



HELUKABEL® SiHF 3G1 QMM / 23008 300/500 V CE

## TECHNICAL DATA

Silicone control and connection cable in alignment with DIN VDE 0250-1, DIN VDE 0285-525-2-83 / DIN EN 50525-2-83

Temperature range	flexible -25°C to +180°C fixed -60°C to +180°C
Permissible operating temperature of the conductor	+180°C
Nominal voltage	AC U <sub>0</sub> /U 300/500 V
Test voltage core/core	2000 V
Breakdown voltage	4000 V
Minimum bending radius	flexible 7.5x Outer-Ø fixed 4x Outer-Ø

## CABLE STRUCTURE

- Copper wire tinned, finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
- Core insulation: silicone
- Core identification acc. to DIN VDE 0293-308,  
2 - 5 core(s): colour coded  
6 - 25 core(s): black cores with consecutive labeling in white digits
- Protective conductor: starting with 3 cores,  
G = with protective conductor GN-YE, in the outer layer,  
x = without protective conductor
- Cores stranded in layers with optimal lay lengths
- Outer sheath: silicone
- Sheath colour: redbrown
- Length marking: in metres

## PROPERTIES

- resistant to: ozone, oxygen, weathering effects, alcohols, dilute acids, alkalis, saline solutions, oxidising agents, high molecular weight oils, vegetable and animal fats, plasticisers and clophen, seawater

- halogen-free
- high flash point
- leaves an insulating layer of SiO<sub>2</sub> when exposed to flames
- no significant changes in dielectric strength and insulation resistance even at higher temperatures

## TESTS

- halogen-free acc. to DIN VDE 0482-754-1 / DIN EN 60754-1 / IEC 60754-1
- corrosiveness of combustion gases acc. to DIN VDE 0482-754-2 / DIN EN 60754-2 / IEC 60754-2
- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2

## APPLICATION

Silicone cables were evolved for use wherever insulation is subjected to extreme temperature changes. The good performance of the environmental resistant properties means that silicone cables can be used at temperatures down to -60°C. Silicone cables are halogen-free cables and are especially suited for installation in power stations. They have also found their uses in the steel producing industries, aviation industry, ship building as well as in ceramic, glass and cement factories. Due to elastical characteristic of core insulations, these are used as flexible connection cable

## NOTES

- the conductor is metrically (mm<sup>2</sup>) constructed, AWG numbers are approximated, and are for reference only
- for fixed installation, always install in open, ventilated pipe or duct systems; otherwise, a combination of high temperatures above 90°C and the absence of air would affect the mechanical properties of silicone

Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
22989	2 x 0.5	20	5.6	9.6	42.0
22990	3 G 0.5	20	5.9	14.5	44.0
22940	3 x 0.5	20	5.9	14.5	44.0
22991	4 G 0.5	20	6.5	19.3	58.0
22941	4 x 0.5	20	6.5	19.3	58.0
22992	5 G 0.5	20	7.3	24.0	62.0
22942	5 x 0.5	20	7.3	24.0	62.0
22993	6 G 0.5	20	8.3	28.9	79.0
22994	7 G 0.5	20	8.3	33.7	85.0
22995	8 G 0.5	20	9.0	38.4	99.0
22996	10 G 0.5	20	10.1	48.1	124.0
22997	12 G 0.5	20	10.7	57.6	141.0
22998	16 G 0.5	20	12.1	76.7	186.0
22999	18 G 0.5	20	12.7	86.5	211.0
23000	25 G 0.5	20	15.3	120.0	271.0
23001	2 x 0.75	19	6.4	14.4	53.0
23002	3 G 0.75	19	6.8	21.6	63.0

Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
23104	3 x 0.75	19	6.8	21.6	63.0
23003	4 G 0.75	19	7.6	29.0	83.0
23105	4 x 0.75	19	7.6	29.0	83.0
23004	5 G 0.75	19	8.5	36.0	101.0
22943	5 x 0.75	19	8.5	36.0	101.0
23005	6 G 0.75	19	9.2	43.0	115.0
23006	7 G 0.75	19	9.2	50.0	124.0
23127	8 G 0.75	19	9.9	57.7	138.0
23128	10 G 0.75	19	11.1	72.1	156.0
23129	12 G 0.75	19	12.2	86.5	185.0
23130	16 G 0.75	19	13.7	115.2	218.0
23131	18 G 0.75	19	14.6	129.7	260.0
23132	25 G 0.75	19	17.8	180.0	370.0
23007	2 x 1	18	6.6	19.0	59.0
23008	3 G 1	18	7.0	29.0	77.0
22944	3 x 1	18	7.0	29.0	77.0
23009	4 G 1	18	7.9	38.0	94.0

## increased temperature resistance, tinned wire

Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
22945	4 x 1	18	7.9	38.0	94.0
23010	5 G 1	18	8.8	48.0	115.0
22946	5 x 1	18	8.8	48.0	115.0
23011	6 G 1	18	9.5	58.0	134.0
23012	7 G 1	18	9.5	67.0	144.0
23133	8 G 1	18	10.3	76.7	175.0
24000	9 G 1	18	11.5	86.0	196.0
23134	10 G 1	18	11.5	96.1	216.0
23135	12 G 1	18	12.6	115.2	231.0
23136	16 G 1	18	14.2	153.5	302.0
23137	18 G 1	18	15.1	172.9	340.0
23138	25 G 1	18	18.4	240.0	431.0
23013	2 x 1.5	16	7.6	29.0	81.0
23014	3 G 1.5	16	8.0	43.0	98.0
22947	3 x 1.5	16	8.0	43.0	98.0
23015	4 G 1.5	16	8.8	58.0	122.0
22948	4 x 1.5	16	8.8	58.0	122.0
23016	5 G 1.5	16	9.6	72.0	147.0
22949	5 x 1.5	16	9.6	72.0	147.0
23017	6 G 1.5	16	10.4	86.0	173.0
23018	7 G 1.5	16	10.4	101.0	187.0
23019	8 G 1.5	16	11.3	114.0	213.0
23020	10 G 1.5	16	13.0	116.0	263.0
23021	12 G 1.5	16	14.0	173.0	314.0
23022	14 G 1.5	16	14.7	202.0	379.0
23023	16 G 1.5	16	16.2	231.0	445.0
23024	18 G 1.5	16	17.0	260.0	506.0
23025	20 G 1.5	16	17.5	288.0	566.0
23026	24 G 1.5	16	19.8	346.0	722.0
23027	2 x 2.5	14	8.8	48.0	134.0
23028	3 G 2.5	14	9.7	72.0	152.0
23029	4 G 2.5	14	10.6	96.0	188.0
23030	5 G 2.5	14	11.6	120.0	228.0
23139	6 G 2.5	14	12.6	144.0	304.0

Part no.	No. cores x cross-sec. mm <sup>2</sup>	AWG, approx.	Outer Ø mm, approx.	Cu-weight kg/km	Weight kg/km, approx.
23032	7 G 2.5	14	12.6	168.0	320.0
23140	8 G 2.5	14	13.7	192.2	373.0
23141	10 G 2.5	14	15.5	240.1	450.0
23033	12 G 2.5	14	17.1	288.0	502.0
23142	16 G 2.5	14	19.6	384.0	659.0
23143	18 G 2.5	14	20.6	432.2	761.0
23144	25 G 2.5	14	24.9	600.0	1007.0
23034	2 x 4	12	10.8	77.0	180.0
23035	3 G 4	12	11.5	115.0	224.0
23036	4 G 4	12	12.6	154.0	295.0
23037	5 G 4	12	14.0	192.0	359.0
23039	7 G 4	12	15.6	269.0	479.0
23040	2 x 6	10	12.4	115.0	210.0
23041	3 G 6	10	13.2	173.0	270.0
23042	4 G 6	10	14.7	230.0	341.0
23043	5 G 6	10	16.6	288.0	432.0
23045	7 G 6	10	18.6	403.0	552.0
23046	2 x 10	8	16.2	192.0	400.0
23047	3 G 10	8	17.3	288.0	507.0
23048	4 G 10	8	19.4	384.0	644.0
23049	5 G 10	8	21.6	480.0	788.0
23145	7 G 10	8	23.4	672.2	1151.0
23050	2 x 16	6	18.0	308.0	591.0
23051	3 G 16	6	19.4	462.0	749.0
23052	4 G 16	6	21.4	616.0	950.0
23053	5 G 16	6	24.0	770.0	1204.0
23146	7 G 16	6	26.4	1075.3	1682.0
23054	2 x 25	4	22.0	480.0	700.0
23055	3 G 25	4	23.5	720.0	1100.0
23056	4 G 25	4	26.4	960.0	1500.0
23057	2 x 35	2	24.6	672.0	1100.0
23058	3 G 35	2	26.4	1008.0	1500.0
23059	4 G 35	2	29.2	1344.0	2100.0