PDF af favoritter

MODSTANDSFØLERE MED FLANGE TW40

Serie TR10-F

TR10F-14369107
PT100 3-tråd -50-500°C 250x9 DN25 form2F



- Måleområde fra -196 til 600°C
- Udskiftelig måleindsats
- Option: ATEX-klassificering
- Option: 4-20mA udgangssignal
- Sammenføjet dyklomme TW40 med flange

PRODUKTBESKRIVELSE

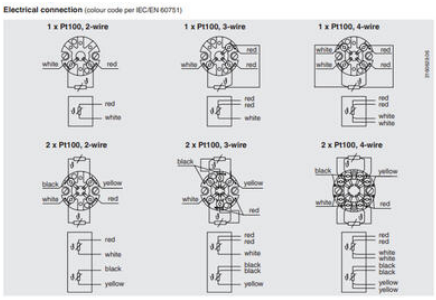
Serie TR10-F er optimal til temperaturmåling i beholdere og rørledninger med væske eller gasser. Standardflanger i henhold til DIN EN eller ASME er tilgængelige. Beskyttelsesrøret svejses og skrues ind i tilslutningshovedet. Beskyttelsesrør i rustfrit stål er egnede til normale kemiske forhold. Som ekstraudstyr anbefales en belægning mod kemisk aggressive medier eller en slidbestandig belægning mod slibende medier.
Den udskiftelige måleindsats kan fjernes, uden at man behøver at tage hele sensoren tages ud af processen, hvilket gør inspektion, overvågning og service let.
Et bredt udvalg af indsatslængder, flangestørrelser, beskyttelsesrør og sensorhoveder gør hver føler velegnet til enhver anvendelse.
Som option er det muligt at få føleren med en analog eller digital transmitter installeret.

Bestillingsnøgle:
- Godkendelser?
- Anti-korrosionsbeskyttelse?
- Flere godkendelser / certifikater?
- Sensortype?
- Nøjagtighed?
- Måleområde?
- Model på huset?
- Kabelindgang + størrelse?
- Evt. transmitter?
- Tilslutnings halsrør?
- Halsrørslængde?
- Procesforbindelse?
- Indstikslængde?
- Diameter måleindsatsen?
- Materiale måleindsats?

SPECIFIKATIONER

Indstikslængde	250 mm
Inside diameter	7 mm
IP-klasse	IP65
Længde	340 mm
Material Sensor Body	Inoconel - 600

Materiale hus	Aluminium
Materiale medieberørte del	Rustfrit stål 316Ti
Neck length	65 m
Omgivelsestemperatur fra	-40 °C
Omgivelsestemperatur til	80 °C
Plug diameter	9 mm
Temperaturområde fra	-50 °C
Temperaturområde til	500 °C
Trykmodstand max	16 bar





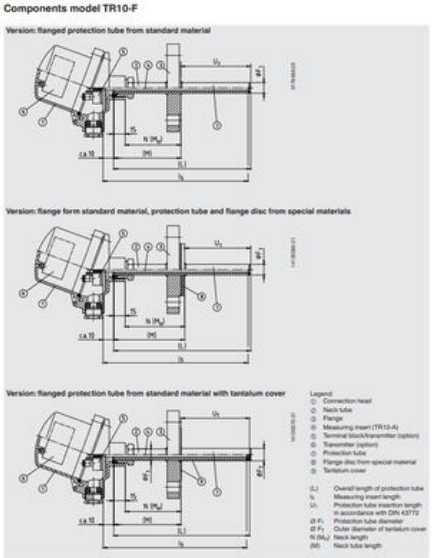
Model	Material	Cable entry thread size	Ingress protection (max.) [1]	Cap	Surface	Connection to neck tube
BS	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65, IP68	Flat cap with 2 screws	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65, IP68	Spherical hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ-H	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65, IP68	Raised hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ-H (2x cable outlet)	Aluminium	2 x M20 x 1.5 or 2 x ½ NPT [1]	IP65, IP68	Raised hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5
BSZ-H / DIH10 [2]	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65	Raised hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSS	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65	Spherical hinged cover with clamping lever	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSS-H	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65	Raised hinged cover with clamping lever	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BVS	Stainless steel	M20 x 1.5 [1]	IP65	Precision-cast screw-on lid	Blank, electropolished	M24 x 1.5
BSZ-K	Plastic	M20 x 1.5 or ½ NPT [1]	IP65	Spherical hinged cover with cylinder head screw	Black	M24 x 1.5
BSZ-HK	Plastic	M20 x 1.5 or ½ NPT [1]	IP65	Raised hinged cover with cylinder head screw	Black	M24 x 1.5

Model	Explosion protection				
	Without	Ex i (gas) Zone 0, 1, 2	Ex i (dust) Zone 20, 21, 22	Ex nA (gas) Zone 2	Ex tc (dust) Zone 22
BS	x	x	-	-	-
BSZ	x	x	x	x	x
BSZ-H	x	x	x	x	x
BSZ-H (2x cable outlet)	x	x	x	x	x
BSZ-H / DIH10 [2]	x	x	-	-	-
BSS	x	x	-	-	-
BSS-H	x	x	-	-	-
BVS	x	x	-	-	-
BSZ-K	x	x	-	-	-
BSZ-HK	x	x	-	-	-



Cable entry	Cable entry thread size
Standard cable entry [1]	M20 x 1.5 or ½ NPT
Plastic cable gland (cable Ø 6 ... 10 mm) [1]	M20 x 1.5 or ½ NPT
Nickel-plated brass cable gland (cable Ø 6 ... 12 mm)	M20 x 1.5 or ½ NPT
Stainless steel cable gland (cable Ø 7 ... 12 mm)	M20 x 1.5 or ½ NPT
Plain threaded	M20 x 1.5 or ½ NPT
2 x M20 x 1.5 [1]	2 x M20 x 1.5
Junction box M12 x 1 (4-pin) [1]	M20 x 1.5
Sealing plugs for transport	M20 x 1.5 or ½ NPT

Cable entry	Colour	Ingress protection (max.)	Min./max. ambient temperature	Explosion protection				
				without	Ex i (gas) Zone 0, 1, 2	Ex i (dust) Zone 20, 21, 22	Ex nA (gas) Zone 2	Ex tc (dust) Zone 22
Standard cable entry [1]	Blank	IP65	-40 ... +80 °C	x	x	-	-	-
Plastic cable gland [1]	Black or grey	IP66, IP68	-40 ... +80 °C	x	-	-	-	-
Plastic cable gland, Ex e [1]	Light blue	IP66, IP68	-20 ... +80 °C (standard) -40 ... +70 °C (option)	x	x	x	-	-
Plastic cable gland, Ex e [1]	Black	IP66, IP68	-20 ... +80 °C (standard) -40 ... +70 °C (option)	x	-	-	x	x
Nickel-plated brass cable gland	Blank	IP66, IP68	-60 °C / -40 ... +80 °C	x	-	-	-	-
Nickel-plated brass cable gland, Ex e	Blank	IP66, IP68	-60 °C / -40 ... +80 °C	x	x	x	x	x
Stainless steel cable gland	Blank	IP66, IP68	-60 °C / -40 ... +80 °C	x	x	x	-	-
Stainless steel cable gland, Ex e	Blank	IP66, IP68	-60 °C / -40 ... +80 °C	x	x	x	x	x
Plain threaded	-	IP00	-	x	x	x [1]	x [1]	x [1]
2 x M20 x 1.5 [1]	-	IP00	-	x	x	x [1]	x [1]	x [1]
Junction box M12 x 1 (4-pin) [2]	-	IP65	-40 ... +80 °C	x	x [3]	x [3]	-	-
Sealing plugs for transport	Transparent	-	-40 ... +80 °C	not applicable, transport protection				

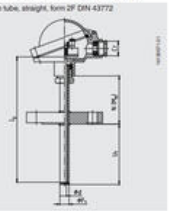


Protection tube

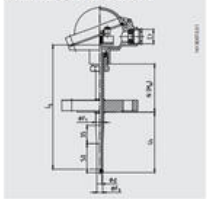
Protection tube designs

■ **Protection tube in accordance with DIN 43772**

Protection tube, straight, form 2F DIN 43772

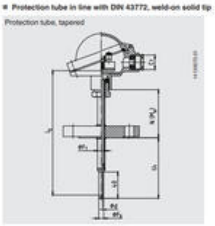


Protection tube, tapered, form 3F DIN 43772



■ **Protection tube in line with DIN 43772, weld-on solid tip**

Protection tube, tapered

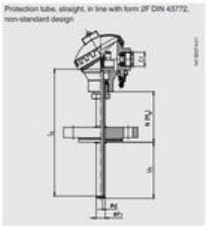


Legend:

U_1	Insertion length	Ø F_2	Diameter of protection tube tip
l_k	Measuring insert length	Ø F_1	Outer diameter of tantalum cover
N (M_2)	Neck length	(L)	Overall length of protection tube
C_1	Thread cable entry	Ø d	Measuring insert diameter
Ø F_1	Protection tube diameter		

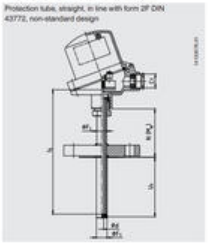
■ **Protection tube in line with DIN 43772, wetted parts from special material, girder flange: stainless steel**

Protection tube, straight, in line with form 2F DIN 43772, non-standard design

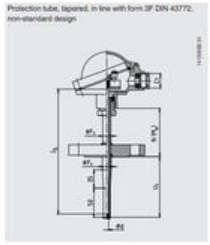


■ **Protection tube in line with DIN 43772, tantalum cover with tantalum flange disc, carrier protection tube: stainless steel**

Protection tube, straight, in line with form 2F DIN 43772, non-standard design



Protection tube, tapered, in line with form 3F DIN 43772, non-standard design



Legend:

U_1	Insertion length	Ø F_2	Diameter of protection tube tip
l_k	Measuring insert length	Ø F_1	Outer diameter of tantalum cover
N (M_2)	Neck length	(L)	Overall length of protection tube
C_1	Thread cable entry	Ø d	Measuring insert diameter
Ø F_1	Protection tube diameter		

The pictures show examples of connection heads.

Protection tube designs in accordance with DIN 43772

Protection tube	Material	Protection tube Ø	Suitable for measuring insert Ø	Connection to head
Straight, form 2F DIN 43772	Stainless steel 1.4571	9 x 1 mm 11 x 2 mm 12 x 2.5 mm	6 mm	M24 x 1.5 (rotatable threaded connection, male nut)
		14 x 2.5 mm	6 mm with sleeve Ø 8 mm / 8 mm	
Tapered, form 3F DIN 43772	Stainless steel 1.4571	12 x 2.5 mm, tapered to 9 mm	6 mm	

Protection tube designs in line with DIN 43772, weld-on solid tip

Protection tube	Material	Protection tube Ø	Suitable for measuring insert Ø	Connection to head
Tapered, weld-on solid tip, in line with DIN 43772, non-standard design	Stainless steel 1.4571	9 x 1 mm, tapered to 6 mm 11 x 2 mm, tapered to 6 mm 12 x 2.5 mm, tapered to 6 mm	3 mm	M24 x 1.5 (rotatable threaded connection, male nut)

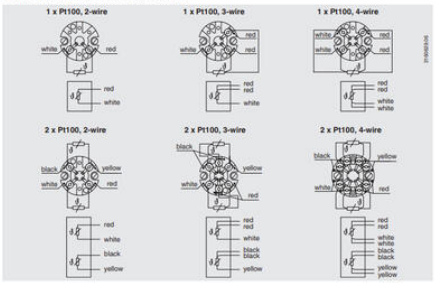
Protectio tube designs in line with DIN 43772, wetted parts: special material, girder flange: stainless steel

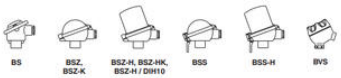
Protection tube	Material	Protection tube Ø	Suitable for measuring insert Ø	Connection to head
Straight, in line with form 2F DIN 43772, non-standard design	2.4360 (Monel/400) / stainless steel 2.4819 (Hastelloy C276) / stainless steel 2.4610 (Hastelloy C4) / stainless steel 3.7035 (Titan Grade 2) / stainless steel	13.7 x 2.2 mm	6 mm with sleeve Ø 8 mm / 8 mm	M24 x 1.5 (rotatable threaded connection, male nut)

Protection tube designs in line with DIN 43772, tantalum cover with tantalum flange disc, carrier protection tube: stainless steel

Protection tube	Material	Protection tube Ø	Suitable for measuring insert Ø	Connection to head
Straight, in line with form 2F DIN 43772, non-standard design	Tantalum / stainless steel	11 x 2 mm, tantalum cover 12 x 0.4 mm	6 mm	M24 x 1.5 (rotatable threaded connection, male nut)
		15 x 3 mm, tantalum cover 16 x 0.4 mm	6 mm with sleeve Ø 8 mm / 8 mm	
Tapered, in line with form 3F DIN 43772, non-standard design	Tantalum / stainless steel	12 x 2.5 mm, tantalum cover 13 x 0.4 mm	6 mm	

Electrical connection (colour code per IEC/EN 60751)





BS | BSZ, BSZ-K | BSZ-H, BSZ-HK, BSZ-H / DIH10 | BSS | BSS-H | BVS

Model	Material	Cable entry thread size	Ingress protection (max.) [1]	Cap	Surface	Connection to neck tube
BS	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65, IP68	Flat cap with 2 screws	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65, IP68	Spherical hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ-H	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65, IP68	Raised hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ-H (2x cable outlet)	Aluminium	2 x M20 x 1.5 or 2 x ½ NPT [1]	IP65, IP68	Raised hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5
BSZ-H / DIH10 [2]	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65	Raised hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSS	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65	Spherical hinged cover with clamping lever	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSS-H	Aluminium	M20 x 1.5 or ½ NPT [1]	IP65	Raised hinged cover with clamping lever	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BVS	Stainless steel	M20 x 1.5 [1]	IP65	Precision-cast screw-on lid	Blank, electropolished	M24 x 1.5
BSZ-K	Plastic	M20 x 1.5 or ½ NPT [1]	IP65	Spherical hinged cover with cylinder head screw	Black	M24 x 1.5
BSZ-HK	Plastic	M20 x 1.5 or ½ NPT [1]	IP65	Raised hinged cover with cylinder head screw	Black	M24 x 1.5

Model	Explosion protection				
	Without	Ex i (gas) Zone 0, 1, 2	Ex i (dust) Zone 20, 21, 22	Ex nA (gas) Zone 2	Ex tc (dust) Zone 22
BS	x	x	-	-	-
BSZ	x	x	x	x	x
BSZ-H	x	x	x	x	x
BSZ-H (2x cable outlet)	x	x	x	x	x
BSZ-H / DIH10 [2]	x	x	-	-	-
BSS	x	x	-	-	-
BSS-H	x	x	-	-	-
BVS	x	x	-	-	-
BSZ-K	x	x	-	-	-
BSZ-HK	x	x	-	-	-

Cable entry



Standard | Plastic | Plastic (Ex) | Brass, nickel-plated | Stainless steel | Junction box, M12 x 1 (4-pin)



Plain threaded | 2 x M20 x 1.5 | Sealing plugs for transport

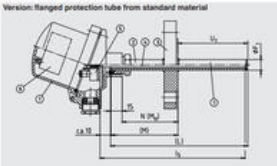
The pictures show examples of connection heads.

Cable entry	Cable entry thread size
Standard cable entry [1]	M20 x 1.5 or ½ NPT
Plastic cable gland (cable Ø 6 ... 10 mm) [1]	M20 x 1.5 or ½ NPT
Nickel-plated brass cable gland (cable Ø 6 ... 12 mm)	M20 x 1.5 or ½ NPT
Stainless steel cable gland (cable Ø 7 ... 12 mm)	M20 x 1.5 or ½ NPT
Plain threaded	M20 x 1.5 or ½ NPT
2 x M20 x 1.5 [2]	2 x M20 x 1.5
Junction box M12 x 1 (4-pin) [3]	M20 x 1.5
Sealing plugs for transport	M20 x 1.5 or ½ NPT

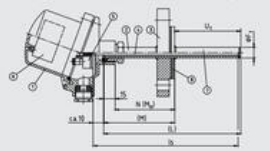
Cable entry	Colour	Ingress protection (max.)	Min./max. ambient temperature	Explosion protection				
				without	Ex i (gas) Zone 0, 1, 2	Ex i (dust) Zone 20, 21, 22	Ex nA (gas) Zone 2	Ex tc (dust) Zone 22
Standard cable entry [1]	Blank	IP65	-40 ... +80 °C	x	x	-	-	-
Plastic cable gland [1]	Black or grey	IP66, IP68	-40 ... +80 °C	x	-	-	-	-
Plastic cable gland, Ex e [1]	Light blue	IP66, IP68	-20 ... +80 °C (standard) -40 ... +70 °C (option)	x	x	x	-	-
Plastic cable gland, Ex e [1]	Black	IP66, IP68	-20 ... +80 °C (standard) -40 ... +70 °C (option)	x	-	-	x	x
Nickel-plated brass cable gland	Blank	IP66, IP68	-50 [1] / -40 ... +80 °C	x	-	-	-	-
Nickel-plated brass cable gland, Ex e	Blank	IP66, IP68	-50 [1] / -40 ... +80 °C	x	x	x	x	x
Plain threaded	-	IP00	-	x	x	x [1]	x [1]	x [1]
2 x M20 x 1.5 [2]	-	IP00	-	x	x	x [1]	x [1]	x [1]
Junction box M12 x 1 (4-pin) [3]	-	IP65	-40 ... +80 °C	x	x [4]	x [4]	-	-
Sealing plugs for transport	Transparent	-	-40 ... +80 °C	not applicable, transport protection				

Components model TR10-F

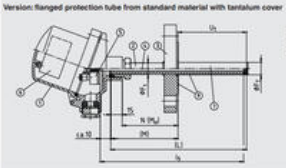
Version: flanged protection tube from standard material



Version: flange form standard material, protection tube and flange disc from special materials



Version: flanged protection tube from standard material with tantalum cover



Legend:

① Connection head
② Neck tube
③ Flange
④ Measuring insert (TR10-A)
⑤ Terminal block/transmitter (option)
⑥ Transmitter (option)
⑦ Protection tube
⑧ Flange disc from special material
⑨ Tantalum cover

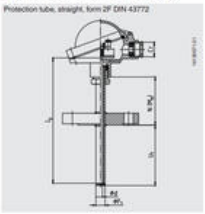
(L) Overall length of protection tube
l_k Measuring insert length
U_1 Protection tube insertion length in accordance with DIN 43772
Ø F_1 Protection tube diameter
Ø F_2 Outer diameter of tantalum cover
N (M_2) Neck length
(M) Neck tube length

Protection tube

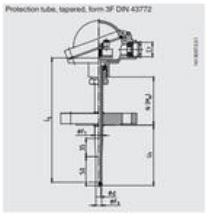
Protection tube designs

■ **Protection tube in accordance with DIN 43772**

Protection tube, straight, form 2F DIN 43772

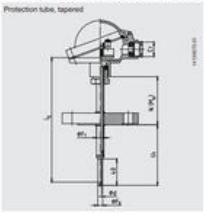


Protection tube, tapered, form 3F DIN 43772



■ **Protection tube in line with DIN 43772, weld-on solid tip**

Protection tube, tapered

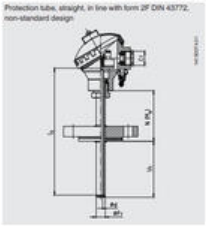


Legend:

U_1	Insertion length	Ø F_2	Diameter of protection tube tip
l_s	Measuring insert length	Ø F_1	Outer diameter of tantalum cover
N (M_2)	Neck length	(L)	Overall length of protection tube
C_1	Thread cable entry	Ø d	Measuring insert diameter
Ø F_1	Protection tube diameter		

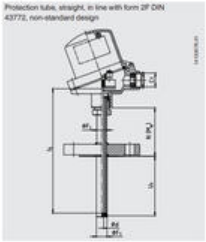
■ **Protection tube in line with DIN 43772, wetted parts from special material, girder flange: stainless steel**

Protection tube, straight, in line with form 2F DIN 43772, non-standard design



■ **Protection tube in line with DIN 43772, tantalum cover with tantalum flange disc, carrier protection tube: stainless steel**

Protection tube, straight, in line with form 2F DIN 43772, non-standard design



Protection tube, tapered, in line with form 3F DIN 43772, non-standard design



Legend:

U_1	Insertion length	Ø F_2	Diameter of protection tube tip
l_s	Measuring insert length	Ø F_1	Outer diameter of tantalum cover
N (M_2)	Neck length	(L)	Overall length of protection tube
C_1	Thread cable entry	Ø d	Measuring insert diameter
Ø F_1	Protection tube diameter		

The pictures show examples of connection heads.

Protection tube designs in accordance with DIN 43772

Protection tube	Material	Protection tube Ø	Suitable for measuring insert Ø	Connection to head
Straight, form 2F DIN 43772	Stainless steel 1.4571	9 x 1 mm 11 x 2 mm 12 x 2.5 mm	6 mm	M24 x 1.5 (rotatable threaded connection, male nut)
		14 x 2.5 mm	6 mm with sleeve Ø 8 mm / 8 mm	
Tapered, form 3F DIN 43772	Stainless steel 1.4571	12 x 2.5 mm, tapered to 9 mm	6 mm	

Protection tube designs in line with DIN 43772, weld-on solid tip

Protection tube	Material	Protection tube Ø	Suitable for measuring insert Ø	Connection to head
Tapered, weld-on solid tip, in line with DIN 43772, non-standard design	Stainless steel 1.4571	9 x 1 mm, tapered to 8 mm 11 x 2 mm, tapered to 6 mm 12 x 2.5 mm, tapered to 6 mm	3 mm	M24 x 1.5 (rotatable threaded connection, male nut)

Protectio tube designs in line with DIN 43772, wetted parts: special material, girder flange: stainless steel

Protection tube	Material	Protection tube Ø	Suitable for measuring insert Ø	Connection to head
Straight, in line with form 2F DIN 43772, non-standard design	2.4360 (Monel400) / stainless steel 2.4819 (Hastelloy C276) / stainless steel 2.4610 (Hastelloy C4) / stainless steel 3.7035 (Titan Grade 2) / stainless steel	13.7 x 2.2 mm	6 mm with sleeve Ø 8 mm / 8 mm	M24 x 1.5 (rotatable threaded connection, male nut)

Protection tube designs in line with DIN 43772, tantalum cover with tantalum flange disc, carrier protection tube: stainless steel

Protection tube	Material	Protection tube Ø	Suitable for measuring insert Ø	Connection to head
Straight, in line with form 2F DIN 43772, non-standard design	Tantalum / stainless steel	11 x 2 mm, tantalum cover 12 x 0.4 mm	6 mm	M24 x 1.5 (rotatable threaded connection, male nut)
		15 x 3 mm, tantalum cover 16 x 0.4 mm	6 mm with sleeve Ø 8 mm / 8 mm	
Tapered, in line with form 3F DIN 43772, non-standard design	Tantalum / stainless steel	12 x 2.5 mm, tantalum cover 13 x 0.4 mm	6 mm	