Poptávka

SNÍMAČE TEPLOTY TR10-F

Série TR10-F

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



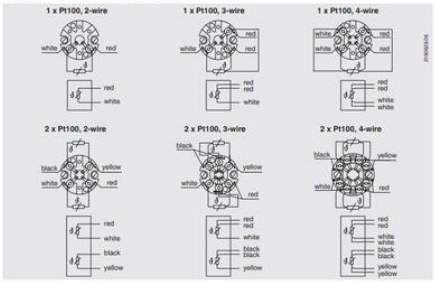
- PT100, PT1000
- Teplota -196 až 600°C
- Připojení příruba
- Média voda, plyny, oleje
- ATEX, IECEx, SIL2, GOST

POPIS PRODUKTU

SPECIFIKACE

Délka	340 mm
Insertion length	250 mm
Inside diameter	7 mm
Materiál kontaktní části	Nerez ocel 316Ti
Materiál těla	Hliník
Neck length	65 m
Plug diameter	9 mm
Provozní teplota max.	500 °C
Provozní teplota min.	-50 °C
Teplota okolí do	80 °C
Teplota okolí od	-40 °C
Tlaková odolnost	16 bar
Třída krytí	IP65

Electrical connection (colour code per IEC/EN 60751)

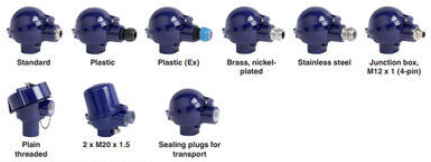




Model	Material	Cable entry thread size	Ingress protection (max.) [1]	Cap	Surface	Connection to neck tube
BS	Aluminium	M20 x 1.5 or ½ NPT [2]	IP65, IP68	Flat cap with 2 screws	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ	Aluminium	M20 x 1.5 or ½ NPT [2]	IP65, IP68	Spherical hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ-H	Aluminium	M20 x 1.5 or ½ NPT [2]	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 [2]	IP65, IP68	Raised hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5
BSZ-H / DIH10 [3]	Aluminium	M20 x 1.5 or ½ NPT [2]	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 [2]	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 [2]	IP65	Raised hinged cover with clamping lever	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BVS	Stainless steel	M20 x 1.5 [2]	IP65	Precision-cast screw-on lid	Blank, electropolished	M24 x 1.5
BSZ-K	Plastic	M20 x 1.5 or ½ NPT [2]	IP65	Spherical hinged cover with cylinder head screw	Black	M24 x 1.5
BSZ-HK	Plastic	M20 x 1.5 or ½ NPT [2]	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 [3]	x	x	-	-	-
BSS	x	x	-	-	-
BSS-H	x	x	-	-	-
BVS	x	x	-	-	-
BSZ-K	x	x	-	-	-
BSZ-HK	x	x	-	-	-

Cable entry



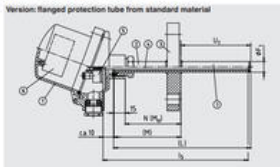
The pictures show examples of connection heads.

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

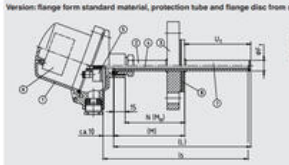
Cable entry	Colour	Ingress protection (max.)	Min./max. ambient temperature	Explosion protection				
				without	Ex i (gas) Zone 0, 1, 2	Ex i (dust) Zone 20, 21, 22	Ex nA (gas) Zone 2	Ex tc (dust) Zone 22
Standard cable entry [1]	Blank	IP65	-40 ... +80 °C	x	x	-	-	-
Plastic cable gland [1]	Black or grey	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	-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 [5]	x [5]	x [5]
2 x M20 x 1.5 [2]	-	IP00	-	x	x	x [5]	x [5]	x [5]
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

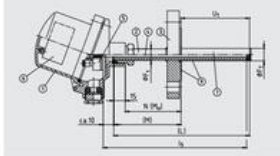
Version: flanged protection tube from standard material



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



Version: flanged protection tube from standard material with tantalum cover



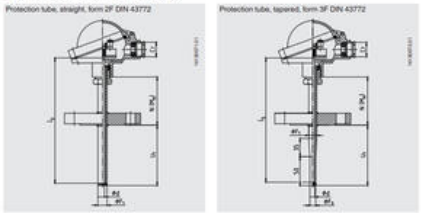
Legend:
① Connection head
② Neck tube
③ Flange
④ Measuring insert (TR10-A)
⑤ Terminal block/transmitter (option)
⑥ Transmitter (option)
⑦ Protection tube
⑧ Flange disc from special material
⑨ Tantalum cover

(L) Overall length of protection tube
l_k Measuring insert length
U_1 Protection tube insertion length in accordance with DIN 43772
Ø P_1 Protection tube diameter
Ø P_2 Outer diameter of tantalum cover
N (N_d) Neck length
(M) Neck tube length

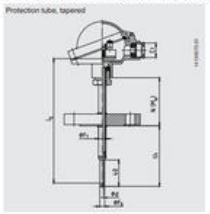
Protection tube

Protection tube designs

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

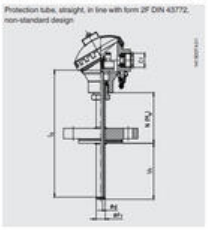


■ **Protection tube in line with DIN 43772, weld-on solid tip**

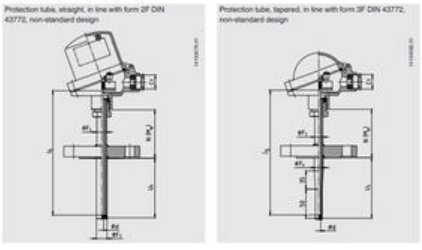


Legend:
U_1 Insertion length
l_k Measuring insert length
N (N_d) Neck length
C_D Thread cable entry
Ø P_1 Protection tube diameter
Ø P_2 Diameter of protection tube tip
Ø P_3 Outer diameter of tantalum cover
(L) Overall length of protection tube
Ø d Measuring insert diameter

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



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



Legend:
U_1 Insertion length
l_k Measuring insert length
N (N_d) Neck length
C_D Thread cable entry
Ø P_1 Protection tube diameter
Ø P_2 Diameter of protection tube tip
Ø P_3 Outer diameter of tantalum cover
(L) Overall length of protection tube
Ø d Measuring insert 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 14 x 2.5 mm	6 mm 6 mm with sleeve Ø 8 mm / 8 mm	M24 x 1.5 (rotatable threaded connection, male nut)
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)

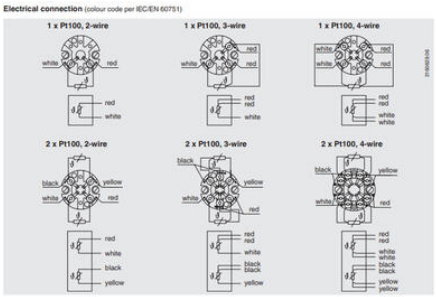
Protectio tube designs in line with DIN 43772, wetted parts: special material, girder flange: stainless steel

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 (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 15 x 3 mm, tantalum cover 18 x 0.4 mm	6 mm 6 mm with sleeve Ø 8 mm / 8 mm	M24 x 1.5 (rotatable threaded connection, male nut)
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)

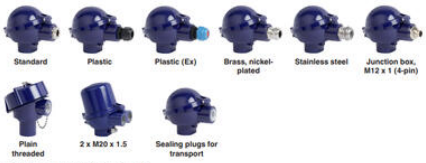




Model	Material	Cable entry thread size	Ingress protection (max.) [1]	Cap	Surface	Connection to neck tube
BS	Aluminium	M20 x 1.5 or ½ NPT [2]	IP65, IP68	Flat cap with 2 screws	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ	Aluminium	M20 x 1.5 or ½ NPT [2]	IP65, IP68	Spherical hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BSZ-H	Aluminium	M20 x 1.5 or ½ NPT [2]	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 [2]	IP65, IP68	Raised hinged cover with cylinder head screw	Blue, lacquered [4]	M24 x 1.5
BSZ-H / DIH10 [3]	Aluminium	M20 x 1.5 or ½ NPT [2]	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 [2]	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 [2]	IP65	Raised hinged cover with clamping lever	Blue, lacquered [4]	M24 x 1.5, ½ NPT
BVS	Stainless steel	M20 x 1.5 [2]	IP65	Precision-cast screw-on lid	Blank, electropolished	M24 x 1.5
BSZ-K	Plastic	M20 x 1.5 or ½ NPT [2]	IP65	Spherical hinged cover with cylinder head screw	Black	M24 x 1.5
BSZ-HK	Plastic	M20 x 1.5 or ½ NPT [2]	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 [3]	x	x	-	-	-
BSS	x	x	-	-	-
BSS-H	x	x	-	-	-
BVS	x	x	-	-	-
BSZ-K	x	x	-	-	-
BSZ-HK	x	x	-	-	-

Cable entry



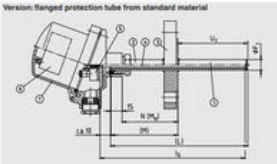
The pictures show examples of connection heads.

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

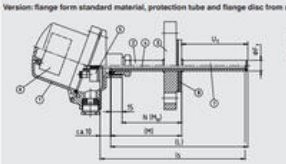
Cable entry	Colour	Ingress protection (max.)	Min./max. ambient temperature	Explosion protection				
				without	Ex i (gas) Zone 0, 1, 2	Ex i (dust) Zone 20, 21, 22	Ex nA (gas) Zone 2	Ex tc (dust) Zone 22
Standard cable entry [1]	Blank	IP65	-40 ... +80 °C	x	x	-	-	-
Plastic cable gland [1]	Black or grey	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	-60 [4] / -40 ... +80 °C	x	-	-	-	-
Nickel-plated brass cable gland, Ex e	Blank	IP66, IP68	-60 [4] / -40 ... +80 °C	x	x	x	x	x
Stainless steel cable gland	Blank	IP66, IP68	-60 [4] / -40 ... +80 °C	x	x	x	-	-
Stainless steel cable gland, Ex e	Blank	IP66, IP68	-60 [4] / -40 ... +80 °C	x	x	x	x	x
Plain threaded	-	IP00	-	x	x	x [5]	x [5]	x [5]
2 x M20 x 1.5 [2]	-	IP00	-	x	x	x [5]	x [5]	x [5]
Junction box M12 x 1 (4-pin) [3]	-	IP65	-40 ... +80 °C	x	x [6]	x [6]	-	-
Sealing plugs for transport	Transparent	-	-40 ... +80 °C	not applicable, transport protection				

Components model TR10-F

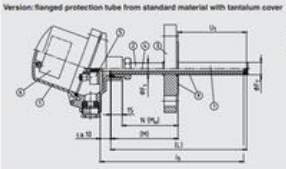
Version: flanged protection tube from standard material



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

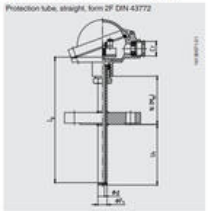
(L) Overall length of protection tube
l_k Measuring insert length
U_1 Protection tube insertion length in accordance with DIN 43772
Ø F_1 Protection tube diameter
Ø F_2 Outer diameter of tantalum cover
N ($M_{ü}$) Neck length
(M) Neck tube length

Protection tube

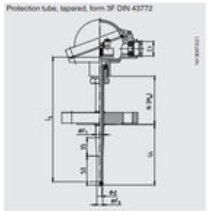
Protection tube designs

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

Protection tube, straight, form 2F DIN 43772

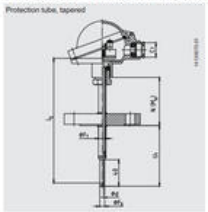


Protection tube, tapered, form 3F DIN 43772



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

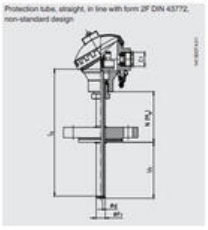
Protection tube, tapered



Legend:
U_1 Insertion length
l_k Measuring insert length
N ($M_{ü}$) Neck length
C_1 Thread cable entry
Ø F_1 Protection tube diameter
Ø F_2 Diameter of protection tube tip
Ø F_3 Outer diameter of tantalum cover
(L) Overall length of protection tube
Ø d Measuring insert diameter

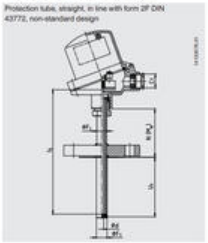
■ **Protection tube in line with DIN 43772, wetted parts from special material, girder flange: stainless steel**

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

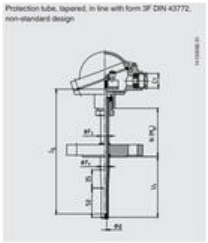


■ **Protection tube in line with DIN 43772, tantalum cover with tantalum flange disc, carrier protection tube: stainless steel**

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
l_k Measuring insert length
N ($M_{ü}$) Neck length
Ø F_1 Protection tube diameter
Ø F_2 Diameter of protection tube tip
Ø F_3 Outer diameter of tantalum cover
(L) Overall length of protection tube
Ø d Measuring insert 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 (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 15 x 3 mm, tantalum cover 18 x 0.4 mm	6 mm 6 mm with sleeve Ø 8 mm / 8 mm	M24 x 1.5 (rotatable threaded connection, male nut)
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	