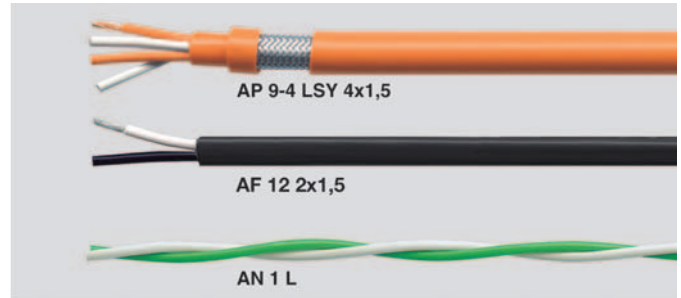
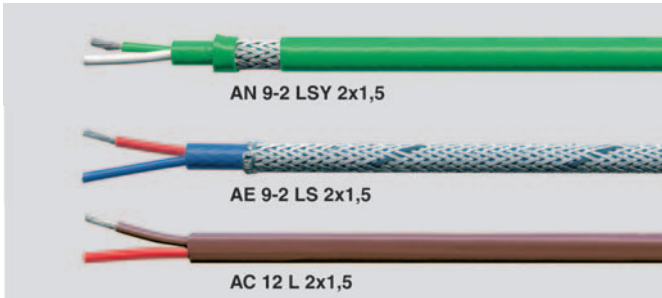


COMPENSATING CABLES



Technical data

- Special insulation of PVC, silicone, fluoropolymers, or glass fiber depending on the requirement

- **Conductor resistance** in accordance with DIN 43713

| | |
|-------|-------------|
| Fe: | 0.080 ohm/m |
| CuNi: | 0.327 ohm/m |
| NiCr: | 0.07 ohm/m |
| Ni: | 0.3 ohm/m |
| PtRh: | 0.023 ohm/m |
| Pt: | 0.041 ohm/m |

- **Test voltages** for PVC, fluoropolymers and silicone-cables

| | |
|---------------|-------|
| core/core | 500 V |
| core/screen | 500 V |
| screen/screen | 500 V |

- **Test voltage** for glass-fiber lines

| | |
|-----------|-------|
| core/core | 500 V |
|-----------|-------|

- **Insulation resistance**

for PVC, silicone and fluoropolymers

min. 10 MOhm x km

- **Operating capacity**

(approx. value) – nF/km

| | Stranded 1.5 mm ² | Solid 1.5 mm ² | Stranded 0.22 mm ² |
|-----------|---------------------------------|------------------------------|----------------------------------|
| •PVC | | | |
| core | 135 | 138 | 115 |
| pair | | | |
| screened | 240 | 245 | 180 |
| •FEP | | | |
| core | 60 | 60 | 45 |
| pair | | | |
| screened | 120 | 120 | 70 |
| •Silicone | | | |
| core | 80 | 70 | 45 |

- **Inductivity** (guide value)

for PVC, fluoropolymers and silicone versions < 1 mH/km

- **Corrosiveness of fire gases (halogen-free)**

• **Silicone + glass-fiber**
test in accordance with VDE 0472 Part 813 and IEC 60754-1

• No development of corrosive gases

Fire behavior

Self-extinguishing and flame-retardant in accordance with VDE 0482 322-1-2, DIN EN 60332-1-2/IEC 60332-1 (corresponds to DIN VDE 0472 Part 804 test type B)

Structure

- Conductors made of special materials

- Conductor type: Fe-Cu Ni, SoNiCr-SoNi, SoPtRh-SoPt, Cu-CuNi

- Insulation of PVC, silicone, fluoropolymers or glass-fiber

- Core coding: Single color (see Color table)

- Coding of the pairs, starting at 2 pairs the individual pairs are marked with imprinted numbering

- Jacket material of PVC, silicone, fluoropolymers or glass-fiber braid

- Braided screen of galvanized steel wire (type SY) or Cu-braid (type CY)

Measuring

For temperature measuring, the temperature-dependent characteristics of materials are taken into consideration, for example, the expansion thermometers or thermocouples, etc. Temperature measuring devices with a thermocouple as transducer usually consist of thermocouple, the connecting line from the connection point to the reference junction, a reference junction with a known temperature and a voltage measuring device.

The connecting line between the thermocouple and the reference junction must have the same thermo-electric properties as the thermocouple itself. The temperature differential is measured between the measuring point and the reference junction. Tolerance of the meter resistances $\pm 10\%$.

Hazardous areas

The compensating cables for thermocouples with plastic insulation can be imprinted with longitudinal colored stripes depending on the type of the thermocouple, as follows:
Cu/Cu-Ni = brown, Fe/Cu-Ni = dark blue, NiCr/Ni = green, Pt-Rh/Pt = white
In the case of compensating cables for thermocouples with mineral insulation or with metal braiding, for color coding of the intrinsically safe property, a light blue band of sufficient width must also be woven in.

Use

For instrumentation and control technology, compensating cables (also referred to as compensation cables) are required for precise temperature measurements. They are used as a thermo-electric extension from the thermocouple to the measurement device.

The compensating cable consists of a positive core and a negative core, that generate the same thermo-electric voltage at connector head temperatures up to +200°C, as the thermocouple in accordance with DIN 43710.

Materials

(Compensating wires and strands) There is a distinction between original materials and substitutes.

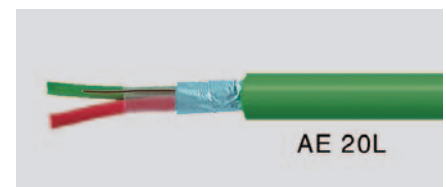
- Compensating wires and strands of **original materials** are made of the same material as the associated thermocouple and they are referred to as thermocable or thermocouple cable.
- Compensating wires and strands of **substitute materials** that consist of alloys and which are not identical to the associated thermocouple are called compensating cables.
 - **Substitute materials** are used for the Type K and Type N thermocouples
 - **Precious metal thermocouples** Type R, Type S, Type B consist of thermal materials.

Thermocouple cables

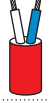
Thermocouple cables are made of the same element material as the thermocouple and are tested to the same temperatures. We offer thermocouple cables on customer request only.

Note

Thermal materials consist of very expensive materials while the substitutes are significantly cheaper.

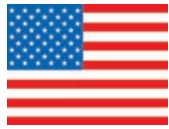


■ COLOR CODING AND TEMPERATURE RANGES FOR THERMAL CABLES & COMPENSATING CABLES

| Code letter of the thermocouple | Material combination | |  NFC 42-324 | |  BS 4937 | |
|---------------------------------|----------------------|---------------|---|---|--|---|
| | + | - | Identification | | Identification | |
| | (plus) | (minus) | THL | AGL | THL | AGL |
| T | Cu | Cu Ni | TX -25°C to +100°C |  | TC -25°C to +100°C |  |
| U | Cu | Cu Ni | | | | |
| J | Fe | Cu Ni | JX -25°C to +200°C |  | JC -25°C to +250°C |  |
| L | Fe | Cu Ni | | | | |
| E | Ni Cr | Cu Ni | EX -25°C to +200°C |  | EC -25°C to +250°C |  |
| | Ni Cr | Ni | KX -25°C to +200°C |  | KC -25°C to +200°C |  |
| K | Ni Cr | Ni | |  | WC 0°C to +100°C | |
| | Ni Cr | Ni | |  | VC 0°C to +100°C |  |
| N | Ni Cr Si | Ni Si | | | | |
| R | PtRh 13 | Pt | |  | SC 0°C to +200°C |  |
| S | PtRh 10 | Pt | | | | |
| B | PtRh 30 | PtRh 6 | |  | BC 0°C to +100°C | |

The highest application temperature of the insulating materials or the application temperature range of the conductor material limits the application temperature range of the cable. The lower value is valid.

As a rule, intrinsically safe cables have a blue jacket color and an identification stripe assigned to the element.



ANSI MC 96.1



DIN IEC 584



DIN 43710*

| ANSI MC 96.1 | | DIN IEC 584 | | DIN 43710* | |
|----------------------------|----------------------------|--------------------------------|---------------------------------|-----------------------------------|-----|
| Identification | | Identification | | Identification | |
| THL | AGL | THL | AGL | THL | AGL |
| TX 0°C to +100°C | | TX -25°C to +100°C | | | |
| JX 0°C to +200°C | | JX** -25°C to +200°C | | UX** 0°C to +200°C | |
| EX 0°C to +200°C | | EX -25°C to +200°C | | | |
| KX 0°C to +200°C | | KX -25°C to +200°C | | | |
| | | | KCA** 0°C to +150°C | | |
| | | | KCB 0°C to +100°C | | |
| | | NX -25°C to +200°C | | NC 0°C to +150°C | |
| | | | RCA/SCA 0°C to +100°C | RCB/SCB** 0°C to +200°C | |
| | SX 0°C to +200°C | | | | |
| | BX 0°C to +100°C | (According to DIN 43710/85) | | BC 0°C to +100°C | |

THL = Thermocouple wire
AGL = Compensating cable

Example: KCA Compensating cable KCA (plus) ≙ positive core for AGL KC
KCA (minus) ≙ negative core for AGL KC

*) DIN 43710 was withdrawn in April 1994. Thus the element types "U" and "L" are no longer standardized.

** standard type

■ COMPENSATING CABLES

Materials for compensating cables

| Standards | Element type | | | Material of the compensating cable | | |
|-------------|--------------|---------------|----------------|------------------------------------|---------------|----------------|
| | Type | Plus pole (+) | Minus pole (-) | Code | Plus pole (+) | Minus pole (-) |
| DIN 43710 | U | Cu | CuNi | UX | Cu | CuNi |
| | L | Fe | CuNi | LX | Fe | CuNi |
| DIN IEC 584 | T | Cu | CuNi | TX | Cu | CuNi |
| | E | NiCr | CuNi | EX | NiCr | CuNi |
| | J | Fe | CuNi | JX | Fe | CuNi |
| | K | NiCr | Ni | KX | NiCr | Ni |
| | K | NiCr | Ni | KC 1 | Fe | CuNi |
| | K | NiCr | Ni | KC 2 | Cu | CuNi |
| | R/S | Pt 13/10 Rh | Pt | RC A/SC A | Cu | CuNi |
| R/S | Pt 13/10 Rh | Pt | RC B/SC B | Cu | CuNi | |
| NF | T | Cu | CuNi | TX | Cu | CuNi |
| | E | NiCr | CuNi | EX | NiCr | CuNi |
| | J | Fe | CuNi | JX | Fe | CuNi |
| | K | NiCr | Ni | KX | NiCr | Ni |
| | K | NiCr | Ni | VC | Cu | CuNi |
| | K | NiCr | Ni | WC | Fe | CuNi |
| | R/S | Pt 13/10 Rh | Pt | RC/SC | Cu | CuNi |
| B | Pt 30 Rh | Pt 6 Rh | BC | Cu-ALY | Cu | |
| ANSI | T | Cu | CuNi | TX | Cu | CuNi |
| | E | NiCr | CuNi | EX | NiCr | CuNi |
| | J | Fe | CuNi | JX | Fe | CuNi |
| | K | NiCr | Ni | KX | NiCr | Ni |
| | R/S | Pt 13/10 Rh | Pt | RX/SX | Cu | CuNi |
| | B | Pt 30 Rh | Pt 6 Rh | BX | Cu | Cu |

Properties of the wires for thermocouples and compensating cables

| Materials | Main components approx. % | | | | Density at 20°C $\frac{g}{cm^3}$ | Spec. resistance at 20°C $\mu\text{ohm} \cdot \text{cm}$ | Resistance value (guide value) in ohm/m | |
|-----------|-------------------------------|------|--------|-------|-------------------------------------|---|--|-----------|
| | Cu | Ni | Mn | Other | | | mm ø 0.20 | mm ø 1.38 |
| CuNi | 55 | 44 | 1 | - | 8.85 | 49 | 15.60 | 0.328 |
| SoNi | 51 | 45 | 2 | Fe2 | 8.85 | 51 | 16.26 | 0.341 |
| NiCr | - | Rest | - | Cr 10 | 8.7 | 72 | 22.90 | 0.481 |
| Ni | - | 95 | MnAlSi | 5 | 8.55 | 27 | 8.59 | 0.180 |
| SoPt | 95 | 3 | 2 | - | 8.9 | 12 | 3.82 | 0.0802 |
| ECu | In accordance with DIN 46 431 | | | | 8.9 | 1.7 | 0.54 | 0.011 |
| Fe | - | - | - | - | 7.85 | 12 | 3.82 | 0.08 |
| BPX | 97 | - | 3 | - | 8.9 | 12.5 | 3.98 | 0.084 |

COMPENSATING CABLES

| Part no. | Thermocouple element material in accordance with DIN 43713 | Thermocouple type | Core insulation | Jacket/armoring jacket | Outer ø approx. mm | Form | Temperature range of insulation °C | Installation temperature range °C | min. bending radius x cable ø | Weight approx. kg/km |
|--|--|-------------------|----------------------|------------------------|--------------------|-------|------------------------------------|--|-------------------------------|----------------------|
| Single-pair: 2 x 1.5 mm² (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ø 1.38 mm) | | | | | | | | | | |
| 48001 | Fe-CuNi (Ko) | L | AE 1 L stranded | PVC | 5.4 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 40 |
| 48002 | SoNiCr-SoNi | K | AN 1 L stranded | PVC | 5.4 | round | | | 7.5 | 40 |
| 48003 | SoPtRh-SoPt | S | AP 1 L stranded | PVC | 5.4 | round | | | 7.5 | 40 |
| 48230 | Cu-CuNi (Ko) | U | AC 1 L stranded | PVC | 5.4 | round | | | 7.5 | 40 |
| 48478 | Fe-CuNi | J | AF 1 L stranded | PVC | 5.4 | round | | | 7.5 | 40 |
| 48004 | Fe-CuNi (Ko) | L | AE 1 M stranded | PVC | 5.4 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 10 | 40 |
| 48005 | SoNiCr-SoNi | K | AN 1 M stranded | PVC | 5.4 | round | | | 10 | 40 |
| 48006 | SoPtRh-SoPt | S | AP 1 M stranded | PVC | 5.4 | round | | | 10 | 40 |
| 48231 | Cu-CuNi (Ko) | U | AC 1 M stranded | PVC | 5.4 | round | | | 10 | 40 |
| 48007 | Fe-CuNi (Ko) | L | AE 1 L-SIL stranded | silicone | 5.4 | round | -60°C to +180°C | stationary -25°C to +180°C flexing -25°C to +180°C (short time +200°C) | 7.5 | 40 |
| 48008 | SoNiCr-SoNi | K | AN 1 L-SIL stranded | silicone | 5.4 | round | | | 7.5 | 40 |
| 48009 | SoPtRh-SoPt | S | AP 1 L-SIL stranded | silicone | 5.4 | round | | | 7.5 | 40 |
| 48232 | Cu-CuNi (Ko) | U | AC 1 L-SIL stranded | silicone | 5.4 | round | | | 7.5 | 40 |
| 48233 | Fe-CuNi (Ko) | L | AE 2 M-SIL stranded | silicone | 7.8 | round | -60°C to +180°C | stationary -25°C to +180°C flexing -25°C to +180°C (short time +200°C) | 15 | 248 |
| 48234 | SoNiCr-SoNi | K | AN 2 M-SIL stranded | silicone | 7.8 | round | | | 15 | 248 |
| 48235 | SoPtRh-SoPt | S | AP 2 M-SIL stranded | silicone | 7.8 | round | | | 15 | 248 |
| 48236 | Cu-CuNi (Ko) | U | AC 2 M-SIL stranded | silicone | 7.8 | round | | | 15 | 248 |
| 48010 | Fe-CuNi (Ko) | L | AE 3 L parallel | glass-fiber | 5.0x7.2 | oval | -60°C to +200°C | stationary -25°C to +200°C flexing -25°C to +200°C | 7.5 | 64 |
| 48011 | SoNiCr-SoNi | K | AN 3 L parallel | glass-fiber | 5.0x7.2 | oval | | | 7.5 | 64 |
| 48012 | SoPtRh-SoPt | S | AP 3 L parallel | glass-fiber | 5.0x7.2 | oval | | | 7.5 | 64 |
| 48237 | Cu-CuNi (Ko) | U | AC 3 L parallel | glass-fiber | 5.0x7.2 | oval | | | 7.5 | 64 |
| 48238 | Fe-CuNi (Ko) | L | AE 3 Ln-SIL parallel | silicone | 5.2x7.4 | oval | -60°C to +180°C | stationary -25°C to +180°C flexing -25°C to +180°C (short time +200°C) | 7.5 | 62 |
| 48239 | SoNiCr-SoNi | K | AN 3 Ln-SIL parallel | silicone | 5.2x7.4 | oval | | | 7.5 | 62 |
| 48240 | SoPtRh-SoPt | S | AP 3 Ln-SIL parallel | silicone | 5.2x7.4 | oval | | | 7.5 | 62 |
| 48241 | Cu-CuNi (Ko) | U | AC 3 Ln-SIL parallel | silicone | 5.2x7.4 | oval | | | 7.5 | 62 |
| 48013 | Fe-CuNi (Ko) | L | AE 4 L parallel | glass-fiber | 5.8x8.0 | oval | -60°C to +200°C | stationary -25°C to +200°C flexing -25°C to +200°C | 7.5 | 87 |
| 48014 | SoNiCr-SoNi | K | AN 4 L parallel | glass-fiber | 5.8x8.0 | oval | | | 7.5 | 87 |
| 48015 | SoPtRh-SoPt | S | AP 4 L parallel | glass-fiber | 5.8x8.0 | oval | | | 7.5 | 87 |
| 48242 | Cu-CuNi (Ko) | U | AC 4 L parallel | glass-fiber | 5.8x8.0 | oval | | | 7.5 | 87 |
| 48016 | Fe-CuNi (Ko) | L | AE 4 Ln-SIL | silicone | 6.0x8.2 | oval | -60°C to +180°C | stationary -25°C to +180°C flexing -25°C to +180°C (short time +200°C) | 7.5 | 85 |
| 48017 | SoNiCr-SoNi | K | AN 4 Ln-SIL | silicone | 6.0x8.2 | oval | | | 7.5 | 85 |
| 48018 | SoPtRh-SoPt | S | AP 4 Ln-SIL | silicone | 6.0x8.2 | oval | | | 7.5 | 85 |
| 48243 | Cu-CuNi (Ko) | U | AC 4 Ln-SIL | silicone | 6.0x8.2 | oval | | | 7.5 | 85 |
| 48244 | Fe-CuNi (Ko) | L | AE 5 L | PVC | 8.1 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 93 |
| 48245 | SoNiCr-SoNi | K | AN 5 L | PVC | 8.1 | round | | | 7.5 | 93 |
| 48246 | SoPtRh-SoPt | S | AP 5 L | PVC | 8.1 | round | | | 7.5 | 93 |
| 48247 | Cu-CuNi (Ko) | U | AC 5 L | PVC | 8.1 | round | | | 7.5 | 93 |
| 48248 | Fe-CuNi (Ko) | L | AE 6 L-SIL | silicone | 8.0 | round | -60°C to +180°C | stationary -25°C to +180°C flexing -25°C to +180°C (short time +200°C) | 7.5 | 94 |
| 48249 | SoNiCr-SoNi | K | AN 6 L-SIL | silicone | 8.0 | round | | | 7.5 | 94 |
| 48250 | SoPtRh-SoPt | S | AP 6 L-SIL | silicone | 8.0 | round | | | 7.5 | 94 |
| 48251 | Cu-CuNi (Ko) | U | AC 6 L-SIL | silicone | 8.0 | round | | | 7.5 | 94 |
| 48252 | Fe-CuNi (Ko) | L | AE 6 M-SIL | silicone | 7.8 | round | -60°C to +180°C | stationary -25°C to +180°C flexing -25°C to +180°C (short time +200°C) | 12 | 92 |
| 48253 | SoNiCr-SoNi | K | AN 6 M-SIL | silicone | 7.8 | round | | | 12 | 92 |
| 48254 | SoPtRh-SoPt | S | AP 6 M-SIL | silicone | 7.8 | round | | | 12 | 92 |
| 48255 | Cu-CuNi (Ko) | U | AC 6 M-SIL | silicone | 7.8 | round | | | 12 | 92 |
| 48019 | Fe-CuNi (Ko) | L | AE 7 L parallel | PVC | 5.5x8.2 | oval | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 60 |
| 48020 | SoNiCr-SoNi | K | AN 7 L parallel | PVC | 5.5x8.2 | oval | | | 7.5 | 60 |
| 48021 | SoPtRh-SoPt | S | AP 7 L parallel | PVC | 5.5x8.2 | oval | | | 7.5 | 60 |
| 48256 | Cu-CuNi (Ko) | U | AC 7 L parallel | PVC | 5.5x8.2 | oval | | | 7.5 | 60 |
| 48022 | Fe-CuNi (Ko) | L | AE 8 L | PVC | 6.9x9.0 | oval | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 82 |
| 48023 | SoNiCr-SoNi | K | AN 8 L | PVC | 6.9x9.0 | oval | | | 7.5 | 82 |
| 48024 | SoPtRh-SoPt | S | AP 8 L | PVC | 6.9x9.0 | oval | | | 7.5 | 82 |
| 48257 | Cu-CuNi (Ko) | U | AC 8 L | PVC | 6.9x9.0 | oval | | | 7.5 | 82 |
| 48025 | Fe-CuNi (Ko) | L | AE 9 L | PVC | 7.0 | round | -10°C to +80° | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 79 |
| 48026 | SoNiCr-SoNi | K | AN 9 L | PVC | 7.0 | round | | | 7.5 | 79 |
| 48027 | SoPtRh-SoPt | S | AP 9 L | PVC | 7.0 | round | | | 7.5 | 79 |
| 48258 | Cu-CuNi (Ko) | U | AC 9 L | PVC | 7.0 | round | | | 7.5 | 79 |
| 48479 | Fe-CuNi | J | AF 9 L | PVC | 7.0 | round | | | 7.5 | 79 |
| 48028 | Fe-CuNi (Ko) | L | AE 9-2 LS | PVC | 7.8 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 108 |
| 48029 | SoNiCr-SoNi | K | AN 9-2 LS | PVC | 7.8 | round | | | 7.5 | 108 |
| 48030 | SoPtRh-SoPt | S | AP 9-2 LS | PVC | 7.8 | round | | | 7.5 | 108 |
| 48259 | Cu-CuNi (Ko) | U | AC 9-2 LS | PVC | 7.8 | round | | | 7.5 | 108 |
| 48480 | Fe-CuNi | J | AF 9-2 LS | PVC | 7.8 | round | | | 7.5 | 108 |
| 48031 | Fe-CuNi (Ko) | L | AE 9-2 LSY | PVC | 9.8 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 147 |
| 48032 | SoNiCr-SoNi | K | AN 9-2 LSY | PVC | 9.8 | round | | | 7.5 | 147 |
| 48069 | SoPtRh-SoPt | S | AP 9-2 LSY | PVC | 9.8 | round | | | 7.5 | 147 |
| 48260 | Cu-CuNi (Ko) | U | AC 9-2 LSY | PVC | 9.8 | round | | | 7.5 | 147 |

L = stranded conductor
M = solid conductor
tin. = tinned
galv. = galvanized

COMPENSATING CABLES

| Part no. | Thermocouple element material in accordance with DIN 43713 | Thermocouple type | Type | Core insulation | Jacket/armor jacket | Outer ø approx. mm | Form | Temperature range of insulation °C | Installation temperature range °C | min. bending radius x cable ø | Weight approx. kg/km |
|--|--|-------------------|----------------------|---------------------------|--|--------------------|-------|------------------------------------|-----------------------------------|-------------------------------|----------------------|
| Single-pair: 2 x 1.5 mm² (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ø 1.38 mm) | | | | | | | | | | | |
| 48033 | FE-CuNi (Ko) | L | AE 9 M | PVC | | 7.0 | round | -10°C to +80° | stationary | 12 | 79 |
| 48034 | SoNiCr-SoNi | K | AN 9 M | PVC | PVC | 7.0 | round | | -25°C to +70°C | 12 | 79 |
| 48035 | SoPtRh-SoPt | S | AP 9 M | PVC | | 7.0 | round | | flexing | 12 | 79 |
| 48261 | Cu-CuNi (Ko) | U | AC 9 M | PVC | | 7.0 | round | -5°C to +70°C | 12 | 79 | |
| 48262 | Fe-CuNi (Ko) | L | AE 9-2 MSY | PVC | PVC/galv. steel wire braid/ PVC | 9.6 | round | -10°C to +80°C | stationary | 12 | 144 |
| 48263 | SoNiCr-SoNi | K | AN 9-2 MSY | PVC | | 9.6 | round | | -25°C to +70°C | 12 | 144 |
| 48264 | SoPtRh-SoPt | S | AP 9-2 MSY | PVC | | 9.6 | round | | flexing | 12 | 144 |
| 48265 | Cu-CuNi (Ko) | U | AC 9-2 MSY | PVC | | 9.6 | round | -5°C to +70°C | 12 | 144 | |
| 48036 | Fe-CuNi (Ko) | L | AE 10 L-SIL parallel | silicone | glass-fiber | 5.5x8.2 | oval | -60°C to +180°C | stationary | 7.5 | 59 |
| 48037 | SoNiCr-SoNi | K | AN 10 L-SIL parallel | silicone | | 5.5x8.2 | oval | | -25°C to +180°C | 7.5 | 59 |
| 48038 | SoPtRh-SoPt | S | AP 10 L-SIL parallel | silicone | | 5.5x8.2 | oval | | flexing | 7.5 | 59 |
| 48266 | Cu-CuNi (Ko) | U | AC 10 L-SIL parallel | silicone | | 5.5x8.2 | oval | (short time +200°C) | 7.5 | 59 | |
| 48039 | Fe-CuNi (Ko) | L | AE 11 L | silicone | Glass-fiber/ galv. steel wire braid | 6.3x9.0 | oval | -60°C to +180°C | stationary | 7.5 | 82 |
| 48040 | SoNiCr-SoNi | K | AN 11 L | silicone | | 6.3x9.0 | oval | | -25°C to +180°C | 7.5 | 82 |
| 48041 | SoPtRh-SoPt | S | AP 11 L | silicone | | 6.3x9.0 | oval | | flexing | 7.5 | 82 |
| 48267 | Cu-CuNi (Ko) | U | AC 11 L | silicone | | 6.3x9.0 | oval | (short time +200°C) | 7.5 | 82 | |
| 48042 | Fe-CuNi (Ko) | L | AE 11 Lr | silicone | Glass-fiber/ galv. steel wire braid | 6.7 | round | -60°C to +180°C | stationary | 7.5 | 83 |
| 48043 | SoNiCr-SoNi | K | AN 11 Lr | silicone | | 6.7 | round | | -25°C to +180°C | 7.5 | 83 |
| 48044 | SoPtRh-SoPt | S | AP 11 Lr | silicone | | 6.7 | round | | flexing | 7.5 | 83 |
| 48268 | Cu-CuNi (Ko) | U | AC 11 Lr | silicone | | 6.7 | round | (short time +200°C) | 7.5 | 83 | |
| 48045 | Fe-CuNi (Ko) | L | AE 11 Mr | silicone | Glass-fiber/ galv. steel wire braid | 6.5 | round | -60°C to +180°C | stationary | 12 | 83 |
| 48046 | SoNiCr-SoNi | K | AN 11 Mr | silicone | | 6.5 | round | | -25°C to +180°C | 12 | 83 |
| 48047 | SoPtRh-SoPt | S | AP 11 Mr | silicone | | 6.5 | round | | flexing | 12 | 83 |
| 48269 | Cu-CuNi (Ko) | U | AC 11 Mr | silicone | | 6.5 | round | (short time +200°C) | 12 | 83 | |
| 48048 | Fe-CuNi (Ko) | L | AE 12 L parallel | PVC | PVC | 4.3x7.0 | oval | -10°C to +80°C | stationary | 7.5 | 69 |
| 48049 | SoNiCr-SoNi | K | AN 12 L parallel | PVC | | 4.3x7.0 | oval | | -25°C to +70°C | 7.5 | 69 |
| 48050 | SoPtRh-SoPt | S | AP 12 L parallel | PVC | | 4.3x7.0 | oval | | flexing | 7.5 | 69 |
| 48270 | Cu-CuNi (Ko) | U | AC 12 L parallel | PVC | | 4.3x7.0 | oval | -5°C to +70°C | 7.5 | 69 | |
| 48481 | Fe-CuNi | J | AF 12 L parallel | PVC | | 4.3x7.0 | oval | | 7.5 | 69 | |
| 48051 | Fe-CuNi (Ko) | L | AE 12 M parallel | PVC | PVC | 4.2x6.8 | oval | -10°C to +80°C | stationary | 12 | 61 |
| 48052 | SoNiCr-SoNi | K | AN 12 M parallel | PVC | | 4.2x6.8 | oval | | -25°C to +70°C | 12 | 61 |
| 48053 | SoPtRh-SoPt | S | AP 12 M parallel | PVC | | 4.2x6.8 | oval | | flexing | 12 | 61 |
| 48271 | Cu-CuNi (Ko) | U | AC 12 M parallel | PVC | | 4.2x6.8 | oval | -5°C to +70°C | 12 | 61 | |
| 48054 | Fe-CuNi (Ko) | L | AE 13 L parallel | silicone | Glass-fiber | 3.2x5.9 | oval | -60°C to +180°C | stationary | 7.5 | 45 |
| 48055 | SoNiCr-SoNi | K | AN 13 L parallel | silicone | | 3.2x5.9 | oval | | -25°C to +180°C | 7.5 | 45 |
| 48056 | SoPtRh-SoPt | S | AP 13 L parallel | silicone | | 3.2x5.9 | oval | | flexing | 7.5 | 45 |
| 48272 | Cu-CuNi (Ko) | U | AC 13 L parallel | silicone | | 3.2x5.9 | oval | (short time +200°C) | 7.5 | 45 | |
| 48057 | Fe-CuNi (Ko) | L | AE 13 M | silicone | Glass-fiber | 3.5x6.0 | oval | -60°C to +180°C | stationary | 12 | 45 |
| 48058 | SoNiCr-SoNi | K | AN 13 M | silicone | | 3.5x6.0 | oval | | -25°C to +180°C | 12 | 45 |
| 48059 | SoPtRh-SoPt | S | AP 13 M | silicone | | 3.5x6.0 | oval | | flexing | 12 | 45 |
| 48273 | Cu-CuNi (Ko) | U | AC 13 M | silicone | | 3.5x6.0 | oval | (short time +200°C) | 12 | 45 | |
| 48060 | Fe-CuNi (Ko) | L | AE 14 L | silicone | Special foamed silicone mixture/ galv. Steel hose | 11.7 | round | -60°C to +180°C | stationary | 7.5 | 196 |
| 48061 | SoNiCr-SoNi | K | AN 14 L | silicone | | 11.7 | round | | -25°C to +180°C | 7.5 | 196 |
| 48062 | SoPtRh-SoPt | S | AP 14 L | silicone | | 11.7 | round | | flexing | 7.5 | 196 |
| 48274 | Cu-CuNi (Ko) | U | AC 14 L | silicone | | 11.7 | round | (short time +200°C) | 7.5 | 196 | |
| 48063 | Fe-CuNi (Ko) | L | AE 15 L | silicone | silicone | 7.7 | round | -60°C to +180°C | stationary | 7.5 | 76 |
| 48064 | SoNiCr-SoNi | K | AN 15 L | silicone | | 7.7 | round | | -25°C to +180°C | 7.5 | 76 |
| 48065 | SoPtRh-SoPt | S | AP 15 L | silicone | | 7.7 | round | | flexing | 7.5 | 76 |
| 48275 | Cu-CuNi (Ko) | U | AC 15 L | silicone | | 7.7 | round | (short time +200°C) | 7.5 | 76 | |
| 48482 | Fe-CuNi | J | AF 15 L | silicone | | 7.7 | round | | 7.5 | 76 | |
| 48066 | Fe-CuNi (Ko) | L | AE 15 LS | silicone | silicone/ galv. steel wire braid | 7.8 | round | -10°C to +180°C | stationary | 7.5 | 105 |
| 48067 | SoNiCr-SoNi | K | AN 15 LS | silicone | | 7.8 | round | | -25°C to +180°C | 7.5 | 105 |
| 48068 | SoPtRh-SoPt | S | AP 15 LS | silicone | | 7.8 | round | | flexing | 7.5 | 105 |
| 48276 | Cu-CuNi (Ko) | U | AC 15 LS | silicone | | 7.8 | round | (short time +200°C) | 7.5 | 105 | |
| 48277 | Fe-CuNi (Ko) | L | AE 16 L-SIL parallel | silicone | - | 2.8x5.6 | oval | -10°C to +180°C | stationary | 7.5 | 38 |
| 48278 | SoNiCr-SoNi | K | AN 16 L-SIL parallel | silicone | | 2.8x5.6 | oval | | -25°C to +180°C | 7.5 | 38 |
| 48279 | SoPtRh-SoPt | S | AP 16 L-SIL parallel | silicone | | 2.8x5.6 | oval | | flexing | 7.5 | 38 |
| 48280 | Cu-CuNi (Ko) | U | AC 16 L-SIL parallel | silicone | | 2.8x5.6 | oval | (short time +200°C) | 7.5 | 38 | |
| 48281 | Fe-CuNi (Ko) | L | AE 18 L | HELUFLO [®] -FEP | HELUFLO [®] -FEP | 4.4 | round | -100°C to 200°C | stationary | 7.5 | 37 |
| 48282 | SoNiCr-SoNi | K | AN 18 L | HELUFLO [®] -FEP | | 4.4 | round | | -25°C to +205°C | 7.5 | 37 |
| 48283 | SoPtRh-SoPt | S | AP 18 L | HELUFLO [®] -FEP | | 4.4 | round | | flexing | 7.5 | 37 |
| 48284 | Cu-CuNi (Ko) | U | AC 18 L | HELUFLO [®] -FEP | | 4.4 | round | -25°C to +205°C | 7.5 | 37 | |
| 48285 | Fe-CuNi (Ko) | L | AE 19 L | HELUFLO [®] -FEP | PETP tape/ tin. Cu-round wire braid/ HELUFLO [®] -FEP | 5.6 | round | -100°C to 200°C | stationary | 7.5 | 60 |
| 48286 | SoNiCr-SoNi | K | AN 19 L | HELUFLO [®] -FEP | | 5.6 | round | | -25°C to +205°C | 7.5 | 60 |
| 48287 | SoPtRh-SoPt | S | AP 19 L | HELUFLO [®] -FEP | | 5.6 | round | | flexing | 7.5 | 60 |
| 48288 | Cu-CuNi (Ko) | U | AC 19 L | HELUFLO [®] -FEP | | 5.6 | round | (short time +200°C) | 7.5 | 60 | |

L = stranded conductor
M = solid conductor
tin. = tinned
galv. = galvanized

COMPENSATING CABLES

| Part no. | Thermocouple element material in accordance with DIN 43713 | Thermocouple type | Core insulation | Jacket/armoring jacket | Outer ϕ approx. mm | Form | Temperature range of insulation °C | Installation temperature range °C | min. bending radius x cable ϕ | Weight approx. kg/km | |
|--|--|-------------------|-----------------|------------------------|-------------------------|------|------------------------------------|-----------------------------------|-------------------------------------|----------------------|------|
| Single-pair: 2 x 1.5 mm² (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ϕ 1.38 mm) | | | | | | | | | | | |
| 48289 | Fe-CuNi (Ko) | L | AE 20 L | PVC | PETP tape/ | 8.0 | round | -10°C to +80°C | stationary | 7.5 | 75 |
| 48290 | SoNiCr-SoNi | K | AE 20 L | PVC | bl. Cu-ground wire | 8.0 | round | | -25°C to +70°C | 7.5 | 75 |
| 48291 | SoPtRh-SoPt | S | AE 20 L | PVC | 0.5 mm ϕ / | 8.0 | round | | flexing | 7.5 | 75 |
| 48292 | Cu-CuNi (Ko) | U | AE 20 L | PVC | Alu-tape/PVC | 8.0 | round | | -5°C to +70°C | 7.5 | 75 |
| 48293 | Fe-CuNi (Ko) | L | AE 20 M | PVC | PETP tape/ | 8.2 | round | -10°C to +80°C | stationary | 12 | 82 |
| 48294 | SoNiCr-SoNi | K | AE 20 M | PVC | bl. Cu-ground wire | 8.2 | round | | -25°C to +70°C | 12 | 82 |
| 48295 | SoPtRh-SoPt | S | AE 20 M | PVC | 0.5 mm ϕ / | 8.2 | round | | flexing | 12 | 82 |
| 48296 | Cu-CuNi (Ko) | U | AE 20 M | PVC | Alu-tape/PVC | 8.2 | round | | -5°C to +70°C | 12 | 82 |
| Multiple-pair: 2 pair (4 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ϕ 1.38 mm) | | | | | | | | | | | |
| 48100 | Fe-CuNi (Ko) | L | AE 9-4 L | PVC | | 8.3 | round | -10°C to +80°C | stationary | 7.5 | 125 |
| 48101 | SoNiCr-SoNi | K | AN 9-4 L | PVC | | 8.3 | round | | -25°C to +70°C | 7.5 | 125 |
| 48102 | SoPtRh-SoPt | S | AP 9-4 L | PVC | PVC | 8.3 | round | | flexing | 7.5 | 125 |
| 48297 | Cu-CuNi (Ko) | U | AC 9-4 L | PVC | | 8.3 | round | | -5°C to +70°C | 7.5 | 125 |
| 48483 | Fe-CuNi | J | AF 9-4 L | PVC | | 8.3 | round | | 7.5 | 125 | |
| 48298 | Fe-CuNi (Ko) | L | AE 9-4 LS | PVC | | 8.9 | round | -10°C to +80°C | stationary | 7.5 | 155 |
| 48299 | SoNiCr-SoNi | K | AN 9-4 LS | PVC | PVC/ | 8.9 | round | | -25°C to +70°C | 7.5 | 155 |
| 48300 | SoPtRh-SoPt | S | AP 9-4 LS | PVC | galv. steel wire braid | 8.9 | round | | flexing | 7.5 | 155 |
| 48301 | Cu-CuNi (Ko) | U | AC 9-4 LS | PVC | | 8.9 | round | | -5°C to +70°C | 7.5 | 155 |
| 48137 | Fe-CuNi (Ko) | L | AE 9-4 LSY | PVC | | 11.4 | round | -10°C to +80°C | stationary | 7.5 | 220 |
| 48138 | SoNiCr-SoNi | K | AN 9-4 LSY | PVC | PVC/ | 11.4 | round | | -25°C to +70°C | 7.5 | 220 |
| 48139 | SoPtRh-SoPt | S | AP 9-4 LSY | PVC | galv. steel wire braid/ | 11.4 | round | | flexing | 7.5 | 220 |
| 48302 | Cu-CuNi (Ko) | U | AC 9-4 LSY | PVC | PVC | 11.4 | round | | -5°C to +70°C | 7.5 | 220 |
| 48303 | Fe-CuNi (Ko) | L | AE 9-4 MSY | PVC | | 11.0 | round | -10°C to +80°C | stationary | 12 | 210 |
| 48304 | SoNiCr-SoNi | K | AN 9-4 MSY | PVC | PVC/ | 11.0 | round | | -25°C to +70°C | 12 | 210 |
| 48305 | SoPtRh-SoPt | S | AP 9-4 MSY | PVC | galv. steel wire braid/ | 11.0 | round | | flexing | 12 | 210 |
| 48306 | Cu-CuNi (Ko) | U | AC 9-4 MSY | PVC | PVC | 11.0 | round | | -5°C to +70°C | 12 | 210 |
| 48307 | Fe-CuNi (Ko) | L | AE 20-4 M | PVC | PETP tape/ | 10.8 | round | -10°C to +80°C | stationary | 12 | 137 |
| 48308 | SoNiCr-SoNi | K | AN 20-4 M | PVC | bl. Cu-ground wire | 10.8 | round | | -25°C to +70°C | 12 | 137 |
| 48309 | SoPtRh-SoPt | S | AP 20-4 M | PVC | 0.5 mm ϕ / | 10.8 | round | | flexing | 12 | 137 |
| 48310 | Cu-CuNi (Ko) | U | AC 20-4 M | PVC | Alu-tape/PVC | 10.8 | round | | -5°C to +70°C | 12 | 137 |
| Multiple-pair: 4 x 1.5 mm² (L = stranded wire, conductor make-up 48 x 0.20 mm) | | | | | | | | | | | |
| 48474 | Fe-CuNi (Ko) | L | AE 11-4 Lr | silicone | | 7.8 | round | -60°C to +180°C | stationary | 7.5 | 11.8 |
| 48475 | SoNiCr-SoNi | K | AE 11-4 Lr | silicone | Glass-fiber/galv. steel | 7.8 | round | | -25°C to +180°C | 7.5 | 11.8 |
| 48476 | SoPtRh-SoPt | S | AE 11-4 Lr | silicone | wire braid | 7.8 | round | | flexing | 7.5 | 11.8 |
| 48477 | Cu-CuNi (Ko) | U | AE 11-4 Lr | silicone | | 7.8 | round | | -25°C to +180°C (short time +200°C) | 7.5 | 11.8 |
| Multiple-pair: 3 pairs (6 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ϕ 1.38 mm) | | | | | | | | | | | |
| 48103 | Fe-CuNi (Ko) | L | AE 9-6 L | PVC | | 10.3 | round | -10°C to +80°C | stationary | 7.5 | 190 |
| 48104 | SoNiCr-SoNi | K | AN 9-6 L | PVC | | 10.3 | round | | -25°C to +70°C | 7.5 | 190 |
| 48105 | SoPtRh-SoPt | S | AP 9-6 L | PVC | PVC | 10.3 | round | | flexing | 7.5 | 190 |
| 48311 | Cu-CuNi (Ko) | U | AC 9-6 L | PVC | | 10.3 | round | | -5°C to +70°C | 7.5 | 190 |
| 48484 | Fe-CuNi | J | AF 9-6 L | PVC | | 10.3 | round | | 7.5 | 190 | |
| 48312 | Fe-CuNi (Ko) | L | AE 9-6 LS | PVC | | 10.9 | round | -10°C to +80°C | stationary | 7.5 | 226 |
| 48313 | SoNiCr-SoNi | K | AN 9-6 LS | PVC | PVC/ | 10.9 | round | | -25°C to +70°C | 7.5 | 226 |
| 48314 | SoPtRh-SoPt | S | AP 9-6 LS | PVC | galv. steel wire braid | 10.9 | round | | flexing | 7.5 | 226 |
| 48315 | Cu-CuNi (Ko) | U | AC 9-6 LS | PVC | | 10.9 | round | | -5°C to +70°C | 7.5 | 226 |
| 48140 | Fe-CuNi (Ko) | L | AE 9-6 LSY | PVC | | 13.4 | round | -10°C to +80°C | stationary | 7.5 | 292 |
| 48141 | SoNiCr-SoNi | K | AN 9-6 LSY | PVC | PVC/ | 13.4 | round | | -25°C to +70°C | 7.5 | 292 |
| 48142 | SoPtRh-SoPt | S | AP 9-6 LSY | PVC | galv. steel wire braid/ | 13.4 | round | | flexing | 7.5 | 292 |
| 48316 | Cu-CuNi (Ko) | U | AC 9-6 LSY | PVC | PVC | 13.4 | round | | -5°C to +70°C | 7.5 | 292 |
| 48317 | Fe-CuNi (Ko) | L | AE 9-6 MSY | PVC | | 12.5 | round | -10°C to +80°C | stationary | 12 | 272 |
| 48318 | SoNiCr-SoNi | K | AN 9-6 MSY | PVC | PVC/ | 12.5 | round | | -25°C to +70°C | 12 | 272 |
| 48319 | SoPtRh-SoPt | S | AP 9-6 MSY | PVC | galv. steel wire braid/ | 12.5 | round | | flexing | 12 | 272 |
| 48320 | Cu-CuNi (Ko) | U | AC 9-6 MSY | PVC | PVC | 12.5 | round | | -5°C to +70°C | 12 | 272 |
| 48321 | Fe-CuNi (Ko) | L | AE 20-6 M | PVC | PETP tape/ | 12.4 | round | -10°C to +80°C | stationary | 12 | 186 |
| 48322 | SoNiCr-SoNi | K | AN 20-6 M | PVC | bl. Cu-ground wire | 12.4 | round | | -25°C to +70°C | 12 | 186 |
| 48323 | SoPtRh-SoPt | S | AP 20-6 M | PVC | 0.5 mm ϕ / | 12.4 | round | | flexing | 12 | 186 |
| 48324 | Cu-CuNi (Ko) | U | AC 20-6 M | PVC | Alu-tape/PVC | 12.4 | round | | -5°C to +70°C | 12 | 186 |
| Multiple-pair: 4 pairs (8 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm) | | | | | | | | | | | |
| 48106 | Fe-CuNi (Ko) | L | AE 9-8 L | PVC | | 11.0 | round | -10°C to +80°C | stationary | 7.5 | 238 |
| 48107 | SoNiCr-SoNi | K | AN 9-8 L | PVC | | 11.0 | round | | -25°C to +70°C | 7.5 | 238 |
| 48108 | SoPtRh-SoPt | S | AP 9-8 L | PVC | PVC | 11.0 | round | | flexing | 7.5 | 238 |
| 48325 | Cu-CuNi (Ko) | U | AC 9-8 L | PVC | | 11.0 | round | | -5°C to +70°C | 7.5 | 238 |
| 48485 | Fe-CuNi | J | AF 9-8 L | PVC | | 11.0 | round | | 7.5 | 238 | |
| 48143 | Fe-CuNi (Ko) | L | AE 9-8 LSY | PVC | | 14.0 | round | -10°C to +80°C | stationary | 7.5 | 410 |
| 48144 | SoNiCr-SoNi | K | AN 9-8 LSY | PVC | PVC/ | 14.0 | round | | -25°C to +70°C | 7.5 | 410 |
| 48145 | SoPtRh-SoPt | S | AP 9-8 LSY | PVC | galv. steel wire braid/ | 14.0 | round | | flexing | 7.5 | 410 |
| 48326 | Cu-CuNi (Ko) | U | AC 9-8 LSY | PVC | PVC | 14.0 | round | | -5°C to +70°C | 7.5 | 410 |

L = stranded conductor
M = solid conductor
tin. = tinned
galv. = galvanized

COMPENSATING CABLES

| Part no. | Thermocouple element material in accordance with DIN 43713 | Thermocouple type | Core insulation | Jacket/ armoring jacket | Outer ø approx. mm | Form | Temperature range of insulation °C | Installation temperature range °C | min. bending radius x cable ø | Weight approx. kg/km |
|---|--|-------------------|-----------------|-------------------------|--------------------|-------|------------------------------------|--|-------------------------------|--|
| Multiple-pair: 5 pairs (10 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm) | | | | | | | | | | |
| 48109 | FE-CuNi (Ko) | L | AE 9-10 L | PVC | 13.0 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 284 |
| 48110 | SoNiCr-SoNi | K | AN 9-10 L | PVC | 13.0 | round | | | 7.5 | 284 |
| 48111 | SoPtRh-SoPt | S | AP 9-10 L | PVC | 13.0 | round | | | 7.5 | 284 |
| 48327 | Cu-CuNi (Ko) | U | AC 9-10 L | PVC | 13.0 | round | | | 7.5 | 284 |
| 48486 | FE-CuNi (Ko) | J | AF 9-10 L | PVC | 13.0 | round | | | 7.5 | 284 |
| 48146 | Fe-CuNi (Ko) | L | AE 9-10 LSY | PVC | 16.5 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 475 |
| 48147 | SoNiCr-SoNi | K | AN 9-10 LSY | PVC | 16.5 | round | | | 7.5 | 475 |
| 48148 | SoPtRh-SoPt | S | AP 9-10 LSY | PVC | 16.5 | round | | | 7.5 | 475 |
| 48328 | Cu-CuNi (Ko) | U | AC 9-10 LSY | PVC | 16.5 | round | | | 7.5 | 475 |
| Multiple-pair: 6 pairs (12 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ø 1.38 mm) | | | | | | | | | | |
| 48112 | Fe-CuNi (Ko) | L | AE 9-12 L | PVC | 13.5 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 320 |
| 48113 | SoNiCr-SoNi | K | AN 9-12 L | PVC | 13.5 | round | | | 7.5 | 320 |
| 48114 | SoPtRh-SoPt | S | AP 9-12 L | PVC | 13.5 | round | | | 7.5 | 320 |
| 48329 | Cu-CuNi (Ko) | U | AC 9-12 L | PVC | 13.5 | round | | | 7.5 | 320 |
| 48487 | Fe-CuNi | J | AF 9-12 L | PVC | 13.5 | round | | | 7.5 | 320 |
| 48330 | Fe-CuNi (Ko) | L | AE 9-12 LS | PVC | 14.2 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 384 |
| 48331 | SoNiCr-SoNi | K | AN 9-12 LS | PVC | 14.2 | round | | | 7.5 | 384 |
| 48332 | SoPtRh-SoPt | S | AP 9-12 LS | PVC | 14.2 | round | | | 7.5 | 384 |
| 48333 | Cu-CuNi (Ko) | U | AC 9-12 LS | PVC | 14.2 | round | | | 7.5 | 384 |
| 48149 | Fe-CuNi (Ko) | L | AE 9-12 LSY | PVC | 17.5 | round | | | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C |
| 48150 | SoNiCr-SoNi | K | AN 9-12 LSY | PVC | 17.5 | round | 7.5 | 483 | | |
| 48151 | SoPtRh-SoPt | S | AP 9-12 LSY | PVC | 17.5 | round | 7.5 | 483 | | |
| 48334 | Cu-CuNi (Ko) | U | AC 9-12 LSY | PVC | 17.5 | round | 7.5 | 483 | | |
| 48335 | Fe-CuNi (Ko) | L | AE 9-12 MSY | PVC | 16.5 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | | |
| 48336 | SoNiCr-SoNi | K | AN 9-12 MSY | PVC | 16.5 | round | | | 12 | 478 |
| 48337 | SoPtRh-SoPt | S | AP 9-12 MSY | PVC | 16.5 | round | | | 12 | 478 |
| 48338 | Cu-CuNi (Ko) | U | AC 9-12 MSY | PVC | 16.5 | round | | | 12 | 478 |
| 48339 | Fe-CuNi (Ko) | L | AE 20-12 M | PVC | 16.3 | round | | | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C |
| 48340 | SoNiCr-SoNi | K | AN 20-12 M | PVC | 16.3 | round | 12 | 362 | | |
| 48341 | SoPtRh-SoPt | S | AP 20-12 M | PVC | 16.3 | round | 12 | 362 | | |
| 48342 | Cu-CuNi (Ko) | U | AC 20-12 M | PVC | 16.3 | round | 12 | 362 | | |
| Multiple-pair: 7 pairs (14 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm) | | | | | | | | | | |
| 48115 | Fe-CuNi (Ko) | L | AE 9-14 L | PVC | 14.5 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 396 |
| 48116 | SoNiCr-SoNi | K | AN 9-14 L | PVC | 14.5 | round | | | 7.5 | 396 |
| 48117 | SoPtRh-SoPt | S | AP 9-14 L | PVC | 14.5 | round | | | 7.5 | 396 |
| 48343 | Cu-CuNi (Ko) | U | AC 9-14 L | PVC | 14.5 | round | | | 7.5 | 396 |
| 48488 | Fe-CuNi | J | AF 9-14 L | PVC | 14.5 | round | | | 7.5 | 396 |
| 48152 | Fe-CuNi (Ko) | L | AE 9-14 LSY | PVC | 18.5 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 640 |
| 48153 | SoNiCr-SoNi | K | AN 9-14 LSY | PVC | 18.5 | round | | | 7.5 | 640 |
| 48154 | SoPtRh-SoPt | S | AP 9-14 LSY | PVC | 18.5 | round | | | 7.5 | 640 |
| 48344 | Cu-CuNi (Ko) | U | AC 9-14 LSY | PVC | 18.5 | round | | | 7.5 | 640 |
| Multiple-pair: 8 pairs (16 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ø 1.38 mm) | | | | | | | | | | |
| 48118 | Fe-CuNi (Ko) | L | AE 9-16 L | PVC | 15.1 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 419 |
| 48119 | SoNiCr-SoNi | K | AN 9-16 L | PVC | 15.1 | round | | | 7.5 | 419 |
| 48120 | SoPtRh-SoPt | S | AP 9-16 L | PVC | 15.1 | round | | | 7.5 | 419 |
| 48345 | Cu-CuNi (Ko) | U | AC 9-16 L | PVC | 15.1 | round | | | 7.5 | 419 |
| 48489 | Fe-CuNi | J | AF 9-16 L | PVC | 15.1 | round | | | 7.5 | 419 |
| 48346 | Fe-CuNi (Ko) | L | AE 9-16 LS | PVC | 16.1 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | 7.5 | 495 |
| 48347 | SoNiCr-SoNi | K | AN 9-16 LS | PVC | 16.1 | round | | | 7.5 | 495 |
| 48348 | SoPtRh-SoPt | S | AP 9-16 LS | PVC | 16.1 | round | | | 7.5 | 495 |
| 48349 | Cu-CuNi (Ko) | U | AC 9-16 LS | PVC | 16.1 | round | | | 7.5 | 495 |
| 48155 | Fe-CuNi (Ko) | L | AE 9-16 LSY | PVC | 19.3 | round | | | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C |
| 48156 | SoNiCr-SoNi | K | AN 9-16 LSY | PVC | 19.3 | round | 7.5 | 623 | | |
| 48157 | SoPtRh-SoPt | S | AP 9-16 LSY | PVC | 19.3 | round | 7.5 | 623 | | |
| 48350 | Cu-CuNi (Ko) | U | AC 9-16 LSY | PVC | 19.3 | round | 7.5 | 623 | | |
| 48351 | Fe-CuNi (Ko) | L | AE 9-16 MSY | PVC | 18.7 | round | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C | | |
| 48352 | SoNiCr-SoNi | K | AN 9-16 MSY | PVC | 18.7 | round | | | 12 | 616 |
| 48353 | SoPtRh-SoPt | S | AP 9-16 MSY | PVC | 18.7 | round | | | 12 | 616 |
| 48354 | Cu-CuNi (Ko) | U | AC 9-16 MSY | PVC | 18.7 | round | | | 12 | 616 |
| 48355 | Fe-CuNi (Ko) | L | AE 20-16 M | PVC | 16.8 | round | | | -10°C to +80°C | stationary -25°C to +70°C flexing -5°C to +70°C |
| 48356 | SoNiCr-SoNi | K | AN 20-16 M | PVC | 16.8 | round | 12 | 423 | | |
| 48357 | SoPtRh-SoPt | S | AP 20-16 M | PVC | 16.8 | round | 12 | 423 | | |
| 48358 | Cu-CuNi (Ko) | U | AC 20-16 M | PVC | 16.8 | round | 12 | 423 | | |

L = stranded conductor
M = solid conductor
tin. = tinned
galv. = galvanized

COMPENSATING CABLES

| Part no. | Thermocouple element material in accordance with DIN 43713 | Thermocouple type | Core insulation | Jacket/armoring jacket | Outer Ø approx. mm | Form | Temperature range of insulation °C | Installation temperature range °C | min. bending radius x cable Ø | Weight approx. kg/km |
|--|--|-------------------|-----------------|------------------------|--------------------|-------|------------------------------------|-----------------------------------|-------------------------------|----------------------|
| Multiple-pair: 9 pairs (18 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm) | | | | | | | | | | |
| 48121 | Fe-CuNi (Ko) | L | AE 9-18 L | PVC | 16.5 | round | -10°C to +80°C | stationary | 7.5 | 480 |
| 48122 | SoNiCr-SoNi | K | AE 9-18 L | PVC | 16.5 | round | | | flexing | 7.5 |
| 48123 | SoPtRh-SoPt | S | AE 9-18 L | PVC | 16.5 | round | | -25°C to +70°C | 7.5 | 480 |
| 48359 | Cu-CuNi (Ko) | U | AE 9-18 L | PVC | 16.5 | round | | | flexing | 7.5 |
| 48490 | Fe-CuNi | J | AF 9-18 L | PVC | 16.5 | round | -5°C to +70°C | 7.5 | 480 | |
| 48158 | Fe-CuNi (Ko) | L | AE 9-18 LSY | PVC | 20.5 | round | -10°C to +80°C | stationary | 7.5 | 758 |
| 48159 | SoNiCr-SoNi | K | AE 9-18 LSY | PVC | 20.5 | round | | | flexing | 7.5 |
| 48160 | SoPtRh-SoPt | S | AE 9-18 LSY | PVC | 20.5 | round | | -25°C to +70°C | 7.5 | 758 |
| 48360 | Cu-CuNi (Ko) | U | AE 9-18 LSY | PVC | 20.5 | round | | | flexing | 7.5 |
| Multiple-pair: 10 pairs (20 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor Ø 1.38 mm) | | | | | | | | | | |
| 48124 | Fe-CuNi (Ko) | L | AE 9-20 L | PVC | 16.7 | round | -10°C to +80°C | stationary | 7.5 | 520 |
| 48125 | SoNiCr-SoNi | K | AN 9-20 L | PVC | 16.7 | round | | | flexing | 7.5 |
| 48126 | SoPtRh-SoPt | S | AP 9-20 L | PVC | 16.7 | round | | -25°C to +70°C | 7.5 | 520 |
| 48361 | Cu-CuNi (Ko) | U | AC 9-20 L | PVC | 16.7 | round | | | flexing | 7.5 |
| 48491 | Fe-CuNi | J | AF 9-20 L | PVC | 16.7 | round | -5°C to +70°C | 7.5 | 520 | |
| 48362 | Fe-CuNi (Ko) | L | AE 9-20 LS | PVC | 17.7 | round | -10°C to +80°C | stationary | 7.5 | 613 |
| 48363 | SoNiCr-SoNi | K | AN 9-20 LS | PVC | 17.7 | round | | | flexing | 7.5 |
| 48364 | SoPtRh-SoPt | S | AP 9-20 LS | PVC | 17.7 | round | | -25°C to +70°C | 7.5 | 613 |
| 48365 | Cu-CuNi (Ko) | U | AC 9-20 LS | PVC | 17.7 | round | | | flexing | 7.5 |
| 48161 | Fe-CuNi (Ko) | L | AE 9-20 LSY | PVC | 20.9 | round | -10°C to +80°C | stationary | 7.5 | 752 |
| 48162 | SoNiCr-SoNi | K | AN 9-20 LSY | PVC | 20.9 | round | | | flexing | 7.5 |
| 48163 | SoPtRh-SoPt | S | AP 9-20 LSY | PVC | 20.9 | round | | -25°C to +70°C | 7.5 | 752 |
| 48366 | Cu-CuNi (Ko) | U | AC 9-20 LSY | PVC | 20.9 | round | | | flexing | 7.5 |
| 48367 | Fe-CuNi (Ko) | L | AE 9-20 MSY | PVC | 20.3 | round | -10°C to +80°C | stationary | 12 | 744 |
| 48368 | SoNiCr-SoNi | K | AN 9-20 MSY | PVC | 20.3 | round | | | flexing | 12 |
| 48369 | SoPtRh-SoPt | S | AP 9-20 MSY | PVC | 20.3 | round | | -25°C to +70°C | 12 | 744 |
| 48370 | Cu-CuNi (Ko) | U | AC 9-20 MSY | PVC | 20.3 | round | | | flexing | 12 |
| 48371 | Fe-CuNi (Ko) | L | AE 20-20 M | PVC | 20.3 | round | -10°C to +80°C | stationary | 12 | 542 |
| 48372 | SoNiCr-SoNi | K | AN 20-20 M | PVC | 20.3 | round | | | flexing | 12 |
| 48373 | SoPtRh-SoPt | S | AP 20-20 M | PVC | 20.3 | round | | -25°C to +70°C | 12 | 542 |
| 48374 | Cu-CuNi (Ko) | U | AC 20-20 M | PVC | 20.3 | round | | | flexing | 12 |
| Multiple-pair: 12 pairs (24 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor Ø 1.38 mm) | | | | | | | | | | |
| 48127 | Fe-CuNi (Ko) | L | AE 9-24 L | PVC | 19.0 | round | -10°C to +80°C | stationary | 7.5 | 614 |
| 48128 | SoNiCr-SoNi | K | AN 9-24 L | PVC | 19.0 | round | | | flexing | 7.5 |
| 48129 | SoPtRh-SoPt | S | AP 9-24 L | PVC | 19.0 | round | | -25°C to +70°C | 7.5 | 614 |
| 48375 | Cu-CuNi (Ko) | U | AC 9-24 L | PVC | 19.0 | round | | | flexing | 7.5 |
| 48492 | Fe-CuNi | J | AF 9-24 L | PVC | 19.0 | round | -5°C to +70°C | 7.5 | 614 | |
| 48376 | Fe-CuNi (Ko) | L | AE 9-24 LS | PVC | 20.2 | round | -10°C to +80°C | stationary | 7.5 | 738 |
| 48377 | SoNiCr-SoNi | K | AN 9-24 LS | PVC | 20.2 | round | | | flexing | 7.5 |
| 48378 | SoPtRh-SoPt | S | AP 9-24 LS | PVC | 20.2 | round | | -25°C to +70°C | 7.5 | 738 |
| 48379 | Cu-CuNi (Ko) | U | AC 9-24 LS | PVC | 20.2 | round | | | flexing | 7.5 |
| 48164 | Fe-CuNi (Ko) | L | AE 9-24 LSY | PVC | 24.2 | round | -10°C to +80°C | stationary | 7.5 | 938 |
| 48165 | SoNiCr-SoNi | K | AN 9-24 LSY | PVC | 24.2 | round | | | flexing | 7.5 |
| 48166 | SoPtRh-SoPt | S | AP 9-24 LSY | PVC | 24.2 | round | | -25°C to +70°C | 7.5 | 938 |
| 48380 | Cu-CuNi (Ko) | U | AC 9-24 LSY | PVC | 24.2 | round | | | flexing | 7.5 |
| 48381 | Fe-CuNi (Ko) | L | AE 9-24 MSY | PVC | 23.1 | round | -10°C to +80°C | stationary | 12 | 907 |
| 48382 | SoNiCr-SoNi | K | AN 9-24 MSY | PVC | 23.1 | round | | | flexing | 12 |
| 48383 | SoPtRh-SoPt | S | AP 9-24 MSY | PVC | 23.1 | round | | -25°C to +70°C | 12 | 907 |
| 48384 | Cu-CuNi (Ko) | U | AC 9-24 MSY | PVC | 23.1 | round | | | flexing | 12 |
| 48385 | Fe-CuNi (Ko) | L | AE 20-24 M | PVC | 22.5 | round | -10°C to +80°C | stationary | 12 | 638 |
| 48386 | SoNiCr-SoNi | K | AN 20-24 M | PVC | 22.5 | round | | | flexing | 12 |
| 48387 | SoPtRh-SoPt | S | AP 20-24 M | PVC | 22.5 | round | | -25°C to +70°C | 12 | 638 |
| 48388 | Cu-CuNi (Ko) | U | AC 20-24 M | PVC | 22.5 | round | | | flexing | 12 |
| Multiple-pair: 16 pairs (32 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor Ø 1.38 mm) | | | | | | | | | | |
| 48389 | Fe-CuNi (Ko) | L | AE 9-32 L | PVC | 20.9 | round | -10°C to +80°C | stationary | 7.5 | 793 |
| 48390 | SoNiCr-SoNi | K | AN 9-32 L | PVC | 20.9 | round | | | flexing | 7.5 |
| 48391 | SoPtRh-SoPt | S | AP 9-32 L | PVC | 20.9 | round | | -25°C to +70°C | 7.5 | 793 |
| 48392 | Cu-CuNi (Ko) | U | AC 9-32 L | PVC | 20.9 | round | | | flexing | 7.5 |
| 48493 | Fe-CuNi | J | AF 9-32 L | PVC | 20.9 | round | -5°C to +70°C | 7.5 | 793 | |
| 48393 | Fe-CuNi (Ko) | L | AE 9-32 LS | PVC | 22.1 | round | -10°C to +80°C | stationary | 7.5 | 923 |
| 48394 | SoNiCr-SoNi | K | AN 9-32 LS | PVC | 22.1 | round | | | flexing | 7.5 |
| 48395 | SoPtRh-SoPt | S | AP 9-32 LS | PVC | 22.1 | round | | -25°C to +70°C | 7.5 | 923 |
| 48396 | Cu-CuNi (Ko) | U | AC 9-32 LS | PVC | 22.1 | round | | | flexing | 7.5 |

L = stranded conductor
M = solid conductor
tin. = tinned
galv. = galvanized

COMPENSATING CABLES

| Part no. | Thermocouple element material in accordance with DIN 43713 | Thermocouple type | Core insulation | Jacket/ armoring jacket | Outer ø approx. mm | Form | Temperature range of insulation °C | Installation temperature range °C | min. bending radius x cable ø | Weight approx. kg/km |
|--|--|-------------------|-----------------|-------------------------|--------------------|-------|------------------------------------|-----------------------------------|-------------------------------|----------------------|
| Multiple-pair: 16 pairs (32 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ø 1.38 mm) | | | | | | | | | | |
| 48397 | FE-CuNi (Ko) | L | AE 9-32 LSY | PVC | 26.1 | round | -10°C to +80°C | stationary | 7.5 | 1141 |
| 48398 | SoNiCr-SoNi | K | AN 9-32 LSY | PVC | 26.1 | round | | -25°C to +70°C | 7.5 | 1141 |
| 48399 | SoPtRh-SoPt | S | AP 9-32 LSY | PVC | 26.1 | round | | flexing | 7.5 | 1141 |
| 48400 | Cu-CuNi (Ko) | U | AC 9-32 LSY | PVC | 26.1 | round | | -5°C to +70°C | 7.5 | 1141 |
| 48401 | Fe-CuNi (Ko) | L | AE 9-32 MSY | PVC | 25.3 | round | -10°C to +80°C | stationary | 12 | 1130 |
| 48402 | SoNiCr-SoNi | K | AN 9-32 MSY | PVC | 25.3 | round | | -25°C to +70°C | 12 | 1130 |
| 48403 | SoPtRh-SoPt | S | AP 9-32 MSY | PVC | 25.3 | round | | flexing | 12 | 1130 |
| 48404 | Cu-CuNi (Ko) | U | AC 9-32 MSY | PVC | 25.3 | round | | -5°C to +70°C | 12 | 1130 |
| 48405 | Fe-CuNi (Ko) | L | AE 20-32 M | PVC | 25.1 | round | -10°C to +80°C | stationary | 12 | 847 |
| 48406 | SoNiCr-SoNi | K | AN 20-32 M | PVC | 25.1 | round | | -25°C to +70°C | 12 | 847 |
| 48407 | SoPtRh-SoPt | S | AP 20-32 M | PVC | 25.1 | round | | flexing | 12 | 847 |
| 48408 | Cu-CuNi (Ko) | U | AC 20-32 M | PVC | 25.1 | round | | -5°C to +70°C | 12 | 847 |
| Multiple-pair: 18 pair (36 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ø 1.38 mm) | | | | | | | | | | |
| 48130 | Fe-CuNi (Ko) | L | AE 9-36 L | PVC | 22.1 | round | -10°C to +80°C | stationary | 7.5 | 904 |
| 48132 | SoNiCr-SoNi | K | AN 9-36 L | PVC | 22.1 | round | | -25°C to +70°C | 7.5 | 904 |
| 48133 | SoPtRh-SoPt | S | AP 9-36 L | PVC | 22.1 | round | | flexing | 7.5 | 904 |
| 48409 | Cu-CuNi (Ko) | U | AC 9-36 L | PVC | 22.1 | round | | -5°C to +70°C | 7.5 | 904 |
| 48494 | Fe-CuNi | J | AF 9-36 L | PVC | 22.1 | round | | 7.5 | 904 | |
| 48410 | Fe-CuNi (Ko) | L | AE 9-36 LS | PVC | 23.3 | round | -10°C to +80°C | stationary | 7.5 | 1040 |
| 48411 | SoNiCr-SoNi | K | AN 9-36 LS | PVC | 23.3 | round | | -25°C to +70°C | 7.5 | 1040 |
| 48412 | SoPtRh-SoPt | S | AP 9-36 LS | PVC | 23.3 | round | | flexing | 7.5 | 1040 |
| 48413 | Cu-CuNi (Ko) | U | AC 9-36 LS | PVC | 23.3 | round | | -5°C to +70°C | 7.5 | 1040 |
| 48167 | Fe-CuNi (Ko) | L | AE 9-36 LSY | PVC | 27.3 | round | -10°C to +80°C | stationary | 7.5 | 1268 |
| 48169 | SoNiCr-SoNi | K | AN 9-36 LSY | PVC | 27.3 | round | | -25°C to +70°C | 7.5 | 1268 |
| 48170 | SoPtRh-SoPt | S | AP 9-36 LSY | PVC | 27.3 | round | | flexing | 7.5 | 1268 |
| 48414 | Cu-CuNi (Ko) | U | AC 9-36 LSY | PVC | 27.3 | round | | -5°C to +70°C | 7.5 | 1268 |
| 48415 | Fe-CuNi (Ko) | L | AE 9-36 MSY | PVC | 26.1 | round | -10°C to +80°C | stationary | 12 | 1232 |
| 48416 | SoNiCr-SoNi | K | AN 9-36 MSY | PVC | 26.1 | round | | -25°C to +70°C | 12 | 1232 |
| 48417 | SoPtRh-SoPt | S | AP 9-36 MSY | PVC | 26.1 | round | | flexing | 12 | 1232 |
| 48418 | Cu-CuNi (Ko) | U | AC 9-36 MSY | PVC | 26.1 | round | | -5°C to +70°C | 12 | 1232 |
| 48419 | Fe-CuNi (Ko) | L | AE 20-36 M | PVC | 26.0 | round | -10°C to +80°C | stationary | 12 | 944 |
| 48420 | SoNiCr-SoNi | K | AN 20-36 M | PVC | 26.0 | round | | -25°C to +70°C | 12 | 944 |
| 48421 | SoPtRh-SoPt | S | AP 20-36 M | PVC | 26.0 | round | | flexing | 12 | 944 |
| 48422 | Cu-CuNi (Ko) | U | AC 20-36 M | PVC | 26.0 | round | | -5°C to +70°C | 12 | 944 |
| Multiple-pair: 19 pairs (38 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm) | | | | | | | | | | |
| 48134 | Fe-CuNi (Ko) | L | AE 9-38 L | PVC | 22.5 | round | -10°C to +80°C | stationary | 7.5 | 937 |
| 48135 | SoNiCr-SoNi | K | AN 9-38 L | PVC | 22.5 | round | | -25°C to +70°C | 7.5 | 937 |
| 48136 | SoPtRh-SoPt | S | AP 9-38 L | PVC | 22.5 | round | | flexing | 7.5 | 937 |
| 48423 | Cu-CuNi (Ko) | U | AC 9-38 L | PVC | 22.5 | round | | -5°C to +70°C | 7.5 | 937 |
| 48171 | Fe-CuNi (Ko) | L | AE 9-38 LSY | PVC | 26.5 | round | -10°C to +80°C | stationary | 7.5 | 1340 |
| 48172 | SoNiCr-SoNi | K | AN 9-38 LSY | PVC | 26.5 | round | | -25°C to +70°C | 7.5 | 1340 |
| 48173 | SoPtRh-SoPt | S | AP 9-38 LSY | PVC | 26.5 | round | | flexing | 7.5 | 1340 |
| 48424 | Cu-CuNi (Ko) | U | AC 9-38 LSY | PVC | 26.5 | round | | -5°C to +70°C | 7.5 | 1340 |
| Multiple-pair: 20 pairs (40 x 1.5 mm²) (L = stranded wire, conductor make-up 48 x 0.20 mm; M = solid conductor, conductor ø 1.38 mm) | | | | | | | | | | |
| 48425 | Fe-CuNi (Ko) | L | AE 9-40 L | PVC | 24.1 | round | -10°C to +80°C | stationary | 7.5 | 1032 |
| 48426 | SoNiCr-SoNi | K | AN 9-40 L | PVC | 24.1 | round | | -25°C to +70°C | 7.5 | 1032 |
| 48427 | SoPtRh-SoPt | S | AP 9-40 L | PVC | 24.1 | round | | flexing | 7.5 | 1032 |
| 48428 | Cu-CuNi (Ko) | U | AC 9-40 L | PVC | 24.1 | round | | -5°C to +70°C | 7.5 | 1032 |
| 48429 | Fe-CuNi (Ko) | L | AE 9-40 LS | PVC | 25.3 | round | -10°C to +80°C | stationary | 7.5 | 1200 |
| 48430 | SoNiCr-SoNi | K | AN 9-40 LS | PVC | 25.3 | round | | -25°C to +70°C | 7.5 | 1200 |
| 48431 | SoPtRh-SoPt | S | AP 9-40 LS | PVC | 25.3 | round | | flexing | 7.5 | 1200 |
| 48432 | Cu-CuNi (Ko) | U | AC 9-40 LS | PVC | 25.3 | round | | -5°C to +70°C | 7.5 | 1200 |
| 48433 | Fe-CuNi (Ko) | L | AE 9-40 LSY | PVC | 29.3 | round | -10°C to +80°C | stationary | 7.5 | 1446 |
| 48434 | SoNiCr-SoNi | K | AN 9-40 LSY | PVC | 29.3 | round | | -25°C to +70°C | 7.5 | 1446 |
| 48435 | SoPtRh-SoPt | S | AP 9-40 LSY | PVC | 29.3 | round | | flexing | 7.5 | 1446 |
| 48436 | Cu-CuNi (Ko) | U | AC 9-40 LSY | PVC | 29.3 | round | | -5°C to +70°C | 7.5 | 1446 |
| 48437 | Fe-CuNi (Ko) | L | AE 9-40 MSY | PVC | 28.0 | round | -10°C to +80°C | stationary | 12 | 1381 |
| 48438 | SoNiCr-SoNi | K | AN 9-40 MSY | PVC | 28.0 | round | | -25°C to +70°C | 12 | 1381 |
| 48439 | SoPtRh-SoPt | S | AP 9-40 MSY | PVC | 28.0 | round | | flexing | 12 | 1381 |
| 48440 | Cu-CuNi (Ko) | U | AC 9-40 MSY | PVC | 28.0 | round | | -5°C to +70°C | 12 | 1381 |
| 48441 | Fe-CuNi (Ko) | L | AE 9-40M | PVC | 26.0 | round | -10°C to +80°C | stationary | 12 | 1001 |
| 48442 | SoNiCr-SoNi | K | AN 9-40 M | PVC | 26.0 | round | | -25°C to +70°C | 12 | 1001 |
| 48443 | SoPtRh-SoPt | S | AP 9-40 M | PVC | 26.0 | round | | flexing | 12 | 1001 |
| 48444 | Cu-CuNi (Ko) | U | AC 9-40 M | PVC | 26.0 | round | | -5°C to +70°C | 12 | 1001 |

L = stranded conductor
M = solid conductor
tin. = tinned
galv. = galvanized

COMPENSATING CABLES

| Part no. | Thermocouple element material in accordance with DIN 43 713 | Thermocouple type | Type | Core insulation | Jacket/armoring jacket | Outer ϕ approx. mm | Form | Temperature range of insulation °C | Installation temperature range °C | min. bending radius x cable ϕ | Weight approx. kg/km |
|---|---|-------------------|------------------|-----------------|---|-------------------------|-------|------------------------------------|-----------------------------------|------------------------------------|----------------------|
| Single-pair: 2 x 0.22 mm² (L = stranded wire, conductor make-up 7 x 0.20 mm) | | | | | | | | | | | |
| 48200 | Fe-CuNi (Ko) | L | AE 1 L | PVC | | 1.0 | round | -10°C to +80°C | stationary | 7.5 | 10 |
| 48201 | SoNiCr-SoNi | K | AE 1 L | PVC | | 1.0 | round | | | | |
| 48202 | SoPtRh-SoPt | S | AE 1 L | PVC | | 1.0 | round | | flexing | 7.5 | 10 |
| 48460 | Cu-CuNi (Ko) | U | AE 1 L | PVC | | 1.0 | round | | | | |
| Single-pair: 2 x 0.22 mm² (L = stranded wire, conductor make-up 7 x 0.20 mm) | | | | | | | | | | | |
| 48203 | Fe-CuNi (Ko) | L | AE 9-022 | PVC | PVC | 4.0 | round | -10°C to +80°C | stationary | 7.5 | 22 |
| 48204 | SoNiCr-SoNi | K | AE 9-022 | PVC | | 4.0 | round | | | | |
| 48205 | SoPtRh-SoPt | S | AE 9-022 | PVC | | 4.0 | round | | flexing | 7.5 | 22 |
| 48461 | Cu-CuNi (Ko) | U | AE 9-022 | PVC | | 4.0 | round | | | | |
| 48206 | Fe-CuNi (Ko) | L | AE 5-022 | PVC | PETP tape/ galv. Cu-round wire braid/ PVC | 4.9 | round | -10°C to +80°C | stationary | 7.5 | 31 |
| 48207 | SoNiCr-SoNi | K | AN 5-022 | PVC | | 4.9 | round | | | | |
| 48208 | SoPtRh-SoPt | S | AP 5-022 | PVC | | 4.9 | round | | flexing | 7.5 | 31 |
| 48462 | Cu-CuNi (Ko) | U | AC 5-022 | PVC | | 4.9 | round | | | | |
| 48463 | Fe-CuNi (Ko) | L | AE 15-022 | glass-fiber | silicone | 3.4 | round | -40°C to +200°C | stationary | 7.5 | 16 |
| 48464 | SoNiCr-SoNi | K | AN 15-022 | glass-fiber | | 3.4 | round | | | | |
| 48465 | SoPtRh-SoPt | S | AP 15-022 | glass-fiber | | 3.4 | round | | flexing | 7.5 | 16 |
| 48466 | Cu-CuNi (Ko) | U | AC 15-022 | glass-fiber | | 3.4 | round | | | | |
| 48209 | Fe-CuNi (Ko) | L | AE 15-G 022 | glass-fiber | silicone/glass-fiber | 3.9 | round | -40°C to +200°C | stationary | 7.5 | 22 |
| 48210 | SoNiCr-SoNi | K | AN 15-G 022 | glass-fiber | | 3.9 | round | | | | |
| 48211 | SoPtRh-SoPt | S | AP 15-G 022 | glass-fiber | | 3.9 | round | | flexing | 7.5 | 22 |
| 48467 | Cu-CuNi (Ko) | U | AC 15-G 022 | glass-fiber | | 3.9 | round | | | | |
| 48212 | Fe-CuNi (Ko) | L | AE (GI-SIL-GI-S) | glass-fiber | silicone/ Glass-fiber/ galv. steel wire braid | 5.0 | round | -40°C to +200°C | stationary | 7.5 | 25 |
| 48213 | SoNiCr-SoNi | K | AN (GI-SIL-GI-S) | glass-fiber | | 5.0 | round | | | | |
| 48214 | SoPtRh-SoPt | S | AP (GI-SIL-GI-S) | glass-fiber | | 5.0 | round | | flexing | 7.5 | 25 |
| 48468 | Cu-CuNi (Ko) | U | AC (GI-SIL-GI-S) | glass-fiber | | 5.0 | round | | | | |
| Single-pair: 2 x 0.5 mm² (L = stranded wire, conductor make-up 16 x 0.20 mm) | | | | | | | | | | | |
| 48215 | Fe-CuNi (Ko) | L | AE (GI-SIL) | glass-fiber | silicone | 4.6 | round | -40°C to +200°C | stationary | 7.5 | 18 |
| 48216 | SoNiCr-SoNi | K | AN (GI-SIL) | glass-fiber | | 4.6 | round | | | | |
| 48217 | SoPtRh-SoPt | S | AP (GI-SIL) | glass-fiber | | 4.6 | round | | flexing | 7.5 | 18 |
| 48469 | Cu-CuNi (Ko) | U | AC (GI-SIL) | glass-fiber | | 4.6 | round | | | | |
| Single-pair: 2 x 0.75 mm² (L = stranded wire, conductor make-up 24 x 0.20 mm) | | | | | | | | | | | |
| 48218 | Fe-CuNi (Ko) | L | AE (PVC-PVC) | PVC | PVC | 6.0 | round | -10°C to +80°C | stationary | 7.5 | 25 |
| 48219 | SoNiCr-SoNi | K | AN (PVC-PVC) | PVC | | 6.0 | round | | | | |
| 48220 | SoPtRh-SoPt | S | AP (PVC-PVC) | PVC | | 6.0 | round | | flexing | 7.5 | 25 |
| 48470 | Cu-CuNi (Ko) | U | AC (PVC-PVC) | PVC | | 6.0 | round | | | | |
| Multiple-pair: 4 x 0.22 mm² (stranded wire, conductor make-up 7 x 0.20 mm) | | | | | | | | | | | |
| 48221 | Fe-CuNi (Ko) | L | AE (PVC-PVC) | PVC | PVC | 6.0 | round | -10°C to +80°C | stationary | 7.5 | 33 |
| 48222 | SoNiCr-SoNi | K | AN (PVC-PVC) | PVC | | 6.0 | round | | | | |
| 48223 | SoPtRh-SoPt | S | AP (PVC-PVC) | PVC | | 6.0 | round | | flexing | 7.5 | 33 |
| 48471 | Cu-CuNi (Ko) | U | AC (PVC-PVC) | PVC | | 6.0 | round | | | | |
| 48224 | Fe-CuNi (Ko) | L | AE (PVC-C-PVC) | PVC | galv. Cu-braid/ PVC jacket | 6.0 | round | -10°C to +80°C | stationary | 7.5 | 37 |
| 48225 | SoNiCr-SoNi | K | AN (PVC-C-PVC) | PVC | | 6.0 | round | | | | |
| 48226 | SoPtRh-SoPt | S | AP (PVC-C-PVC) | PVC | | 6.0 | round | | flexing | 7.5 | 37 |
| 48472 | Cu-CuNi (Ko) | U | AC (PVC-C-PVC) | PVC | | 6.0 | round | | | | |
| 48227 | Fe-CuNi (Ko) | L | AE (GIL-SIL) | glass-fiber | silicone | 6.0 | round | -40°C to +200°C | stationary | 7.5 | 35 |
| 48228 | SoNiCr-SoNi | K | AN (GIL-SIL) | glass-fiber | | 6.0 | round | | | | |
| 48229 | SoPtRh-SoPt | S | AP (GIL-SIL) | glass-fiber | | 6.0 | round | | flexing | 7.5 | 35 |
| 48473 | Cu-CuNi (Ko) | U | AC (GIL-SIL) | glass-fiber | | 6.0 | round | | | | |

L = stranded conductor
M = solid conductor
tin. = tinned
galv. = galvanized