.5												
0	...+100	2	0.5							•					
0	...+120	2	1							•					
0	...+160	5	1							•					
0	...+200	5	1												
0	...+250	5	2												
0	...+300	5	2												
0	...+400	10	2												
0	...+500	10	5												
0	...+600	10	5												
0	...+700	10	5												
0	...+800	10	5												

× **NOT AVAILABLE** • **STANDARD** **FOR OPTIONS ON TEMPERATURE RANGES: SEE PAGE 29**

OTHER RANGES ON DEMAND

TEMPERATURE RANGES for TXR-DIESEL:

TEMPERATURE RANGES		EXTRA COSTS		
	SCALE DIVISION	CASE DIMENSIONS (in mm)		
(in ℃)	cl. 1	Ø 63	Ø 80	Ø 100
0 ...+600	10		•	
0 ...+650	10		•	
0 ...+700	10			
0 ...+750	10			
0 ...+800	10			
+50 ...+600	10			
+50 ...+650	10		•	
+50 ...+700	10			
+100 ...+600	10			
+100 ...+650	10			
+100 ...+700	10			

OPTIONS ON TEMPERATURE RANGES (excl. temp. recorder)

OPTIONS	EXTRA COSTS										
	CASE DIMENSIONS (in mm)										
	Ø 63	Ø 80	Ø 100	Ø 160	Ø 250	72x72	96x96	144x144	192x192	72x144 144x72	192x96 96x192
RANGE IN ℉ or ℀											
Standard ranges											
Non-standard ranges											
DUAL SCALE IN ℃/℉											
Standard ranges											
Non-standard ranges											
OTHER OPTIONS											
Non-standard scale division											
ACCURACY											
±1% F.S. / class 1	•	•	•	•	•	•	•	•	•	•	•
±0.6 / 0.5% F.S. (class 0.6 or 0.5)	×	×				×	×				
Mirrorscale (for anti-parallax)	×	×	×			×	×	×	×	×	×

× **NOT AVAILABLE** • **STANDARD**

MARKING FOR TEMPERATURE GAUGES

OPTION	EXTRA PRICE
TAG number on dial	
TAG number on AISI304/1.4301 TAG plate 55x25 mm	
Lettering on dial	
Red mark on dial	

CERTIFICATES FOR TEMPERATURE GAUGES

TYPE OF CERTIFICATE	NET PRICES
Certificate of Conformity acc. to EN 10204 2.2.	
Calibration certificate (Traceable to international standards)	
Material certificate wetted parts acc. to EN 10204 3.1	
GOST certificate	

CONVERSION OF DEGREES CELCIUS IN FAHRENHEIT AND REVERSE

READ THE VALUE IN EITHER CELCIUS OR FAHRENHEIT IN THE COLUMN MARKED WITH -x-. READ THE CORRESPONDING VALUE IN CELCIUS OR FAHRENHEIT IN THE COLUMN MARKED WITH ℃ OR ℉. GENERAL: ℃ELCIUS =5/9x(℉AHRENHEIT - 32)

℃	-X-	℉	℃	-X-	℉	℃	-X-	℉	℃	-X-	℉	℃	-X-	℉
-73,3	**-100**	-148,0	-1,7	**29**	84,2	19,4	**67**	152,6	65,6	**150**	302,0	276,7	**530**	986,0
-62,2	**-80**	-112,0	-1,1	**30**	86,0	20,0	**68**	154,4	71,1	**160**	320,0	282,2	**540**	1004,0
-56,7	**-70**	-94,0	-0,6	**31**	87,8	20,6	**69**	156,2	76,7	**170**	338,0	287,8	**550**	1022,0
-51,1	**-60**	-76,0	0,0	**32**	89,6	21,1	**70**	158,0	82,2	**180**	356,0	293,3	**560**	1040,0
-45,6	**-50**	-58,0	0,6	**33**	91,4	21,7	**71**	159,8	87,8	**190**	374,0	298,9	**570**	1058,0
-40,0	**-40**	-40,0	1,1	**34**	93,2	22,2	**72**	161,6	93,3	**200**	392,0	304,4	**580**	1076,0
-34,4	**-30**	-22,0	1,7	**35**	95,0	22,8	**73**	163,4	98,9	**210**	410,0	310,0	**590**	1094,0
-28,9	**-20**	-4,0	2,2	**36**	96,8	23,3	**74**	165,2	104,4	**220**	428,0	315,6	**600**	1112,0
-23,3	**-10**	14,0	2,8	**37**	98,6	23,9	**75**	167,0	110,0	**230**	446,0	326,7	**620**	1148,0
-17,8	**0**	32,0	3,3	**38**	100,4	24,4	**76**	168,8	115,6	**240**	464,0	337,8	**640**	1184,0
-17,2	**1**	33,8	3,9	**39**	102,2	25,0	**77**	170,6	121,1	**250**	482,0	348,9	**660**	1220,0
-16,7	**2**	35,6	4,4	**40**	104,0	25,6	**78**	172,4	126,7	**260**	500,0	360,0	**680**	1256,0
-16,1	**3**	37,4	5,0	**41**	105,8	26,1	**79**	174,2	132,2	**270**	518,0	371,1	**700**	1292,0
-15,6	**4**	39,2	5,6	**42**	107,6	26,7	**80**	176,0	137,8	**280**	536,0	382,2	**720**	1328,0
-15,0	**5**	41,0	6,1	**43**	109,4	27,2	**81**	177,8	143,3	**290**	554,0	393,3	**740**	1364,0
-14,4	**6**	42,8	6,7	**44**	111,2	27,8	**82**	179,6	148,9	**300**	572,0	404,4	**760**	1400,0
-13,9	**7**	44,6	7,2	**45**	113,0	28,3	**83**	181,4	154,4	**310**	590,0	415,6	**780**	1436,0
-13,3	**8**	46,4	7,8	**46**	114,8	28,9	**84**	183,2	160,0	**320**	608,0	426,7	**800**	1472,0
-12,8	**9**	48,2	8,3	**47**	116,6	29,4	**85**	185,0	165,6	**330**	626,0	437,8	**820**	1508,0
-12,2	**10**	50,0	8,9	**48**	118,4	30,0	**86**	186,8	171,1	**340**	644,0	448,9	**840**	1544,0
-11,7	**11**	51,8	9,4	**49**	120,2	30,6	**87**	188,6	176,7	**350**	662,0	460,0	**860**	1580,0
-11,1	**12**	53,6	10,0	**50**	122,0	31,1	**88**	190,4	182,2	**360**	680,0	471,1	**880**	1616,0
-10,6	**13**	55,4	10,6	**51**	123,8	31,7	**89**	192,2	187,8	**370**	698,0	482,2	**900**	1652,0
-10,0	**14**	57,2	11,1	**52**	125,6	32,2	**90**	194,0	193,3	**380**	716,0	493,3	**920**	1688,0
-9,4	**15**	59,0	11,7	**53**	127,4	32,8	**91**	195,8	198,9	**390**	734,0	504,4	**940**	1724,0
-8,9	**16**	60,8	12,2	**54**	129,2	33,3	**92**	197,6	204,4	**400**	752,0	515,6	**960**	1760,0
-8,3	**17**	62,6	12,8	**55**	131,0	33,9	**93**	199,4	210,0	**410**	770,0	526,7	**980**	1796,0
-7,8	**18**	64,4	13,3	**56**	132,8	34,4	**94**	201,2	215,6	**420**	788,0	537,8	**1000**	1832,0
-7,2	**19**	66,2	13,9	**57**	134,6	35,0	**95**	203,0	221,1	**430**	806,0	593,3	**1100**	2012,0
-6,7	**20**	68,0	14,4	**58**	136,4	35,6	**96**	204,8	226,7	**440**	824,0	648,9	**1200**	2192,0
-6,1	**21**	69,8	15,0	**59**	138,2	36,1	**97**	206,6	232,2	**450**	842,0	704,4	**1300**	2372,0
-5,6	**22**	71,6	15,6	**60**	140,0	36,7	**98**	208,4	237,8	**460**	860,0	760,0	**1400**	2552,0
-5,0	**23**	73,4	16,1	**61**	141,8	37,2	**99**	210,2	243,3	**470**	878,0	815,6	**1500**	2732,0
-4,4	**24**	75,2	16,7	**62**	143,6	37,8	**100**	212,0	248,9	**480**	896,0	871,1	**1600**	2912,0
-3,9	**25**	77,0	17,2	**63**	145,4	43,3	**110**	230,0	254,4	**490**	914,0	926,7	**1700**	3092,0
-3,3	**26**	78,8	17,8	**64**	147,2	48,9	**120**	248,0	260,0	**500**	932,0	982,2	**1800**	3272,0
-2,8	**27**	80,6	18,3	**65**	149,0	54,4	**130**	266,0	265,6	**510**	950,0	1037,8	**1900**	3452,0
-2,2	**28**	82,4	18,9	**66**	150,8	60,0	**140**	284,0	271,1	**520**	968,0	1093,3	**2000**	3632,0

SHORTEST SENSITIVE LENGTH FOR ALL TYPES THERMOMETERS

SHORTEST SENSITIVE LENGTH OF THERMOMETERS WITHOUT CONTACT

DIAMETER AND LENGTH OF SENSITIVE PART mm (Ls)															CAPILLARY LENGTH mm						
6	6,35	7	8	9	10	11	12	12.5/13	14	15	16	18	20		0	<1000	<2000	<5000	<10000	<20000	< 30000
70	50	50	35	30	25	20	18	17	15	14	13	13	12		80	80	80	100	120	n.a.	n.a.
120	96	80	60	45	35	30	25	25	20	20	17	16	15		60	60	60	80	80	100	120
190	155	125	90	60	55	45	35	35	30	25	25	20	20		60	60	60	80	80	80	100
--	--	190	135	100	80	65	55	50	40	35	30	30	26		60	60	60	60	80	80	100
--	--	--	170	130	100	80	65	60	50	45	40	35	31		60	60	60	60	60	80	100
--	--	--	--	190	150	120	95	90	70	60	55	50	43		60	60	60	60	60	60	60

Others on demand

SHORTEST SENSITIVE LENGTH OF THERMOMETERS WITH CONTACT

DIAMETER AND LENGTH OF SENSITIVE PART mm (Ls)															CAPILLARY LENGTH mm						
6	6.35	7	8	9	10	11	12	12.5/13	14	15	16	18	20		0	<1000	<2000	<5000	<10000	<20000	< 30000
70	50	50	35	30	25	20	18	17	15	14	13	13	12		120	160	160	160	160	160	160
120	96	80	60	45	35	30	25	25	20	20	17	16	15		60	80	80	80	80	80	100
190	155	125	90	60	55	45	35	35	30	25	25	20	20		60	80	80	80	80	80	100
--	--	190	135	100	80	65	55	50	40	35	30	30	26		60	60	60	60	80	80	80
--	--	--	170	130	100	80	65	60	50	45	40	35	31		60	60	60	60	60	80	80
--	--	--	--	190	150	120	95	90	70	60	55	50	43		60	60	60	60	60	60	80

Others on demand

EXAMPLE: **Bulb diameter** **10 mm**

Capillary length **5000 mm**

Range **-20/+40C (= 60C span)**

Look at the table: "SHORTEST SENSITIVE LENGTH OF THERMOMETERS WITHOUT CONTACT"

Start at <5000 mm capillary (right side of the table).

Go down till 60C span

Go left.

Go more left to the diameter and length side.

Stop at the 10 (mm diameter) column.

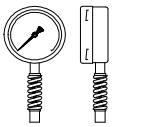
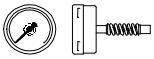
The minimum sensitive length is 80 mm.

If this is too long choose a larger diameter, larger range or a shorter capillary length. The minimum active length will be shorter then.

SHORTEST SENSITIVE LENGTH OF THERMOMETERS WITHOUT CONTACT

DIAMETER AND LENGTH OF SENSITIVE PART mm (Ls)															CAPILLARY LENGTH mm						
6	6.35	7	8	9	10	11	12	12.5/13	14	15	16	18	20		GEEN	<1000	<2000	<5000	<10000	<20000	< 30000
					80													60			

OPTIONS FOR THERMOMETERS

OPTION		CASE DIAMETER (Ø in mm)				
		63	80	100	160	250
SILICONE OIL FILLING	*AGAINST HEAVY VIBRATIONS*					
CASE MATERIAL AISI316/1.4401 (i.o. AISI304/1.4301)	*CASE + BAYONETRING* *FRONT -OR BACKFLANGE*	 N.A.	N.A. N.A.			N.A. N.A.
ANTI-VIBRATIONSPRING for model: TXR, Type A and E SEE ALSO TXR-DIESEL **+AVS**	A  E 	 +AVS	 +AVS	 +AVS	 +AVS	 +AVS
PLEXIGLASS	*PMMA*					
"SECURIT" GLASS	*SAFETY GLASS*					
DRAG POINTER	*RESETABLE WITH KEY*					
DRAG POINTER IN COMBINATION WITH CONTACT	*RESETABLE WITH KEY* *ONLY FOR "HZ" CONTACTS*	N.A.	N.A.			N.A.
OVERLOAD RESISTANCE EXECUTION	*OVERLOAD POSSIBLE UPTO 100% DEPENDING ON RANGE* *MAXIMUM +800℃*					
STAINLESS STEEL MOVEMENT	*AISI304/1.4301*					
MICROMETER POINTER	*ADJUSTABLE POINTER*					

BUILT-IN MICROSWITCH TYPE Q

TYPE Q Hz (low hysteresis)

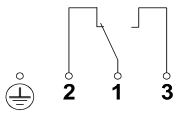
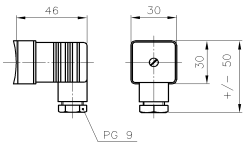
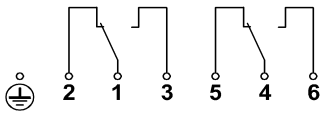
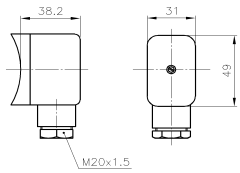
STANDARD MODEL	
INSTRUMENT	: class 1
MINIMAL RANGE	: 60 ℃
CONNECTOR	: cable junction box, SEE BELOW
HYSTERESIS	: max. 1% up and down
SETPOINT(S)	: from outside
WINDOW	: PMMA - plexiglass
POINTER	: micro adjustable
CONTACT POINTER(S)	: first red, (second yellow)

example: TXC100XB + Q - 33 Hz

Class 1 and 5 Amp!!

ELECTRICAL SWITCH CAPACITY

125 Vac	: 5A (ind. load 3A)
250 Vac	: 3A (ind. load 2A)
DC 30 V	: 5A (ind. load 3A)
DC 125 V	: 0.4A (ind. load 0,4A)
DC 250 V	: 0.2A (ind. load 0,2A)

CONTACT TYPE	SWITCH FUNCTION	CABLE JUNCTION BOX	CASE DIMENSIONS			
			100	160	96x96	144x144
Q - 3 Hz SPDT		 Hirschmann				
Q - 33 Hz DPDT		 Wiebrock				

OPTION		EXTRA COSTS			
SETPOINT	FIXED SETPOINT (without setpoint adjustment)	0	0	0	0

LIQUID FILLING NOT POSSIBLE WITH MICROSWITCH

BUILT-IN LOW-ACTION CONTACT TYPE M

TYPE M Hz

INSTRUMENT	: class 1
MINIMAL RANGE	: 60 ℃
CONNECTOR	: cable junction box, SEE BELOW
HYSTERESIS	: max. 1% up and down
SETPOINT(S)	: from outside with key
WINDOW	: PMMA - plexiglass
POINTER	: black (adjustable)
CONTACT POINTER(S)	: red

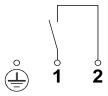
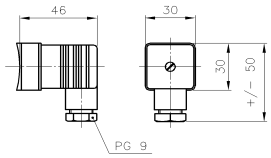
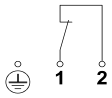
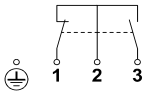
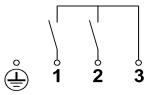
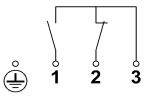
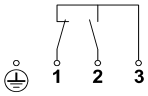
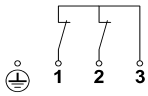
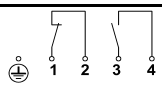
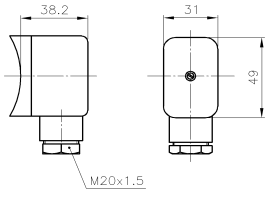
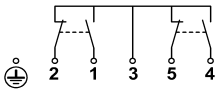
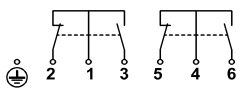
example:

TXR100XA

+ M-12 Hz

ELECTRICAL SWITCH CAPACITY

AC	**: 50 VA (max. 250V)**
DC	**: 30 W (max. 250V)**

CONTACT TYPE	**SWITCH FUNCTION**	**CABLE JUNCTION BOX**	**CASE DIMENSIONS**				
			100	**160**	**96x96**	**144x144**	**72x144**
M-1 Hz		 Hirschmann					
M-2 Hz							
M-3 Hz							
M-11 Hz							
M-12 Hz							
M-21 Hz							
M-22 Hz							
M-xx Hz +GS	 example: S-21 Hz GS	 Wiebrock					N.A.
M-33 Hz							N.A.
M-33 Hz+GS							N.A.
M-xxx Hz	functions to be specified at order						N.A.
M-xxxx Hz	functions to be specified at order		O.D.	O.D.	O.D.	O.D.	N.A.
OPTION			**EXTRA COSTS**				
Lx	**LIQUID FILLED CASE (ONDINA)**				N.A.	N.A.	N.A.

BUILT-IN INDUCTIVE CONTACT TYPE I

TYPE I Hz

INSTRUMENT	: class 1
MINIMAL RANGE	: 60 °C
CONNECTOR	: cable junction box, SEE BELOW
HYSTERESIS	: max. 1% up and down
SETPOINT(S)	: from outside with key
WINDOW	: PMMA - plexiglass
POINTER	: black (adjustable)
CONTACT POINTER(S)	: red

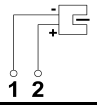
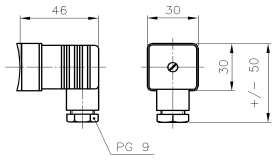
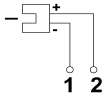
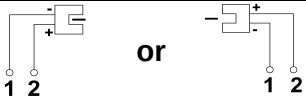
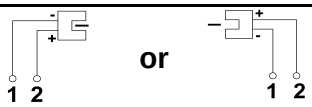
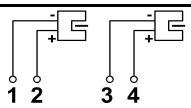
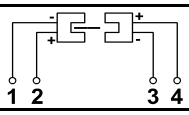
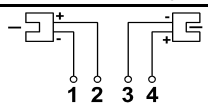
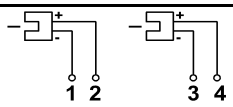
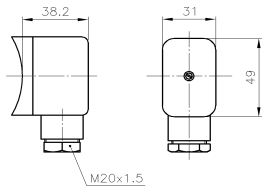
example:

TXR100XA

+ I-12 Hz

ELECTRICAL SWITCH CAPACITY

Nominal voltage	**: 8V (Ri=1 Kohm)**
Explosion proof	**: EEx ib II C T6**
Regulations	**: EN 60947-5-2**

CONTACT TYPE	SWITCH FUNCTION OPERATING CURRENT	CABLE JUNCTION BOX	CASE DIMENSIONS 100	160	96x96	144x144	72x144
I-1 Hz *Si 2-K08-Y1 (Turck)*							
I-2 Hz *Si 2-K08-Y1 (Turck)*							
I-x Hz+2SN *SJ 2 SN (Pepperl+Fuchs)*				N.A.		N.A.	
I-x Hz+3.5SN *SJ 3.5 SN (Pepperl+Fuchs)*			N.A.		N.A.		N.A.
I-11 Hz *Si 2-K08-Y1 (Turck)*							
I-12 Hz *Si 2-K08-Y1 (Turck)*		Hirschmann		SJ3.5N		SJ3.5N	
I-21 Hz *Si 2-K08-Y1 (Turck)*				SJ3.5N		SJ3.5N	
I-22 Hz *Si 2-K08-Y1 (Turck)*							
I-xx Hz+2SN *SJ 2 SN (Pepperl+Fuchs)*	function to be specified at order			N.A.		N.A.	
I-xx Hz+3.5SN *SJ 3.5 SN (Pepperl+Fuchs)*	function to be specified at order		N.A.		N.A.		N.A.
I-xxx Hz *Si 2-K08-Y1 (Turck)*	function to be specified at order		O.D.	O.D.	O.D.	O.D.	N.A.
I-xxxx Hz *Si 2-K08-Y1 (Turck)*	function to be specified at order	Wiebrock	O.D.	O.D.	O.D.	O.D.	N.A.
OPTION			**EXTRA COSTS**				
Lx	**LIQUID FILLED CASE (ONDINA)**				N.A.	N.A.	N.A.

BUILT-IN ELECTRONIC CONTACT TYPE E

TYPE E Hz

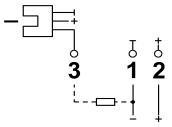
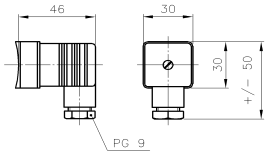
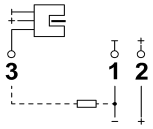
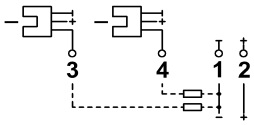
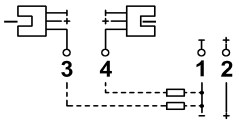
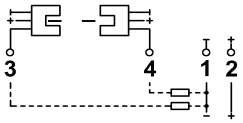
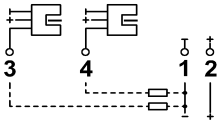
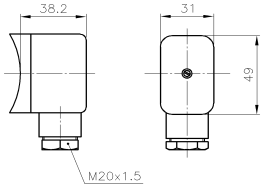
INSTRUMENT	: class 1
MINIMAL RANGE	: 60 ℃
CONNECTOR	: cable junction box, SEE BELOW
HYSTERESIS	: max. 1% up and down
SETPOINT(S)	: from outside with key
WINDOW	: PMMA - plexiglass
POINTER	: black (adjustable)
CONTACT POINTER(S)	: red

example:

TXR100XA
+ E-12 Hz

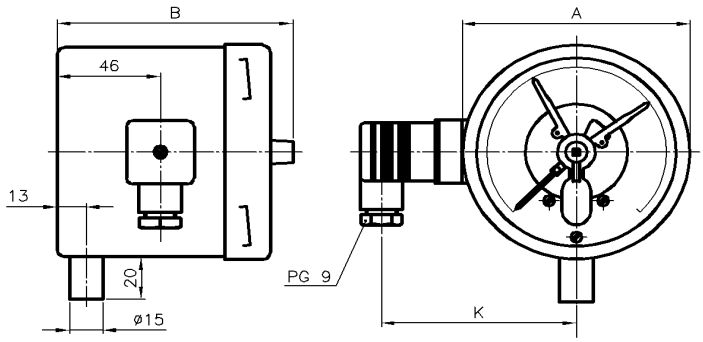
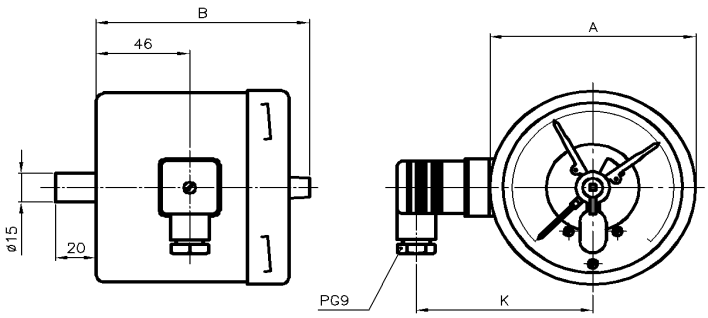
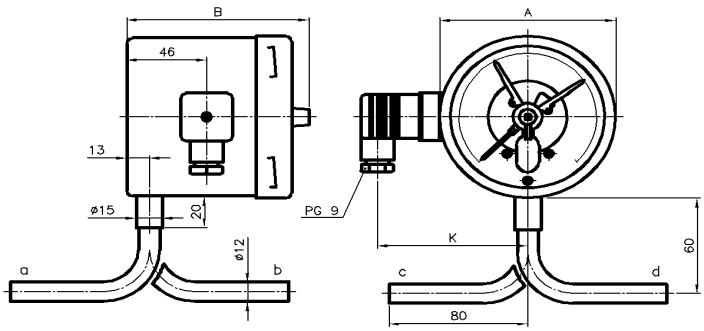
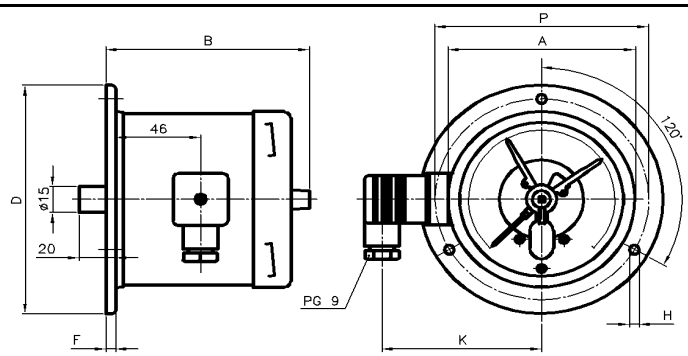
ELECTRICAL SWITCH CAPACITY

Nominal voltage	: 10...30 V dc
Proximity sensor	: Si-K08-AP7 (Turck)
Output	: 3-wire, PNP
Regulations	: EN 60947-5-2

CONTACT TYPE	**SWITCH FUNCTION**	**CABLE JUNCTION BOX**	**CASE DIMENSIONS**				
			100	**160**	**96x96**	**144x144**	**72x144**
E-1 Hz		 Hirschmann					
E-2 Hz							
E-11 Hz							
E-12 Hz							
E-21 Hz							
E-22 Hz							
E-xxx Hz	function to be specified with order	 Wiebrock	O.D.	O.D.	O.D.	O.D.	N.A.
E-xxxx Hz	function to be specified with order		O.D.	O.D.	O.D.	O.D.	N.A.

OPTION		**EXTRA COSTS**				
Lx	**LIQUID FILLED CASE (ONDINA)**			N.A.	N.A.	N.A.

THERMOMETERS TYPE TXR WITH CONTACT

TYPE	DRAWING	DIMENSIONS mm
A ***TXRxxxXA*** **Hirschman cable junction box**		
E ***TXRxxxXE*** **Hirschman cable junction box**		
T ***TXRxxxXT*** **Hirschman cable junction box**		
F ***TXRxxxXF*** **Hirschman cable junction box**		

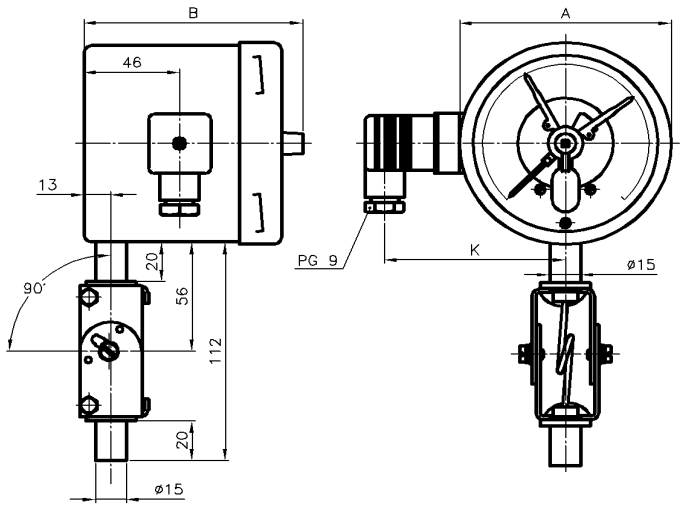
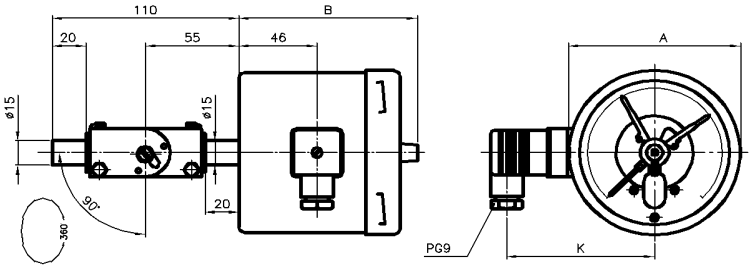
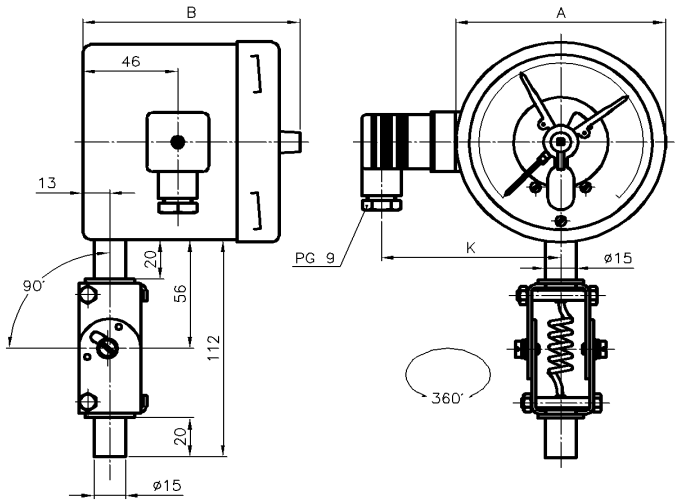
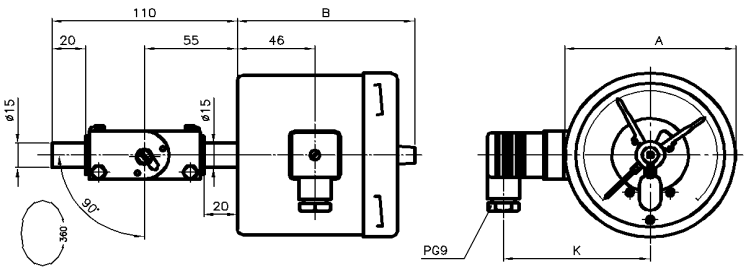
DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	104	108
K	92	122

DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	104	108
K	92	122

DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	104	108
K	92	122

DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	110	114
D	132	196
F	5	5
H	5.5	6
P	116	178
K	92	122

THERMOMETERS TYPE TXR WITH CONTACT

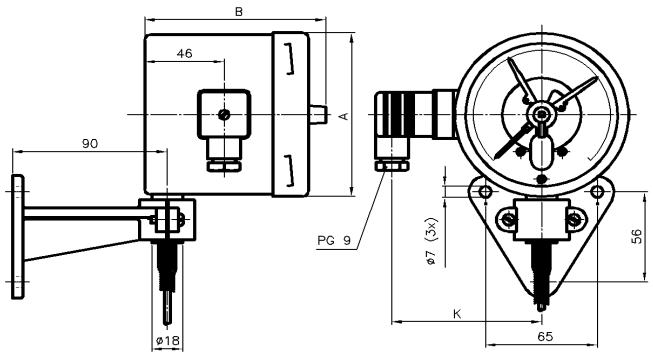
TYPE	DRAWING	DIMENSIONS mm
A ***TXRxxxXA +*** ***knee joint 180°*** **Hirschman cable junction box**		DIM. / CASE DIAMETER **100** / **160** **A** 101 / 161 **B** 104 / 108 **K** 92 / 122
E ***TXRxxxXE +*** ***knee joint 180°*** **Hirschman cable junction box**		DIM. / CASE DIAMETER **100** / **160** **A** 101 / 161 **B** 104 / 108 **K** 92 / 122
A ***TXRxxxXE +*** ***knee joint 360°*** **Hirschman cable junction box**		DIM. / CASE DIAMETER **100** / **160** **A** 101 / 161 **B** 104 / 108 **K** 92 / 122
E ***TXRxxxXE +*** ***knee joint 360°*** **Hirschman cable junction box**		DIM. / CASE DIAMETER **100** / **160** **A** 101 / 161 **B** 104 / 108 **K** 92 / 122

THERMOMETERS TYPE TXC WITH CONTACT

A

TXCxxxXA

Hirschman cable junction box

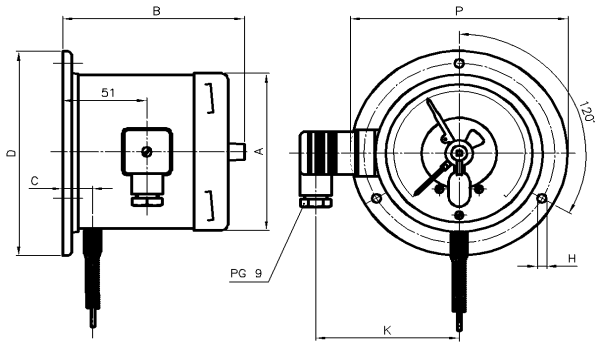


DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	104	108
K	92	122

B

TXCxxxXB

Hirschman cable junction box

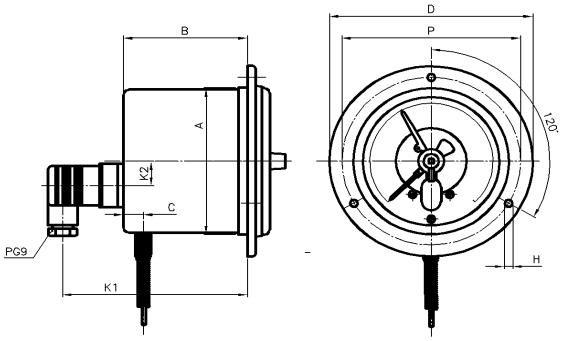


DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	110	114
C	19	19
D	132	196
H	5.5	6
P	116	178
K	92	122

D

TXCxxxXD

Hirschman cable junction box



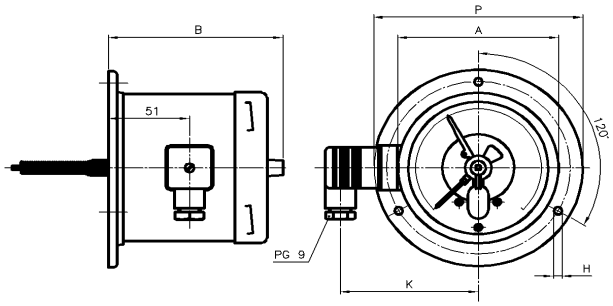
DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	80	83
C	13	13
D	132	196
H	5.5	6
P	116	178
K1	92	122
K2	15	0*

* 54 mm to the left (front view)

F

TXCxxxXF

Hirschman cable junction box

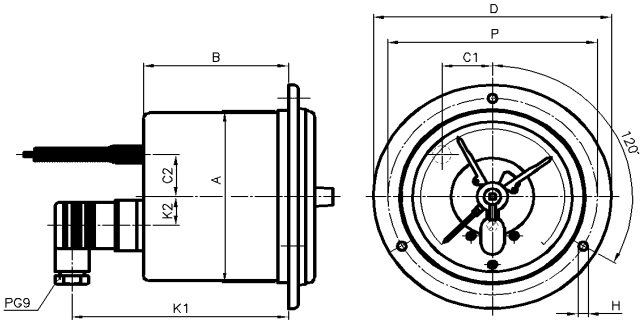


DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	110	114
D	132	196
H	5.5	6
P	116	178
K	92	122

G

TXCxxxXG

Hirschman cable junction box



DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	80	83
C1	26	0
C2	10	0
D	132	196
H	5.5	6
P	116	178
K1	123	126
K2	15	0*

* 54 mm to the left (front vieuw)

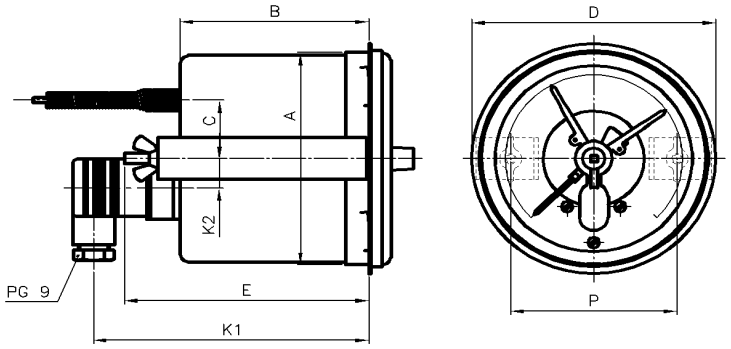
THERMOMETERS TYPE TXC WITH CONTACT

TYPE	DRAWING	DIMENSIONS mm

H

TXCxxxXH

Hirschman cable junction box



DIM.	CASE DIAMETER	
	100	**160***
A	101	161
B	84	88
C	25	0
D	112	180
E	109	113
P	75	139
K1	128	131
K2	15	54**

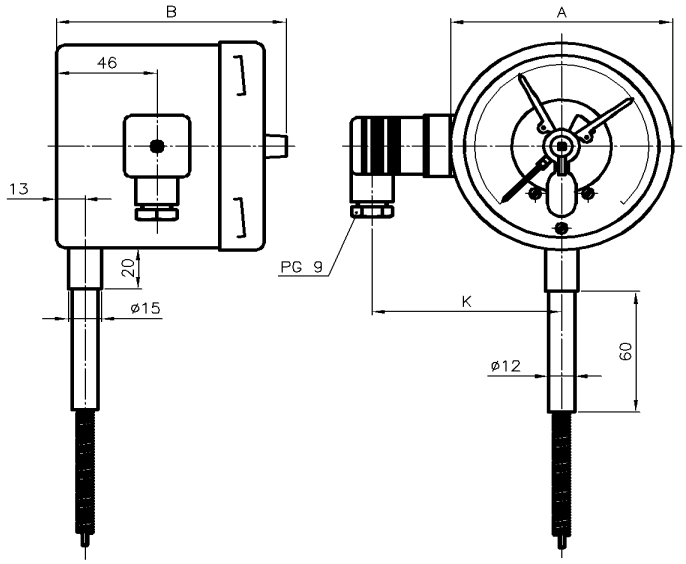
* U-clamp mounted vertical

** 54 mm to the left (front vieuw)

I

TXCxxxXI

Hirschman cable junction box



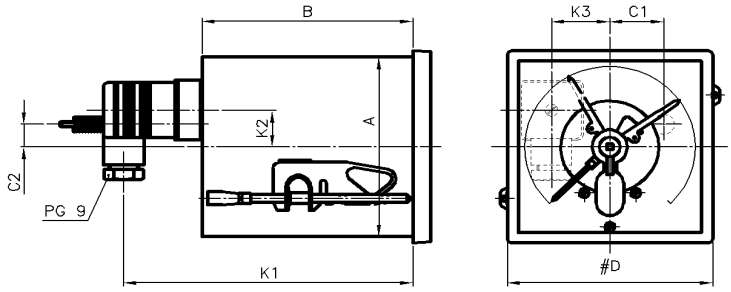
DIM.	CASE DIAMETER	
	100	**160**
A	101	161
B	104	108
K	92	122

THERMOMETERS TYPE TPC WITH CONTACT

S

TPCxxxXS

Hirschman cable junction box

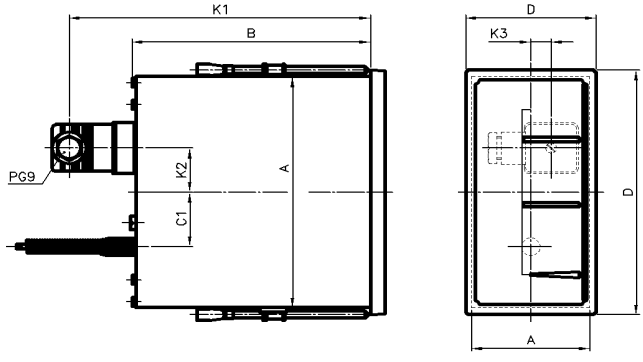


DIM.	CASE DIMENSIONS	
	96x96	**144x144**
A	90x90	183x183
B	99	136
C1	25	0
C2	11	0
D	96x96	144x144
K1	142	180
K2	18	16
K3	27	41

H / V

TPCxxxXH
TPCxxxXV

Hirschman cable junction box



DIM.	CASE DIMENSIONS
	72x144
A	66x136
B	130
C1	32
D	72X144
K1	173
K2	26
K3	11

BUILT-IN PT-100 / TRANSMITTERS

With PT-100 sensor

SENSOR : PT-100

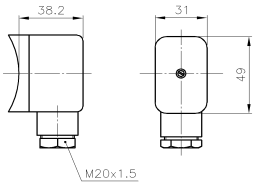
ACCURACY : 1/3 DIN class B, IEC751

INSTRUMENT : class 1

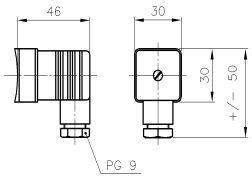
MINIMAL RANGE : 60 ℃

BULB SIZE : minimal Ø8 mm

CONNECTOR : cable junction box, SEE BELOW

TYPE	FUNCTION	CABLE JUNCTION BOX	CASE DIMENSIONS				
			100	160	96x96	144x144	72x144
PT-100	**PT-100 sensor 3 wire**	 Wiebrock	first 100 mm bulb per 100 mm extra First 1000 mm capillary per 1000 mm extra:				
TT2	**4...20 mA, 13...35Vdc, 2-wire**		excluding PT-100 sensor				
TRP-EX	**4...20 mA, 13...35Vdc, 2-wire** **EEx ia II C T6**	depends on design	excluding PT-100 sensor				

With potentiometer

TYPE	FUNCTION	CABLE JUNCTION BOX	CASE DIMENSIONS				
			100	160	96x96	144x144	72x144
R	**0...100 ohm, 3-wire**						N.A.

ADD-ON UNITS WITH ELECTRICAL CONTACTS FOR THERMOMETERS

ADD-ON UNIT (built on top of dial) with PG cable conduit and 1500 mm cable			
DIN16085/16196 *TYPE*	Switch function in clockwise direction	EXTRA COSTS CASE DIMENSIONS (in mm)	
MAGNETIC ADD-ON CONTACT (=30W/~50VA), TYPE: M		**Ø 100**	**Ø 160**
M -1	contact closes		
M -2	contact opens		
M -3	single change-over contact (SPDT)		
M -11	1st contact closes, 2nd contact closes		
M -12	1st contact closes, 2nd contact opens		
M -21	1st contact opens, 2nd contact closes		
M -22	1st contact opens, 2nd contact opens		
M -xx+GS	double acting contact with separate circuits		
M -xxx	triple acting contact, 1=closes, 2=opens		
INDUCTIVE ADD-ON CONTACT (=8V, Ri=1 kohm, EEx ib IIC T6), TYPE: I		**Ø 100**	**Ø 160**
I -1	contact closes (operating current)		
I -2	contact opens		
I -x+SN	single contact with safety oscillator (SN)		
I -11	1st contact closes, 2nd contact closes		
I -12	1st contact closes, 2nd contact opens		
I -21	1st contact opens, 2nd contact closes		
I -22	1st contact opens, 2nd contact opens		
I -xx+SN	double contact with safety oscillator (SN)		

OPTIONS FOR ELECTRICAL CONTACTS

OPTIONS	DESCRIPTION	Ø 100	Ø 160	96 x 96	144 x 144	72 x 144
OIL FILLING	for HZ electrical contacts only			N.A.	N.A.	N.A.
CABLE	Cable connected to junction box for HZ electrical contacts	First 1500 mm:			per 1000 mm extra:	
MSR-010	Protection relay for single acting contacts (supply 230Vac)					
MSR-020	Protection relay for double acting contacts (supply 230Vac)					
WE 77/Ex-1	Protection relay for single inductive contacts Eex ia ib IIC 230Vac					
WE 77/Ex-2	Protection relay for double inductive contacts Eex ia ib IIC 230 Vac					

STAINLESS STEEL POCKETS (WELDED)

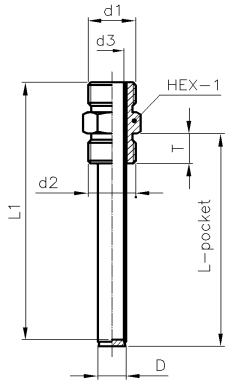
WELDED POCKETS (THREADED), Pmax = 25 bar

STANDARD MODEL:

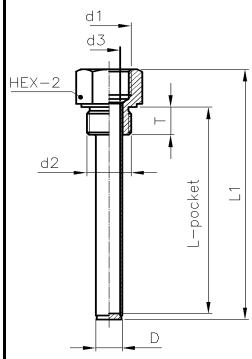
MATERIAL	*: AISI304/1.4301, AISI321/1.4541*
CONNECTION FOR TYPE 02; 04	***: 1/2"BSP, type B, see page 8, 25***
CONNECTION FOR TYPE 03; 04	***: 1/2"BSP, type A04 or CSx see page 8, 9, 25, 26***
OPTIONS	***: other stem diameters***
	others threads

Type 02

THREADED TYPE		STANDARD DIMENSIONS (in mm)									COSTS	per 100 mm extra
02	03	bulb dia.	L pocket	d1	d2	d3	T	D	HEX-1	HEX-2		
		10	100	1/2"BSP	1/2"BSP	10.5	14	12.5	22	27		
		10	100	1/2"BSP	3/4"BSP	10.5	16	12.5	27	32		
		10	100	1/2"BSP	1"BSP	10.5	18	12.5	36	36		
		10	100	1/2"BSP	1/2"NPT	10.5	20	12.5	22	27		
		10	100	1/2"BSP	3/4"NPT	10.5	20	12.5	27	27		
		10	100	1/2"BSP	1"NPT	10.5	25	12.5	36	36		
		10	100	1/2"BSP	M20x1.5	10.5	14	12.5	22	27		
		10	100	1/2"BSP	M24x1.5	10.5	14	12.5	27	27		
		12,5	63	1/2"BSP	1/2"BSP	13	14	15	22	27		
		12,5	63	1/2"BSP	3/4"BSP	13	16	15	27	32		
		12,5	63	1/2"BSP	1"BSP	13	18	15	36	36		
		12,5	63	1/2"BSP	1/2"NPT	13	20	15	22	27		
		12,5	63	1/2"BSP	3/4"NPT	13	20	15	27	27		
		12,5	63	1/2"BSP	1"NPT	13	25	15	36	36		
		12,5	63	1/2"BSP	M24x1.5	13	14	15	27	27		



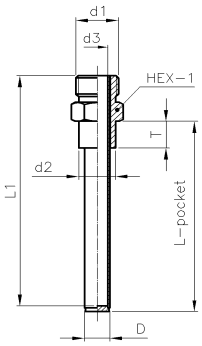
L1 = L-pocket + 20 mm



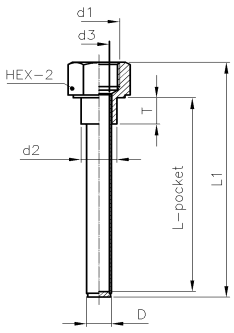
For type CS1, 2, 3
L1 = L-pocket + 10 mm

For type A04
L1 = L-pocket

WELDING TYPE		STANDARD DIMENSIONS (in mm)									COSTS	per 100 mm extra
04	05	bulb dia.	L pocket	d1	d2	d3	T	D	HEX-1	HEX-2		
		10	100	1/2"BSP	18	10.5	14	12.5	22	27		
		10	100	3/4"BSP	23	10.5	16	12.5	27	32		
		10	100	1"BSP	28	10.5	18	12.5	36	36		
		12.5	63	1/2"BSP	18	13	14	15	22	27		
		12.5	63	3/4"BSP	23	13	16	15	27	32		
		12.5	63	1"BSP	28	13	18	15	36	36		



L1=L-pocket + 20 mm



For type CS1, 2, 3 L1 = L-pocket + 10 mm

For type A04, L1 = L-pocket + 10 mm

OTHER DESIGNS, BULB DIAMETERS AND MATERIALS ON DEMAND
MATERIAL CERTIFICATE ACC TO EN 10204 3.1.B. see page 29

STAINLESS STEEL THERMOWELL (BAR STOCK)

Weld - in thermowell form BS and CS acc. to DIN 16179

STANDARD MODEL:

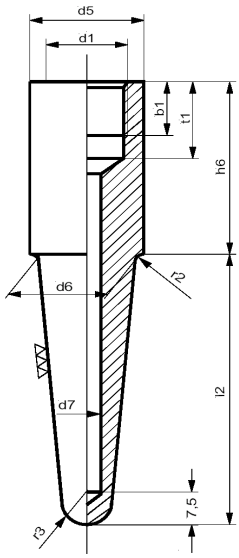
MATERIAL	*: AISI316Ti/1.4571, others on request*
INSTRUMENT CONNECTION	*: 1/2"BSP*
FORM BD, BE, CD, CE	*: on request*
OPTIONS	*other materials*
	others instruments threads

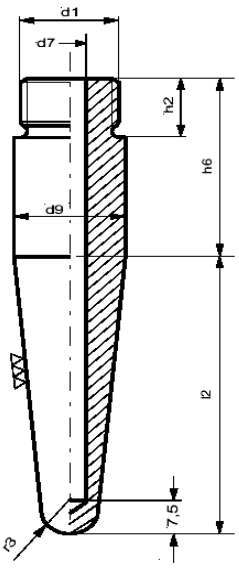
THERMOWELLS ACC. TO:

DIN 43763 (D1 - D6) AND DIN 43772-2 (FORM 4 - 9) ON REQUEST

FORM BS

FORM CS

WELDING TYPE	**STANDARD DIMENSIONS (in mm)**											
BS	bulb dia.	L2	d1	d5	d6	d7	b1	h6	r2	r3	t1	COSTS
	10	73	1/2"BSP	30	25	11	16	39	2,5	8,5	20	
	10	133	1/2"BSP	30	25	11	16	39	2,5	8,5	20	
	10	223	1/2"BSP	30	25	11	16	39	2,5	8,5	20	
	12	73	1/2"BSP	30	25	13	16	39	2,5	9,5	20	
	12	133	1/2"BSP	30	25	13	16	39	2,5	9,5	20	
	12	223	1/2"BSP	30	25	13	16	39	2,5	9,5	20	
	12	373	1/2"BSP	30	25	13	16	39	2,5	9,5	20	
L-thermometer	for connection type AL04		L-thermometer = L2 + 10 mm									
	for connection type CS1, 2, 3		L-thermometer = L2 + 30 mm									

CS	bulb dia.	L2	d1	d7	d9	h2	h6	r3	COSTS
	10	63	1/2"BSP	11	24	12	39	8,5	
	10	100	1/2"BSP	11	24	12	39	8,5	
	10	160	1/2"BSP	11	24	12	39	8,5	
	10	250	1/2"BSP	11	24	12	39	8,5	
	12	63	1/2"BSP	13	30	14	45	9,5	
	12	100	1/2"BSP	13	30	14	45	9,5	
	12	160	1/2"BSP	13	30	14	45	9,5	
	12	250	1/2"BSP	13	30	14	45	9,5	
	12	400	1/2"BSP	13	30	14	45	9.5	
L-thermometer	for connection type B		L-thermometer = L2 + h6 - 10 mm						

MATERIAL CERTIFICATE ACC TO EN 10204 3.1.B. see page 29

STAINLESS STEEL THERMOWELL (BAR STOCK)

Screw - in thermowell form BE and CE acc. to DIN 16179

STANDARD MODEL:

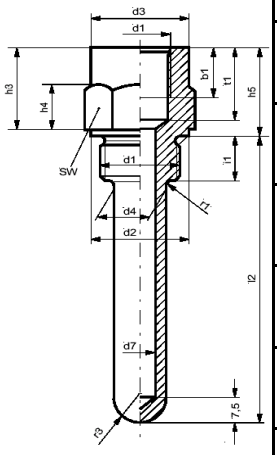
MATERIAL	*: AISI316Ti/1.4571, others on request*
INSTRUMENT CONNECTION	*: 1/2"BSP*
FORM BD, CD	*: on request*
OPTIONS	*other materials*
	others proces / instruments threads

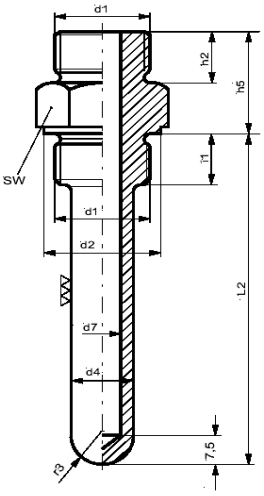
THERMOWELLS ACC. TO:

DIN 43763 (D1 - D6) AND DIN 43772-2 (FORM 4 - 9) ON REQUEST

FORM BE

FORM CE

THREADED TYPE	**STANDARD DIMENSIONS (in mm)**																
BE	bulb dia.	L2	d1	d2	d3	d4	d7	b1	h3	h4	h5	i1	r1	r3	t1	SW	COSTS
	10	87	1/2"BSP	26	27	17	11	16	22	12	25	14	1.6	8.5	20	27	
	10	147	1/2"BSP	26	27	17	11	16	22	12	25	14	1.6	8.5	20	27	
	10	237	1/2"BSP	26	27	17	11	16	22	12	25	14	1.6	8.5	20	27	
	12	87	1/2"BSP	26	27	17	13	16	22	12	25	14	1.6	9.5	20	27	
	12	147	1/2"BSP	26	27	17	13	16	22	12	25	14	1.6	9.5	20	27	
	12	237	1/2"BSP	26	27	17	13	16	22	12	25	14	1.6	9.5	20	27	
	12	387	1/2"BSP	26	27	17	13	16	22	12	25	14	1.6	9.5	20	27	
L-thermometer	for connection type AL04			L-thermometer = L2 - 5 mm													
	for connection type CS1, 2, 3			L-thermometer = L2 + 15 mm													

CE	bulb dia.	L2	d1	d2	d4	d7	h2	h5	i1	r1	r3	SW	COSTS
	10	63	1/2"BSP	26	17	11	12	25	14	1.6	8.5	27	
	10	100	1/2"BSP	26	17	11	12	25	14	1.6	8.5	27	
	10	160	1/2"BSP	26	17	11	12	25	14	1.6	8.5	27	
	10	250	1/2"BSP	26	17	11	12	25	14	1.6	8.5	27	
	12	63	1/2"BSP	26	17	13	12	25	14	1.6	9.5	27	
	12	100	1/2"BSP	26	17	13	12	25	14	1.6	9.5	27	
	12	160	1/2"BSP	26	17	13	12	25	14	1.6	9.5	27	
	12	250	1/2"BSP	26	17	13	12	25	14	1.6	9.5	27	
	12	400	1/2"BSP	26	17	13	12	25	14	1.6	9.5	27	
L-thermometer	for connection type B			L-thermometer = L2 + 15 mm									

MATERIAL CERTIFICATE ACC TO EN 10204 3.1.B. see page 29

STAINLESS STEEL THERMOWELL (BAR STOCK)

Flanged thermowell acc. to DIN or ANSI

STANDARD MODEL:

MATERIAL	*: AISI316Ti/1.4571, others on request*
CONSTRUCTION	*: barr stock + welded flange*
OPTIONS	*: other dimensions / bulb sizes*
	other flanges DN / PN
	others instruments threads

THERMOWELLS ACC. TO:

DIN 43763 (D1 - D6) AND DIN 43772-2 (FORM 4 - 9) ON REQUEST

FLANGED TYPE

DIN FLANGE

DN	PN	D	k	b	d2
20	40	105	75	14	4x14
25		115	85	14	4x14
32		140	100	18	4x18
40		150	110	18	4x18
50		165	125	18	4x18
65		185	145	18	8x18

ANSI FLANGE

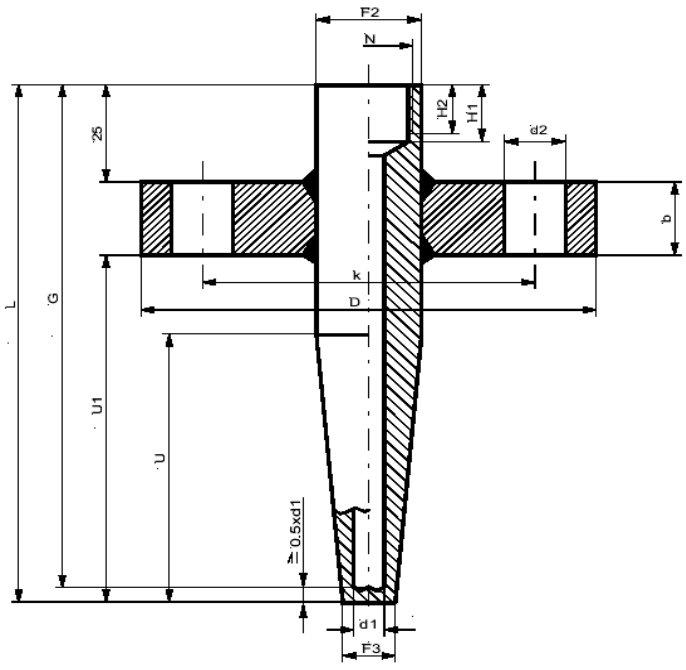
DN	PN	D	k	b	d2
3/4"	150#	98.4	69.8	1/2"	4x15.9
1"		107.9	79.4	9/16"	4x15.9
1 1/4"		117.5	88.9	5/8"	4x15.9
1 1/2"		127	98.4	11/16"	4x15.9
2"		152.4	120.6	3/4"	4x19
2 1/2"		177.8	139.7	7/8"	4x19

DIAMETER / CONNECTION DIM. (mm)

d1	F2	N	F3	H1	H2
7	24	M18x1.5	12.5	14	12
9		1/2"BSP (M20x1.5)	15	19	15
11			17		
13	32	3/4"BSP (M27x2)	19		17
14			20		

LENGTH DIM. (mm)

L	G	U	U1
110	105	65	--
140	135	65	--
170	165	125	--
200	195	65	130
260	255	125	190
410	405	275	340
OTHERS ON REQUEST			



L-thermometer		
	for connection type AL04	L-thermometer = L - 30 mm
	for connection type CS1, 2, 3	L-thermometer = L - 10 mm

MATERIAL CERTIFICATE ACC TO EN 10204 3.1.B. see page 29
OTHER DIMENSIONS / MATERIALS ON REQUEST