GÜNTHER GmbH
Temperaturmesstechnik

Product category 92-THL
Thermoelectric Cables

Product category 93-AGL
Compensation Cables

92 - THL // Thermoelectric cables
93 - AGL // Compensation cables

Thermoelectric cables and compensation cables are essentially differentiated on the basis of the materials they are made of.

Thermoelectric cables are made of the respective original thermocouple materials or of materials which have the same nominal chemical composition as the corresponding thermocouples. For this reason thermoelectric cables are suitable for use as trailing thermocouples after a measuring point has been completed. They are named in accordance with the distinguishing letter of the respective thermocouple followed by an “X” (e.g. KX).

Compensation cables are made of replacement materials which are not identical with the original thermocouple materials; however, up to a certain authorised temperature range, they do have the same thermoelectric properties. They are named in accordance with the identification letter of the respective thermocouple followed by a “C” (e.g. KC).

Cable structure:

Thermoelectric cables are produced both as stranded conductors and as solid conductors, generally with cross-sections of 0.22 mm^2 to 1.50 mm^2 or with diameters of 0.2 mm to 1.0 mm. Compensation cables are produced as stranded conductors, generally with cross-sections of 0.22 mm^2 to 1.50 mm^2.

Tolerances, limiting deviations and colour marking:

Cables for thermal conductors and compensation conductors comply with DIN 43713. Thermoelectric voltages within an authorised temperature range comply with DIN EN 60584-1. Limiting deviations for thermal and compensation conductors are stipulated in DIN 43722. Precision category 1 applies for thermoelectric cables and category 2 applies for thermoelectric cables and for compensation cables (apart from thermocouple types U and L in accordance with DIN 43710, equivalent to ± 3°C). The colour codes for cables which Günther-GmbH has in stock comply with DIN 43722 (except for thermocouple types U and L – in accordance with DIN 43714).

Selection criteria for thermoelectric cables and compensation cables:

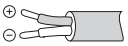
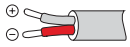
A suitable choice of cable for a specific application depends greatly on influencing factors and on ambient conditions.

For example:
thermal stability, stress, flexibility, resistance to moisture or aggressive media, cross-section of conductors, outer dimensions, flammability, electromagnetic compatibility (sheath) and many more. We suggest that you speak to us about your specific application. We will gladly give you advice and endeavour to offer you a conductor suitable for your particular application.

Product range:

Günther-Gmbh supplies almost all of the widely-used thermal and compensation cables from stock. Special dimensions or designs can generally be procured at short notice. The article numbers for cables from our standard range are all listed in **bold print** on the following pages.

Colour index for compensation and thermoelectric cables and for thermal plugs

Thermocouple type	IEC 584	DIN 43714	ANSI MC 96.1
NiCr-Ni / K	 + green / - white Sheath: green	 + red / - green Sheath: green	 + yellow / - red Sheath: yellow
Fe-CuNi / L	—	 + red / - blue Sheath: blue	—
Fe-CuNi /J	 + black / - white Sheath: black	—	 + white / - red Sheath: black
Pt10Rh-Pt / S	 + orange / - white Sheath: orange	 + red / - white Sheath: white	 + black / - red Sheath: green
Pt13Rh-Pt / R	 + orange / - white Sheath: orange	 + red / - white Sheath: white	 + black / - red Sheath: green
Pt30Rh-Pt6Rh / B	 + grey / - white Sheath: grey	—	 + grey / - red Sheath: grey
NiCrosil-Nisil / N	 + pink / - white Sheath: pink	—	—
Cu-CuNi / U	—	 + red / - brown Sheath: brown	—
Cu-CuNi / T	 + brown / - white Sheath: brown	—	—

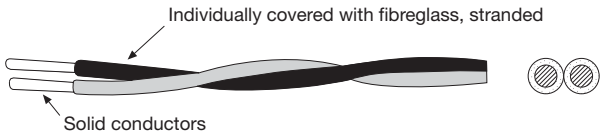
The basic data for the individual thermocouples is the same for all of the specifications indicated. Thermocouples U and L are only normed in DIN 43710/1985. For new equipment and for retrofits we recommend that only thermocouples in accordance with IEC 584 be used (T instead of U and J instead of L). J and T type thermocouples are not identical with types L and U.

Limiting deviations in accordance with EN 60584-2 (comparison point 0°C)

Code letter	Range	Class 1	Range	Class 2
J	-40 ... 750°C	±1,5°C or 0,004·(t)	-40 ... 750°C	±2,5°C or 0,0075·(t)
K	-40 ... 1000°C	±1,5°C or 0,004·(t)	-40 ... 1200°C	±2,5°C or 0,0075·(t)
T	-40 ... 350°C	±0,5°C or 0,004·(t)	-40 ... 350°C	±1,0°C or 0,0075·(t)
E	-40 ... 800°C	±1,5°C or 0,004·(t)	-40 ... 900°C	±2,5°C or 0,0075·(t)
S / R	0 ... 1600°C	±1,0°C or [1,0+0,003(t-1100)]°C	0 ... 1600°C	±1,5°C or 0,0025·(t)
N	-40 ... 1000°C	±1,5°C or 0,004·(t)	-40 ... 1200°C	±2,5°C or 0,0075·(t)
B			600 ... 1700°C	±1,5°C or 0,0025·(t)

The higher figure applies (t = number for the temperature in °C)

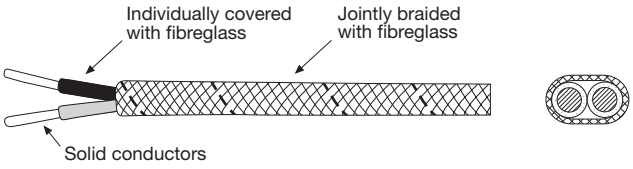
92 - THL // Thermoelectric cables



Thermoelectric cable (impregnated coating) Covered with fibreglass G, stranded

- Thermal stability of the insulation material -40°C to +400°C
- Use in dry rooms at a low degree of mechanical stress

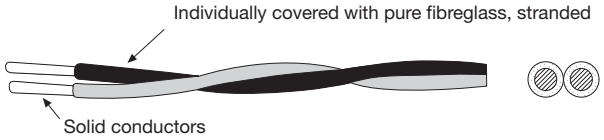
Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	round, stranded	92-30202018-G	92-40202028-G	92-50202018-G	92-60202018-G
2 x 0.5 mm ø	round, stranded	92-30205018-G	92-40205028-G	92-50202018-G	92-60205018-G
2 x 1.0 mm ø	round, stranded	92-30210018-G	92-40210028-G	92-50210018-G	92-60210018-G



Thermoelectric cable (impregnated coating) Covered with fiberglass - Braided with fibreglass GG, oval

- Thermal stability of the insulation material -40°C to +400°C
- Use in dry rooms at a low degree of mechanical stress

Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	oval	**92-30202015-GG**	**92-40202025-GG**	92-50202015-GG	92-60202015-GG
2 x 0.5 mm ø	oval	**92-30205015-GG**	**92-40205025-GG**	**92-50205015-GG**	92-60205015-GG
2 x 1.0 mm ø	oval	92-30210015-GG	92-40210025-GG	92-50210015-GG	92-60210015-GG

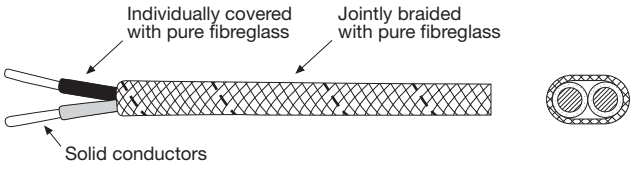


Thermoelectric cable (impregnated coating) Covered with pure fibreglass R, stranded

- Thermal stability of the insulation material -40°C to +700°C
- Use in dry rooms at a low degree of mechanical stress

Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	round, stranded	92-30202018-R	92-40202028-R	92-50202018-R	92-60202018-R
2 x 0.5 mm ø	round, stranded	92-30205018-R	92-40205028-R	92-50205018-R	92-60205018-R
2 x 1.0 mm ø	round, stranded	**92-30210018-R**	92-40210028-R	92-50210018-R	92-60210018-R

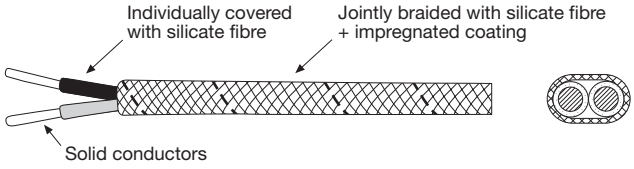
92 - THL // Thermoelectric cables



Thermoelectric cable (impregnated coating) Covered with pure fibreglass – Braided with pure fibreglass RR, oval

- Thermal stability of the insulation material -40°C to +700°C
- Use in dry rooms at a low degree of mechanical stress

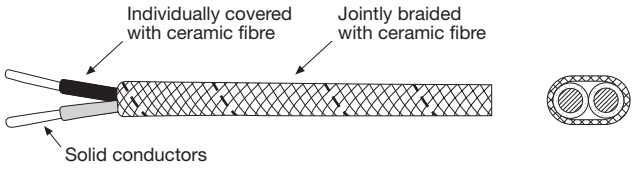
Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	oval	92-30202015-RR	92-40202025-RR	92-50202015-RR	92-60202015-RR
2 x 0.5 mm ø	oval	**92-30205015-RR**	92-40205025-RR	92-50205015-RR	92-60205015-RR
2 x 1.0 mm ø	oval	**92-30210015-RR**	92-40210025-RR	92-50210015-RR	92-60210015-RR



Thermoelectric cable (impregnated coating) Covered with silicate fibre – Braided with silicate fibre LL, oval

- Thermal stability of the insulation material -40°C to +1000°C
- Use in dry rooms at a low degree of mechanical stress

Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	oval	92-30202015-LL	92-40202025-LL	92-50202015-LL	92-60202015-LL
2 x 0.5 mm ø	oval	92-30205015-LL	92-40205025-LL	92-50205015-LL	92-60205015-LL
2 x 1.0 mm ø	oval	**92-30210015-LL**	92-40210025-LL	92-50210015-LL	92-60210015-LL

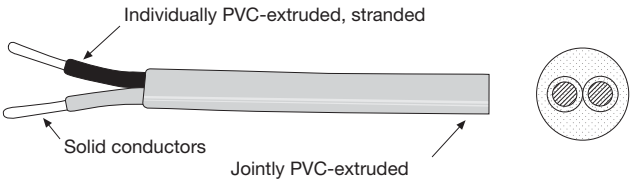


Thermoelectric cable Covered with ceramic fibre – Braided with ceramic fibre KK, oval

- Thermal stability of the insulation material -40°C to +1200°C temporarily up to +1400°C
- Use in dry rooms at a low degree of mechanical stress

Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	oval	92-30202015-KK	92-40202025-KK	92-50202015-KK	92-60202015-KK
2 x 0.5 mm ø	oval	92-30205015-KK	92-40205025-KK	92-50205015-KK	92-60205015-KK
2 x 1.0 mm ø	oval	**92-30210015-KK**	92-40210025-KK	92-50210015-KK	92-60210015-KK

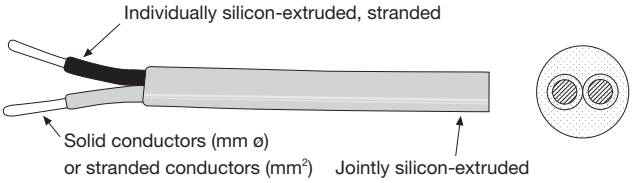
92 - THL // Thermoelectric cables



Thermoelectric cable Individually PVC-extruded - Jointly PVC-extruded JJ, round

- Thermal stability of the insulation material -10°C to +105°C
- Use in a damp environment at a medium degree of mechanical stress

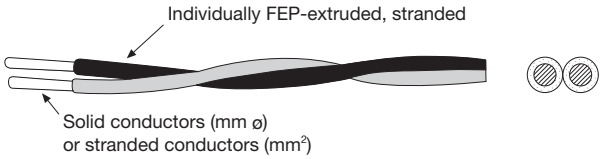
Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	round, stranded	92-30202018-JJ	92-40202028-JJ	92-50202018-JJ	92-60202018-JJ
2 x 0.5 mm ø	round, stranded	92-30205018-JJ	92-40205028-JJ	92-50205018-JJ	92-60205018-JJ
2 x 1.0 mm ø	round, stranded	92-30210018-JJ	92-40210028-JJ	92-50210018-JJ	92-60210018-JJ



Thermoelectric cable Individually silicone-extruded - Jointly silicone-extruded SS, round

- Thermal stability of the insulation material -45°C to +180°C
- Use in a damp environment and at a medium degree of mechanical stress

Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	round, stranded	92-30202018-SS	92-40202028-SS	92-50202018-SS	92-60202018-SS
2 x 0.5 mm ø	round, stranded	92-30205018-SS	92-40205028-SS	92-50205018-SS	92-60205018-SS
2 x 1.0 mm ø	round, stranded	92-30210018-SS	92-40210028-SS	92-50210018-SS	92-60210018-SS
2 x 0.22 mm²	round, stranded	92-30202214-SS	**92-40202224-SS**	**92-50202214-SS**	92-60202214-SS
2 x 0.5 mm²	round, stranded	92-30205014-SS	92-40205024-SS	92-50205014-SS	92-60205014-SS
2 x 1.0 mm²	round, stranded	92-30210014-SS	92-40210024-SS	92-50210014-SS	92-60210014-SS

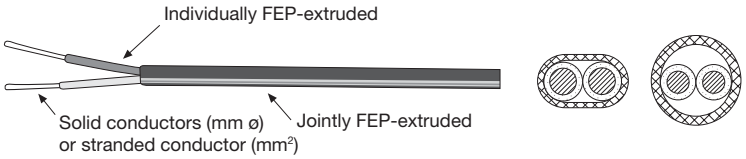


Thermoelectric cable Insulated with Teflon (FEP) and stranded E, stranded

- Thermal stability of the insulation material -200°C to +205°C
- Use in a damp environment and for special requirements concerning resistance to chemicals

Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	round, stranded	92-30202018-E	92-40202028-E	92-50202018-E	92-60202018-E
2 x 0.5 mm ø	round, stranded	92-30205018-E	92-40205028-E	92-50205018-E	92-60205018-E
2 x 1.0 mm ø	round, stranded	92-30210018-E	92-40210028-E	92-50210018-E	92-60210018-E
2 x 0.22 mm²	round, stranded	92-30202214-E	92-40202224-E	**92-50202214-E**	92-60202214-E
2 x 0.5 mm²	round, stranded	92-30205014-E	92-40205024-E	92-50205014-E	92-60205014-E
2 x 1.0 mm²	round, stranded	92-30210014-E	92-40210024-E	92-50210014-E	92-60210014-E

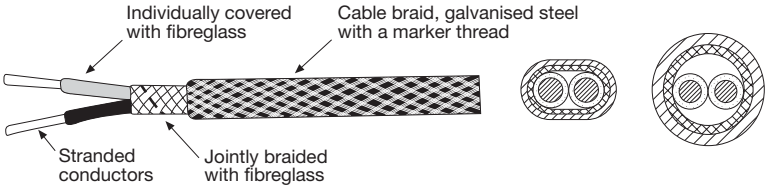
92 - THL // Thermoelectric cables



Thermoelectric cable
Individually Teflon FEP-extruded - Jointly FEP-extruded
EE, oval and round models, stranded

- Thermal stability of the insulation material -200°C to +205°C
- Use in a damp environment and for special requirements concerning resistance to chemicals

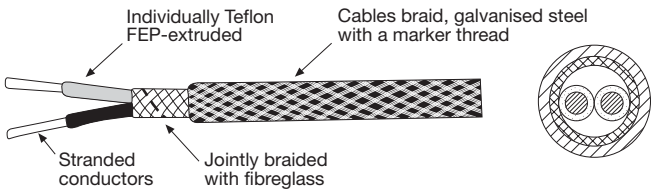
Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.2 mm ø	round, stranded	92-30202018-EE	92-40202028-EE	92-50202018-EE	92-60202018-EE
2 x 0.5 mm ø	oval	92-30205015-EE	92-40205025-EE	**92-50205015-EE**	92-60205015-EE
2 x 1.0 mm ø	round, stranded	92-30210018-EE	92-40210028-EE	92-50210018-EE	92-60210018-EE
2 x 0.22 mm²	round, stranded	92-30202014-EE	92-40202024-EE	92-50202014-EE	92-60202014-EE
2 x 0.5 mm²	oval	**92-30205011-EE**	**92-40205021-EE**	92-50205011-EE	92-60205011-EE
2 x 1.0 mm²	round, stranded	92-30210014-EE	92-40210024-EE	92-50210014-EE	92-60210014-EE



Thermoelectric cable
Fibreglass – Fibreglass – Wire braid
GGP, oval and round models, stranded

- Thermal stability of the insulation material -200°C to +400°C
- Use in a dry environment and at high mechanical stress

Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.22 mm²	oval	**92-30202011-GGP**	92-40202021-GGP	92-50202011-GGP	92-60202011-GGP
2 x 0.5 mm²	round, stranded	**92-30205014-GGP**	**92-40205024-GGP**	**92-50205014-GGP**	92-60205014-GGP
2 x 1.0 mm²	round, stranded	92-30210014-GGP	92-40210024-GGP	92-50210014-GGP	92-60210014-GGP

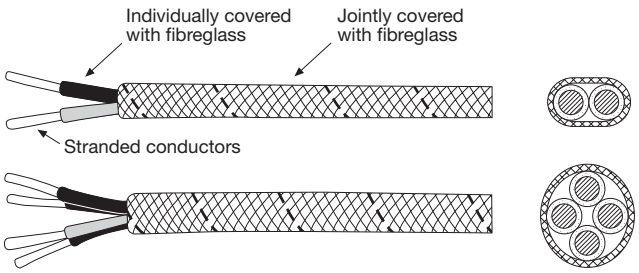


Thermoelectric cable
Teflon FEP - Fibreglass – Wire braid
EGP, round

- Thermal stability of the insulation material -200°C to +205°C
- Use in a dry environment and at high mechanical stress

Cable	Shape	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3
2 x 0.22 mm²	round, stranded	92-30202014-EGP	92-40202024-EGP	92-50202014-EGP	92-60202014-EGP
2 x 0.5 mm²	round, stranded	**92-30205014-EGP**	**92-40205024-EGP**	92-50205014-EGP	92-60205014-EGP
2 x 1.0 mm²	round, stranded	92-30210014-EGP	92-40210024-EGP	92-50210014-EGP	92-60210014-EGP

93 - AGL // Compensation cables

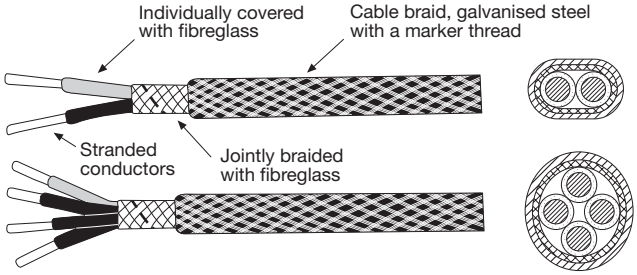


Compensation cable Fibreglass - Fibreglass GG, oval and round models, stranded

- Thermal stability of the insulation material up to 200°C
- Use in dry rooms at a low degree of mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 1.5 mm²	oval	**93-10215011-GG**	**93-20215011-GG**	**93-30215011-GG**	93-40215021-GG
4 x 1.5 mm²	round	93-10415011-GG	93-20415011-GG	93-30415011-GG	93-40415021-GG

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 1.5 mm²	oval	93-50215011-GG	93-60215011-GG	93-70215041-GG	93-80215041-GG
4 x 1.5 mm²	round	93-50415011-GG	93-60415011-GG	93-70415041-GG	93-80415041-GG



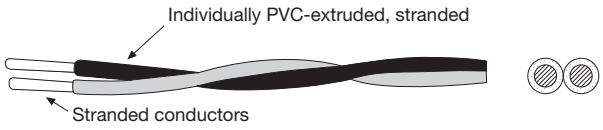
Compensation cable Fibreglass – Fibreglass – Wire braid GGP, oval and round models, stranded

- Thermal stability of the insulation material up to 400°C
- Use in dry rooms at high mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.22 mm²	round	93-10202214-GGP	93-20202214-GGP	**93-30202214-GGP**	**93-40202224-GGP**
2 x 0.5 mm²	round	93-10205014-GGP	93-20205014-GGP	93-30205014-GGP	93-40205024-GGP
2 x 0.5 mm²	oval	93-10205011-GGP	93-20205011-GGP	**93-30205011-GGP**	93-40205021-GGP
2 x 0.75 mm²	round	93-10207514-GGP	93-20207514-GGP	93-30207514-GGP	93-40207524-GGP
2 x 0.75 mm²	oval	93-10207511-GGP	93-20207511-GGP	93-30207511-GGP	93-40207521-GGP
2 x 1.5 mm²	oval	**93-10215011-GGP**	**93-20215011-GGP**	**93-30215011-GGP**	93-40215021-GGP
4 x 0.5 mm²	round	93-10405014-GGP	93-20405014-GGP	**93-30405014-GGP**	93-40405024-GGP
4 x 1.5 mm²	round	93-10415014-GGP	93-20415014-GGP	93-30415014-GGP	93-40415024-GGP

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.22 mm²	round	93-50202214-GGP	93-60202214-GGP	93-70202244-GGP	93-80202244-GGP
2 x 0.5 mm²	round	93-50205014-GGP	93-60205014-GGP	93-70205044-GGP	93-80205044-GGP
2 x 0.5 mm²	oval	93-50205011-GGP	93-60205011-GGP	93-70205041-GGP	93-80205041-GGP
2 x 0.75 mm²	round	93-50207514-GGP	93-60207514-GGP	93-70207544-GGP	93-80207544-GGP
2 x 0.75 mm²	oval	93-50207511-GGP	93-60207511-GGP	93-70207541-GGP	93-80207541-GGP
2 x 1.5 mm²	oval	93-50215011-GGP	93-60215011-GGP	93-70215041-GGP	93-80215041-GGP
4 x 0.5 mm²	round	93-50405014-GGP	93-60405014-GGP	93-70405044-GGP	93-80405044-GGP
4 x 1.5 mm²	round	93-50415014-GGP	93-60415014-GGP	93-70415044-GGP	93-80415044-GGP

93 - AGL // Compensation cables

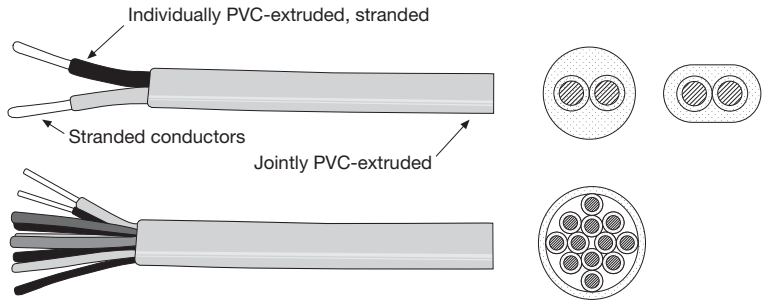


Compensation cable
PVC
J, stranded

- Thermal stability of the insulation material -10°C to +105°C
- Use in a damp environment at a low degree of mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.5 mm²	round	**93-10205014-J**	93-20205014-J	**93-30205014-J**	93-40205024-J
2 x 0.75 mm²	round	93-10207514-J	93-20207514-J	**93-30207514-J**	93-40207524-J
2 x 1.0 mm²	round	93-10210014-J	93-20210014-J	93-30210014-J	93-40210024-J
2 x 1.5 mm²	round	**93-10215014-J**	93-20215014-J	**93-30215014-J**	93-40215024-J

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.5 mm²	round	93-50205014-J	93-60205014-J	93-70205044-J	93-80205044-J
2 x 0.75 mm²	round	93-50207514-J	93-60207514-J	93-70207544-J	93-80207544-J
2 x 1.0 mm²	round	93-50210014-J	93-60210014-J	93-70210044-J	93-80210044-J
2 x 1.5 mm²	round	93-50215014-J	93-60215014-J	93-70215044-J	93-80215044-J



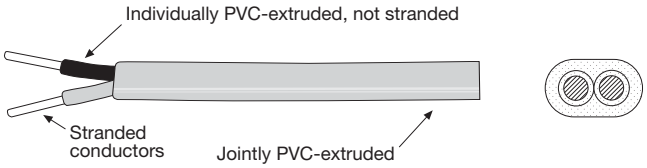
Compensation cable
PVC - PVC
JJ, oval and round models, stranded

- Thermal stability of the insulation material -10°C to +105°C
- Use in a damp environment at a low degree of mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.22 mm²	round	**93-10202214-JJ**	**93-20202214-JJ**	**93-30202214-JJ**	**93-40202224-JJ**
2 x 0.5 mm²	round	**93-10205014-JJ**	93-20205014-JJ	**93-30205014-JJ**	93-40205024-JJ
2 x 0.75 mm²	round	**93-10207514-JJ**	93-20207514-JJ	**93-30207514-JJ**	93-40207524-JJ
2 x 1.5 mm²	oval	93-10215011-JJ	93-20215011-JJ	93-30215011-JJ	93-40215021-JJ
4 x 0.22 mm²	round	**93-10402214-JJ**	93-20402214-JJ	**93-30402214-JJ**	93-40402224-JJ
4 x 0.5 mm²	round	93-10405014-JJ	93-20405014-JJ	93-30405014-JJ	93-40405024-JJ
4 x 0.75 mm²	round	93-10407514-JJ	93-20407514-JJ	93-30407514-JJ	93-40407524-JJ
4 x 1.5 mm²	round	**93-10415014-JJ**	93-20415014-JJ	**93-30415014-JJ**	93-40415024-JJ

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.22 mm²	round	**93-50202214-JJ**	**93-60202214-JJ**	93-70202244-JJ	93-80202244-JJ
2 x 0.5 mm²	round	93-50205014-JJ	93-60205014-JJ	93-70205044-JJ	93-80205044-JJ
2 x 0.75 mm²	round	93-50207514-JJ	93-60207514-JJ	93-70207544-JJ	93-80207544-JJ
2 x 1.5 mm²	round	93-50215014-JJ	93-60215014-JJ	93-70215044-JJ	93-80215044-JJ
4 x 0.22 mm²	round	93-50402214-JJ	93-60402214-JJ	93-70402244-JJ	93-80402244-JJ
4 x 0.5 mm²	round	93-50405014-JJ	93-60405014-JJ	93-70405044-JJ	93-80405044-JJ
4 x 0.75 mm²	round	93-50407514-JJ	93-60407514-JJ	93-70407544-JJ	93-80407544-JJ
4 x 1.5 mm²	round	93-50415014-JJ	93-60415014-JJ	93-70415044-JJ	93-80415044-JJ

93 - AGL // Compensation cables

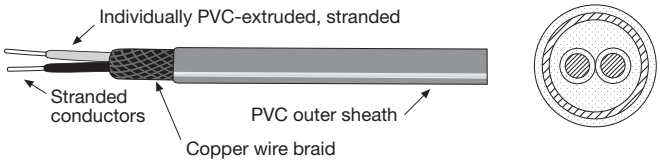


Compensation cable
PVC - PVC
JJ, oval

- Thermal stability of the insulation material -10°C to +105°C
- Use in a damp environment at a medium degree of mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 1.5 mm²	oval	**93-10215011-JJ**	93-20215011-JJ	**93-30215011-JJ**	**93-40215021-JJ**

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 1.5 mm²	oval	**93-50215011-JJ**	93-60215011-JJ	93-70215041-JJ	93-80215041-JJ



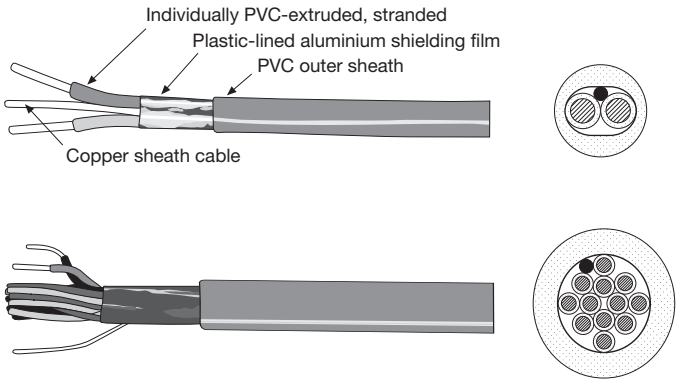
Compensation cable
PVC – copper wire braid - PVC
JCJ, round

- Thermal stability of the insulation material -10°C to +105°C
- Use in a damp environment at a medium degree of mechanical stress
- Shield against electromagnetic interference

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.22 mm²	round	**93-10202214-JCJ**	**93-20202214-JCJ**	**93-30202214-JCJ**	**93-40202224-JCJ**
2 x 0.5 mm²	round	**93-10205014-JCJ**	93-20205014-JCJ	93-30205014-JCJ	93-40205024-JCJ
2 x 0.75 mm²	round	93-10207514-JCJ	93-20207514-JCJ	93-30207514-JCJ	93-40207524-JCJ
2 x 1.5 mm²	round	**93-10215014-JCJ**	93-20215014-JCJ	**93-30215014-JCJ**	**93-40215024-JCJ**
4 x 0.22 mm²	round	**93-10402214-JCJ**	93-20402214-JCJ	**93-30402214-JCJ**	**93-40402224-JCJ**
4 x 0.5 mm²	round	93-10405014-JCJ	93-20405014-JCJ	93-30405014-JCJ	93-40405024-JCJ
4 x 0.75 mm²	round	**93-10407514-JCJ**	93-20407514-JCJ	93-30407514-JCJ	93-40407524-JCJ
4 x 1.5 mm²	round	93-10415014-JCJ	93-20415014-JCJ	**93-30415014-JCJ**	93-40415024-JCJ

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.22 mm²	round	**93-50202214-JCJ**	**93-60202214-JCJ**	93-70202244-JCJ	93-80202244-JCJ
2 x 0.5 mm²	round	93-50205014-JCJ	93-60205014-JCJ	93-70205044-JCJ	93-80205044-JCJ
2 x 0.75 mm²	round	93-50207514-JCJ	93-60207514-JCJ	93-70207544-JCJ	93-80207544-JCJ
2 x 1.5 mm²	round	93-50215014-JCJ	93-60215014-JCJ	93-70215044-JCJ	93-80215044-JCJ
4 x 0.22 mm²	round	93-50402214-JCJ	**93-60402214-JCJ**	93-70402244-JCJ	93-80402244-JCJ
4 x 0.5 mm²	round	93-50405014-JCJ	93-60405014-JCJ	93-70405044-JCJ	93-80405044-JCJ
4 x 0.75 mm²	round	93-50407514-JCJ	93-60407514-JCJ	93-70407544-JCJ	93-80407544-JCJ
4 x 1.5 mm²	round	93-50415014-JCJ	93-60415014-JCJ	93-70415044-JCJ	93-80415044-JCJ

93 - AGL // Compensation cables



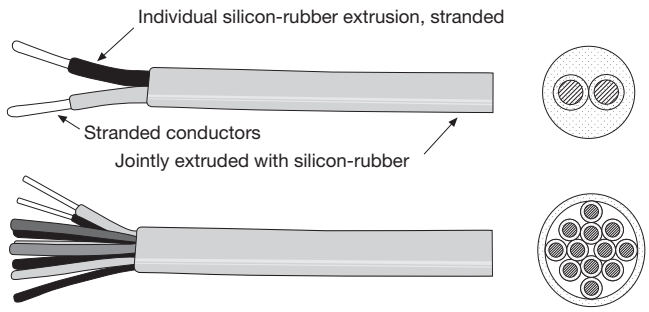
Compensation cable PVC – Aluminium foil, sheath cable - PVC JFJ, round

- Thermal stability of the insulation material -10°C to +105°C
- Use in a damp environment at a medium degree of mechanical stress
- Extra shielding against electromagnetic interference, earth cable

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.22 mm²	round	**93-10202214-JFJ**	93-20202214-JFJ	**93-30202214-JFJ**	93-40202224-JFJ
2 x 0.5 mm²	round	93-10205014-JFJ	93-20205014-JFJ	**93-30205014-JFJ**	93-40205024-JFJ
2 x 0.75 mm²	round	**93-10207514-JFJ**	93-20207514-JFJ	**93-30207514-JFJ**	93-40207524-JFJ
2 x 1.5 mm²	round	**93-10215014-JFJ**	**93-20215014-JFJ**	**93-30215014-JFJ**	93-40215024-JFJ
4 x 0.22 mm²	round	**93-10402214-JFJ**	93-20402214-JFJ	**93-30402214-JFJ**	93-40402224-JFJ
4 x 0.5 mm²	round	**93-10405014-JFJ**	93-20405014-JFJ	**93-30405014-JFJ**	93-40405024-JFJ
4 x 0.75 mm²	round	**93-10407514-JFJ**	93-20407514-JFJ	**93-30407514-JFJ**	93-40407524-JFJ
4 x 1.5 mm²	round	**93-10415014-JFJ**	93-20415014-JFJ	**93-30415014-JFJ**	**93-40415024-JFJ**

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.22 mm²	round	93-50202214-JFJ	93-60202214-JFJ	93-70202244-JFJ	93-80202244-JFJ
2 x 0.5 mm²	round	93-50205014-JFJ	93-60205014-JFJ	93-70205044-JFJ	93-80205044-JFJ
2 x 0.75 mm²	round	93-50207514-JFJ	93-60207514-JFJ	**93-70207544-JFJ**	**93-80207544-JFJ**
2 x 1.5 mm²	round	**93-50215014-JFJ**	93-60215014-JFJ	93-70215044-JFJ	93-80215044-JFJ
4 x 0.22 mm²	round	93-50402214-JFJ	93-60402214-JFJ	93-70402244-JFJ	93-80402244-JFJ
4 x 0.5 mm²	round	93-50405014-JFJ	93-60405014-JFJ	93-70405044-JFJ	93-80405044-JFJ
4 x 0.75 mm²	round	93-50407514-JFJ	**93-60407514-JFJ**	93-70407544-JFJ	93-80407544-JFJ
4 x 1.5 mm²	round	93-50415014-JFJ	93-60415014-JFJ	93-70415044-JFJ	93-80415044-JFJ

93 - AGL // Compensation cables

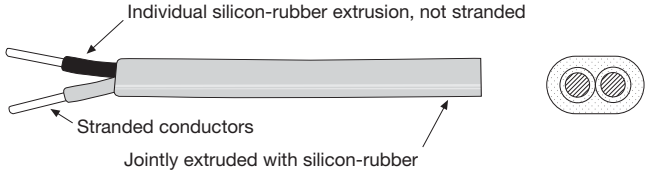


Compensation cable Silicon - Silicon SLSL, round

- Thermal stability of the insulation material -60°C to +180°C
- Use in a damp environment at a medium degree of mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.22 mm²	rund	**93-10202214-SS**	**93-20202214-SS**	**93-30202214-SS**	**93-40202224-SS**
2 x 0.5 mm²	rund	93-10205014-SS	93-20205014-SS	**93-30205014-SS**	93-40205024-SS
2 x 0.75 mm²	rund	93-10207514-SS	93-20207514-SS	**93-30207514-SS**	93-40207524-SS
2 x 1.0 mm²	rund	93-10210014-SS	93-20210014-SS	93-30210014-SS	93-40210024-SS
2 x 1.5 mm²	rund	93-10215014-SS	93-20215014-SS	93-30215014-SS	93-40215024-SS
4 x 0.22 mm²	rund	**93-10402214-SS**	93-20402214-SS	**93-30402214-SS**	93-40402224-SS
4 x 0.5 mm²	rund	93-10405014-SS	93-20405014-SS	**93-30405014-SS**	93-40405024-SS
4 x 0.75 mm²	rund	93-10407514-SS	93-20407514-SS	93-30407514-SS	93-40407524-SS
4 x 1.5 mm²	rund	**93-10415014-SS**	93-20415014-SS	**93-30415014-SS**	93-40415024-SS

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.22 mm²	rund	**93-50202214-SS**	**93-60202214-SS**	93-70202244-SS	93-80202244-SS
2 x 0.5 mm²	rund	93-50205014-SS	93-60205014-SS	93-70205044-SS	93-80205044-SS
2 x 0.75 mm²	rund	93-50207514-SS	93-60207514-SS	93-70207544-SS	93-80207544-SS
2 x 1.0 mm²	rund	93-50210014-SS	93-60210014-SS	93-70210044-SS	93-80210044-SS
2 x 1.5 mm²	rund	93-50215014-SS	93-60215014-SS	93-70215044-SS	93-80215044-SS
4 x 0.22 mm²	rund	93-50402214-SS	93-60402214-SS	93-70402244-SS	93-80402244-SS
4 x 0.5 mm²	rund	93-50405014-SS	93-60405014-SS	93-70405044-SS	93-80405044-SS
4 x 0.75 mm²	rund	93-50407514-SS	93-60407514-SS	93-70407544-SS	93-80407544-SS
4 x 1.5 mm²	rund	93-50415014-SS	93-60415014-SS	93-70415044-SS	93-80415044-SS



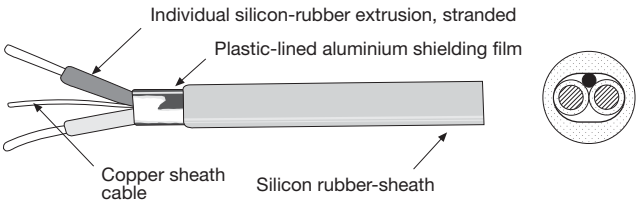
Compensation cable Silicon - Silicon SLSL, oval

- Thermal stability of the insulation material -60°C to +180°C
- Use in a damp environment at a medium degree of mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 1.5 mm²	oval	**93-10215011-SS**	**93-20215011-SS**	**93-30215011-SS**	**93-40215021-SS**

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 1.5 mm²	oval	**93-50215011-SS**	93-60215011-SS	93-70215041-SS	93-80215041-SS

93 - AGL // Compensation cables

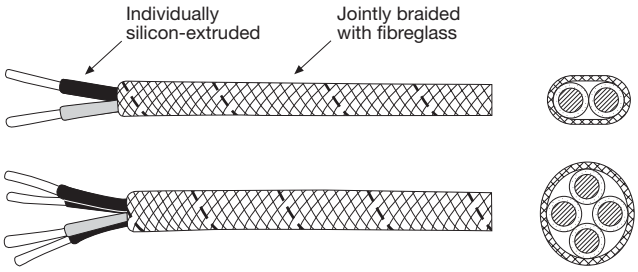


Compensation cable
Silicon – Aluminium foil, sheath cable - Silicon
SLFSL, round

- Thermal stability of the insulation material -60°C to +180°C
- Use in a damp environment at a medium degree of mechanical stress
- Extra shielding against electromagnetic interference, earth cable

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.5 mm²	round	93-10205014-SFS	93-20205014-SFS	93-30205014-SFS	93-40205024-SFS
2 x 0.75 mm²	round	**93-10207514-SFS**	93-20207514-SFS	**93-30207514-SFS**	93-40207524-SFS
2 x 1.0 mm²	round	93-10210014-SFS	93-20210014-SFS	93-30210014-SFS	93-40210024-SFS
2 x 1.5 mm²	round	93-10215014-SFS	93-20215014-SFS	**93-30215014-SFS**	93-40215024-SFS
4 x 0.75 mm²	round	**93-10407514-SFS**	93-20407514-SFS	**93-30407514-SFS**	93-40407524-SFS

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.5 mm²	round	93-50205014-SFS	93-60205014-SFS	93-70205044-SFS	93-80205044-SFS
2 x 0.75 mm²	round	93-50207514-SFS	**93-60207514-SFS**	93-70207544-SFS	93-80207544-SFS
2 x 1.0 mm²	round	93-50210014-SFS	93-60210014-SFS	93-70210044-SFS	93-80210044-SFS
2 x 1.5 mm²	round	93-50215014-SFS	93-60215014-SFS	93-70215044-SFS	93-80215044-SFS
4 x 0.75 mm²	round	93-50407514-SFS	93-60407514-SFS	93-70407544-SFS	93-80407544-SFS



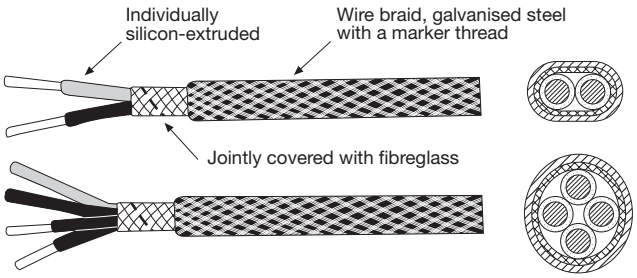
Compensation cable
Silicon - Fibreglass
SG, oval and round models, stranded

- Thermal stability of the insulation material up to 180°C
- Use in a damp environment at a low degree of mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 1.5 mm²	oval	**93-10215011-SG**	**93-20215011-SG**	**93-30215011-SG**	**93-40215021-SG**
4 x 1.5 mm²	round	**93-10415011-SG**	93-20415011-SG	**93-30415011-SG**	93-40415021-SG

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 1.5 mm²	oval	93-50215011-SG	**93-60215011-SG**	93-70215041-SG	93-80215041-SG
4 x 1.5 mm²	round	93-50415011-SG	93-60415011-SG	93-70415041-SG	93-80415041-SG

93 - AGL // Compensation cables

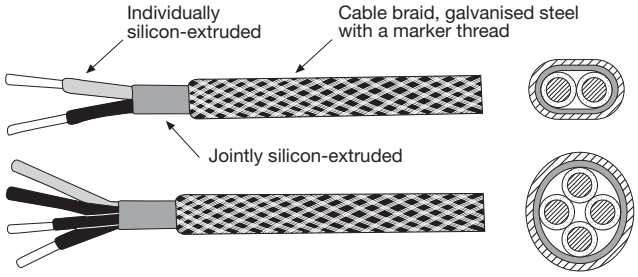


Compensation cable
Silicon – Fibreglass – Cable braid
SGP, oval and round models, stranded

- Thermal stability of the insulation material up to 180°C
- Use in a damp environment at high mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.75 mm²	oval	93-10207511-SGP	93-20207511-SGP	**93-30207511-SGP**	93-40207521-SGP
2 x 1.5 mm²	oval	**93-10215011-SGP**	93-20215011-SGP	**93-30215011-SGP**	**93-40215021-SGP**
4 x 0.5 mm²	round	93-10405014-SGP	93-20405014-SGP	**93-30405014-SGP**	93-40405024-SGP
4 x 1.5 mm²	round	**93-10415014-SGP**	93-20415014-SGP	**93-30415014-SGP**	**93-40415024-SGP**

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.75 mm²	oval	93-50207511-SGP	93-60207511-SGP	93-70207541-SGP	93-80207541-SGP
2 x 1.5 mm²	oval	93-50215011-SGP	93-60215011-SGP	93-70215041-SGP	93-80215041-SGP
4 x 0.5 mm²	round	93-50405014-SGP	93-60405014-SGP	93-70405044-SGP	93-80405044-SGP
4 x 1.5 mm²	round	93-50415014-SGP	93-60415014-SGP	93-70415044-SGP	93-80415044-SGP



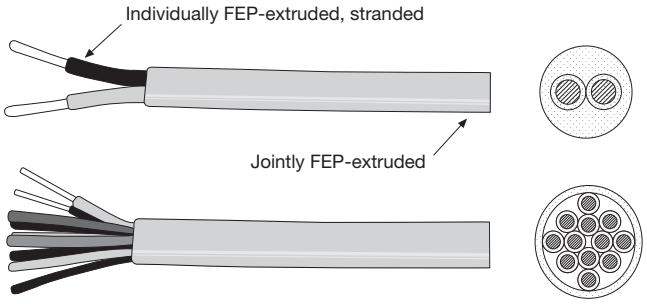
Compensation cable
Silicon – Silicon – Cable braid
SSP, oval and round models, stranded

- Thermal stability of the insulation material up to 180°C
- Use in a damp environment at high mechanical stress

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.75 mm²	oval	93-10207511-SSP	93-20207511-SSP	**93-30207511-SSP**	93-40207521-SSP
2 x 1.5 mm²	oval	**93-10215011-SSP**	**93-20215011-SSP**	**93-30215011-SSP**	**93-40215021-SSP**
4 x 0.5 mm²	round	93-10405014-SSP	93-20405014-SSP	**93-30405014-SSP**	93-40405024-SSP
4 x 1.5 mm²	round	93-10415014-SSP	93-20415014-SSP	93-30415014-SSP	93-40415024-SSP

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.75 mm²	oval	93-50207511-SSP	93-60207511-SSP	93-70207541-SSP	93-80207541-SSP
2 x 1.5 mm²	oval	93-50215011-SSP	93-60215011-SSP	93-70215041-SSP	93-80215041-SSP
4 x 0.5 mm²	round	93-50405014-SSP	93-60405014-SSP	93-70405044-SSP	93-80405044-SSP
4 x 1.5 mm²	round	93-50415014-SSP	93-60415014-SSP	93-70415044-SSP	93-80415044-SSP

93 - AGL // Compensation cables

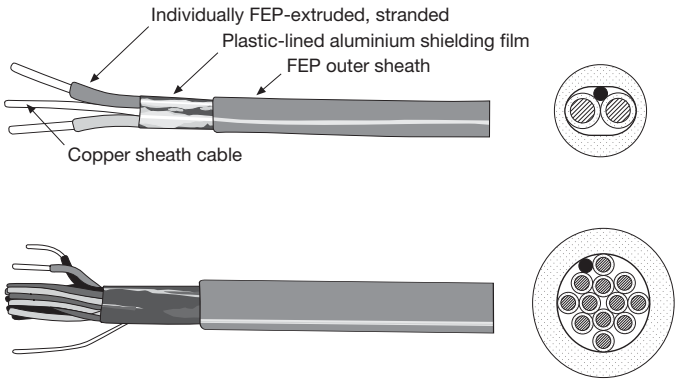


Compensation cable Teflon FEP - Teflon FEP EE, round

- Thermal stability of the insulation material -200°C to +205°C
- Use in a damp environment at high temperatures and for special requirements concerning resistance to chemicals

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.5 mm²	round	93-10205014-EE	93-20205014-EE	93-30205014-EE	93-40205024-EE
2 x 0.75 mm²	round	93-10207514-EE	93-20207514-EE	93-30207514-EE	93-40207524-EE
2 x 1.0 mm²	round	93-10210014-EE	93-20210014-EE	93-30210014-EE	93-40210024-EE

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.5 mm²	round	93-50205014-EE	93-60205014-EE	93-70205044-EE	93-80205044-EE
2 x 0.75 mm²	round	93-50207514-EE	93-60207514-EE	93-70207544-EE	93-80207544-EE
2 x 1.0 mm²	round	93-50210014-EE	93-60210014-EE	93-70210044-EE	93-80210044-EE



Compensation cable Teflon FEP – Aluminium foil, Sheath cable - Teflon FEP EFE, round

- Thermal stability of the insulation material -200°C to +205°C
- Use in a damp environment at high temperatures special requirements concerning resistance to chemicals
- Extra shielding against electromagnetic interference, earth cable

Cable	Shape	PtRh-Pt/S R + orange - white IEC 584/3	Pt30Rh-Pt6Rh/B + grey - white IEC 584/3	NiCr-Ni/K + green - white IEC 584/3	Fe-CuNi/L + red - blue DIN 43710
2 x 0.5 mm²	round	93-10205014-EFE	93-20205014-EFE	93-30205014-EFE	93-40205024-EFE
2 x 0.75 mm²	round	93-10207514-EFE	93-20207514-EFE	**93-30207514-EFE**	93-40207524-EFE
2 x 1.0 mm²	round	93-10210014-EFE	93-20210014-EFE	93-30210014-EFE	93-40210024-EFE

Cable	Shape	Fe-CuNi/J + black - white IEC 584/3	Nicrosil-Nisil/N + pink - white IEC 584/3	Wo3Re-Wo25Re/D + red - white	Wo5Re-Wo26Re/C + red - white
2 x 0.5 mm²	round	93-50205014-EFE	93-60205014-EFE	93-70205044-EFE	93-80205044-EFE
2 x 0.75 mm²	round	93-50207514-EFE	93-60207514-EFE	93-70207544-EFE	93-80207544-EFE
2 x 1.0 mm²	round	93-50210014-EFE	93-60210014-EFE	93-70210044-EFE	93-80210044-EFE