

Silicone Rubber Insulated Power Cable

◆ Standard

Silicon Rubber Insulated Power Cables is manufactured according to Q/320412HLC011.

◆ Application

This product is suitable for connecting with moving electrical appliances in inclement environment for power generation, metallurgy, chemical industry, port and mine and so on; it is suitable for fixed location also.

◆ Product Property

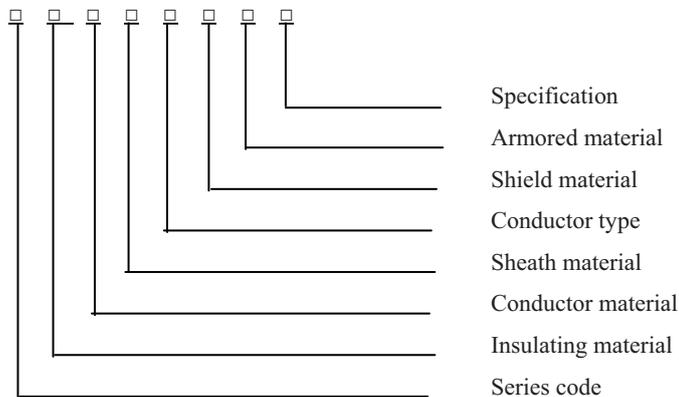
- (1) Operation temperature: Long-term operation temperature is no more than 200°C.
- (2) Rated voltage U_0/U : 600/1000V.
- (3) Min environment temperature: fixed laying -60°C; no fixed laying -20°C.
- (4) Min curve radius: Not less than four times of cable outer diameter.

◆ Code and Explanation

Table 1

Item	Code	Explanation
Insulating material	G	Silicone
	F	Fluoroplastics (FEP)
Shield material	P	Copper wire braid
Armored material	22	Steel tape armored
	31	Steel wire braid armored
	32	Steel wire armor
Sheath material	G	Silicone Rubber
	V	PVC elastomer plastic (flame retardant)
Conductor material	/	Copper wire omitted
	X	Tinned copper wire
Conductor type	R	Multi-stranded flexible conductor
Size		Core number × conductor section
		C: 2,3,4,5
		S: 2.5~185(mm ²)

2. Type explanation



Example:

1. Three-core main wire is 50mm², the one-core phase wire is 25mm² Tinned copper conductor silicone rubber Insulated and sheath flexible cable shows: HCS_GGZR_X 3×50+1×25
2. Three-core main wire is 50mm², the one-core phase wire is 25mm² copper conductor fluoroplastics Insulated silicone rubber sheath flexible cable shows: HCFS_GGZR 3×50+1×25
3. Three-core main wire is 50mm², the two-core phase wire is 25mm² Tinned copper conductor silicone rubber Insulated and sheath copper wire braid flexible cable shows: HCS_GGZR_{PX} 3×50+2×25
4. Three-core main wire is 50mm², the two-core phase wire is 25mm² copper conductor silicone rubber Insulated plastic elastomer sheath steel strip armor cable shows: HCS_GV₇R₂₂ 3×50+2×25

◆ Technical Data (see table 2)

Table 2

Nominal cross Section (mm ²)	Max. Conductor resistance (20°C) Ω/km		Technical performances		
			Min. Insulated resistance MΩ• km (20°C)	Heat-resistant testing	Test voltage
	Copper	Tinned Copper			
4.0	4.95	5.09	50	Heat-resistant testing, which the cable bears 200±2°C, and heating time is 120h; after cooling 4h, the Insulated surface has no visual crack	AC 50Hz 3500V voltage tested for 5min is breakdown
6.0	3.30	3.39			
10.0	1.91	1.95			
16.0	1.21	1.24			
25.0	0.780	0.795			
35.0	0.554	0.565			
50.0	0.386	0.393			
70.0	0.272	0.277			
95.0	0.206	0.210	35		
120	0.161	0.164			
150	0.129	0.132			
185	0.106	0.108			
Flame-retardant performance			According with the requirement of GB/T18380.1 that oxygen index is more than 28, higher than B sort.		

◆ Type and Name, Structure and Diameter

1. Type and Name (Table 3)

Table 3

Type	Name
HCGZ2R	Copper conductor silicone rubber insulated and sheathed flexible cable
HCGZ2RX	Tinned copper conductor silicone rubber insulated and sheathed flexible cable
HCFGZRDL	Copper conductor fluoroplastics insulated silicone rubber sheathed flexible cable
HCFGZR _X DL	Tinned copper conductor fluoroplastics insulated silicone rubber sheathed flexible cable
HCGZVRDL	Copper conductor silicone rubber insulated plastic elastomer sheathed flexible cable
HCGZVR _X DL	Tinned copper conductor silicone rubber insulated plastic elastomer sheathed flexible cable
HCGZ2RP	Copper conductor silicone rubber insulated and sheathed copper wire braid screened flexible cable
HCGZVR22DL	Copper conductor silicone rubber insulated plastic elastomer sheathed steel tape armored cable
HCGZVR31DL	Copper conductor silicone rubber insulated plastic elastomer sheathed steel wire braid armored cable
HCGZVR32DL	Copper conductor silicone rubber insulated plastic elastomer sheathed steel wire armored cable

Note: To be added before the type of the flame retardant grade “ZR”.

2. Structure and Diameter (Table 4~10)
Table 4

(2 cores)			
Nominal cross section (mm ²)	Conductor structure No./mm	Approx. outer diameter of cable (mm)	Calculated weight (kg/km)
	Core /diameter(mm)		
2×4	56/0.30	12.5	194.0
2×6	84/0.30	16.2	330.0
2×10	80/0.40	21.2	390.0
2×16	126/0.40	23.5	670.0
2×25	196/0.40	27.0	984.0
2×35	276/0.40	31.4	1276.0
2×50	396/0.40	36.5	1770.0
2×70	356/0.50	41.4	2273.0
2×95	485/0.50	46.8	3051.0

Table 5

(3 cores)			
Nominal cross section (mm ²)	Conductor structure No./mm	Approx. outer diameter of cable (mm)	Calculated weight (kg/km)
	Core /diameter(mm)		
3×4	56/0.30	14.0	217
3×6	84/0.30	17.0	373.0
3×10	80/0.40	22.7	665.0
3×16	126/0.40	24.5	890.0
3×25	196/0.40	28.6	1351.0
3×35	276/0.40	32.6	1744.0
3×50	396/0.40	38.1	2357.0
3×70	356/0.50	43.2	3140.0
3×95	485/0.50	49.6	4224.0

Table 6

(4 cores)			
Nominal cross section (mm ²)	Conductor structure No./mm	Approx. outer diameter of cable (mm)	Calculated weight (kg/km)
	Core /diameter(mm)		
4×4	19/0.52	15.1	334.0
4×6	19/0.63	18.1	483.0
4×10	37/0.58	23.7	838.0
4×16	119/0.41	26.0	1137.0
4×25	98/0.58	32.1	1750.0
4×35	133/0.58	36.1	2258.0
4×50	189/0.58	42.2	3052.2
4×70	366/0.52	45.7	3932.0
4×95	448/0.52	54.3	5431.0

Table 7

(5 cores)			
Nominal cross section (mm ²)	Conductor structure No./mm	Approx. outer diameter of cable (mm)	Calculated weight (kg/km)
	Core /diameter(mm)		
5×4	56/0.30	16.0	415.0
5×6	84/0.30	20.1	598.0
5×10	80/0.40	26.1	1026.0
5×16	126/0.40	29.7	1410.0
5×25	196/0.40	35.5	2159.0
5×35	276/0.40	39.3	2709.0
5×50	396/0.40	44.5	3638.0
5×70	356/0.50	50.2	4827.0
5×95	485/0.50	59.5	6659.0

Table 8

(3+1 cores)			
Nominal section (mm ²)	Conductor structure No./mm	Approx. outer diameter of cable (mm)	Calculated weight (kg/km)
	Core /diameter(mm)		
3×4+1×2.5	56/0.30+49/0.25	15.1	325.0
3×6+1×4	84/0.30+56/0.30	18.1	460.0
3×10+1×6	80/0.40+84/0.30	23.7	805.0
3×16+1×10	126/0.40+80/0.40	26.0	1087.0
3×25+1×16	196/0.40+126/0.40	32.1	1670.0
3×35+1×16	276/0.40+126/0.40	36.1	2087.0
3×50+1×25	396/0.40+196/0.40	42.2	2827.0
3×70+1×35	356/0.50+276/0.40	45.7	3617.0
3×95+1×50	485/0.50+396/0.40	54.3	5026.0

Table 9

(3+2 cores)			
Nominal section (mm ²)	Conductor structure No./mm	Approx. outer diameter of cable (mm)	Calculated weight (kg/km)
	Core /diameter(mm)		
3×4+2×2.5	56/0.30+49/0.25	16.0	388.0
3×6+2×4	84/0.30+56/0.30	20.1	562.0
3×10+2×6	80/0.40+84/0.30	26.1	954.0
3×16+2×10	126/0.40+80/0.40	29.7	1302.0
3×25+2×16	196/0.40+126/0.40	35.5	1997.0
3×35+2×16	276/0.40+126/0.40	39.3	2367.0
3×50+2×25	396/0.40+196/0.40	44.5	3188.0
3×70+2×35	356/0.50+276/0.40	50.2	4197.0
3×95+2×50	485/0.50+356/0.50	59.5	5849.0

Table 10

Nominal section (mm ²)	Conductor structure No./mm	Approx. outer diameter of cable (mm)	Calculated weight (kg/km)
	Core /diameter(mm)		
4×4+1×2.5	56/0.30+49/0.25	16.0	400.0
4×6+1×4	84/0.30+56/0.30	20.1	580.0
4×10+1×6	80/0.40+84/0.30	26.1	990.0
4×16+1×10	126/0.40+80/0.40	29.7	1356.0
4×25+1×16	196/0.40+126/0.40	35.5	2078.0
4×35+1×16	276/0.40+126/0.40	39.3	2538.0
4×50+1×25	396/0.40+196/0.40	44.5	3413.0
4×70+1×35	356/0.50+276/0.40	50.2	4512.0
4×95+1×50	485/0.50+356/0.50	59.5	6245.0

Note: Need to increase armored cable outer diameter for 5mm.

◆ Delivery Length

Cable delivery length is not less than 100m, not less than 50m to delivery, quantity does not exceed 10% of total delivery, if there are special requirements, detailed instructions, it should be negotiated by vendor and buyer.