

SiHF-C-Si silicon multicore cable, halogen-free, Cu-screened, EMC-preferred type, meter marking



Technical data

- Special silicone-insulated cable with higher heat-resistance adapted to DIN VDE 0250 part 1 and DIN VDE 0285-525-2-83 / DIN EN 50525-2-83
- **Temperature range**
-60°C to +180°C
(for short time +220°C)
- **Temperature limit** at the conductor in operation +180°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 2000 V
- **Breakdown voltage** min. 5000 V
- **Insulation resistance**
min. 200 MΩm x km
- **Power rating**
at ambient temperatures up to +145°C
acc. to DIN VDE 0100
150°C - load value 100%
155°C - load value 91%
160°C - load value 82%
165°C - load value 71%
170°C - load value 58%
175°C - load value 41%
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Coupling resistance**
max. 250 Ωm/km
- **Radiation resistance**
up to 20×10^6 cJ/kg (up to 20 Mrad)

Application

Silicone-rubber-insulated cables are used for all applications where the cable insulation is subjected to high temperature fluctuations. These cables are heat-resistant for continuous use at temperatures up to +180°C, as well as for short periods of time at +220°C. Silicone-rubber-insulated cables can also be used at low temperatures down to -60°C because of the excellent weathering resistance of the material. These cables are halogen-free and hence are particularly suitable for applications in iron and steel works, rolling mills, foundries, in aircraft construction and ship building, as well as in cement, glass and ceramic plants. Silicone-rubber-insulated cables have demonstrated proven applications in projector and high-power lighting fixtures as well as all types of heating equipment. 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

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

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Cable structure

- Tinned copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of silicone
- Core identification to DIN VDE 0293-308
- up to 5 cores coloured
- from 6 cores, black with continuous white numbering
- GN-YE conductor, 3 cores and above
- Cores stranded in layers with optimal lay-length
- Inner sheath of silicone
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of silicone
- Sheath colour preferentially redbrown
- with meter marking

Properties

• 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
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts. Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C.

Tests

- Halogen-free
acc. to DIN VDE 0482 part 267, DIN EN 50267-2-2, IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- Behaviour in fire
no flame propagation acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
SiHF

Part no.	No. cores x cross-sec. mm ²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.
23151	2 x 0,5	8,0	55,5	101,0	20	23160	2 x 0,75	9,0	61,4	124,0	19
23152	3 G 0,5	8,3	60,8	118,0	20	23161	3 G 0,75	9,4	69,1	136,0	19
23153	4 G 0,5	9,1	66,5	131,0	20	23162	4 G 0,75	10,4	86,7	159,0	19
23154	5 G 0,5	9,9	81,6	153,0	20	23163	5 G 0,75	11,3	95,2	180,0	19
23155	7 G 0,5	10,9	92,2	173,0	20	23164	7 G 0,75	12,0	113,3	212,0	19
23156	10 G 0,5	12,8	124,0	242,0	20	23165	10 G 0,75	13,9	165,2	306,0	19
23157	12 G 0,5	13,5	134,4	263,0	20	23166	12 G 0,75	15,2	180,3	333,0	19
23158	16 G 0,5	15,1	170,2	326,0	20	23167	16 G 0,75	16,9	212,2	418,0	19
23159	18 G 0,5	15,9	181,0	351,0	20	23168	18 G 0,75	18,0	282,1	453,0	19
23291	25 G 0,5	18,5	230,1	348,0	20	23292	25 G 0,75	20,8	297,4	468,0	19

Continuation ▶

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Part no.	No. cores x cross-sec. mm ²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.
23169	2 x 1	9,4	66,7	132,0	18
23170	3 G 1	9,8	86,2	153,0	18
23171	4 G 1	11,1	96,8	173,0	18
23172	5 G 1	12,0	108,3	202,0	18
23173	7 G 1	12,7	141,2	243,0	18
23174	10 G 1	14,7	190,0	238,0	18
23175	12 G 1	15,8	209,8	371,0	18
23176	16 G 1	17,4	251,8	468,0	18
23177	18 G 1	18,5	297,4	526,0	18
23293	25 G 1	21,8	329,0	559,0	18
23178	2 x 1,5	10,8	87,7	172,0	16
23179	3 G 1,5	11,2	103,5	198,0	16
23180	4 G 1,5	12,0	131,7	235,0	16
23181	5 G 1,5	12,8	148,5	281,0	16
23182	7 G 1,5	13,6	193,4	345,0	16
23183	10 G 1,5	14,7	268,5	482,0	16
23184	12 G 1,5	15,8	298,4	531,0	16
23185	16 G 1,5	17,4	362,3	662,0	16
23186	18 G 1,5	20,6	394,0	720,0	16
23294	25 G 1,5	24,2	488,2	791,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.
23187	2 x 2,5	12,0	122,3	230,0	14
23188	3 G 2,5	12,9	147,7	275,0	14
23189	4 G 2,5	13,8	188,6	340,0	14
23190	5 G 2,5	14,8	214,9	394,0	14
23191	7 G 2,5	15,8	265,7	488,0	14
23192	4 G 4	16,0	294,0	520,0	12
23193	5 G 4	17,4	374,0	653,0	12
23150	2 x 6	15,8	171,0	350,0	20
23194	4 G 6	18,1	449,0	781,0	10
23195	5 G 6	20,0	563,0	982,0	10
23196	4 G 10	23,2	759,0	1294,0	8
23197	4 G 16	25,2	1180,0	1988,0	6
23198	4 G 25	31,0	1276,0	2995,0	4

Dimensions and specifications may be changed without prior notice. (RE01)