



## PVC, silicone or glass fibre-insulated

- Available in many different designs



## Product description

### Application range

- The thermocouple is used to measure temperature as a part of monitoring the manufacturing process, thus the sheath material should be selected with reference to the maximum ambient temperature at its junction.
- Conductor materials (alloys):  
Fe/CuNi (LX, JX)  
Conductor alloys are identical to thermocouple alloys
- NiCr/Ni (KCA, KX)  
KCA version: compensating alloys, not identical to thermocouple alloys  
KX version - conductor alloys are identical to thermocouple alloys
- PtRh/Pt (RCB, SCB)  
Compensating alloys are not identical to thermocouple alloys

### Product Make-up

- Design abbreviations:  
PVC: Polyvinylchloride  
SIL: Silicone rubber  
GL: Glass fibre  
C: Copper braiding screen  
ST: Aluminium foil screen  
S: Steel wire braiding
- Design, for example PVC-PVC-S-PVC:

- PVC core insulation
- PVC inner sheath
- Steel wire braiding
- PVC outer sheath
- Examples shown (top to bottom):
  - Fe/CuNi DIN 2 x 1.5 PVC
  - NiCr/Ni IEC 2 x 1.5 GL-GL
  - PtRh/Pt IEC 2 x 1.5 GL-GL-S
  - NiCr/Ni DIN 2 x 1.5 SIL-GL
  - NiCr/Ni DIN 2 x 1.5 PVC-PVC
  - PtRh/Pt DIN 2 x 1.5 SIL-SIL
  - Fe/CuNi IEC 2 x 1.5 SIL-SIL-S
  - NiCr/Ni IEC 2 x 1.5 SIL
  - PtRh/Pt IEC 2 x 1.5 SIL-GL-S
  - Fe/CuNi IEC 2 x 0.22 PVC-PVC-C-PVC
  - NiCr/Ni IEC 2 x 1.5 PVC-ST-PVC
  - Fe/CuNi DIN 2 x 1.5 PVC-PVC-S-PVC

## Norm references / Approvals

- Colour identity code
  - DIN 43710
  - Negative conductor and outer sheath:
    - Fe/CuNi: blue
    - NiCr/Ni: green
    - PtRh/Pt: white
  - Positive conductor: always red
  - IEC 60 584
  - Positive conductor and outer sheath:
    - Fe/CuNi: black
    - NiCr/Ni: green
    - PtRh/Pt: orange
  - Negative conductor: always white

## Technical Data

|                        |   |
|------------------------|---|
| Classification         | ETIM 5.0 Class-ID: EC000838   |
| Based on               | ETIM 5.0 Class-Description: Thermocouple cable<br>Limiting deviation in accordance with DIN and IEC in accordance with class 2  |
| Conductor stranding    | 1.5 mm <sup>2</sup> : approx. 48 x 0.20 mm<br>0.75 mm <sup>2</sup> : approx. 24 x 0.20 mm<br>0.5 mm <sup>2</sup> : approx. 16 x 0.20 mm<br>0.22 mm <sup>2</sup> : approx. 7 x 0.20 mm |
| Minimum bending radius | Without metal braiding:<br>12 x cable diameter<br>With metal braiding:<br>15 x cable diameter   |
| Temperature range      | (referring to insulation and sheath material)<br>PVC: -5°C to +70°C<br>Silicone: -25°C to +180°C<br>Glass fibre: -25°C to +200°C  |