

THERMFLEX 180 EWKF*-C halogen-free

Silicone Multicore Cable, copper screened, EMC*-preferred type +180 °C



HELUKABEL THERMFLEX 180 EWKF-C 3G1,5 QMM / 23969 300/500 V 001042372 CE

Technical data

- Heat-resistant silicone-insulated flexible cable in adapted to DIN VDE 0250 part 816
- **Temperature range** flexing –25°C to +180°C fixed installation –60°C to +180°C short time operation +220°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 2000 V
- **Insulation resistance** min. 200 MOhm x km
- **Minimum bending radius** min. 10x cable \varnothing
- **Coupling resistance** max. 250 Ohm/km
- **Radiation resistance** up to 20×10^6 cJ/kg (up to 20 Mrad)
- **Insulation integrity** continuance of insulation effects under fire condition according to IEC 60331 and DIN VDE 0472 part 814.
- **Freedom from halogen** (corrosiveness of combustion gases) according to DIN VDE 0482 part 267/EN 50267-2-2/IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- **Behaviour in fire** no flame propagation, test according to DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- **Smoke density** low

Note

FRNC = Flame Retardant Non Corrosive
All silicon cables are available also in FRNC versions. The jacket designed with special-compound conform flame test method C to DIN VDE 0472 part 804 and IEC 60332-3 as well as HD 405.3. This special compound is self-extinguishing. Because of that these cables can be installed as security cable with functionality as for example in communal buildings, power stations, hotels, airports etc.

Cable structure

- Tinned copper conductor, stranded to DIN VDE 0295, cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Silicone core insulation, 2GI1 to DIN VDE 0207 part 20
- Core identification to DIN VDE 0293
 - up to 5 cores one-coloured
 - 6 and more cores black with white numbering
- Green-yellow earth core (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special silicone inner sheath
- Tinned copper braided screening, covering approx. 85%
- Silicone outer jacket, 2GM1 to DIN VDE 0207 part 21, jacket colour black (RAL 9005)

Advantages

- Due to the special abrasive and notch resistance outer jacket, these cables are suitable for heavy loading of mechanical stresses than the usual standard silicone cables.
- Hardly changes of dielectric strength and the insulation resistance also at high temperatures
- High ignition or flash point
- In case of fire, forms an insulating layer of SiO_2

EWKF*

Improved values to

- E** = tearing resistance
- W** = breaking strength propagation
- K** = notch strength
- F** = flexibility

Application

These cables are ideal for use everywhere, where increased mechanical stresses for the installation and operation are required.

Silicone-rubber-insulated cables are used for all applications where the cable insulation is subjected to high temperature fluctuations.

Suitable for installation at high temperature influence in dry, damp and in the open air. As flexible connecting cable for low mechanical stress i.e. sauna, solar installations, foundries and steel plants. This cable can be used for fixed installation only in open and ventilated cable tubes and cable ducts.

An interference-free transmission of signals and pulse is assured by the high screening density. The ideal interference-protected silicone multicore flexible cable for such applications as given above.

* **EMC** = Electromagnetic compatibility

Note To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

Resistant to

- High molecular oils
- Fats from vegetables and animals
- Alcohols
- Plasticizers and clophenes
- Diluted acids
- Lyes and salt dissolution
- Oxidation substances
- Tropical influences and weather
- Lake water
- Oxygen, ozone

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. cores x cross-sec. mm ²	Outer \varnothing ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.†)
23960	2x0,75	8,9	61,4	124	18
23961	3G0,75	9,0	69,1	136	18
23962	4G0,75	10,4	86,7	160	18
23963	5G0,75	11,0	95,2	180	18
23964	2x1	9,1	66,7	132	17
23965	3G1	9,6	86,2	154	17
23966	4G1	10,9	96,8	176	17
23967	5G1	11,8	108,3	207	17
23968	2x1,5	10,9	87,7	170	16
23969	3G1,5	11,3	103,5	190	16
23970	4G1,5	12,1	131,7	231	16
23971	5G1,5	13,0	148,5	282	16
23972	7G1,5	14,2	193,4	342	16
23973	12G1,5	18,0	298,4	531	16

Part No.	No. cores x cross-sec. mm ²	Outer \varnothing ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-no.†)
23974	16G1,5	20,2	362,3	660	16
23975	20G1,5	22,1	405,1	766	16
23976	2x2,5	12,1	122,3	230	14
23977	3G2,5	12,9	147,7	275	14
23978	4G2,5	14,0	188,6	340	14
23979	5G2,5	15,3	214,9	395	14
23980	2x4	14,1	137,0	308	12
23981	3G4	15,6	178,1	364	12
23982	4G4	17,0	294,0	511	12
23983	5G4	19,1	374,0	630	12
23984	2x6	15,6	185,0	418	10
23985	3G6	17,0	241,1	612	10
23986	4G6	18,6	449,0	781	10
23987	5G6	20,9	563,0	980	10

G = with green-yellow earth core

X = without green-yellow earth core

Further sizes and dimensions available on request.