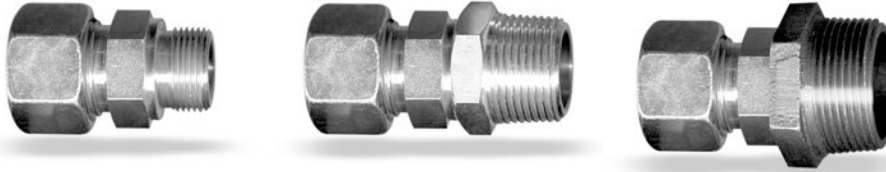


## Accessories for thermocouple sensors

### — Connections —

#### ■ 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

## Stainless steel thermowells

### • 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 number GST)



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

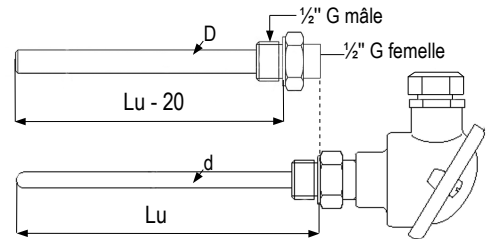
**Storage** : >1 year at room temperature (< 50°C)

**Solvent** : trichlorethane

### Threaded thermowell



#### • Determination of thermowell length

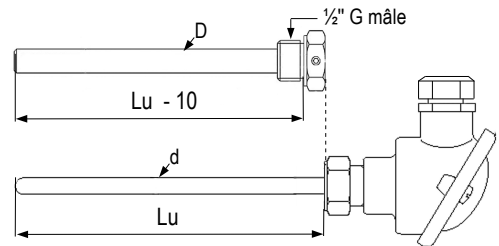


$$Lu_{\text{thermowell}} = Lu_{\text{probe}} - 20\text{mm}$$

### Thermowell with screw connection



#### • Determination of thermowell diameter



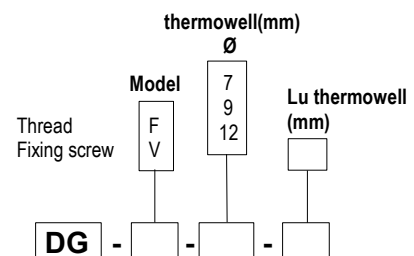
$$Lu_{\text{thermowell}} = Lu_{\text{probe}} - 10\text{mm}$$

#### • 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

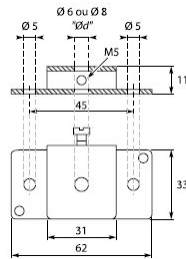
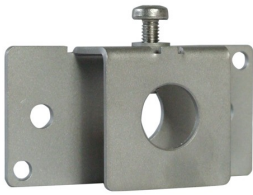
#### • Thermowell part numbers



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

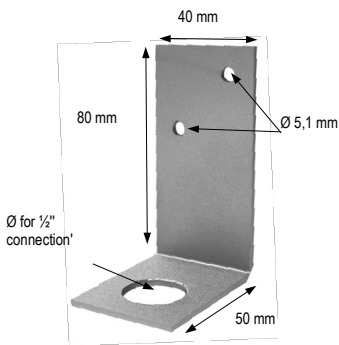
## ■ Fixations

### 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.

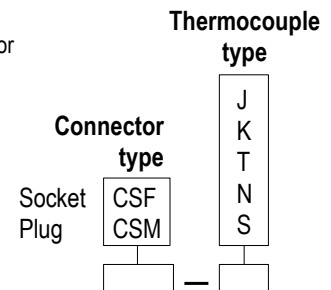
## ■ Connectors

### 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

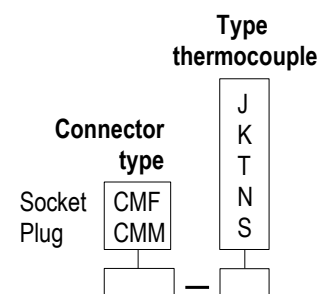


### Compensated miniature connector



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



## Connectors

### 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 :**

Connector type		Temperature resistance	Thermocouple type
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

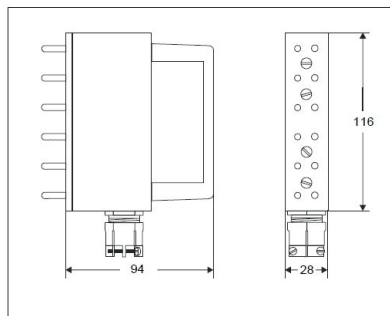
**Temperature resistance** : 35 : 350 °C  
65 : 650 °C

**Standard color** : IEC 584-3

**Part numbers :**

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

### Multiple connector with male standard connector



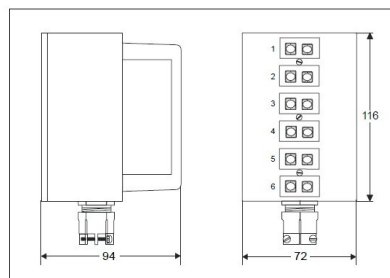
Multiple connector for thermocouple. Suitable for the simultaneous connection of 1 to 6 standard circuits.

- 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.

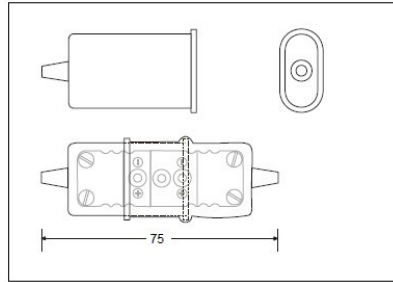
- Housing in robust steel with epoxy coating.
- Handle in anodised aluminium for an easy grip.
- Cable gland PG 13 for 15 mm max. cable
- Screw terminal block for conductor 0.2 to 2 mm
- Temperature resistance : 200 °C max

**Part numbers :** PMF -  -

T	1
J	2
K	3
N	4
S	5
	6

## Connectors accessories

### • Silicone rubber boot for connector



For wet use, good vibration resistance.

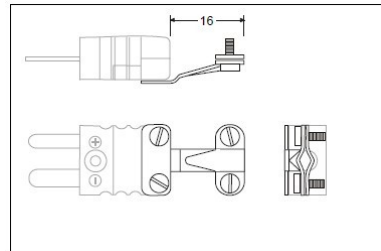
**Temperature resistance** : 200 °C

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

	<b>Model</b>
Standard	S
Mini	M

**Part numbers** : **PS** —

### • Wire clamp bracket

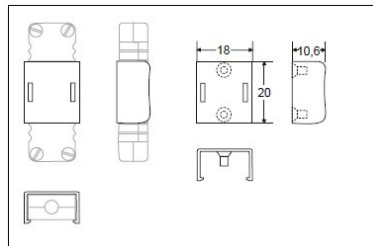


Stainless steel wire clamp bracket for miniature or standard connectors

	<b>Model</b>
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**

## ■ Snap-on connectors

### 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.

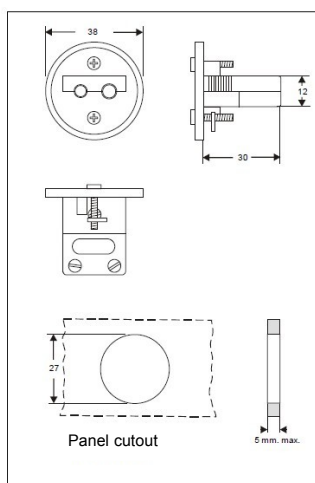
**Material** : thermoplastic glass silk shielded  
**Operating temperature** : from -50°C to +210°C  
**Colour code** : IEC 584-3

Thermocouple type

J  
K  
T  
N  
S

Part numbers : EM -

### Round base for standard connector



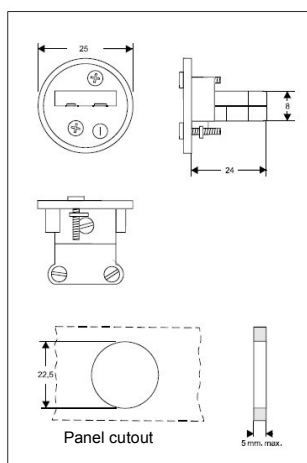
Round base for control panel.

**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.

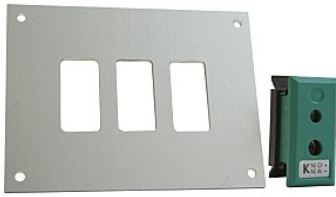
**Cutout** :  $\varnothing$  22.5 mm  
**Material** : thermoplastic with glass silk  
**Temperature** : 200 °C max  
**Fixing** : 2 screws in front face  
**Connection for wire** : from 0.002 to 0.6 mm

J  
K  
T  
N  
S

Part numbers : EC - M -

## ■ Connector panel

### 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



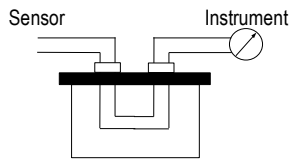
**Number of channels : 2, 4, 6, 8, 12 or 24**  
**Anodised aluminium** panel (width ≈ 2 mm)  
**Dimensions** : according to number of channels  
 (D = number of channel x 19 + 31 mm)  
**Supplied with snapped on connectors.**

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.

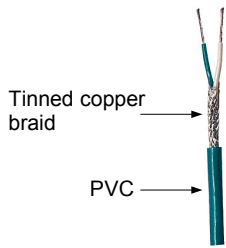
Thermocouple type
J
K

**Part numbers** : PEC -

## Cables

### Extension cable

#### • PVC / Tinned copper braid / PVC



**Conductors section** : 2 x 0,22 mm<sup>2</sup> (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

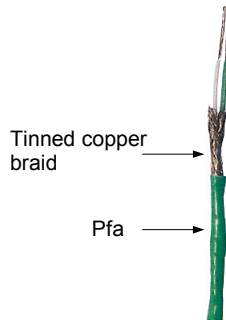
Thermocouple type      Cable length (m)

J	1
K	2
T	3
N	...*

Part numbers : CE- [ ] - PB - [ ]

\*other on request

#### • Pfa / Tinned copper braid / Pfa



**Conductors section** : 2 x 0,22 mm<sup>2</sup>  
**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)

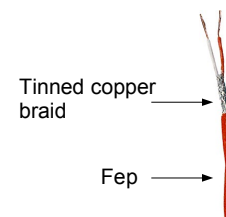
J	1
K	2
T	3
N	...*

Part numbers : CE- [ ] - TB - [ ]

\*other on request

### Compensating cable

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



**Conductors section** : 2 x 0,22 mm<sup>2</sup> (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

## Extension lead

### 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 - [ ] - [ ]



## Converters

### CST-TC transmitter



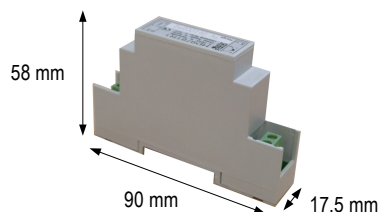
**Mounting** : connection head DIN "B"  
**Input** : Thermocouple J, K, T, N  
**Output** : 4-20 mA 2 wires  
**Accuracy** :  $\pm 0.04\%$  FS  $\pm 0.04$  of reading  
 or  $0.5^\circ\text{C}$  (the biggest)  
**Linearisation** : EN 60584-1-2, ASTM E 230 – ANSI (MC96-1)  
**Default range** : 0 to  $1000^\circ\text{C}$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

**Working temperature** : from  $-30$  to  $+80^\circ\text{C}$   
**Storage temperature** : from  $-40$  to  $+80^\circ\text{C}$   
**Minimum temperature range** :  $50^\circ\text{C}$   
**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  $0.5^\circ\text{C}$  (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  $1000^\circ\text{C}$   
**Working temperature** : from  $0^\circ\text{C}$  to  $+70^\circ\text{C}$   
**Storage temperature** : from  $-40^\circ\text{C}$  to  $+80^\circ\text{C}$   
**Minimal measuring range** :  $50^\circ\text{C}$   
**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 $\Omega$   
**Charge (min.)** : 500 k $\Omega$   
**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

## Miscellaneous

### 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.

[www.kimo.fr](http://www.kimo.fr)

Distributed by :



**EXPORT DEPARTMENT**

Tel : + 33. 1. 60. 06. 69. 25 - Fax : + 33. 1. 60. 06. 69. 29

e-mail : [export@kimo.fr](mailto:export@kimo.fr)