


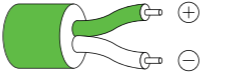
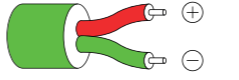
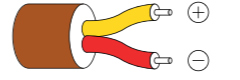
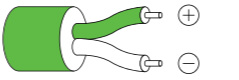
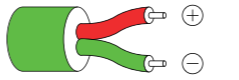
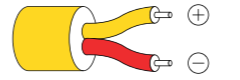
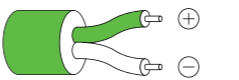
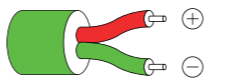
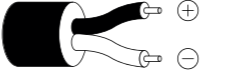
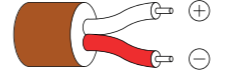
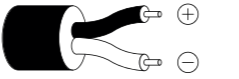
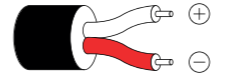
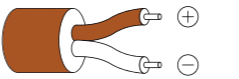
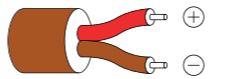
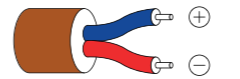
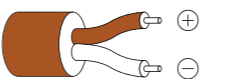
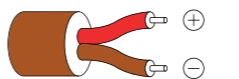
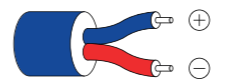
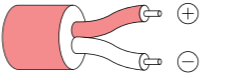
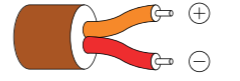
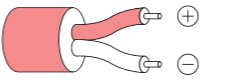
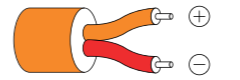
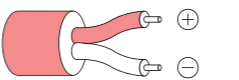
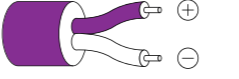
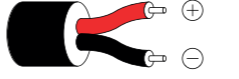
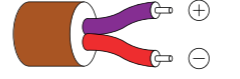
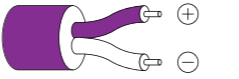
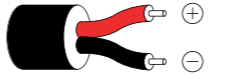
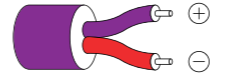
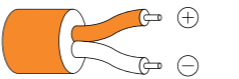
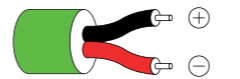
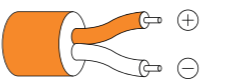

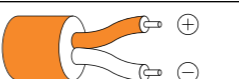
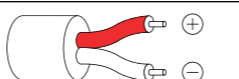
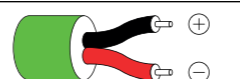
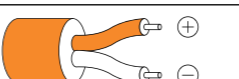
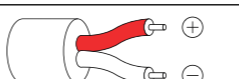

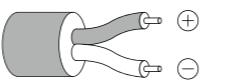
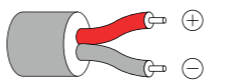
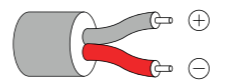
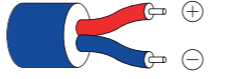
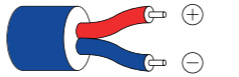


# Thermocouple and compensating cables for thermocouples

Limit deviations - National and international labeling system

| Materials                              | International code letters |                    |                    | <br>International color coding according to IEC 60584 | <br>Germany according to DIN 43713 | <br>USA according to ANSI MC 96.1 | Limit deviations according to IEC 60584 |           |                   |                   | Measuring point temperature |       |
|--|----------------------------|--------------------|--------------------|--|---|--|---|-----------|-------------------|-------------------|-----------------------------|-------|
|  | Thermocouple               | Thermocouple cable | Compensating cable |  |   |  | Class 1                                 |           | Class 2           |                   |                             |       |
|  |                            |                    |                    |  |   |  | Temperature range                       | Tolerance | Temperature range | Tolerance         |                             |       |
| <b>NiCr/Ni</b><br>KCA: Fe-CuNi         | <b>K</b>                   |                    |                    |   |                                    |                                   | -40 °C to 1000 °C                       | ±1.5 °C   | -40 °C to 1200 °C | ±2.5 °C           |                             |       |
|  |                            | <b>KX</b>          |                    |   |                                    |                                   | -25 °C to 200 °C                        | ±1.5 °C   | -25 °C to 200 °C  | ±2.5 °C           | 900°C                       |       |
|  |                            |                    | <b>KCA</b>         |   |                                    |  | *                                       | *         | 0 °C to 150 °C    | ±2.5 °C           | 900°C                       |       |
| <b>Fe/CuNi</b>                         | <b>J</b>                   |                    |                    |   |   |                                   | -40 °C to 750 °C                        | ±1.5 °C   | -40 °C to 750 °C  | ±2.5 °C           |                             |       |
|  |                            | <b>JX</b>          |                    |   |   |                                   | -25 °C to 200 °C                        | ±1.5 °C   | -25 °C to 200 °C  | ±2.5 °C           | 500°C                       |       |
| <b>Cu/CuNi</b>                         | <b>T</b>                   |                    |                    |   |                                    |                                   | -40 °C to 350 °C                        | ±0.5 °C   | -40 °C to 350 °C  | ±1.0 °C           |                             |       |
|  |                            | <b>TX</b>          |                    |   |                                    |                                   | -25 °C to 100 °C                        | ±0.5 °C   | -25 °C to 100 °C  | ±1.0 °C           | 300°C                       |       |
| <b>NiCrosil/Nisil</b><br>NC: Cu/CuNiFe | <b>N</b>                   |                    |                    |    |   |                                  | -40 °C to 1000 °C                       | ±1.5 °C   | -40 °C to 1200 °C | ±2.5 °C           |                             |       |
|  |                            | <b>NX</b>          |                    |   |   |                                 | -25 °C to 200 °C                        | ±1.5 °C   | -25 °C to 200 °C  | ±2.5 °C           | 900°C                       |       |
|  |                            |                    | <b>NC</b>          |   |   |  |   |           | 0 °C to 150 °C    | ±2.5 °C           | 900°C                       |       |
| <b>NiCr/CuNi</b>                       | <b>E</b>                   |                    |                    |   |                                  |                                 | -40 °C to 800 °C                        | ±1.5 °C   | -40 °C to 900 °C  | ±2.5 °C           |                             |       |
|  |                            | <b>EX</b>          |                    |   |                                  |                                 | -25 °C to 200 °C                        | ±1.5 °C   | -25 °C to 200 °C  | ±2.5 °C           | 500°C                       |       |
| <b>E-Cu/A-Cu</b>                       |                            |                    | <b>RCA</b>         |   |   |                                 |   |           | 0 °C to 100 °C    | ±2.5 °C           | 1000°C                      |       |
|  |                            |                    | <b>RCB</b>         |   |   |                                 |   |           | 0 °C to 200 °C    | ±5.0 °C           | 1000°C                      |       |
|  |                            |                    | <b>SCA</b>         |   |                                  |                                 |   |           | 0 °C to 100 °C    | ±2.5 °C           | 1000°C                      |       |
|  |                            |                    | <b>SCB</b>         |   |                                  |                                 |   |           | 0 °C to 200 °C    | ±5.0 °C           | 1000°C                      |       |
| <b>S-Cu/E-Cu</b>                       |                            |                    | <b>BC</b>          |   |                                  |                                 |   |           | 0 °C to 100 °C    | ±3.5 °C           | 1400°C                      |       |
| <b>Fe/CuNi</b>                         | <b>L</b>                   |                    |                    |  |                                  |  |   |           |                   | -200 °C to 900 °C | ±3.0 °C                     |       |
|  |                            | <b>LX</b>          |                    |  |                                  |  |   |           |                   | -200 °C to 900 °C | ±3.0 °C                     | 900°C |

Limited tolerances (e.g. ANSI special or L and LX with ±1.5 °C) also available on request.

\*KCA compensating cable also available in class 1.