

H07ZZ-F EN 50525-3-21 LSZH Rubber Flexible Cable



Application

For installation where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

Examples of use include supplying mobile power units, UPS installations, stage lighting and audio visual equipment. This cable will withstand medium mechanical stresses and is suitable for both installation indoors and outdoors.

Standards

EN 50525-3-21, HD 22-13, CEI 20-19 Part 13, EN 60228

Flame Retardant according to IEC/EN 60332-3-10

Characteristics

Voltage Rating U/U₀
450/750V

Temperature Rating
Fixed: -20°C to +90°C
Flexed: -5°C to +50°C

Minimum Bending Radius
Fixed: 4 x overall diameter
Flexed: 6 x overall diameter



Construction

Conductor

Class 5 flexible copper conductor

Insulation

LSZH (Low Smoke Zero Halogen) cross-linked compound

Sheath

LSZH (Low Smoke Zero Halogen) cross-linked compound

Sheath Colour

Black

Note: sizes from 5x35mm² are not harmonised (07ZZ-F)



Dimensions

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	A2 GLANDS Brass	A2PL GLAND Plastic
1	1.5	6.4	63	-	-
1	2.5	7.1	76	-	-
1	4	8.1	107	20S	20
1	6	8.85	140	20S	20
1	10	10.7	213	20S	20
1	16	12.1	291	20	25
1	25	14.25	415	25	25
1	35	16.1	539	25	25
1	50	18.55	740	25	32
1	70	20.95	989	32	32
1	95	23.4	1290	32	40
1	120	25.7	1592	40	40
1	150	28.3	1957	40	40
1	185	31	2350	50S	50
1	240	34.45	3099	50	63
1	300	37.7	3687	50	-
1	400	42.1	4850	63S	-
1	500	46.65	5998	63	-
2	1	8.85	112	-	-
2	1.5	9.75	135	20S	20
2	2.5	11.65	190	20	25
2	4	13.45	255	25	-
2	6	14.95	335	25	-
2	10	20.15	590	32	-
2	16	22.95	821	32	-
2	25	27.5	1172	40	-
3	1	9.5	125	-	-
3	1.5	10.55	129	20	20
3	2.5	12.45	250	25	25
3	4	14.45	330	25	-
3	6	16.05	440	25	-
3	10	21.65	800	32	-
3	16	24.7	1150	40	-
3	25	29.55	1680	50S	-
3	35	33.2	2170	50S	-
4	1	10.55	170	20S	-
4	1.5	11.65	196	20	25
4	2.5	13.8	275	25	25
4	4	15.95	388	25	25
4	6	17.85	515	32	32
4	10	23.7	882	40	40
4	16	26.95	1234	40	40
4	25	32.75	1811	50S	50
4	35	36.8	2365	50	63
4	50	42.6	3212	63S	-
4	70	48.35	4320	63	-
4	95	54.7	5572	73S	-

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	A2 GLANDS	
				Brass	Plastic
4	120	59.5	6930	75	-
4	150	65.5	8419	-	-
4	185	72	10165	-	-
4	240	81.5	13420	-	-
5	1	11.65	205	20	-
5	1.5	12.8	242	25	25
5	2.5	15.15	341	25	25
5	4	17.75	495	32	32
5	6	19.85	642	32	32
5	10	26	1090	40	40
5	16	29.85	1534	50S	50
5	25	36.2	2291	50	63
5	35	39.5	2700	-	-
5	50	44.2	3730	63S	-
5	70	50.4	5022	-	-
5	95	56.2	6520	-	-
5	120	64.1	8080	-	-
5	150	70.1	8660	-	-
7	1.5	16.7	355	25	32
12	1.5	20	660	32	32
19	1.5	27.5	788	40	40
27	1.5	31.5	1077	40	40
37	1.5	36.5	1358	50S	50

CONDUCTORS

Class 5 Flexible Copper Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	
		ohms/km	
		Plain Wires	
1	0.21	19.5	
1.5	0.26	13.3	
2.5	0.26	7.98	
4	0.31	4.95	
6	0.31	3.3	
10	0.41	1.91	
16	0.41	1.21	
25	0.41	0.78	
35	0.41	0.554	
50	0.41	0.386	
70	0.51	0.272	
95	0.51	0.206	
120	0.51	0.161	
150	0.51	0.129	
185	0.51	0.106	
240	0.51	0.0801	
300	0.51	0.0641	
400	0.51	0.0486	
500	0.61	0.0384	

The above table is in accordance with EN 60228

Electrical Characteristics (1mm² to 2.5mm²)

Current Carrying Capacity and Mass Supportable

NOMINAL CROSS SECTIONAL AREA mm ²	CURRENT CARRYING CAPACITY Amps		MAXIMUM MASS SUPPORTABLE BY TWIN FLEXIBLE CABLE (See Regulations 522.7.2 and 559.6.1.5 of the 17th Edition of IEE Wiring Regulations) kg
	Single-Phase AC	Three-Phase AC	
1	10	10	5
1.5	16	16	5
2.5	25	20	5

Voltage Drop

NOMINAL CROSS SECTIONAL AREA mm ²	DC OR SINGLE-PHASE AC mV/A/m	THREE-PHASE AC mV/A/m
1	46	40
1.5	32	27
2.5	19	16

The above table is in accordance with Table 4F3B of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

Conductor operating temperature: 60°C*

Note

The tabulated values above are for 60°C thermoplastic or thermosetting insulated flexible cables and for other types of flexible cable they are to be multiplied by the following factors:

For	90°C thermoplastic or thermosetting insulated	1.09
	150°C	1.31
	185°C glass fibre	1.43

ELECTRICAL CHARACTERISTICS (4mm² and above)

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm ²	DC OR SINGLE-PHASE AC (1 TWO CORE CABLE WITH OR WITHOUT PROTECTIVE CONDUCTOR)	THREE-PHASE AC (1 THREE CORE, FOUR CORE OR FIVE CORE CABLE)	SINGLE-PHASE AC OR DC (2 SINGLE CORE CABLES TOUCHING)
	Amps	Amps	Amps
4	42	37	-
6	55	49	-
10	76	66	-
16	103	89	-
25	136	119	-
35	-	146	200
50	-	177	250
70	-	225	310
95	-	273	369
120	-	316	432
150	-	363	497
185	-	414	564
240	-	487	673
300	-	560	773
400	-	-	924
500	-	-	1062

The above table is in accordance with Table 4F2A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

Ambient temperature: 30°C

Conductor operating temperature: 90°C

Voltage Drop

NOMINAL CROSS SECTIONAL AREA mm ²	1 TWO CORE OR 2 SINGLE CORE CABLES DC mV/A/m	TWO CORE CABLE SINGLE-PHASE AC mV/A/m			1 THREE CORE, FOUR CORE OR FIVE CORE CABLE mV/A/m			2 SINGLE CORE CABLES, TOUCHING mV/A/m		
					Three-Phase AC			Single-Phase AC*		
4	13.2	13.2			11.1			-		
6	8.5	8.5			7.4			-		
10	5.1	5.1			4.4			-		
16	3.2	3.2			2.7			-		
		r	x	z	r	x	z	r	x	z
25	2.03	2.03	0.175	2.04	1.73	0.150	1.73	-	-	-
35	1.42	-	-	-	1.22	0.150	1.23	1.44	0.210	1.46
50	1	-	-	-	0.91	0.145	0.93	1.00	0.210	1.02
70	0.71	-	-	-	0.62	0.140	0.64	0.71	0.200	0.73
95	0.54	-	-	-	0.47	0.135	0.49	0.54	0.195	0.57
120	0.42	-	-	-	0.37	0.135	0.390	0.42	0.190	0.460
150	0.34	-	-	-	0.290	0.130	0.320	0.34	0.190	0.39
185	0.27	-	-	-	0.240	0.130	0.270	0.270	0.190	0.330
240	0.21	-	-	-	0.188	0.130	0.23	0.210	0.185	0.280
300	0.167	-	-	-	0.147	0.125	0.195	0.173	0.180	0.250
400	0.127	-	-	-	-	-	-	0.132	0.175	0.220
500	0.1	-	-	-	-	-	-	0.107	0.170	0.200

The above table is in accordance with Table 4F2B of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52 r = Resistive Component

x = Reactive Component

z = Impedance Value



De-Rating Factors

90°C Thermosetting (Rubber) Insulated Cables

AMBIENT TEMPERATURE	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C	85°C
DE-RATING FACTOR	0.95	0.91	0.86	0.82	0.76	0.7	0.64	0.57	0.5	0.4	0.28

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.