MAVIS

Nový Bor s.r.o.

ACCESSORIES FOR TEMPERATURE SENSORS

Product catalog

2025-01

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Content

TJ1

THERMOWELLS FOR TEMPERATURE SENSORS

Thermowells are provided to protect the basic sensor from mechanical damage and corrosion. Thermowells are designed to be screwed into the weld-on piece. The inserted sensor is fixed in the thermowell with a fixing screw.

General Information (Table TJ1.1)

	Max. working temperature	550 °C
	Max. working pressure	40 bar
①	**Tube**	
	Material	Stainless steel 1.4541
②	**Fitting**	
	Material	Stainless steel 1.4305
③	**Fixing screw**	
	Material	Stainless steel

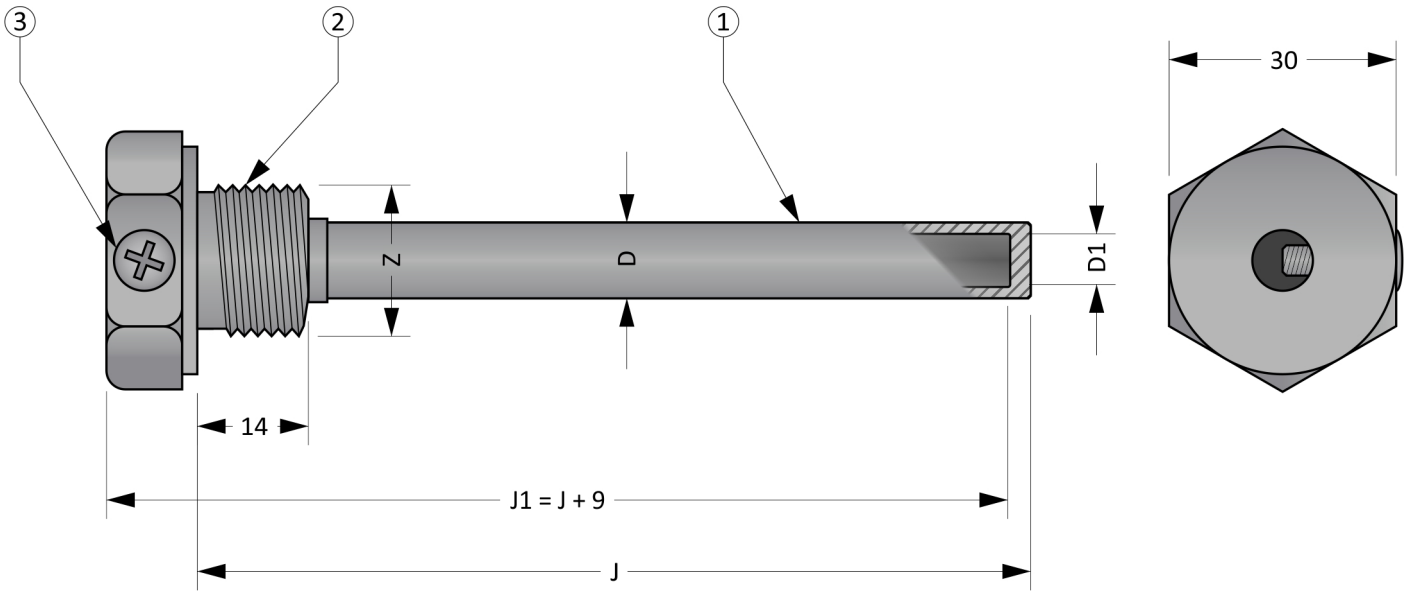


Figure TJ1.1: TJ1

Optional Parameters Including the Creation of an Order Code (Table TJ1.2)

Pos.	Code	TJ1 - ❶❷ - ❸
❶	**Type of external thread**	
	1	Z = G½“, OK30
	2	Z = M20 x 1,5, OK30
❷	**Tube diameter [mm]**	
	1	D = 8,0 mm, D1 = 6,0 mm
	2	D = 10,0 mm, D1 = 8,0 mm
	3	D = 10,0 mm, D1 = 7,0 mm
❸	**Tube length J [mm]**	
	xxx	Selectable range from 30 to 2000 mm (in 1 mm increments)

Order code example: TJ1-11-300
... Z = G½“, OK30
... D = 8,0 mm, D1 = 6,0 mm
... Tube length J = 300 mm

Approximate weight of the product: TJ1-11-300 ... 0,4 kg

Length Tolerances (Table TJ1.3)

Length J	Length tolerance J	Length tolerance J1
≤ 1500 mm	± 2 mm	± 2 mm
1500 mm < J ≤ 2000 mm	± 3 mm	± 3 mm

Diameter tolerance (Table TJ1.4)

Diameter tolerance D	Diameter tolerance D1
± 0,1 mm	± 0,1 mm

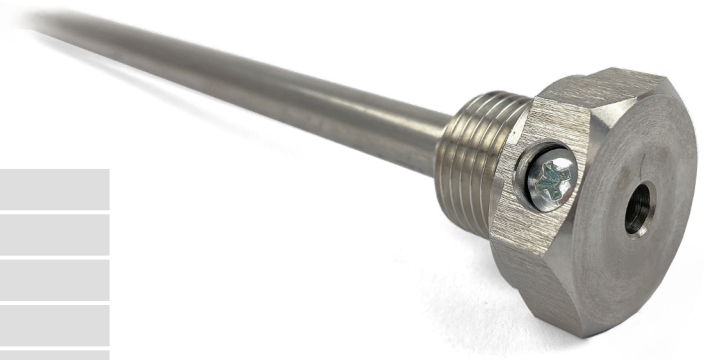
Installation And Operating Instructions

The thermowell is screwed into the prepared welded-on piece. The sensor is then inserted into the thermowell and fixed with a fixing screw.

TJS130

THERMOWELLS FOR TEMPERATURE SENSORS

Thermowells are provided to protect the basic sensor from mechanical damage and corrosion. Thermowells are designed to be screwed into the weld-on piece. The inserted sensor is fixed in the thermowell with a fixing screw.



General Information (Table TJS130.1)

	Max. working temperature	450 °C
	Max. working pressure	63 bar
	Pro snímače s průměrem stonku max. 6,2 mm	
①	**Tube**	
	Material	Stainless steel 1.4301
②	**Fitting**	
	Material	Stainless steel 1.4301
③	**Fixing screw**	
	Material	Stainless steel

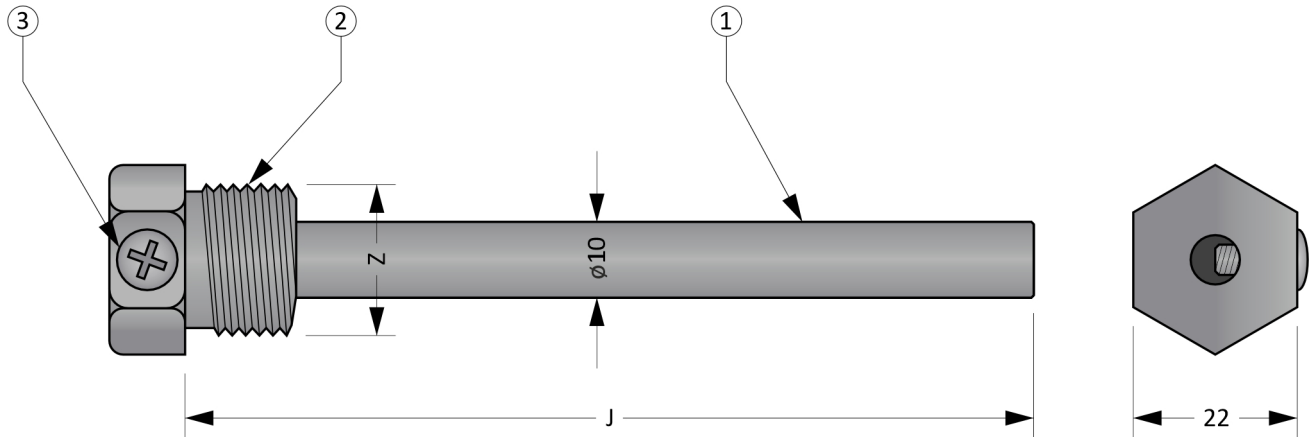


Figure TJS130.1: TJS130

Optional Parameters Including the Creation of an Order Code (Table TJ1.2)

Pos.	Code	TJS130 - ❶ - ❷
❶	**Type of external thread**	
	1	Z = G½“
	2	Z = M20 x 1,5
	3	Z = M27 x 2
	4	Z = G⅜“
❷	**Tube length J [mm]**	
	50	50 mm
	100	100 mm
	160	160 mm
	220	220 mm
	280	280 mm
	340	340 mm
	400	400 mm

Order code example: TJS130-1-340
... Z = G½“, OK30
... Tube length J = 340 mm

Approximate weight of the product: TJ130-1-340 ... 0,2 kg

Length Tolerances (Table TJS130.3)

Length tolerance J
± 2 mm

Diameter tolerance (Table TJS130.4)

Diameter tolerance D = 10 mm
± 0,1 mm

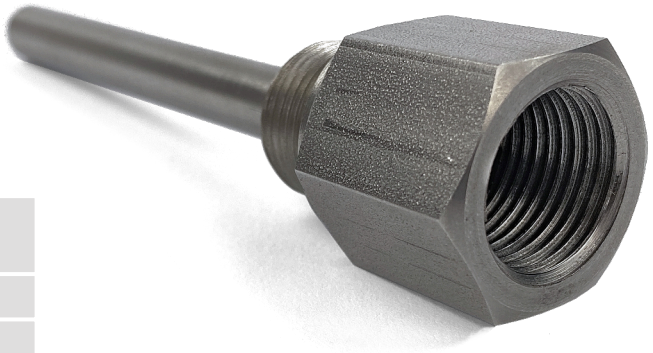
Installation And Operating Instructions

The thermowell is screwed into the prepared welded-on piece. The sensor is then inserted into the thermowell and fixed with a fixing screw.

TJ2

THERMOWELLS FOR TEMPERATURE SENSORS

Thermowells are provided to protect the basic sensor from mechanical damage and corrosion. Thermowells are designed to be screwed into the weld-on piece. The inserted sensor is screwed into the thermowell.



General Information (Table TJ2.1)

	Max. working temperature	550 °C
	Max. working pressure	40 bar
①	**Tube**	
	Material	Stainless steel 1.4541
②	**Fitting**	
	Material	Stainless steel 1.4305

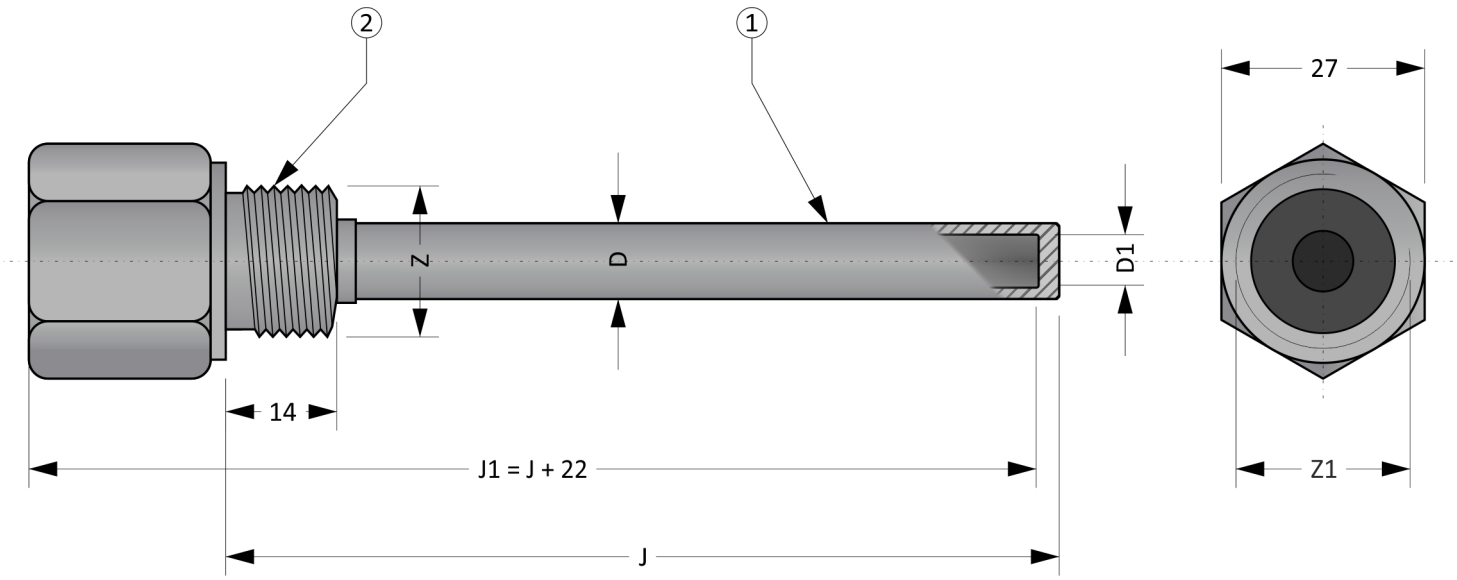


Figure TJ2.1: TJ2

Optional Parameters Including the Creation of an Order Code (Table TJ2.2)

Pos.	Code	TJ2 - ❶❷ - ❸
❶	**Type of external thread**	
	1	Z = G½“, Z1 = G½, OK27
	2	Z = M20 x 1,5, Z1 = G½, OK27
❷	**Tube diameter [mm]**	
	1	D = 8,0 mm, D1 = 6,0 mm
	2	D = 10,0 mm, D1 = 8,0 mm
	3	D = 10,0 mm, D1 = 7,0 mm
❸	**Tube length J [mm]**	
	xxx	volitelný rozsah od 40 do 2000 mm (minimální krok je 1 mm)

Order code example: TJ2-11-300
... Z = G½“, Z1 = G½, OK27
... D = 8,0 mm, D1 = 6,0 mm
... Tube length J = 300 mm

Approximate weight of the product: TJ2-11-300 ... 0,4 kg

Length Tolerances (Table TJ2.3)

Length J	Length tolerance J	Length tolerance J1
≤ 1500 mm	± 2 mm	± 2 mm
1500 mm < J ≤ 2000 mm	± 3 mm	± 3 mm

Diameter tolerance (Table TJ2.4)

Diameter tolerance D	Diameter tolerance D1
± 0,1 mm	± 0,1 mm

Installation And Operating Instructions

The thermowell is screwed into the prepared welded-on piece. The sensor is then screwed into the thermowell.

NV

WELDED-ON PIECES

The welded-on pieces are used for mounting thermowell or sensors in palce of measurement.

They solve the mounting of sensors in case the mounting thread cannot be made directly on the pipe on which the sensor is mounted.

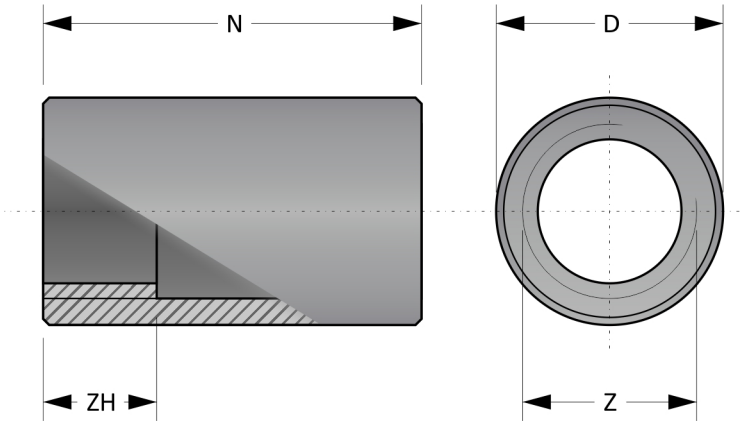


Figure NV.1: Welded-on piece

Optional Parameters Including the Creation of an Order Code (Table NV.1)

Thread Z	Thread length ZH	Nominal length N	Diameter D	Material	Code
G½“	11 mm	22 mm	30 mm	1.0038	**MN22-11-G12**
				1.4305	**MN22-17-G12**
	25 mm	55 mm	30 mm	1.0038	**MN55-11-G12**
				1.4305	**MN55-17-G12**
M20 x 1,5	11 mm	22 mm	30 mm	1.0038	**MN22-11-M20x1.5**
	25 mm	55 mm	30 mm	1.0038	**MN55-11-M20x1.5**
				1.4305	**MN55-17-M20x1.5**
M27 x 2	32 mm	70 mm	40 mm	1.0038	**MN70-11-M27x2**
				1.4305	**MN70-17-M27x2**

Dimension tolerances (Table NV.2)

Length tolerance N	Diameter tolerance D
± 1 mm	± 0,1 mm

Installation And Operating Instructions

The welded-on piece is welded to the pipe and the sensor or the thermowell is screwed into it.

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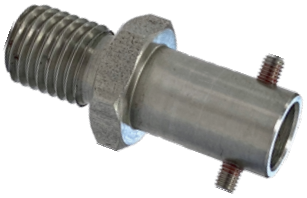
PK

BAYONET ADAPTORS

The bayonet adapter is a tool-free accessory for mounting temperature sensors with a bayonet.



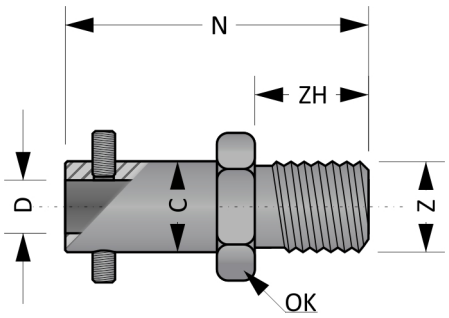


Figure PK.1: Protikus bajonetu

Optional Parameters Including the Creation of an Order Code (Table PK.1)

Thread Z	Thread length ZH	WAF OK	Length N	Diameter D	Material	Bayonet cap compatibility C	Code
G¼“	12 mm	17 mm	32 mm	7 mm	1.4305	12 mm	**PKG1/4-D7-C12**
	10 mm		35 mm	7,8 mm	1.4305	11,3 mm a 12 mm	**PKG1/4-D8-C12**
	12 mm	19 mm	34 mm	9 mm	1.4305	15 mm	**PKG1/4-D9-C15**
M10 x 1	12 mm	17 mm	32 mm	7 mm	1.4305	11,3 mm a 12 mm	**PKM10x1-D7-C12**
M10 x 1,5	12 mm	17 mm	32 mm	7 mm	1.4305	11,3 mm a 12 mm	**PKM10x1.5-D7-C12**
M12 x 1	12 mm	17 mm	32 mm	9 mm	1.4305	12 mm	**PKM12x1-D9-C12**
						15 mm	**PKM12x1-D9-C15**
M12 x 1,5	12 mm	17 mm	32 mm	7 mm	1.4305	11,3 mm a 12 mm	**PKM12x1,5-D7-C12**
				9 mm	1.4305	12 mm	**PKM12x1,5-D9-C12**
M12 x 1,5	15 mm	17 mm	40 mm	7,8 mm	1.4305	11,3 mm a 12 mm	**PKM12x1,5-D8-C12**
M12 x 1,75	12 mm	17 mm	32 mm	7 mm	1.4305	12 mm	**PKM12x1,75-D7-C12**
				9 mm	1.4305	12 mm	**PKM12x1,75-D9-C12**
M14 x 1,5	12 mm	19 mm	34 mm	9 mm	1.4305	15 mm	**PKM14x1,5-D9-C15**

Notes:

For compatibility with the temperature sensor, selection according to the following criteria is necessary:

1) bayonet adaptor diameter D must be at least 1 mm larger than the diameter of sensor stem

2) bayonet cap must be compatible with bayonet adaptor as per Table PK.1 (byonet cap compatibility C)

Approximate weight of the product: PKG1/4-D7-C12 ... ~ 50 g

Installation And Operating Instructions

Screw in the bayonet adaptor ② in place of measurement. Install the temperature sensor equipped with bayonet cap ① into the adaptor and turn the cap to secure it.

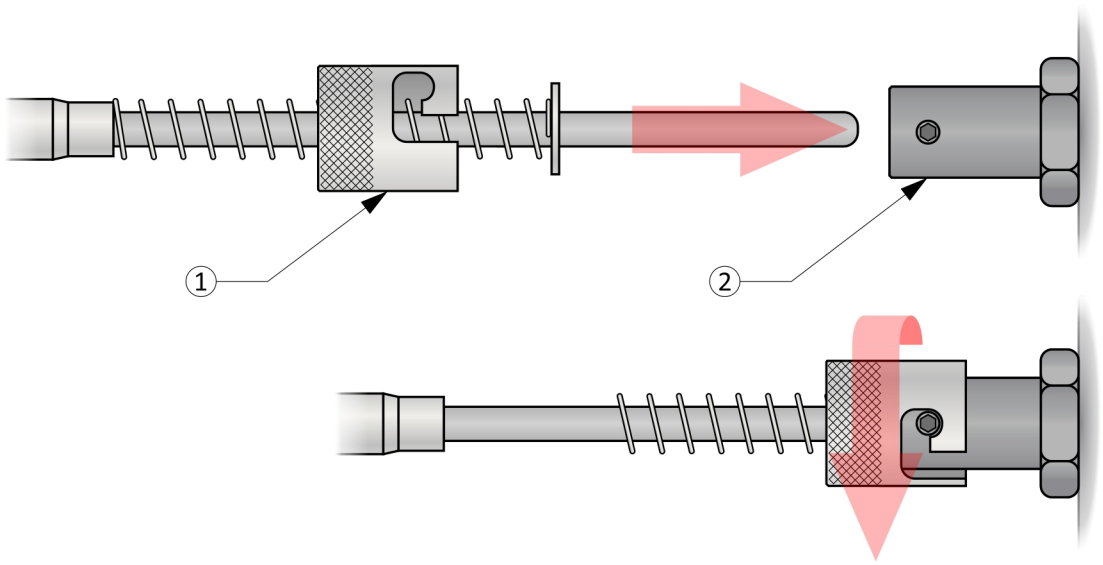


Figure PK.2: Mounting in bayonet adapor

PR

FLANGES FOR TEMPERATURE SENSORS

The flanges are available in several sizes according to the dimensions of the protective tubes of the temperature sensors. They consist of an upper and a lower flange, which are connected to each other by two screws. The upper flange is equipped with a clamp for mounting the sensor protection tube, the lower flange is internally sealed and can be welded to the wall or housing of the process equipment.

Flanges with glass ceramic insulating cord UP

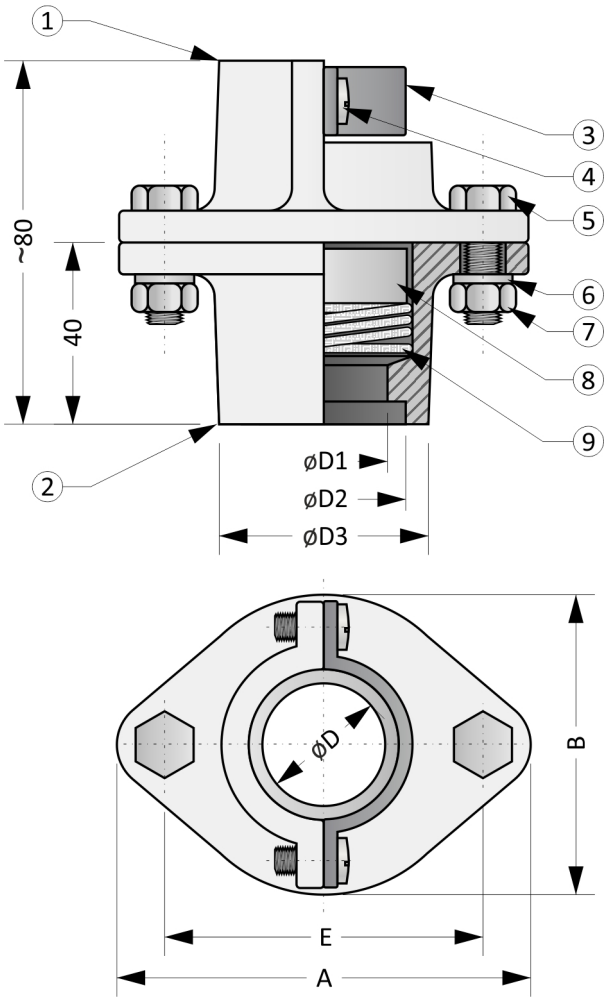


Figure PR.1: Flange with glass ceramic insulating cord

	Item	Material
①	Upper flange	Tempered cast iron with aluminium coating
②	Lower flange	
③	Clamp	Aluminium coated steel
④	Bolt M6 (2 pcs)	Steel
⑤	Bolt M8 (2 pcs)	
⑥	Washer 8 (2 pcs)	
⑦	Nut M8 (2 pcs)	
⑧	Insert	Galvanized steel
⑨	Seal	Glass ceramic insulating cord

Flange dimensions (Table PR.1)

øD (Nominal / actual)	øD1 (Nominal / actual)	øD2	øD3	A	B	E
14 mm/ 15 mm	14 mm/ 17 mm	28 mm	34 mm	75 mm	50 mm	55 mm
22 mm/ 24 mm	22 mm/ 24 mm	36 mm	45 mm	90 mm	65 mm	70 mm
32 mm/ 33 mm	26 mm/ 28 mm	36 mm	45 mm	90 mm	65 mm	70 mm

Optional Parameters Including the Creation of an Order Code (Table PR.2)

Pos.	Code	UP❶❷
❶	**Nominal diameter øD**	
	14	øD = 14 mm
	22	øD = 22 mm
	32	øD = 32 mm
❷	**Design**	
		Complete - upper and lower flange
	A	Upper flange - includes parts ①, ③ a ④
	B	Lower flange - includes parts ②, ⑤, ⑥, ⑦, ⑧ a ⑨

Order code example: UP22

... Nominal diameter øD = 22 mm

... Complete - upper and lower flange

Approximate weight of the product: UP22 ... ~ 750 g

Flanges with teflon seal UP..G

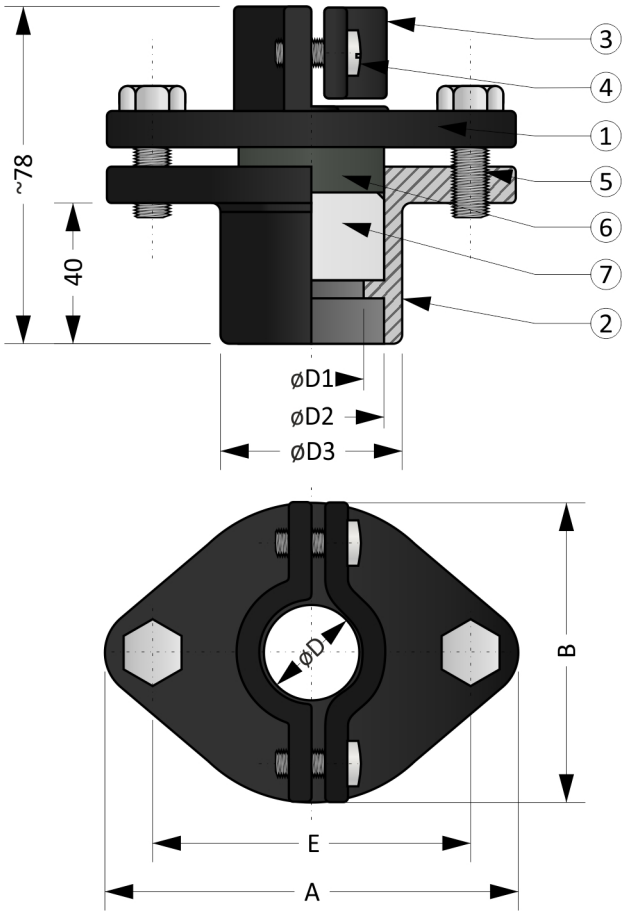


Figure PR.2: Flange UP..G

	Item	Material
①	Upper flange	Cast iron with black powder coating
②	Lower flange	
③	Clamp	
④	Bolt M6 (2 pcs)	Steel
⑤	Bolt M8 (2 pcs)	
⑥	Insert	
⑦	Seal	Teflon ring

Flange dimensions (Table PR.3)

øD	øD1	øD2	øD3	A	B	E
14 mm	16 mm	26 mm	35 mm	73 mm	49 mm	55 mm
15 mm	16 mm	26 mm	35 mm	73 mm	49 mm	55 mm
22 mm	23 mm	32 mm	40 mm	88 mm	64 mm	70 mm
32 mm	33 mm	42 mm	50 mm	88 mm	64 mm	70 mm

Optional Parameters Including the Creation of an Order Code (Table PR.4)

Pos.	Code	UP❶❷G
❶	**Nominal diameter øD**	
	14	øD = 14 mm
	15	øD = 15 mm
	22	øD = 22 mm
	32	øD = 32 mm
❷	**Design**	
		Complete - upper and lower flange
	A	Upper flange - includes parts ①, ③ a ④
	B	Lower flange - includes parts ②, ⑤, ⑥ a ⑦

Order code example: UP14G
... Nominal diameter øD = 14 mm
... Complete - upper and lower flange

Approximate weight of the product: UP14G ... ~ 500 g

Installation And Operating Instructions

Installation of the flange is carried out by welding the lower flange into the wall of the technological equipment. The sensor can be moved after loosening two bolts, which allows the desired sensor immersion to be set.

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UPV

MOUNTING BRACKETS FOR TEMPERATURE SENSORS

Mounting brackets (holders) are used to secure the temperature sensors against pulling out or loosening from the measuring point.

The maximum diameter of the sensor stem is 8 mm for type UPV1 and 6 mm for type UPV2.

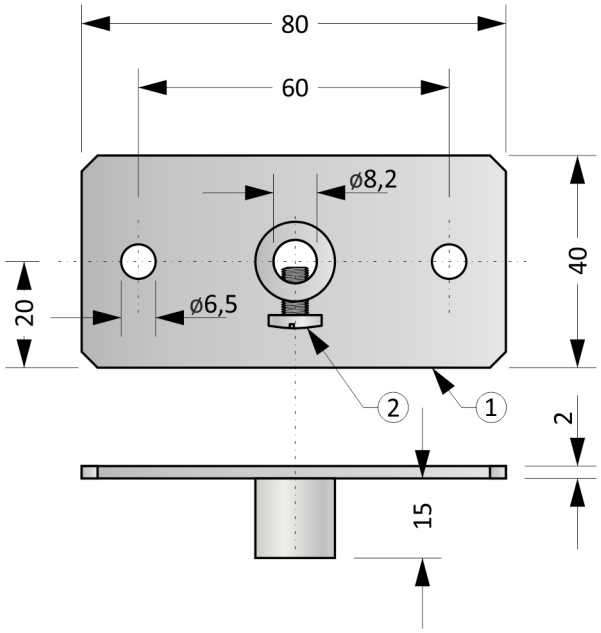


Figure UPV.1: UPV1

	Item	Material
①	Bracket	Steel electroplated nickel
②	Screw	Galvanized steel

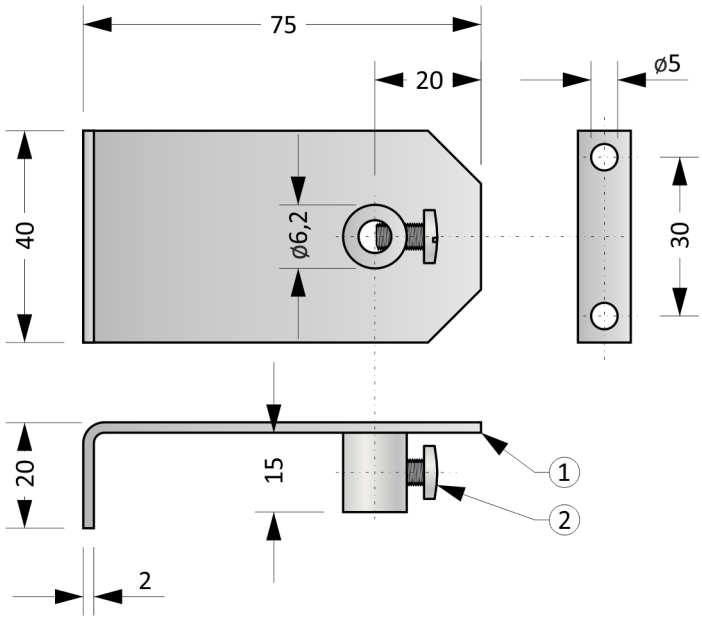


Figure UPV.2: UPV2

Optional Parameters Including the Creation of an Order Code (Table UPV.1)

Code	Popis
UPV1	Mounting bracket according to Figure UPV.1
UPV2	Mounting bracket according to Figure UPV.2

Note:

Approximate weight of the product: UPV1 ... ~ 60 g

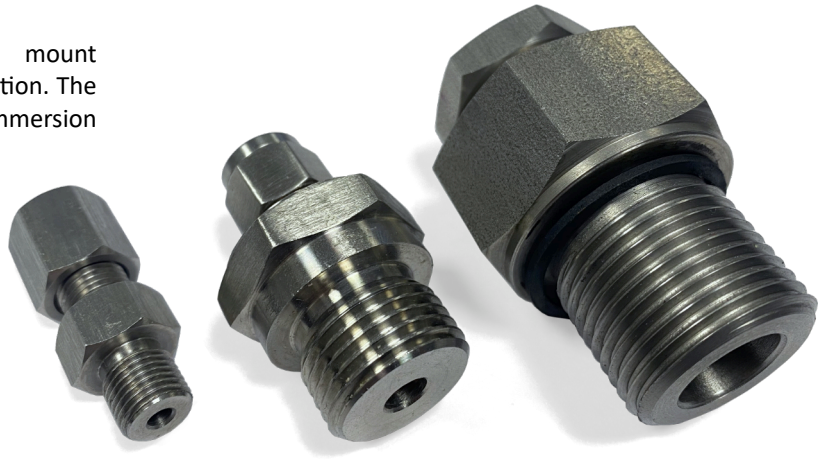
Installation And Operating Instructions

The mounting bracket is fixed with screws (screws not included) to the measuring place. The temperature sensor is then fixed in the mounting bracket with a screw.

PS

COMPRESSION FITTINGS FOR TEMPERATURE SENSORS

The compression fittings are used to mount temperature sensors in the measurement position. The advantage is the possibility of adjusting the immersion during installation.



Overview of Compression Fittings (Table PS.1)

	Oval stainless steel ferrule	„C“ type stainless steel ferrule	Silon ferrule	PTFE ferrule	Notch ferrule
Sensor stem diameter	1,5 ... 8,0 mm	3,0 ... 6,0 mm	14 mm, 22 mm	1,0 ... 14,0 mm	1,0 ... 14,0 mm
Max. temperature	500 °C	500 °C	200 °C	200 °C	500 °C
Max. pressure	1 bar	-	1 bar	7 bar @100 °C 1 bar @200 °C	40 bar @100 °C 3 bar @500 °C
Robust design	YES	YES	NO	NO	YES
Repeatability of mounting	NO	YES	YES	NO	NO

Installation And Operating Instructions

The compression fitting is attached to the sensor stem and fixed in position by tightening the nut. The whole assembly is then screwed into the threaded weld-on piece.

Compression fittings with oval ferrule (Table PS.2)

	Item	Material
①	Nut	Stainless steel
②	Ferrule	Stainless steel
③	Fitting	Stainless steel

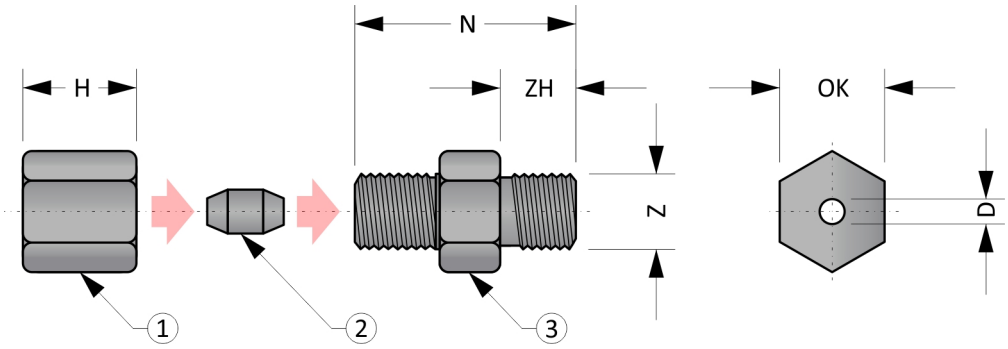


Figure PS.1: Compression fitting with oval ferrule

Optional Parameters Including the Creation of an Order Code (Table PS.3)

Thread Z	Thread length ZH	WAF OK	Length N	Length H	Nominal diameter D	Code
M8 x 1	8 mm	10 mm	24 mm	12 mm	1,5 mm	**PS15-NN-8M1**
					2,0 mm	**PS2-NN-8M1**
					3,0 mm	**PS3-NN-8M1**
M10 x 1	10 mm	14 mm	29 mm	15 mm	3,0 mm	**PS3-NN-10M1**
					4,5 mm	**PS45-NN-10M1**
					6,0 mm	**PS6-NN-10M1**
M12 x 1	10 mm	17 mm	28 mm	13 mm	8,0 mm	**PS8-NN-12M1**

Note:

Approximate weight of the product: PS3-NN-10M1 ... ~ 30 g

Compression fittings with C-type ferrule (Table PS.4)

	Item	Material
①	Nut	Stainless steel
②	Ferrule	Stainless steel
③	Fitting	Stainless steel

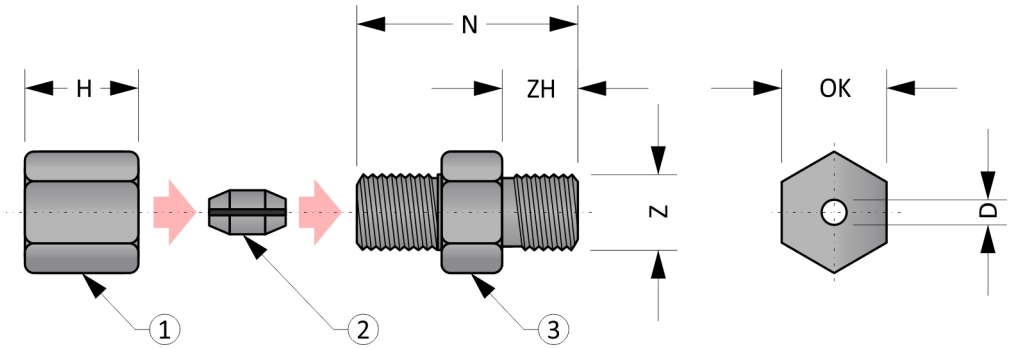


Figure PS.2: Compression fitting with C-type ferrule

Optional Parameters Including the Creation of an Order Code (Table PS.5)

Thread Z	Thread length ZH	WAF OK	Length N	Length H	Nominal diameter D	Code
M8 x 1	8 mm	14 mm	24 mm	15 mm	3,0 mm	**PS3-NNC14-8M1**
M10 x 1	10 mm	14 mm	24 mm	15 mm	3,0 mm	**PS3-NNC-10M1**
					4,5 mm	**PS45-NNC-10M1**
					6,0 mm	**PS6-NNC-10M1**

Note:

Approximate weight of the product: PS3-NNC-10M1 ... ~ 30 g

Compression fittings with silon ferrule (Table PS.6)

	Item	Material
①	Nut	Stainless steel
②	Ferrule	Silon
③	Fitting	Stainless steel
④	Washer	Steel

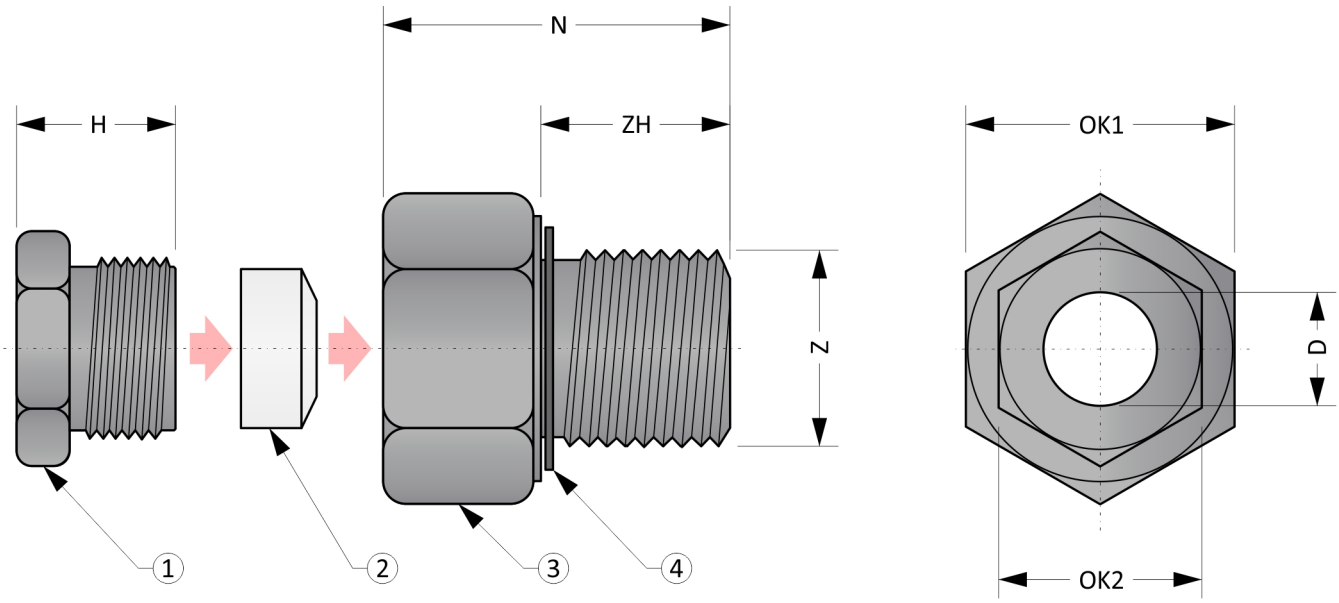


Figure PS.3: Compression fitting with silon ferrule

Optional Parameters Including the Creation of an Order Code (Table PS.7)

Thread Z	Thread length ZH	WAF OK1	Length N	Length H	WAF OK2	Nominal diameter D	Code
M27 x 2	24 mm	36 mm	46 mm	21 mm	27 mm	14,0 mm	**PS14-NT-27M2**
M33 x 2	30 mm	41 mm	81 mm	38 mm	36 mm	22,0 mm	**PS22-NT-33M2**

Note:

Approximate weight of the product: PS14-NT-27M2 ... ~ 230 g

Compression fittings with Teflon ferrule (Table PS.8)

	Item	Material
①	Nut	Stainless steel
②	Ferrule	Teflon PTFE
③	Fitting	Stainless steel

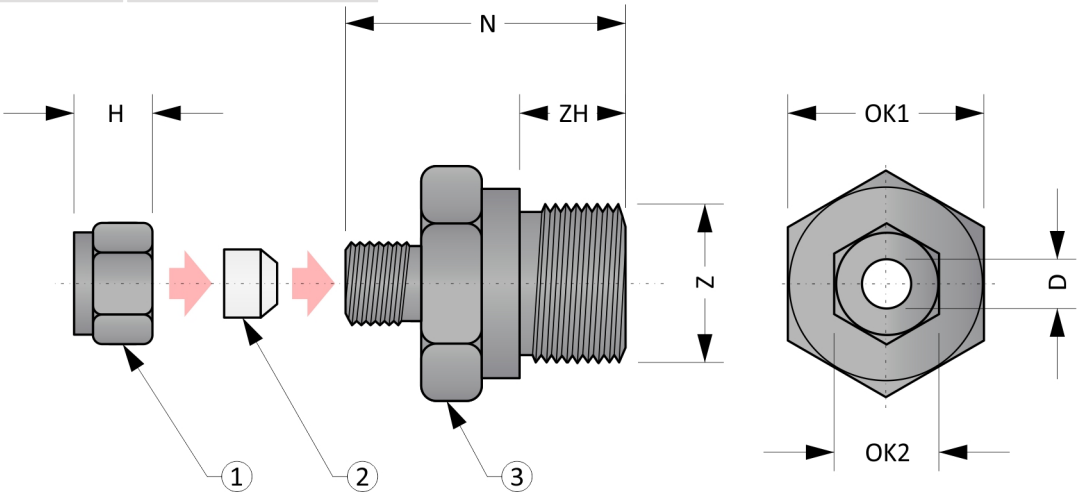


Figure PS.4: Compression fitting with Teflon ferrule

Optional Parameters Including the Creation of an Order Code (Table PS.9)

Thread Z	Thread length ZH	WAF OK1	Length N	Length H	WAF OK2	Nominal diameter D	Code
M8 x 1	7,5 mm	13,6 mm	22 mm	8 mm	7,9 mm	1,0 mm	**PF10-NT-8M1**
						1,5 mm	**PF15-NT-8M1**
			21 mm	8 mm	7,9 mm	2,0 mm	**PF20-NT-8M1**
			25 mm	12 mm	11,2 mm	3,0 mm	**PF30-NT-8M1**
					12,7 mm	4,5 mm	**PF45-NT-8M1**
M20 x 1,5	11,2 mm	24,5 mm	32,7 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NT-20M15**
				13,5 mm	16,0 mm	8,0 mm	**PF80-NT-20M15**
				17,5 mm	22,2 mm	11,0 mm	**PF11-NT-20M15**
					25,4 mm	14,0 mm	**PF14-NT-20M15**
G¼“	11,2 mm	19,1 mm	28,6 mm	12 mm	11,1 mm	3,0 mm	**PF30-NT-14G**
			29,5 mm	12 mm	12,7 mm	4,5 mm	**PF45-NT-14G**
			30,5 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NT-14G**
			31,2 mm	13,5 mm	15,8 mm	8,0 mm	**PF80-NT-14G**
G⅜“	11,1 mm	22,2 mm	29,5 mm	12,0 mm	11,1 mm	3,0 mm	**PF30-NT-38G**
			30,4 mm	12,0 mm	12,7 mm	4,5 mm	**PF45-NT-38G**
			31,4 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NT-38G**
			32,1 mm	13,5 mm	15,8 mm	8,0 mm	**PF80-NT-38G**

Continuation of table PS.9 on the next page

Continuation of table PS.9 from the previous page

Thread Z	Thread length ZH	WAF OK1	Length N	Length H	WAF OK2	Nominal diameter D	Code
G½“	14,2 mm	27,0 mm	36,5 mm	12,0 mm	12,7 mm	4,5 mm	**PF45-NT-12G**
			37,5 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NT-12G**
			38,2 mm	13,5 mm	15,8 mm	8,0 mm	**PF80-NT-12G**
			39,5 mm	17,5 mm	22,2 mm	11,0 mm	**PF11-NT-12G**
			39,8 mm	17,5 mm	25,4 mm	14,0 mm	**PF14-NT-12G**
G¾“	16,0 mm	31,8 mm	41,5 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NT-34G**
			42,2 mm	13,5 mm	14,8 mm	8,0 mm	**PF80-NT-34G**

Note:

Approximate weight of the product: PF45-NT-12G ... ~ 100 g

Compression fittings with notch ferrule (Table PS.10)

	Item	Material
①	Nut	Stainless steel
②	Notch ferrule	Stainless steel
③	Fitting	Stainless steel

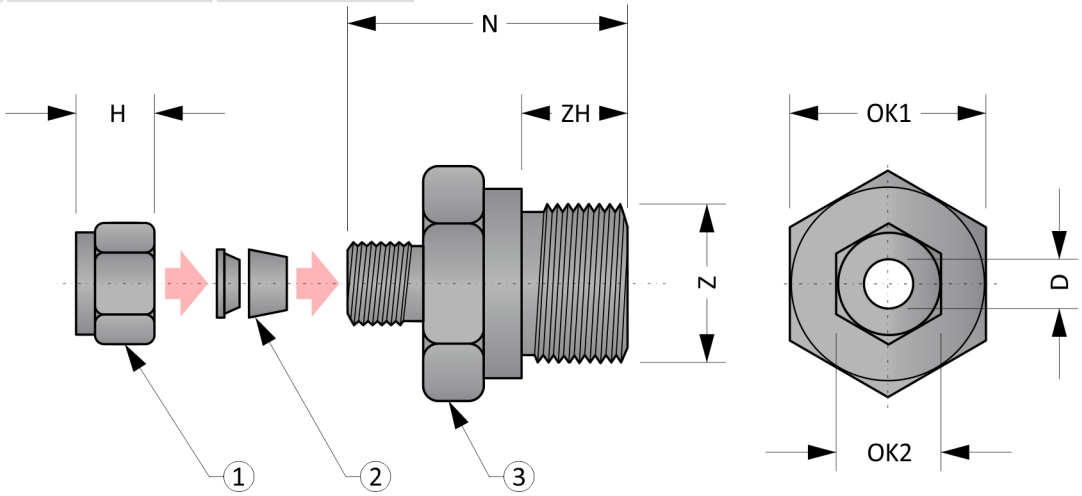


Figure PS.5: Compression fitting with notch ferrule

Optional Parameters Including the Creation of an Order Code (Table PS.11)

Thread Z	Thread length ZH	WAF OK1	Length N	Length H	WAF OK2	Nominal diameter D	Code
M8 x 1	7,5 mm	13,6 mm	22 mm	8 mm	7,9 mm	1,0 mm	**PF10-NN-8M1**
						1,5 mm	**PF15-NN-8M1**
			21 mm	8 mm	7,9 mm	2,0 mm	**PF20-NN-8M1**
			25 mm	12 mm	11,2 mm	3,0 mm	**PF30-NN-8M1**
					12,7 mm	4,5 mm	**PF45-NN-8M1**
M20 x 1,5	11,2 mm	24,5 mm	32,7 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NN-20M15**
				13,5 mm	16,0 mm	8,0 mm	**PF80-NN-20M15**
				17,5 mm	22,2 mm	11,0 mm	**PF11-NN-20M15**
					25,4 mm	14,0 mm	**PF14-NN-20M15**
G¼“	11,2 mm	19,1 mm	28,6 mm	12 mm	11,1 mm	3,0 mm	**PF30-NN-14G**
			29,5 mm	12 mm	12,7 mm	4,5 mm	**PF45-NN-14G**
			30,5 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NN-14G**
			31,2 mm	13,5 mm	15,8 mm	8,0 mm	**PF80-NN-14G**
G⅜“	11,1 mm	22,2 mm	29,5 mm	12,0 mm	11,1 mm	3,0 mm	**PF30-NN-38G**
			30,4 mm	12,0 mm	12,7 mm	4,5 mm	**PF45-NN-38G**
			31,4 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NN-38G**
			32,1 mm	13,5 mm	15,8 mm	8,0 mm	**PF80-NN-38G**

Continuation of table PS.11 on the next page

Continuation of table PS.11 from the previous page

Thread Z	Thread length ZH	WAF OK1	Length N	Length H	WAF OK2	Nominal diameter D	Code
G½“	14,2 mm	27,0 mm	35,6 mm	12,0 mm	11,1 mm	3,0 mm	**PF30-NN-12G**
			36,5 mm	12,0 mm	12,7 mm	4,5 mm	**PF45-NN-12G**
			37,5 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NN-12G**
			38,2 mm	13,5 mm	15,8 mm	8,0 mm	**PF80-NN-12G**
			39,5 mm	17,5 mm	22,2 mm	11,0 mm	**PF11-NN-12G**
			39,8 mm	17,5 mm	25,4 mm	14,0 mm	**PF14-NN-12G**
G¾“	16,0 mm	31,8 mm	41,5 mm	12,7 mm	14,2 mm	6,0 mm	**PF60-NN-34G**
			42,2 mm	13,5 mm	14,8 mm	8,0 mm	**PF80-NN-34G**

Note:

Approximate weight of the product: PF45-NN-12G ... ~ 100 g

Spare ferrules (Table PS.12)

Material / type	WAF OK (OK1)	Nominal diameter D	Code
 Oval ferrule (Stainless steel)	10 mm	1,5 mm	**PSO-N-1.5**
		2,0 mm	**PSO-N-2.0**
		3,0 mm	**PSO-N1-3.0**
	14 mm	3,0 mm	**PSO-N2-3.0**
		4,5 mm	**PSO-N-4.5**
		6,0 mm	**PSO-N-6.0**
	17 mm	8,0 mm	**PSO-N-8.0**
 C-type ferrule (Stainless steel)	10 mm	3,0 mm	**PSOC-N1-3.0**
	14 mm	3,0 mm	**PSOC-N2-3.0**
		4,5 mm	**PSOC-N-4.5**
		6,0 mm	**PSOC-N-6.0**
 Silon ferrule (silon)	36 mm	14,0 mm	**PSO-S-14**
		22,0 mm	**PSO-S-22**
 Double notch ferrule (Stainless steel)	-	3,0 mm	**PFO-ND-3.0**
		4,5 mm	**PFO-ND-4.5**
		6,0 mm	**PFO-ND-6.0**
		8,0 mm	**PFO-ND-8.0**
		11,0 mm	**PFO-ND-11.0**
		14,0 mm	**PFO-ND-14.0**
 Single notch ferrule (Stainless steel)	-	1,0 mm	**PFO-N-1.0**
		1,5 mm	**PFO-N-1.5**
		2,0 mm	**PFO-N-2.0**
		3,0 mm	**PFO-N-3.0**
		4,5 mm	**PFO-N-4.5**
		6,0 mm	**PFO-N-6.0**
		8,0 mm	**PFO-N-8.0**
		11,0 mm	**PFO-N-11.0**
		14,0 mm	**PFO-N-14.0**

Note:

Approximate weight of the product: PSO-N1-3.0 ... ~ 5 g

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TP

PRECIOUS METAL THERMOCOUPLES

Precious metal thermocouples are intended for use in MTC1, MTC1C, MTC1L, MTC1KD, MTC2, MTC2C, MTC2L, MTC4S, MTC5A, MTC5MA, MTC5LA, MTC6A, MTC6LA, MTC6MA, MTC6S and MTC7BM assembly as a measuring element.

The output signal of thermoucouple is a thermoelectric voltage, the value of which is according to the ČSN EN 60584-1 ed. 2.

Figure TP.1: Thermocouple

Optional Parameters Including the Creation of an Order Code (Table TP.1)

Pos.	Code	TP - ❶ - ❷
❶	**Thermocouple type**	
	S035	Thermocouple type „S“, wire diameter 0,35 mm, accuracy class 1 acc. ČSN EN 60584-1 ed. 2
	S05	Thermocouple type „S“, wire diameter 0,5 mm, accuracy class 1 acc. ČSN EN 60584-1 ed. 2
	R05	Thermocouple type „R“, wire diameter 0,5 mm, accuracy class 1 acc. ČSN EN 60584-1 ed. 2
	B05	Thermocouple type „B“, wire diameter 0,5 mm, accuracy class 2 acc. ČSN EN 60584-1 ed. 2
❷	**Thermocouple length T [mm]**	
	xxx	Selectable range from 50 (in 1 mm increments)

Order code example: TP-S05-870

... Thermocouple type „S“, wire diameter 0,5 mm, accuracy class 1

... Thermocouple length T = 870 mm

Approximate weight of the product: TP-S05-870 ... < 10 g

Maximum operating temperature of thermocouples (Table TP.2)

Thermocouple type	Recommended	With limited lifetime
„S“, wire dia. 0,5 mm	< 1400 °C	< 1600 °C
„S“, wire dia. 0,35 mm	< 1300 °C	< 1400 °C
„B“, wire dia. 0,5 mm	< 1500 °C	< 1700 °C
„R“, wire dia. 0,5 mm	< 1400 °C	< 1600 °C

Notes: Operating temperatures are related to temperature measurement in a chemically inert environment. The values are determined empirically.

Minimum thermocouple lengths in assemblies (Table TP.3)

Thermocouple assembly	Thermocouple length T [mm]
MTC1	N + 70
MTC1C	N + 70
MTC1KD	N + 70
MTC1L	N + 70
MTC2	N + 70
MTC2C	N + 70
MTC2L	N + 70
MTC4S	N + 80
MTC5A	N + 80
MTC5LA	N + 80
MTC5MA	N + 40
MTC6A	N + 80
MTC6LA	N + 80
MTC6MA	N + 40
MTC6S	N + 80
MTC7BM	N + 70

Notes: „N“ is the nominal length of the thermoucouple assembly.

TPO

BASE METAL THERMOCOUPLES

Base metal thermocouples are intended for use in MTC assemblies or stand-alone.

The output signal of thermoucouple is a thermoelectric voltage, the value of which is according to the ČSN EN 60584-1 ed. 2.

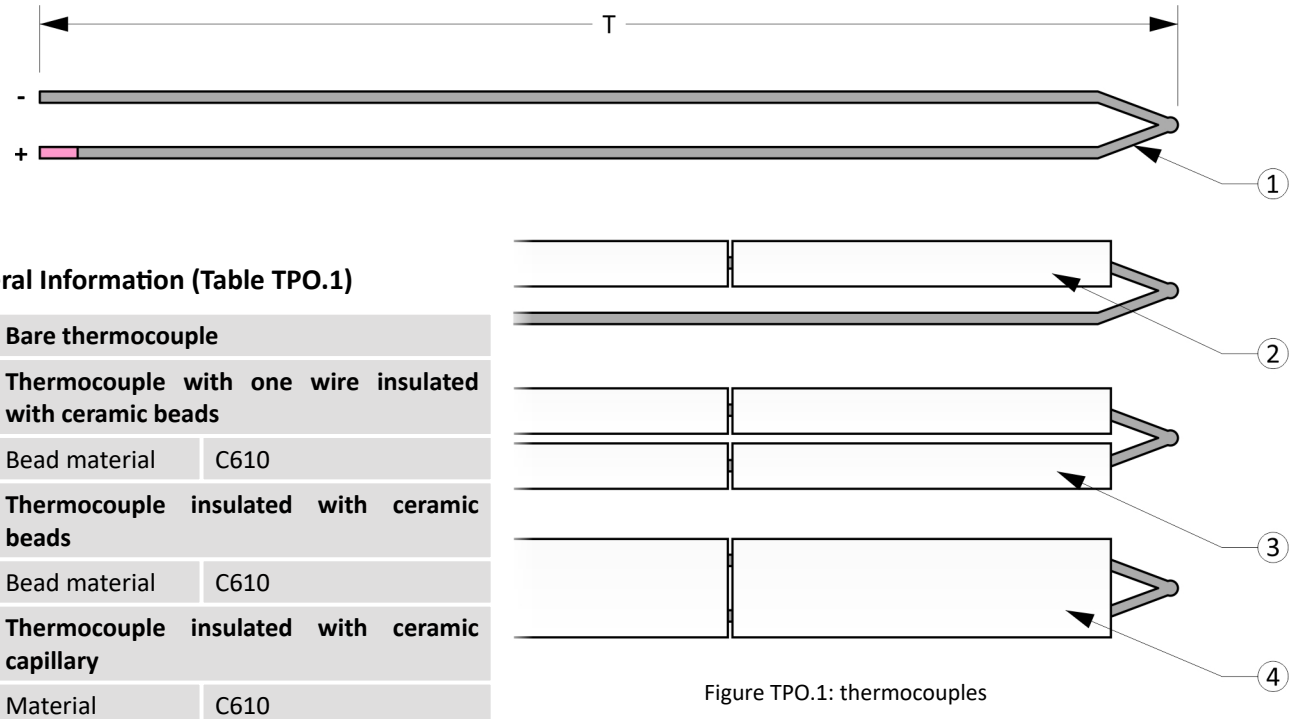

Figure TPO.1: thermocouples

General Information (Table TPO.1)

①	**Bare thermocouple**	
②	**Thermocouple with one wire insulated with ceramic beads**	
	Bead material	C610
③	**Thermocouple insulated with ceramic beads**	
	Bead material	C610
④	**Thermocouple insulated with ceramic capillary**	
	Material	C610

Optional Parameters Including the Creation of an Order Code (Table TPO.1)

Pos.	Code	**TPO - ❶ - ❷ - ❸**
❶	**Thermocouple type**	
	N13	Thermocouple type „N“, wire diameter 1,3 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	N30	Thermocouple type „N“, wire diameter 3,0 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	K05	Thermocouple type „K“, wire diameter 0,5 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	K10	Thermocouple type „K“, wire diameter 1,0 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	K138	Thermocouple type „K“, wire diameter 1,38 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	K15	Thermocouple type „K“, wire diameter 1,5 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	K20	Thermocouple type „K“, wire diameter 2,0 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	K30	Thermocouple type „K“, wire diameter 3,0 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	J10	Thermocouple type „J“, wire diameter 1,0 mm, accuracy class according to ČSN EN 60584-1 ed. 2
	J30	Thermocouple type „J“, wire diameter 3,0 mm, accuracy class according to ČSN EN 60584-1 ed. 2
❷	**Length T [mm]**	
	xxx	Selectable range from 60 to 4500 mm (in 1 mm increments)
	xxx	Selectable range from 4501 (in 100 mm increments)

Continuation of table TPO.2 on the next page

Continuation of table TPO.2 from the previous page

Pos.	Code	TPO - ❶ - ❷ - ❸	
❸	Insulation design		
	0	Bare thermocouple	
	1	Thermocouple with one wire insulated with ceramic beads ø2,7/1,7 x 50 mm	Wire dia. ≤ 1 mm.
	2	Thermocouple insulated with ceramic beads ø2,7/1,7 x 50 mm	Wire dia. ≤ 1 mm.
	3	Thermocouple with one wire insulated with ceramic beads ø4,0/2,0 x 50 mm	Wire dia. 1 < ø ≤ 1,5 mm.
	4	Thermocouple insulated with ceramic beads ø4,0/2,0 x 50 mm	Wire dia. 1 < ø ≤ 1,5 mm.
	5	Thermocouple with one wire insulated with ceramic beads ø6,0/4,0 x 50 mm	Wire dia. 1,5 < ø ≤ 3,0 mm.
	6	Thermocouple insulated with ceramic beads ø6,0/4,0 x 50 mm	Wire dia. 1,5 < ø ≤ 3,0 mm.
	7	Thermocouple insulated with ceramic capillary ø8,0 x 50 mm, bores 2 x ø2,0 mm	Wire dia. ≤ 1,5 mm.
	8	Thermocouple insulated with ceramic capillary ø8,5 x 50 mm, bores 4 x ø1,8 mm	Wire dia. ≤ 1,0 mm.
	9	Thermocouple insulated with ceramic capillary ø13 x 50 mm, bores 4 x ø4,0 mm	Wire dia. 1,5 < ø ≤ 3,0 mm.

Order code example: TPO-K138-870-1

... Thermocouple type „K“, wire diameter 1,38 mm, třída přesnosti 2

... Length T = 870 mm

... Bare thermocouple

Approximate weight of the product: TPO-K138-870-1 ... < 30 g

Maximum operating temperature of thermocouples (Table TPO.3)

Thermocouple type	Recommended	With limited lifetime
Thermocouple type „N“, wire diameter 1,3 mm	< 950 °C	< 1090 °C
Thermocouple type „N“, wire diameter 3,0 mm	< 1100 °C	< 1260 °C
Thermocouple type „K“, wire diameter 0,5 mm	< 650 °C	< 750 °C
Thermocouple type „K“, wire diameter 1,0 mm	< 870 °C	< 980 °C
Thermocouple type „K“, wire diameter 1,38 mm	< 900 °C	< 1020 °C
Thermocouple type „K“, wire diameter 1,5 mm	< 900 °C	< 1020 °C
Thermocouple type „K“, wire diameter 2,0 mm	< 940 °C	< 1060 °C
Thermocouple type „K“, wire diameter 3,0 mm	< 1000 °C	< 1150 °C
Thermocouple type „J“, wire diameter 1,0 mm	< 400 °C	< 520 °C
Thermocouple type „J“, wire diameter 3,0 mm	< 650 °C	< 760 °C

Notes: Operating temperatures are related to temperature measurement in a chemically inert environment. The values are determined empirically.

TCD

BARE THERMOCOUPLE WIRES OF BASE METAL

Bare thermocouple wires of base metal are always delivered in set - positive and negative wire.

Optional Parameters Including the Creation of an Order Code (Table TCD.1)

Thermocouple	Wire diameter	Code (positive wire)	Code (negative wire)
Type „J“	1,0 mm	**7963815**	**7963875**
	3,0 mm	**7963835**	**7963877**
Type „K“	0,5 mm	**7963809**	**7963810**
	1,0 mm	**7963817**	**7963818**
	1,38 mm	**7963819**	**7963820**
	1,5 mm	**7963823**	**7963824**
	2,0 mm	**7963829**	**7963830**
	3,0 mm	**7963837**	**7963838**
Type „N“	1,3 mm	**105210**	**105211**
	3,0 mm	**105230**	**105231**

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PV

TEMPERATURE SIGNAL TO UNIFIED OUTPUT TRANSMITTERS

Temperature sensors work on different physical principles and have different output signals that carry information about the measured temperature. The transmitters convert this information into a unified signal that is readable by most evaluation units. In addition, this unified signal is generally more resistant to external interference.

Figure PV.1: INOR transmitters

Head Mounted Transmitters (Table PV.1)

Type	Input	Output	Settings	Notes
INOR APAQ C130 TC	Thermocouple - B, E, J, K, N, R, S, T	4 ... 20 mA	INOR CONNECT (NFC)	
INOR APAQ C130 RTD	RTD	4 ... 20 mA	INOR CONNECT (NFC)	
INOR IPAQ C202	RTD	4 ... 20 mA	PC WIN ConSoft (ICON USB adaptér)	
INOR miniPAQ - HLP	Thermocouple - B, C, E, J, K, L, N, R, S, T, U RTD	4 ... 20 mA	PC WIN ConSoft (ICON USB adaptor)	
INOR IPAQ C330	Thermocouple - B, C, D, E, J, K, N, R, S, T RTD, mV	4 ... 20 mA, galvanically separated	PC WIN ConSoft (ICON USB adaptor) INOR CONNECT (NFC, Bluetooth®)	
INOR IPAQ C530	Thermocouple - B, C, D, E, J, K, N, R, S, T RTD, mV	4 ... 20 mA, HART, galvanically separated	INOR CONNECT (NFC, Bluetooth®) PC WIN ConSoft (ICON USB adaptor)	
INOR IPAQ C520	Thermocouple - B, C, D, E, J, K, N, R, S, T RTD, mV	4 ... 20 mA, HART, galvanically separated	PC WIN ConSoft (ICON USB adaptor)	2 inputs (redundance) SIL 2 certificate, ATEX

Note: Detailed information on the individual transmitters can be found in the respective datasheets.

DIN Rail Mounted Transmitters (Table PV.2)

Type	Input	Output	Settings	Notes
INOR APAQ R130 TC	Thermocouple - B, E, J, K, N, R, S, T	4 ... 20 mA	INOR CONNECT (NFC)	
INOR APAQ R130 RTD	RTD	4 ... 20 mA	INOR CONNECT (NFC)	
INOR IPAQ R202	RTD	4 ... 20 mA	PC WIN ConSoft (ICON USB adaptor)	
INOR miniPAQ-L	Thermocouple - B, C, E, J, K, L, N, R, S, T, U RTD	4 ... 20 mA	PC WIN ConSoft (ICON USB adaptor)	
INOR IPAQ R330	Thermocouple - B, C, D, E, J, K, N, R, S, T RTD, mV	4 ... 20 mA, galvanically separated	PC WIN ConSoft (ICON USB adaptor) INOR CONNECT (NFC, Bluetooth®)	
INOR IPAQ R530	Thermocouple - B, C, D, E, J, K, N, R, S, T RTD, mV	4 ... 20 mA, HART, galvanically separated	INOR CONNECT (NFC, Bluetooth®) PC WIN ConSoft (ICON USB adaptor)	
INOR IPAQ R520	Thermocouple - B, C, D, E, J, K, N, R, S, T RTD, mV	4 ... 20 mA, HART, galvanically separated	PC WIN ConSoft (ICON USB adaptor)	2 inputs (redundance) SIL 2 certificate, ATEX

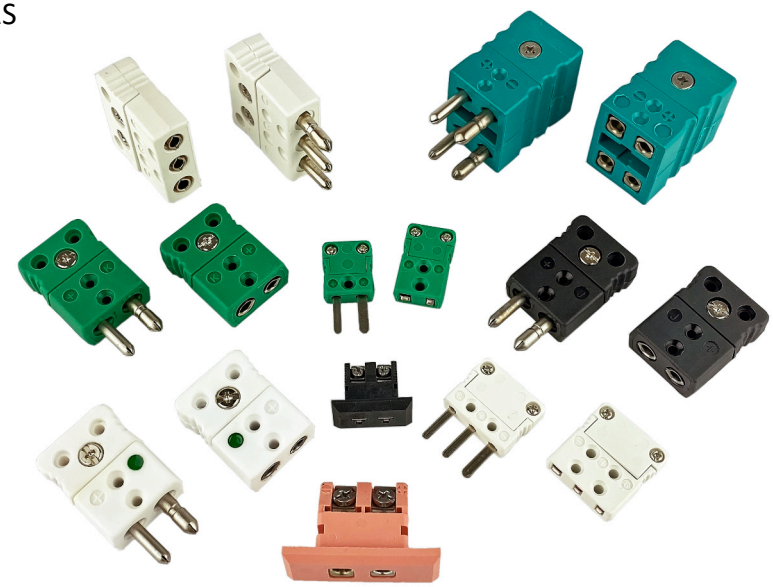
Note: Detailed information on the individual transmitters can be found in the respective datasheets.

MK

CONNECTORS FOR TEMPERATURE SENSORS

Connectors for temperature sensors allow easy and repeatable connection of temperature sensors and cables. Connector contact surface materials are selected to minimize measurement errors.

Two versions called "standard" with round pins and "mini" with flat pins are very common.



Design	Size	Number of pins	Distinctive feature
MTCK-S	standard	2	
MTCK-LS	standard	2	solid pins
MTCK-HS	standard	2	solid pins, higher temperature resistance
MTCK-CS	standard	2	ceramic body (higher temperature resistance)
MTCK-3S	standard	3	
MTCK-DS	standard	4	
MTCK-PSIFB	standard	2	panel socket
MTCK-PSITL	standard	3	panel socket
MTCK-M	miniature	2	
MTCK-HM	miniature	2	solid pins, higher temperature resistance
MTCK-CM	miniature	2	ceramic body (higher temperature resistance)
MTCK-3M	miniature	3	
MTCK-DM	miniature	4	
MTCK-PMIFB	miniature	2	panel socket
MTCK-PMITL	miniature	3	panel socket

Table MK.1: Overview

Standard connectors with two pins MTCK-S (Table MK.S.1)

Max. ambient temperature	+220 °C
Design of pins	hollow
Max. diameter of connected cable	8,0 mm
Max. diameter of connected wires	1,6 mm
Body material	plastic

Connector plug MTCK-SM (Table MK.S.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-SM-N**
Thermocouple type „K“	green	**MTCK-SM-K**
Thermocouple type „J“	black	**MTCK-SM-J**
Thermocouple type „T“	brown	**MTCK-SM-T**
Thermocouple type „R“ and „S“	orange	**MTCK-SM-S**
Thermocouple type „B“	grey	**MTCK-SM-B**
resistance thermometer - Cu wires	white	**MTCK-SM-Cu**

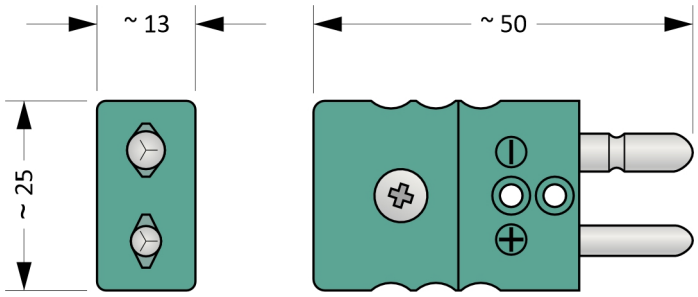


Figure MK.S.1: connector MTCK-SM-K

Connector socket MTCK-SF (Table MK.S.3)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-SF-N**
Thermocouple type „K“	green	**MTCK-SF-K**
Thermocouple type „J“	black	**MTCK-SF-J**
Thermocouple type „T“	brown	**MTCK-SF-T**
Thermocouple type „R“ and „S“	orange	**MTCK-SF-S**
Thermocouple type „B“	grey	**MTCK-SF-B**
resistance thermometer - Cu wires	white	**MTCK-SF-Cu**

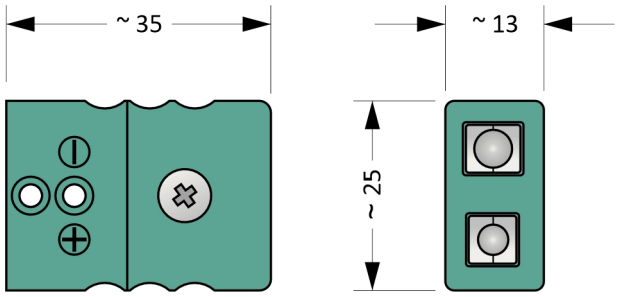


Figure MK.S.2: connector MTCK-SF-K

Standard connectors with two pins MTCK-LS (Table MK.LS.1)

Max. ambient temperature	+220 °C
Design of pins	solid
Max. diameter of connected cable	8,0 mm
Max. diameter of connected wires	1,6 mm
Body material	plastic

Connector plug MTCK-LSM (Table MK.LS.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-LSM-N**
Thermocouple type „K“	green	**MTCK-LSM-K**
Thermocouple type „J“	black	**MTCK-LSM-J**
Thermocouple type „T“	brown	**MTCK-LSM-T**
Thermocouple type „R“ and „S“	orange	**MTCK-LSM-S**
Thermocouple type „B“	grey	**MTCK-LSM-B**
resistance thermometer - Cu wires	white	**MTCK-LSM-Cu**

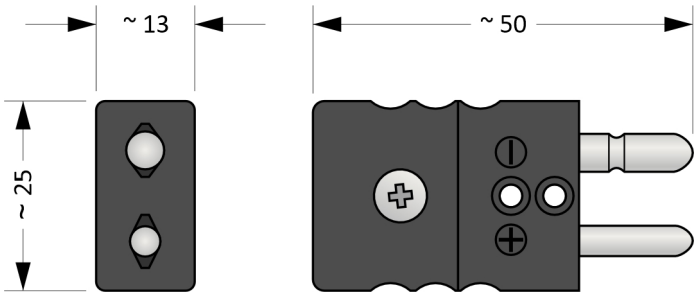


Figure MK.LS.1: connector MTCK-LSM-K

Connector socket MTCK-LSF (Table MK.LS.3)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-LSF-N**
Thermocouple type „K“	green	**MTCK-LSF-K**
Thermocouple type „J“	black	**MTCK-LSF-J**
Thermocouple type „T“	brown	**MTCK-LSF-T**
Thermocouple type „R“ and „S“	orange	**MTCK-LSF-S**
Thermocouple type „B“	grey	**MTCK-LSF-B**
resistance thermometer - Cu wires	white	**MTCK-LSF-Cu**

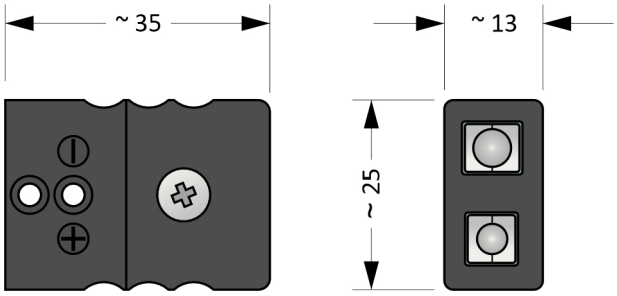


Figure MK.LS.2: connector MTCK-LSF-K

Standard connectors with two pins MTCK-HS (Table MK.HS.1)

Max. ambient temperature	+350 °C
Design of pins	solid
Max. diameter of connected cable	8,0 mm
Max. diameter of connected wires	1,6 mm
Body material	plastic

Connector plug MTCK-HSM (Table MK.HS.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-HSM-N**
Thermocouple type „K“	green	**MTCK-HSM-K**
Thermocouple type „J“	black	**MTCK-HSM-J**
Thermocouple type „T“	brown	**MTCK-HSM-T**
Thermocouple type „R“ and „S“	orange	**MTCK-HSM-S**
Thermocouple type „B“	grey	**MTCK-HSM-B**
resistance thermometer - Cu wires	white	**MTCK-HSM-Cu**

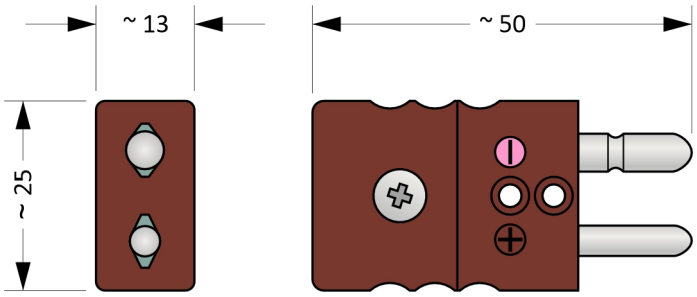


Figure MK.HS.1: connector MTCK-HSM-N

Connector socket MTCK-HSF (Table MK.HS.3)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-HSF-N**
Thermocouple type „K“	green	**MTCK-HSF-K**
Thermocouple type „J“	black	**MTCK-HSF-J**
Thermocouple type „T“	brown	**MTCK-HSF-T**
Thermocouple type „R“ and „S“	orange	**MTCK-HSF-S**
Thermocouple type „B“	grey	**MTCK-HSF-B**
resistance thermometer - Cu wires	white	**MTCK-HSF-Cu**

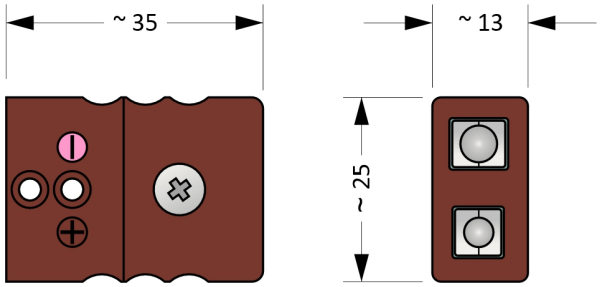


Figure MK.HS.2: connector MTCK-HSF-N

Standard connectors with two pins MTCK-CS (Table MK.CS.1)

Max. ambient temperature	+650 °C
Design of pins	hollow
Max. diameter of connected cable	8,0 mm
Max. diameter of connected wires	1,6 mm
Body material	ceramic

Connector plug MTCK-CSM (Table MK.CS.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-CSM-N**
Thermocouple type „K“	green	**MTCK-CSM-K**
Thermocouple type „J“	black	**MTCK-CSM-J**
Thermocouple type „T“	brown	**MTCK-CSM-T**
Thermocouple type „R“ and „S“	orange	**MTCK-CSM-S**
Thermocouple type „B“	grey	**MTCK-CSM-B**
resistance thermometer - Cu wires	white	**MTCK-CSM-Cu**

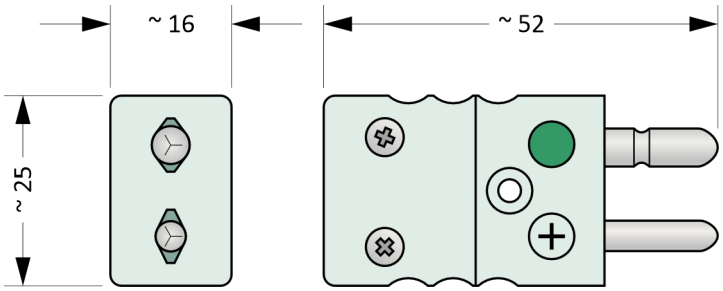


Figure MK.CS.1: connector MTCK-CSM-K

Connector socket MTCK-CSF (Table MK.CS.3)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-CSF-N**
Thermocouple type „K“	green	**MTCK-CSF-K**
Thermocouple type „J“	black	**MTCK-CSF-J**
Thermocouple type „T“	brown	**MTCK-CSF-T**
Thermocouple type „R“ and „S“	orange	**MTCK-CSF-S**
Thermocouple type „B“	grey	**MTCK-CSF-B**
resistance thermometer - Cu wires	white	**MTCK-CSF-Cu**

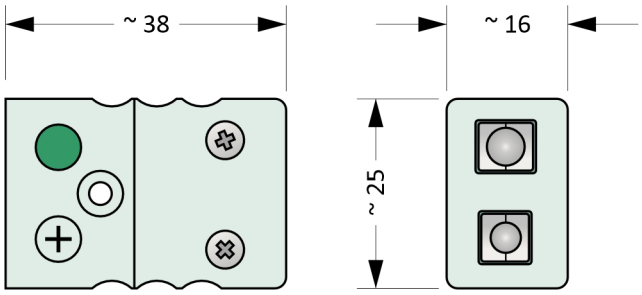
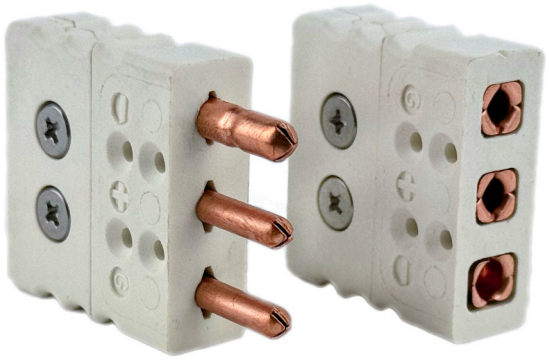


Figure MK.CS.2: connector MTCK-CSF-K

Standard connectors with three pins MTCK-3S (Table MK.3S.1)

Max. ambient temperature	+220 °C
Design of pins	hollow
Max. diameter of connected cable	8,0 mm
Max. diameter of connected wires	1,6 mm
Body material	plastic



Connector plug MTCK-3SM (Table MK.3S.2)

Design	Colour	Code
resistance thermometer - Cu wires	white	**MTCK-3SM-Cu**

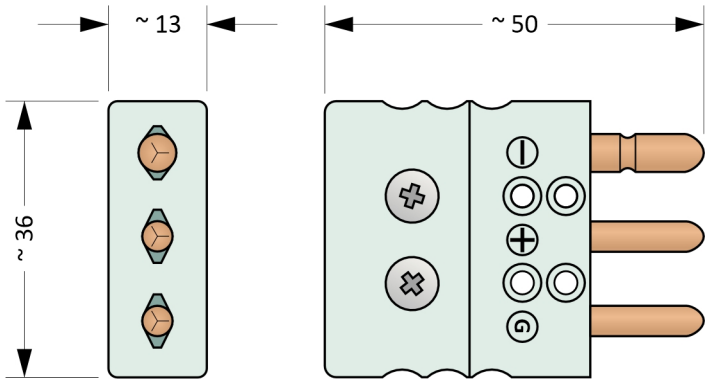


Figure MK.3S.1: connector MTCK-3SM-CU

Connector socket MTCK-3SF (Table MK.3S.3)

Design	Colour	Code
resistance thermometer - Cu wires	white	**MTCK-3SF-Cu**

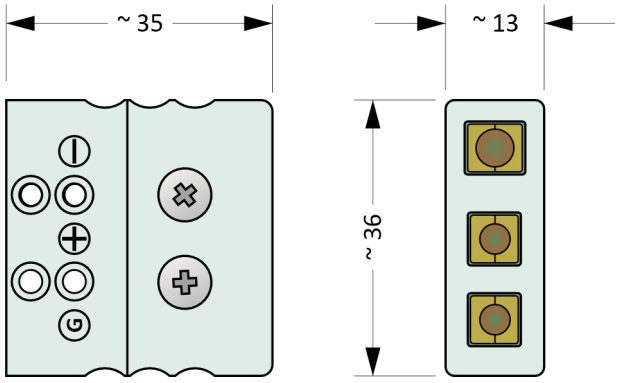
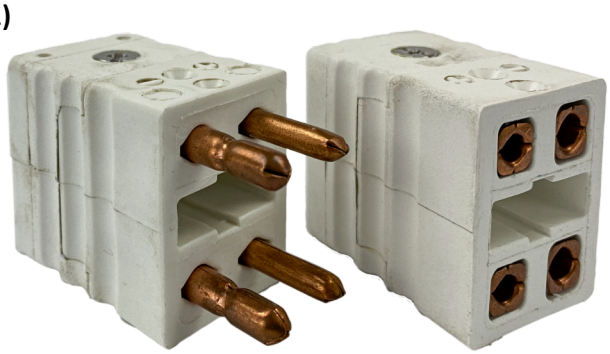


Figure MK.3S.2: connector MTCK-3SF-CU

Standard connectors with four pins MTCK-DS (Table MK.DS.1)

Max. ambient temperature	+220 °C
Design of pins	hollow
Max. diameter of connected cable	8,0 mm
Max. diameter of connected wires	1,6 mm
Body material	plastic



Connector plug MTCK-DSM (Table MK.DS.2)

Design	Colour	Code
2 x Thermocouple type „N“	pink	**MTCK-DSM-N**
2 x Thermocouple type „K“	green	**MTCK-DSM-K**
2 x Thermocouple type „J“	black	**MTCK-DSM-J**
2 x Thermocouple type „T“	brown	**MTCK-DSM-T**
2 x Thermocouple type „R“ and „S“	orange	**MTCK-DSM-S**
2 x Thermocouple type „B“	grey	**MTCK-DSM-B**
resistance thermometer - Cu wires	white	**MTCK-DSM-Cu**

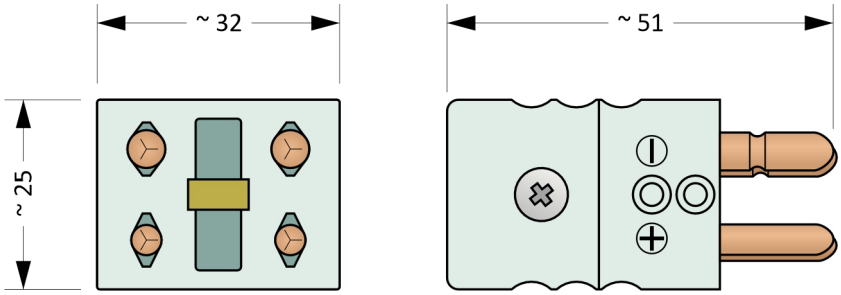


Figure MK.DS.1: connector MTCK-DSM-CU

Connector socket MTCK-DSF (Table MK.DS.3)

Design	Colour	Code
2 x Thermocouple type „N“	pink	**MTCK-DSF-N**
2 x Thermocouple type „K“	green	**MTCK-DSF-K**
2 x Thermocouple type „J“	black	**MTCK-DSF-J**
2 x Thermocouple type „T“	brown	**MTCK-DSF-T**
2 x Thermocouple type „R“ and „S“	orange	**MTCK-DSF-S**
2 x Thermocouple type „B“	grey	**MTCK-DSF-B**
resistance thermometer - Cu wires	white	**MTCK-DSF-Cu**

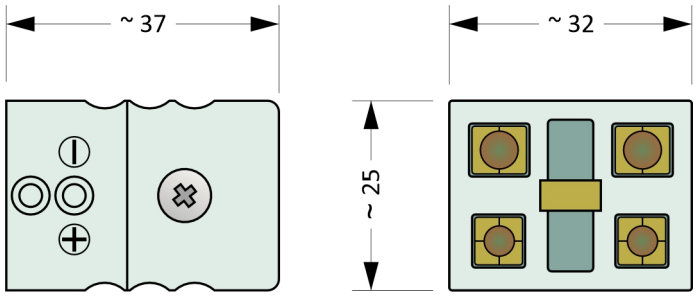
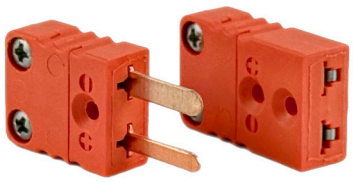


Figure MK.DS.2: connector MTCK-DSF-CU

Miniature connectors with two pins MTCK-M (Table MK.M.1)

Max. ambient temperature	+220 °C
Design of pins	flat
Max. diameter of connected cable	4,5 mm
Max. diameter of connected wires	0,6 mm
Body material	plastic



Connector plug MTCK-MM (Table MK.M.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-MM-N**
Thermocouple type „K“	green	**MTCK-MM-K**
Thermocouple type „J“	black	**MTCK-MM-J**
Thermocouple type „T“	brown	**MTCK-MM-T**
Thermocouple type „R“ and „S“	orange	**MTCK-MM-S**
Thermocouple type „B“	grey	**MTCK-MM-B**
resistance thermometer - Cu wires	white	**MTCK-MM-Cu**

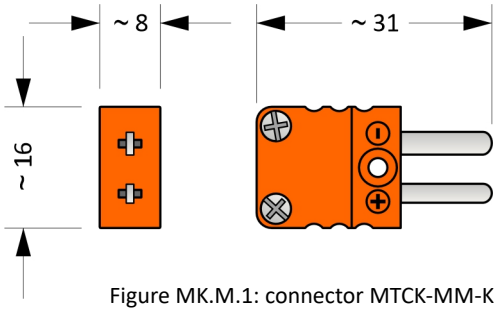


Figure MK.M.1: connector MTCK-MM-K

Connector socket MTCK-SF (Table MK.S.3)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-MF-N**
Thermocouple type „K“	green	**MTCK-MF-K**
Thermocouple type „J“	black	**MTCK-MF-J**
Thermocouple type „T“	brown	**MTCK-MF-T**
Thermocouple type „R“ and „S“	orange	**MTCK-MF-S**
Thermocouple type „B“	grey	**MTCK-MF-B**
resistance thermometer - Cu wires	white	**MTCK-MF-Cu**

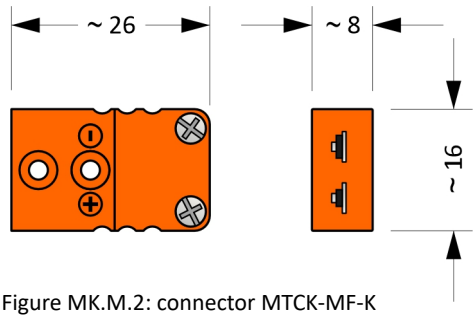


Figure MK.M.2: connector MTCK-MF-K

Miniature connectors with two pins MTCK-HM (Table MK.HM.1)

Max. ambient temperature	+350 °C
Design of pins	flat
Max. diameter of connected cable	4,5 mm
Max. diameter of connected wires	0,6 mm
Body material	plastic

Connector plug MTCK-HMM (Table MK.HM.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-HMM-N**
Thermocouple type „K“	green	**MTCK-HMM-K**
Thermocouple type „J“	black	**MTCK-HMM-J**
Thermocouple type „T“	brown	**MTCK-HMM-T**
Thermocouple type „R“ and „S“	orange	**MTCK-HMM-S**
Thermocouple type „B“	grey	**MTCK-HMM-B**
resistance thermometer - Cu wires	white	**MTCK-HMM-Cu**

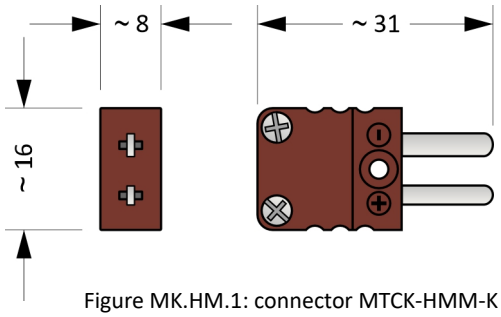


Figure MK.HM.1: connector MTCK-HMM-K

Connector socket MTCK-HMF (Table MK.HM.3)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-HMF-N**
Thermocouple type „K“	green	**MTCK-HMF-K**
Thermocouple type „J“	black	**MTCK-HMF-J**
Thermocouple type „T“	brown	**MTCK-HMF-T**
Thermocouple type „R“ and „S“	orange	**MTCK-HMF-S**
Thermocouple type „B“	grey	**MTCK-HMF-B**
resistance thermometer - Cu wires	white	**MTCK-HMF-Cu**

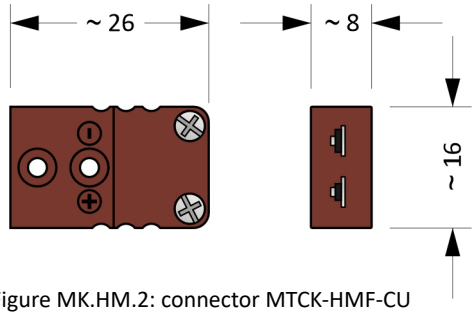
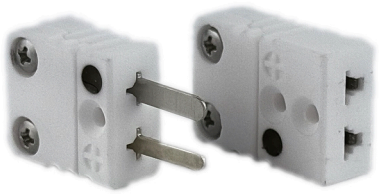


Figure MK.HM.2: connector MTCK-HMF-CU

Miniature connectors with two pins MTCK-CM (Table MK.CM.1)

Max. ambient temperature	+650 °C
Design of pins	flat
Max. diameter of connected cable	4,5 mm
Max. diameter of connected wires	0,6 mm
Body material	ceramic



Connector plug MTCK-CMM (Table MK.CM.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-CMM-N**
Thermocouple type „K“	green	**MTCK-CMM-K**
Thermocouple type „J“	black	**MTCK-CMM-J**
Thermocouple type „T“	brown	**MTCK-CMM-T**
Thermocouple type „R“ and „S“	orange	**MTCK-CMM-S**
Thermocouple type „B“	grey	**MTCK-CMM-B**
resistance thermometer - Cu wires	white	**MTCK-CMM-Cu**

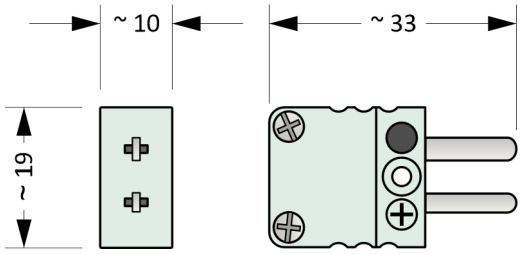


Figure MK.CM.1: connector MTCK-CMM-K

Connector socket MTCK-CMF (Table MK.CM.3)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-CMF-N**
Thermocouple type „K“	green	**MTCK-CMF-K**
Thermocouple type „J“	black	**MTCK-CMF-J**
Thermocouple type „T“	brown	**MTCK-CMF-T**
Thermocouple type „R“ and „S“	orange	**MTCK-CMF-S**
Thermocouple type „B“	grey	**MTCK-CMF-B**
resistance thermometer - Cu wires	white	**MTCK-CMF-Cu**

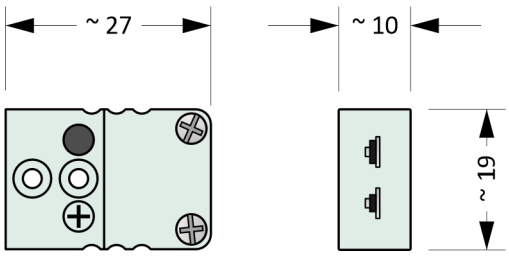
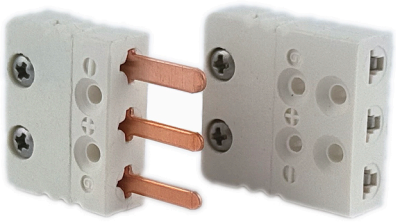


Figure MK.CM.2: connector MTCK-CMF-K

Miniature connectors with two pins MTCK-3M (Table MK.3M.1)

Max. ambient temperature	+220 °C
Design of pins	flat
Max. diameter of connected cable	4,5 mm
Max. diameter of connected wires	0,6 mm
Body material	plastic



Connector plug MTCK-3MM (Table MK.3M.2)

Design	Colour	Code
resistance thermometer - Cu wires	white	**MTCK-3MM-Cu**

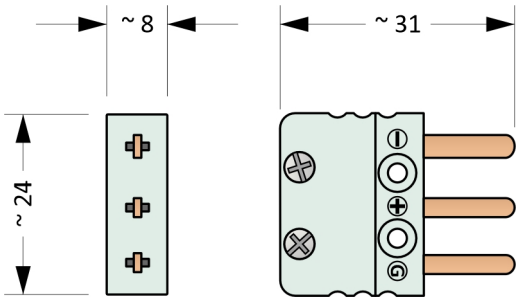


Figure MK.3M.1: connector MTCK-3MM-CU

Connector socket MTCK-3MF (Table MK.3M.3)

Design	Colour	Code
resistance thermometer - Cu wires	white	**MTCK-3MF-Cu**

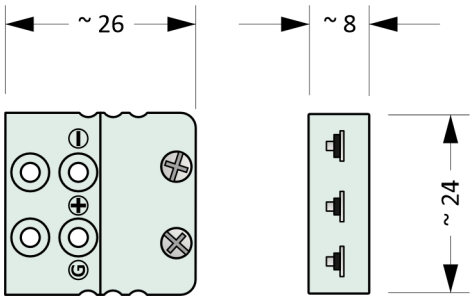
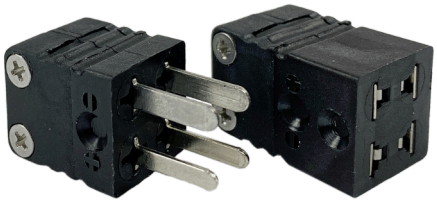


Figure MK.3M.2: connector MTCK-3MF-CU

Miniature connectors with two pins MTCK-DM (Table MK.DM.1)

Max. ambient temperature	+220 °C
Design of pins	flat
Max. diameter of connected cable	4,5 mm
Max. diameter of connected wires	0,6 mm
Body material	plastic



Connector plug MTCK-DMM (Table MK.DM.2)

Design	Colour	Code
2 x Thermocouple type „N“	pink	**MTCK-DMM-N**
2 x Thermocouple type „K“	green	**MTCK-DMM-K**
2 x Thermocouple type „J“	black	**MTCK-DMM-J**
2 x Thermocouple type „T“	brown	**MTCK-DMM-T**
2 x Thermocouple type „R“ and „S“	orange	**MTCK-DMM-S**
2 x Thermocouple type „B“	grey	**MTCK-DMM-B**
resistance thermometer - Cu wires	white	**MTCK-DMM-Cu**

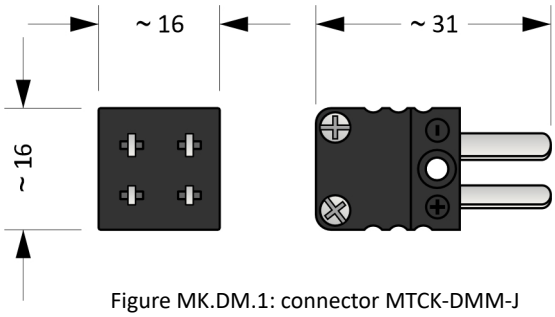


Figure MK.DM.1: connector MTCK-DMM-J

Connector socket MTCK-DMF (Table MK.DM.3)

Design	Colour	Code
2 x Thermocouple type „N“	pink	**MTCK-DMF-N**
2 x Thermocouple type „K“	green	**MTCK-DMF-K**
2 x Thermocouple type „J“	black	**MTCK-DMF-J**
2 x Thermocouple type „T“	brown	**MTCK-DMF-T**
2 x Thermocouple type „R“ and „S“	orange	**MTCK-DMF-S**
2 x Thermocouple type „B“	grey	**MTCK-DMF-B**
resistance thermometer - Cu wires	white	**MTCK-DMF-Cu**

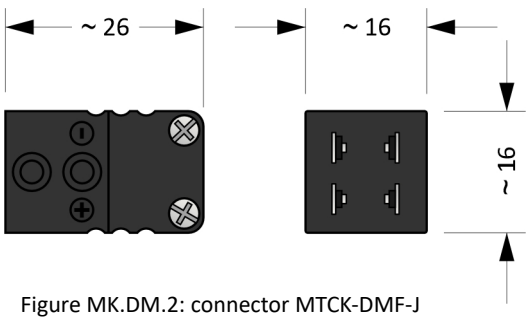


Figure MK.DM.2: connector MTCK-DMF-J

Standard panel sockets with two pins MTCK-PSIFB (Table MK.PS.1)

Max. ambient temperature	+220 °C
Max. sheet thickness	5,0 mm
Cutout in sheet metal	12,9 x 25,5 mm
Max. diameter of connected wires	1,6 mm
Body material	plastic

Connector socket MTCK-PSIFB (Table MK.PS.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-PSIFB-N**
Thermocouple type „K“	green	**MTCK-PSIFB-K**
Thermocouple type „J“	black	**MTCK-PSIFB-J**
Thermocouple type „T“	brown	**MTCK-PSIFB-T**
Thermocouple type „R“ and „S“	orange	**MTCK-PSIFB-S**
Thermocouple type „B“	grey	**MTCK-PSIFB-B**
resistance thermometer - Cu wires	white	**MTCK-PSIFB-Cu**

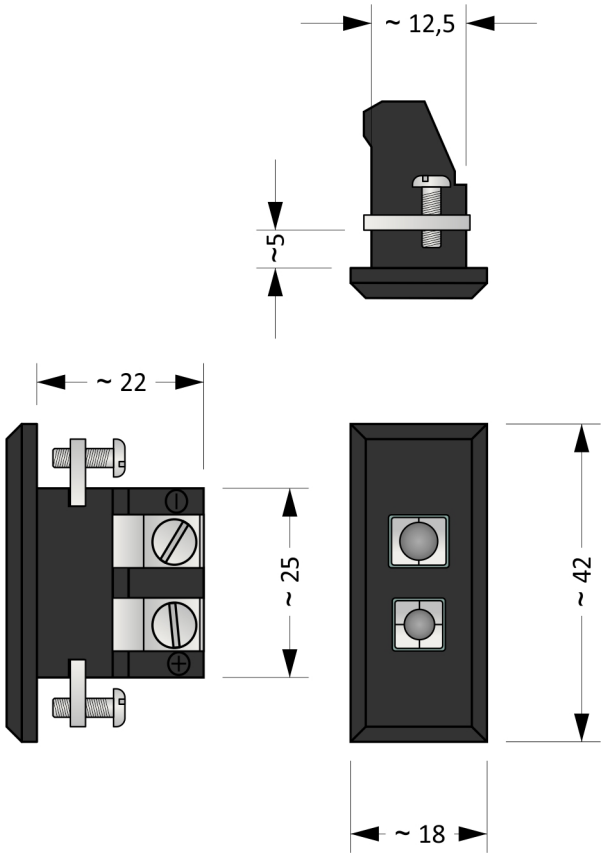
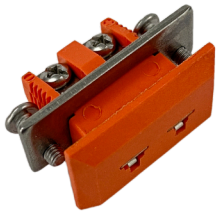


Figure MK.PS.1: Connector socket MTCK-PSIFB-J

Miniature panel sockets with two pins (Table MK.PM.1)

Max. ambient temperature	+220 °C
Max. sheet thickness	5,0 mm
Cutout in sheet metal	8,1 x 16,1 mm
Max. diameter of connected wires	0,6 mm
Body material	plastic



Connector socket MTCK-PMIFB (Table MK.PM.2)

Design	Colour	Code
Thermocouple type „N“	pink	**MTCK-PMIFB-N**
Thermocouple type „K“	green	**MTCK-PMIFB-K**
Thermocouple type „J“	black	**MTCK-PMIFB-J**
Thermocouple type „T“	brown	**MTCK-PMIFB-T**
Thermocouple type „R“ and „S“	orange	**MTCK-PMIFB-S**
Thermocouple type „B“	grey	**MTCK-PMIFB-B**
resistance thermometer - Cu wires	white	**MTCK-PMIFB-Cu**

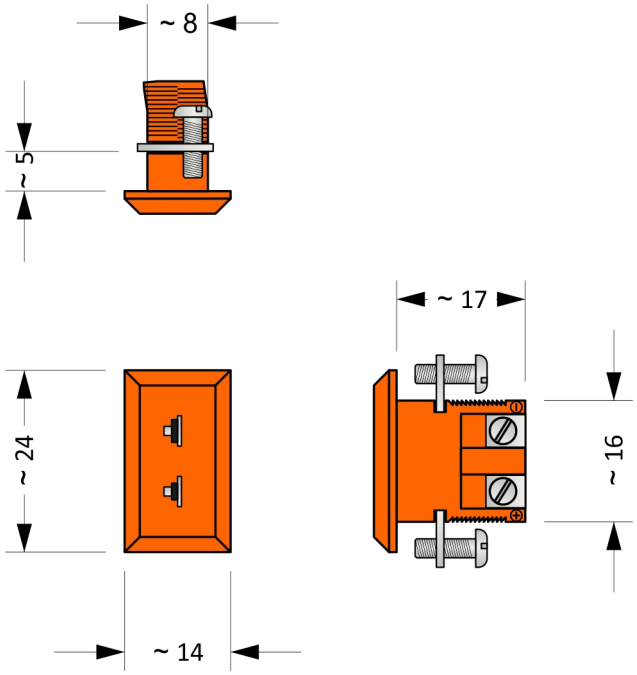


Figure MK.PM.1: Connector socket MTCK-PMIFB-J

Standard panel sockets with three pins MTCK-PSITL (Table MK.PS1.1)

Max. ambient temperature	+220 °C
Max. sheet thickness	3,0 mm
Cutout in sheet metal	12,9 x 36,6 mm
Max. diameter of connected cable	8,0 mm
Max. diameter of connected wires	1,6 mm
Body material	plastic

Connector socket MTCK-PSITL (Table MK.PS1.2)

Design	Colour	Code
resistance thermometer - Cu wires	white	**MTCK-PSITL-Cu**

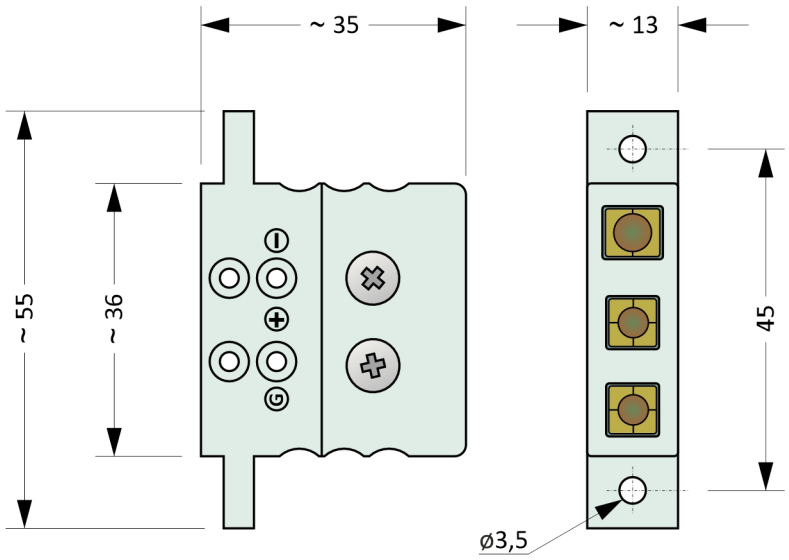
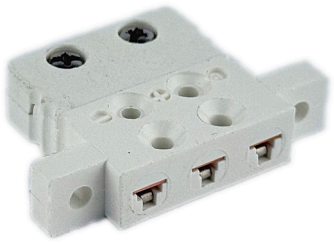


Figure MK.PS1.1: Connector socket MTCK-PSITL-CU

Miniature panel sockets with three pins MTCK-PMITL (Table MK.PM1.1)

Max. ambient temperature	+220 °C
Max. sheet thickness	3,0 mm
Cutout in sheet metal	8,1 x 24 mm
Max. diameter of connected cable	4,5 mm
Max. diameter of connected wires	0,6 mm
Body material	plastic



Connector socket MTCK-PMITL (Table MK.PM1.2)

Design	Colour	Code
resistance thermometer - Cu wires	white	**MTCK-PMITL-Cu**

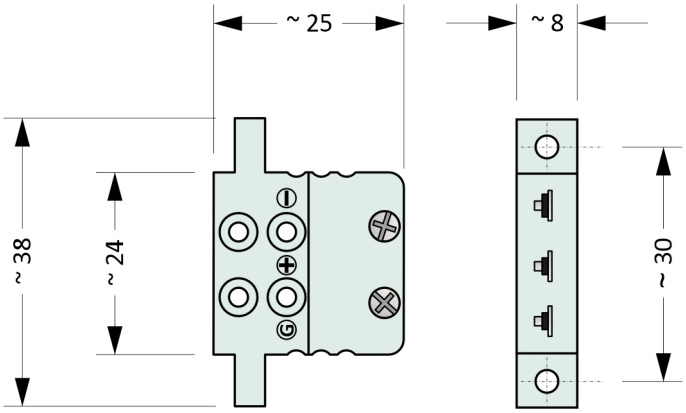
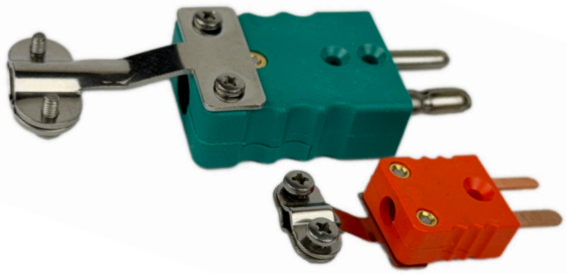


Figure MK.PM1.1: Connector socket MTCK-PMITL-CU

Connector accessories

The connector accessories are used for more robust fixing of sensors (cable or sheathed) to the connector.



Cable holders (Table MK.1)

Connector type	Code
MTCK-S, MTCK-LS, MTCK-HS and MTCK-3S	**MTCK-S-D**
MTCK-CS	**MTCK-CS-D**
MTCK-DS	**MTCK-DS-D**
MTCK-M, MTCK-HM and MTCK-3M	**MTCK-M-D**
MTCK-CM	**MTCK-CM-D**
MTCK-DM	**MTCK-DM-D**

Cable glands (Table MK.2)

Connector type	Max. cable diameter	Code
MTCK-S, MTCK-LS, MTCK-HS, MTCK-CS, MTCK-3S and MTCK-DS	< 2,5 mm	**MTCK-DS-N25**
	< 4,5 mm	**MTCK-DS-N45**
MTCK-M, MTCK-HM, MTCK-CM, MTCK-3M and MTCK-DM	< 1,5 mm	**MTCK-DM-N15**
	< 3,0 mm	**MTCK-DM-N30**

Connector inserts (Table MK.3)

Connector type	Sensor stem diameter	Code
MTCK-S, MTCK-LS, MTCK-HS, MTCK-CS, MTCK-3S and MTCK-DS	1,5 mm	**MTCK-SDBI-15**
	2,0 mm	**MTCK-SDBI-20**
	3,0 mm	**MTCK-SDBI-30**
	4,5 mm	**MTCK-SDBI-45**
	6,0 mm	**MTCK-SDBI-60**
MTCK-M, MTCK-HM, MTCK-CM, MTCK-3M and MTCK-DM	1,0 mm	**MTCK-MDBI-10**
	1,5 mm	**MTCK-MDBI-15**
	2,0 mm	**MTCK-MDBI-20**
	3,0 mm	**MTCK-MDBI-30**

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IB

INSULATION TUBING

Insulating tubing provides electrical, mechanical and thermal insulation of conductors even at elevated ambient temperatures.

Figure IB.1: Insulation tubing GLSI

Insulation tubing GLSI (Table IB.1)

Material	Glass silk + silicone rubber
Ambient temperature range	-60 ... +250 °C
Electrical strength	< 4 kV
Insulation resistance	> 200 MΩ

Optional Parameters Including the Creation of an Order Code (Table IB.2)

Pos.	Code	GLSI - ❶ - ❷
❶	**Inner diameter [mm]**	
	05	0,5 mm
	08	0,8 mm
	10	1,0 mm
	15	1,5 mm
	20	2,0 mm
	25	2,5 mm
	30	3,0 mm
	40	4,0 mm
	50	5,0 mm
	60	6,0 mm
	70	7,0 mm
	80	8,0 mm
	90	9,0 mm
	100	10,0 mm
	120	12,0 mm
	140	14,0 mm
	160	16,0 mm
	180	18,0 mm
	200	20,0 mm
❷	**Colour**	
	W	white
	Y	yellow
	BN	brown
	R	red
	BK	black
	GY	grey

Insulation tubing SV13 (Table IB.3)

Material	Glass silk with heat impregnation
Ambient temperature range	-60 ... +400 °C
Electrical strength	Not defined
Insulation resistance	Not defined
Colour	Natural

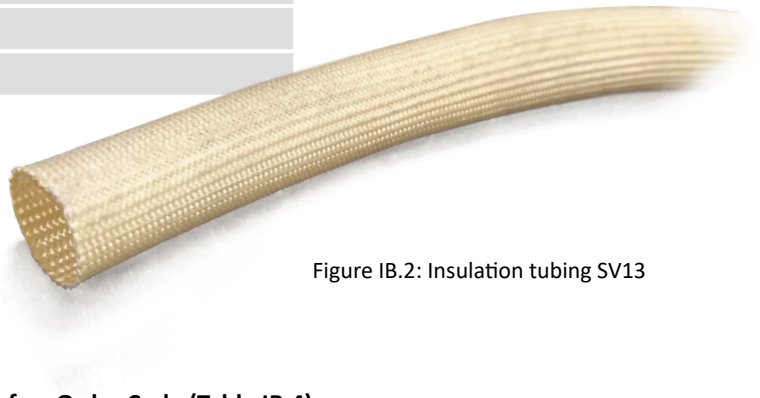

Figure IB.2: Insulation tubing SV13

Optional Parameters Including the Creation of an Order Code (Table IB.4)

Pos.	Code	**SV13 - ❶**
❶	**Inner diameter [mm]**	
	P1	1,0 mm
	P2	2,0 mm
	P3	3,0 mm
	P4	4,0 mm
	P5	5,0 mm
	P6	6,0 mm
	P7	7,0 mm
	P8	8,0 mm
	P9	9,0 mm
	P10	10,0 mm
	P12	12,0 mm
	P14	14,0 mm
	P16	16,0 mm
	P18	18,0 mm
	P20	20,0 mm