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

Eland Product Group: A6Z

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

CHARACTERISTICS

Voltage Rating Uo/U
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

Core Identification
1 core: ● Black
2 core: ● Blue ● Brown
3 core: ◪ Green/Yellow ● Blue ● Brown
4 core: ◪ Green/Yellow ● Brown ● Black ● Grey
5 core: ◪ Green/Yellow ● Blue ● Brown ● Black ● Grey
6 core and above: ● Black with ○ White numbers
◪ Green/Yellow

Sheath Colour
● Black

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

BSI KITEMARK™ TESTED

bsi. Cable Testing Verification KITEMARK™
KM 662609

Cables are tested and verified by The Cable Lab® to confirm they meet the quality standards required of the BSI Cable Testing Verification Kitemark™.

STANDARDS

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

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

THE CABLE LAB®

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.

UKAS ISO/IEC 17025 Accredited Testing Laboratory
IECEE CBTL Accredited Testing Laboratory

SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: www.elandcables.com/company/about-us/esg-sustainability

SCIENCE BASED TARGETS BUSINESS AMBITION FOR 1.5°C

REGULATORY COMPLIANCE

This cable is compliant with European Regulation EN 50575, the Construction Products Regulation.

CPR COMPLIANT EN 50575

This cable meets the requirements of the Low Voltage Directive 2014/35/EU, the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab®.

RoHS REACH CE ◁HAR▷

DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	A2 GLANDS Brass	A2PL GLAND Plastic
A6Z10015	1	1.5	6.4	63	-	-
A6Z10025	1	2.5	7.1	76	-	-
A6Z1004	1	4	8.1	107	20S	20
A6Z1006	1	6	8.85	140	20S	20
A6Z1010	1	10	10.7	213	20S	20
A6Z1016	1	16	12.1	291	20	25
A6Z1025	1	25	14.25	415	25	25
A6Z1035	1	35	16.1	539	25	25
A6Z1050	1	50	18.55	740	25	32
A6Z1070	1	70	20.95	989	32	32
A6Z1095	1	95	23.4	1290	32	40
A6Z1120	1	120	25.7	1592	40	40
A6Z1150	1	150	28.3	1957	40	40
A6Z1185	1	185	31	2350	50S	50
A6Z1240	1	240	34.45	3099	50	63
A6Z1300	1	300	37.7	3687	50	-
A6Z1400	1	400	42.1	4850	63S	-
A6Z1500	1	500	46.65	5998	63	-
A6Z02010	2	1	8.85	112	-	-
A6Z02015	2	1.5	9.75	135	20S	20
A6Z02025	2	2.5	11.65	190	20	25
A6Z02004	2	4	13.45	255	25	-
A6Z02060	2	6	14.95	335	25	-
A6Z0210	2	10	20.15	590	32	-
A6Z0216	2	16	22.95	821	32	-
A6Z0225	2	25	27.5	1172	40	-
A6Z03010	3	1	9.5	125	-	-
A6Z03015	3	1.5	10.55	129	20	20
A6Z03025	3	2.5	12.45	250	25	25
A6Z03040	3	4	14.45	330	25	-
A6Z03060	3	6	16.05	440	25	-
A6Z0310	3	10	21.65	800	32	-
A6Z0316	3	16	24.7	1150	40	-
A6Z0325	3	25	29.55	1680	50S	-
A6Z0335	3	35	33.2	2170	50S	-
A6Z04010	4	1	10.55	170	20S	-
A6Z04015	4	1.5	11.65	196	20	25
A6Z04025	4	2.5	13.8	275	25	25
A6Z04040	4	4	15.95	388	25	25
A6Z04060	4	6	17.85	515	32	32
A6Z0410	4	10	23.7	882	40	40
A6Z0416	4	16	26.95	1234	40	40
A6Z0425	4	25	32.75	1811	50S	50
A6Z0435	4	35	36.8	2365	50	63
A6Z0450	4	50	42.6	3212	63S	-
A6Z0470	4	70	48.35	4320	63	-
A6Z0495	4	95	54.7	5572	73S	-

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ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km	A2 GLANDS Brass	A2PL GLAND Plastic
A6Z04120	4	120	59.5	6930	75	-
A6Z04150	4	150	65.5	8419	-	-
A6Z04185	4	185	72	10165	-	-
A6Z04240	4	240	81.5	13420	-	-
A6Z05010	5	1	11.65	205	20	-
A6Z05015	5	1.5	12.8	242	25	25
A6Z05025	5	2.5	15.15	341	25	25
A6Z05040	5	4	17.75	495	32	32
A6Z05060	5	6	19.85	642	32	32
A6Z0510	5	10	26	1090	40	40
A6Z0516	5	16	29.85	1534	50S	50
A6Z0525	5	25	36.2	2291	50	63
A6Z0535	5	35	39.5	2700	-	-
A6Z0550	5	50	44.2	3730	63S	-
A6Z0570	5	70	50.4	5022	-	-
A6Z0595	5	95	56.2	6520	-	-
A6Z05120	5	120	64.1	8080	-	-
A6Z05150	5	150	70.1	8660	-	-
A6Z07015	7	1.5	16.7	355	25	32
A6Z12015	12	1.5	20	660	32	32
A6Z19015	19	1.5	27.5	788	40	40
A6Z27015	27	1.5	31.5	1077	40	40
A6Z37015	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 mm²	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 mm²	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 mm²	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 mm²	DC OR SINGLE-PHASE AC (1 TWO CORE CABLE WITH OR WITHOUT PROTECTIVE CONDUCTOR) Amps	THREE-PHASE AC (1 THREE CORE, FOUR CORE OR FIVE CORE CABLE) Amps	SINGLE-PHASE AC OR DC (2 SINGLE CORE CABLES TOUCHING) 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

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VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm²	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 1 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