

Zubehör für Thermoelemente

— Anschlüsse —

■ Watertight connections

This stainless steel compression fitting allows watertight connection of a temperature sensor using a stainless steel not adjustable ferrule or a teflon adjustable ferrule.



• Technical features

Working temperature :

Stainless steel ferrule (316L) from -50°C to +400°C (Not adjustable)
Teflon ferrule (PTFE) from -50°C to +250°C (Adjustable)



• Part numbers

Probe Ø (mm)	Cylindrical gas	Stainless steel ferrule	Teflon ferrule
3	1/8"	RCI-3/18	RCT-3/18
3	1/4"	RCI-3/14	RCT-3/14
4	1/8"	RCI-4/18	RCT-4/18
4	1/4"	RCI-4/14	RCT-4/14
4	3/8"	RCI-4/38	RCT-4/38
6	1/8"	RCI-6/18	RCT-6/18
6	1/4"	RCI-6/14	RCT-6/14
6	3/8"	RCI-6/38	RCT-6/38
6	1/2"	RCI-6/12	RCT-6/12
8	1/4"	RCI-8/14	RCT-8/14
8	1/2"	RCI-8/12	RCT-8/12
10	1/2"	RCI-10/12	RCT-10/12
12	1/2"	RCI-12/12	RCT-12/12
14	1/2"	-	RCT-14/12

Edelstahl Tauchhülsen

• Technical features

Operating temperature	from -80°C to +400°C
Protective duct	316 L
	Ø 9x1 or Ø 6x1 mm.
Mounting	welded
Duct	stainless steel 316L, no welding
Process connection	stainless steel ½" G male (other connection on request)
Probe connection	stainless steel ½" G female (other connection on request) or fixing screw.

Options :

- Treatment with teflon, halar etc...
- Swaging

Accessories :

Thermo – conducting silicone grease 200g (Part



Operating temperature : from -60°C to +200°C

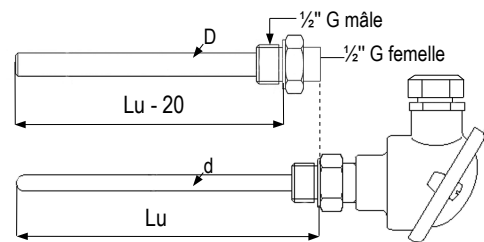
Storage : >1 year at room temperature (< 50°C)

Solvent : trichlorethane

Tauchhülsen mit Gewinde



• Determination of thermowell length

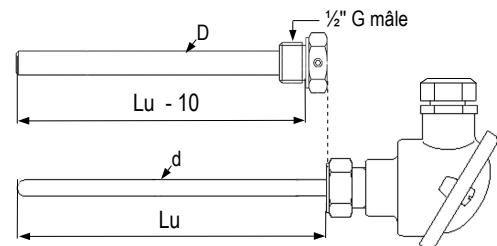


$$Lu_{\text{thermowell}} = Lu_{\text{probe}} - 20\text{mm}$$

Tauchhülsen mit Schraubbefestigung



• Determination of thermowell diameter



$$Lu_{\text{thermowell}} = Lu_{\text{probe}} - 10\text{mm}$$

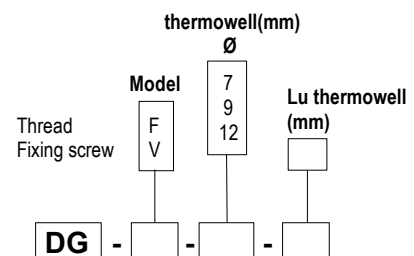
• Determination of thermowell diameter

Informative table :

Probe Ø in mm	Thermowell Ø in mm
4	7
6	9
8	12
10	14
12	21,3
14	21,3

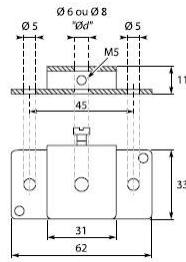
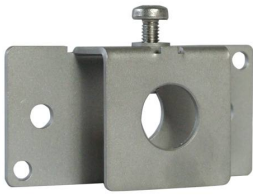
For mounting gap of 3 mm or more, the use of thermo-conducting grease is recommended (GST)

• Thermowell part numbers



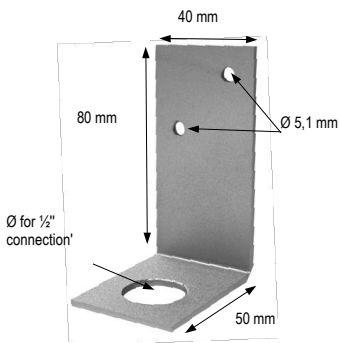
■ Befestigungsflansche

Mounting brackets



- BF - 4** : Stainless steel (316L) mounting brackets for duct fixing of probes Ø 4 et 3mm.
- BF - 6** : As above, Ø 6 mm.
- BF - 8** : As above, Ø 8 mm.

Wall mounting support for probe with connection



- BF-M** : Stainless steel (316 L) wall mounting support. Delivered with a 1/2" G screw nut.

Wall mounting support for probe on cable

For a probe of 100mm minimum length



- SFM - 4** : Wall mounting support made of translucent polycarbonate for probe Ø 4 mm and with 100 mm minimum length.
- SFM - 6** : As above, Ø 6 mm.
- SFM - 8** : As above, Ø 8 mm.

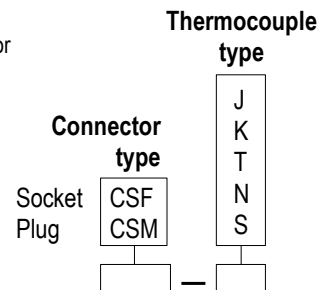
■ Stecker

Compensated standard connector



Round pin miniature connectors for thermocouple sensors and extension or compensating cable connection. Connector is marked for pin polarity.

- Material** : thermoplastic shielded with glass silk
- Operating temperature** : from -50°C to +210°C
- Colour code** : IEC 584-3

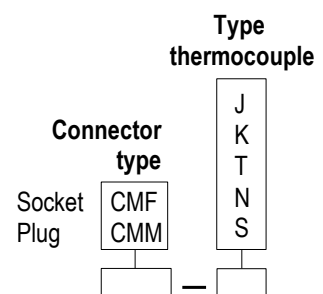


Compensated miniature connector



Flat pin miniature connectors for thermocouple sensors and extension or compensating cable connection. Connector is marked for pin polarity.

- Material** : thermoplastic shielded with glass silk
- Operating temperature** : from -50°C to +210°C
- Colour code** : IEC 584-3



Stecker

Compensated standard connector



Reinforced thermoplastic connector

Up to
+650°C



Ceramic connector

Connector two round pins for the connection of thermocouples and/or with compensating or extension cables.

A system of locating pin prevents the inversion of polarity.

Material : 35 : reinforced thermoplastic
65 : ceramic

Temperature resistance : 35 : 350 °C
65 : 650 °C

Standard color : IEC 584-3

Part numbers :

		Thermocouple type	
		Connector type	Temperature resistance
Female	CSF	35	J
Male	CSM	65	K
			T
			N
			S

Compensated miniature connector



Up to
+650°C



Connector two flat pins for the connection of thermocouples and/or with compensating or extension cables.

A system of locating pin prevents the inversion of polarity.

Material : 35 : reinforced thermoplastic
65 : ceramic

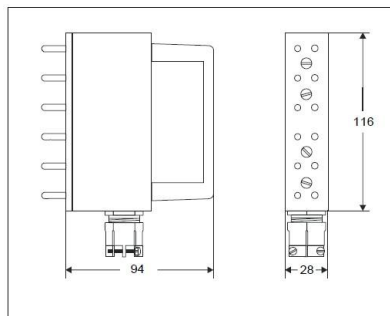
Temperature resistance : 35 : 350 °C
65 : 650 °C

Standard color : IEC 584-3

Part numbers :

		Thermocouple Type	
		Connector type	Temperature resistance
Female	CMF	35	J
Male	CMM	65	K
			T
			N
			S

Multiple connector with male standard connector



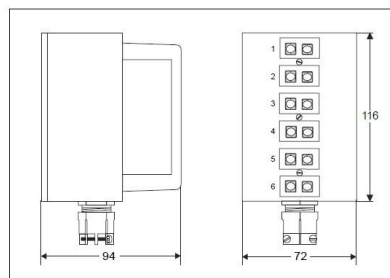
Multiple connector for thermocouple. Suitable for the simultaneous connection of 1 to 6 standard circuits.

- Housing in robust steel with epoxy coating.
- Handle in anodised aluminium for an easy grip.
- Cable gland PG 13 for 15 mm max. cable
- Screw terminal block for conductor 0.2 to 2 mm
- Compatible with standard base panel
- Temperature resistance : 200 °C max

Part numbers : PM - -

T	1
J	2
K	3
N	4
S	5
	6

Multiple connector with female standard connector



Multiple connector for thermocouple. Suitable for the simultaneous connection of 1 to 6 standard circuits.

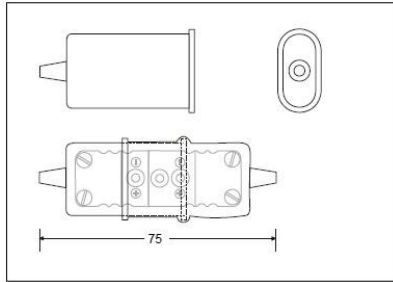
- Housing in robust steel with epoxy coating.
- Handle in anodised aluminium for an easy grip.
- Cable gland PG 13 for 15 mm max. cable
- Screw terminal block for conductor 0.2 to 2 mm
- Temperature resistance : 200 °C max

Part numbers : PMF - -

T	1
J	2
K	3
N	4
S	5
	6

Steckerzubehör

• Silicone rubber boot for connector



For wet use, good vibration resistance.

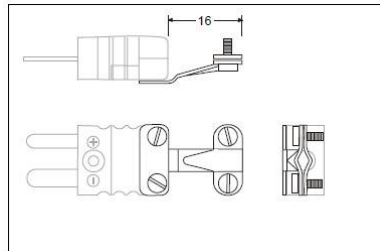
Temperature resistance : 200 °C

Delivered by two pieces, for male and female connectors.
Appropriate for most of cable diameters.

	Model
Standard	S
Mini	M

Part numbers : **PS** —

• Wire clamp bracket

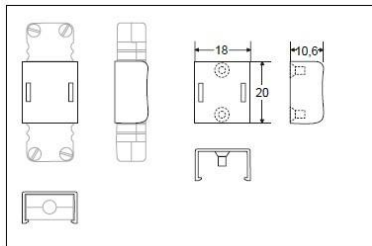


Stainless steel wire clamp bracket for miniature or standard connectors

	Model
Standard	S
Mini	M

Part numbers : **SC** —

• Locking plate for miniature connector



The plate prevents the unwanted disunity of miniatures connectors.

Material : thermoplastic with glass silk

Temperature : 200 °C maxi

Can be placed and removed without any tools

Part numbers : **PV** — **CM**

Stecker zum einschnappen

Standard snap-on connectors



Standard snap-on connectors with round pins for thermocouple sensors and extension or compensating cable connection. Connector is marked for pin polarity.

Material : thermoplastic glass silk shielded
Operating temperature : from -50°C to +210°C
Colour code : IEC 584-3

Thermocouple type

J
K
T
N
S

Part numbers : ES -

Miniature snap-on connectors



Standard snap-on connectors with flat pins for thermocouple sensors and extension or compensating cable connection. Connector is marked for pin polarity.

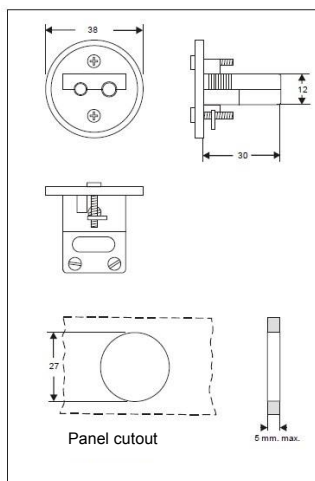
Material : thermoplastic glass silk shielded
Operating temperature : from -50°C to +210°C
Colour code : IEC 584-3

Thermocouple type

J
K
T
N
S

Part numbers : EM -

Round base for standard connector



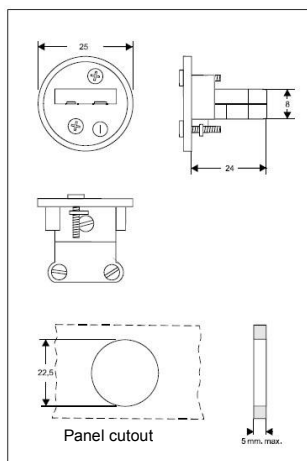
Round base for control panel.

Cutout : \varnothing 27 mm
Material : thermoplastic with glass silk
Temperature : 200 °C max
Fixing : 2 screws in front face
Connection for wire : from 0.2 to 2 mm

J
K
T
N
S

Part numbers : EC - S -

Round base for miniature connector



Round base for control panel.

Cutout : \varnothing 22.5 mm
Material : thermoplastic with glass silk
Temperature : 200 °C max
Fixing : 2 screws in front face
Connection for wire : from 0.002 to 0.6 mm

J
K
T
N
S

Part numbers : EC - M -

■ Tafelblenden mit schnappbare Stecker

For standard snap-on connectors



Number of channels : 2, 4, 6, 8, 12 or 24
Anodised aluminium panel (width ≈ 2 mm)
Dimensions : according to number of channels
 (D = number of channel x 19 + 31 mm)
Supplied with snapped on connectors.

Thermocouple type	Connector number
J	1
K	6
T	12
S	

Part numbers : PES - -

For miniature snap-on connectors



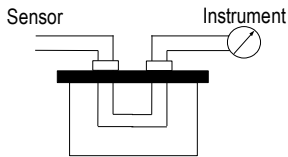
Number of channels : 2, 4, 6, 8, 12 or 24
Anodised aluminium panel (width ≈ 2 mm)
Dimensions : according to number of channels
 (D = number of channel x 19 + 31 mm)
Supplied with snapped on connectors.

Thermocouple type	Connector number
J	1
K	6
T	12
S	

Part numbers : PEM - -

*other on request

■ Control panel



The connector enables easy and quick access to thermocouple circuit in order to control sensor and instrument accuracies, circuit continuity and loop resistance.

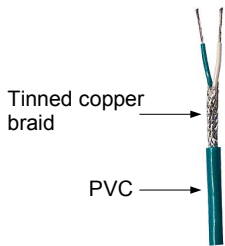
Thermocouple type
J
K

Part numbers : PEC -

Thermoelement-Kabel

Extension cable

• PVC / Tinned copper braid / PVC



Conductors section : 2 x 0,22 mm² (For Tc T, J and K)
Conductors composition : 2 x 7 strands Ø 0.2 mm
Operating temperature : from -40°C to +105°C, short time at +135°C
 Colour code IEC 584-3

Thermocouple type Cable length (m)

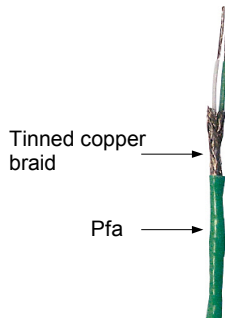
J
K
T
N

1
2
3
...*

Part numbers : CE- - PB -

*other on request

• Pfa / Tinned copper braid / Pfa



Conductors section : 2 x 0,22 mm²
Conductors composition : 2 x 7 strands Ø 0.2 mm
Operating temperature : from -40°C to +250°C
 Colour code IEC 584-3

Thermocouple type Cable length (m)

J
K
T
N

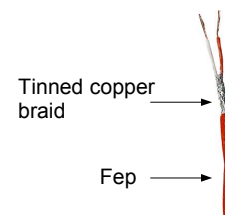
1
2
3
...*

Part numbers : CE- - TB -

*other on request

Compensating cable

• Fep / Tinned copper braid / Fep (For type S only)



Conductors section : 2 x 0,22 mm² (For Tc T, J and K)
Conductors composition : 2 x 7 strands Ø 0.2 mm
Operating temperature : from -40°C to +205°C, short time at +230°C
 Colour code IEC 584-3

Cable length (m)

1
2
3
...*

Part numbers : CP - S - TB -

*other on request

Verlängerungen

Lead with choice of connectors and cable



- Lead with miniature plug and socket connectors
- Lead with standard plug and socket connectors
- Other on request

Thermocouple type

J
K
T
N
S*

Cable

PB from -40°C to +105°C
TB from -40°C to +260°C
SV from -40°C to +400°C

Cable length (m)

1
2
3
...*

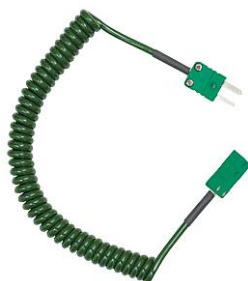
Connector

CMM	CMM
CMF	CMF
CSM	CSM
CSF	CSF

Part numbers : CD - - - -

*with shielded Fep cable only

Coiled extension leads



- Length 160 mm (1800 mm uncoiled)
- Lead with miniature plug and socket connectors
- Lead with standard plug and socket connectors
- Temperature max. 105°C
- Other on request

Connector

CMM	CMM
CMF	CMF
CSM	CSM
CSF	CSF

Part numbers : CDSK - -

Konverter / Messumformer

CST-TC transmitter



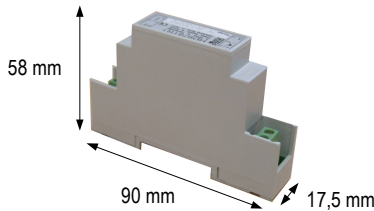
Mounting : connection head DIN "B"
Input : Thermocouple J, K, T, N
Output : 4-20 mA 2 wires
Accuracy : $\pm 0.04\%$ FS ± 0.04 of reading
 or 0.5°C (the biggest)
Linearisation : EN 60584-1-2, ASTM E 230 – ANSI (MC96-1)
Default range : 0 to 1000°C
Power supply :
 9 to 30 VDC polarity protected
Power supply influence :
 $\pm 0,4\ \mu\text{A/V}$

Working temperature : from -30 to $+80^\circ\text{C}$
Storage temperature : from -40 to $+80^\circ\text{C}$
Minimum temperature range : 50°C
Conversion speed : 2 measurements per second
Charge calculation according to power supply :
 $RL_{\text{max}} (\Omega) = (V - 9)/0,022 = 680\ \Omega$ at 25 Vdc
Galvanic insulation : 50 Vdc

To be specified :

- Temperature range
- Thermocouple type

CRD-TC-P transmitter (Passive / 2 wires)



Mounting : rail DIN symmetric or asymmetrical
Input : Thermocouple J, K, T, N
Output : 4-20 mA, 2 wires
Accuracy : $\pm 0.04\%$ FS $\pm 0,04$ of reading or 0.5°C (the biggest)
Linearisation : EN 60584-1-2, ASTM E 230 – ANSI (MC96-1)
Power supply : 9 to 30 VDC
Default range : $T_c = K - \text{Rang} = 0$ to 1000°C
Working temperature : from 0°C to $+70^\circ\text{C}$
Storage temperature : from -40°C to $+80^\circ\text{C}$
Minimal measuring range : 50°C
Conversion speed : 2 measurements per second
Charge calculation according to power supply : $RL (W) = (V - 9)/0,02$
Galvanic insulation : 50 Vdc
Dimensions (mm) : depth 100, width 22, height 75

Temperature range to be specified

CRD-TC-A transmitter (Active / 4 wires)



Mounting : rail DIN symmetric or asymmetrical
Input : Thermocouple J, K, T, N
Output : 4-20 mA or 0-10 V
Accuracy : $\pm 0.1\%$ pe
Input resistance : 10 M Ω
Charge (min.) : 500 k Ω
Operating voltage : 230 Vac, 24 Vac, 24 Vdc and 110 Vac
Working temperature : from -20 to $+60^\circ\text{C}$
Storage temperature : from -20 to $+60^\circ\text{C}$

To be specified :

- Temperature range
- Power supply
- Output 4-20 mA
0-10 V

Optional

- Indicator / Programming front (IF-CRD)



- Communication interface for parameters modification
- Can be transferred from one transmitter to another one
- Display for data process and state

■ Trafos für Spannungsversorgung

Regulated power supply

• Alternating current



KI - AL - 100 A : Class 2 power supply for sensors. Mounting with integrated brackets. Input voltage : 230 Vac, output voltage 24Vac, intensity 100mA.

• Direct current



KI - AL - 100 C : Class 2 power supply for sensors, Input voltage : 230 Vac, Output voltage : 24Vdc, intensity 250mA.