

H05Z-K / H07Z-K LSZH Cable



APPLICATION

LSZH panel wiring for appliances with maximum operating temperatures of 90°C, and generally in areas (such as public and government buildings) where smoke and toxic fumes may cause a threat to life and equipment. The cables produce no corrosive gases when burnt which is particularly important where electronic equipment is installed.

CHARACTERISTICS

Voltage Rating U₀/U

H05Z-K - 0.5mm² to 1mm²: 300/500V

H07Z-K - 1.5mm² to 400mm²: 450/750V

Operating Temperature

-20°C to +90°C

Minimum installation temperature: 0°C

Minimum Bending Radius

Up to 35mm²: 4 x overall diameter

50mm² and above: 6 x overall diameter

STANDARDS

EN 50525-3-41, EN 60228,

Flame Retardant according to IEC/EN 60332-1-2, IEC/EN 60332-3-24

Halogen Free according to IEC/EN 61034-1/2, IEC/EN 60754-1/2

CONSTRUCTION

Conductor

Class 5 flexible copper conductor

Insulation

LSZH (Low Smoke Zero Halogen)

Insulation Colour

Red Black Blue Orange White Yellow

Green/Yellow Grey Brown Violet Pink

THE CABLE TEST

We have world-class testing facility, and made rigorous testing regime, every meter of cable before leaving the factory must go through strict testing, testing qualified products will be shipped to customers, effectively ensure product quality and meet customer requirements.

SUSTAINABILITY COMMITMENT

Guowang Cable actively implements the "carbon reduction" goal, strives to promote the green's low-carbon transformation, strengthens energy-saving and emission reduction technology innovation, and promotes the company's healthy and sustainable development.

DIMENSIONS

NOMINAL CROSS SECTIONAL AREA	NOMINAL THICKNESS OF INSULATION	NOMINAL OVERALL DIAMETER mm		MINIMUM RESISTANCE OF INSULATION AT 90°C	NOMINAL WEIGHT
mm ²	mm	Lower Limit	Upper Limit	Mohms/km	kg/km
0.5	0.6	2.1	2.6	0.015	8.7
0.75	0.6	2.2	2.8	0.011	11.3
1	0.6	2.4	2.9	0.01	13.9
1.5	0.7	2.8	3.5	0.01	19.3
2.5	0.8	3.4	4.3	0.009	30.9
4	0.8	3.9	4.9	0.007	44.9
6	0.8	4.4	5.5	0.006	64.2
10	1	5.7	7.1	0.0	108.2
16	1	6.7	8.4	0.0046	163.4
25	1.2	8.4	10.6	0.0044	248.1
35	1.2	9.7	12.1	0.0038	340.6
50	1.4	11.5	14.4	0.0037	484.2
70	1.4	13.2	16.6	0.0032	671
95	1.6	15.1	18.8	0.0032	895.8
120	1.6	16.7	20.9	0.0029	1111.1
150	1.8	18.6	23.3	0.0029	1389.2
185	2	20.6	25.8	0.0029	1724.1
240	2.2	23.5	29.4	0.0028	2225.4
300	2.4	26.8	29.8	0.0028	2770
400	2.6	30.6	32.6	0.0028	3605

Note: 300mm² and 400mm² are not harmonised

COLOUR CODES

COLOUR	Black	Blue	Grey	Green/Yellow	Orange	Red	Pink	Yellow	Violet	Brown	White
CODE	BK	BL	GR	GY	OR	RD	PK	YW	VI	BR	WH

CONDUCTORS

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

NOMINAL CROSS SECTIONAL AREA	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C
mm ²	mm	ohms/km Plain Wires
0.5	0.21	39
0.75	0.21	26
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

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity and Voltage Drop

NOMINAL CROSS SECTIONAL AREA	REFERENCE METHOD A (ENCLOSED IN CONDUIT IN THERMALLY INSULATING WALL ETC) Amps		REFERENCE METHOD B (ENCLOSED IN CONDUIT ON A WALL OR IN A TRUNKING ETC) Amps		REFERENCE METHOD C (CLIPPED DIRECT) Amps		REFERENCE METHOD F (IN FREE AIR OR ON A PERFORATED CABLE TRAY ETC HORIZONTAL OR VERTICAL ETC) TOUCHING Amps			REFERENCE METHOD G (IN FREE AIR) SPACED BY ONE CABLE DIAMETER Amps	
	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC flat or touching	3 or 4 Cables Three-Phase AC flat and touching or trefoil	2 Cables Single-Phase AC or DC flat	3 Cables Three-Phase AC flat	3 Cables Three-Phase AC trefoil	Horizontal	Vertical
1	14	13	17	15	19	17.5	-	-	-	-	-
1.5	19	17	23	20	25	23	-	-	-	-	-
2.5	26	23	31	28	34	31	-	-	-	-	-
4	35	31	42	37	46	41	-	-	-	-	-
6	45	40	54	48	59	54	-	-	-	-	-
10	61	54	75	66	81	74	-	-	-	-	-
16	81	73	100	88	109	99	-	-	-	-	-
25	106	95	133	117	143	130	161	141	135	182	161
35	131	117	164	144	176	161	200	176	169	226	201
50	158	141	198	175	228	209	242	216	207	275	246
70	200	179	253	222	293	268	310	279	268	353	318
95	241	216	306	269	355	326	377	342	328	430	389
120	278	249	354	312	413	379	437	400	383	500	454
150	318	285	393	342	476	436	504	464	444	577	527
185	362	324	449	384	545	500	575	533	510	661	605
240	424	380	528	450	644	590	679	634	607	781	719
300	486	435	603	514	743	681	783	736	703	902	833
400	-	-	683	584	868	793	940	868	823	1085	1008

Ambient temperature: 30°C

Conductor operating temperature: 90°C

VOLTAGE DROP

NOMI NAL CROSS SECTIO NAL AREA	2 CABL ES DC	2 CABLES SINGLE-PHASE AC mV/A/m										3 OR 4 CABLES THREE-PHASE AC mV/A/m											
		Reference Methods A and B enclosed in conduit or trunking)			Reference Methods C, F and G (clipped direct, on tray or in free air)							Reference Methods A and B enclosed in conduit or trunking)			Reference Methods C, F and G (clipped direct, on tray or in free air)								
	Cables Touching																						
1	46	46			46			46				40			40			40			40		
1.5	31	31			31			31				27			27			27			27		
2.5	19	19			19			19				16			16			16			16		
4	12	12			12			12				10			10			10			10		
6	7.9	7.9			7.9			7.9				6.8			6.8			6.8			6.8		
10	4.7	4.7			4.7			4.7				4			4			4			4		
16	2.9	2.9			2.9			2.9				2.5			2.5			2.5			2.5		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	
25	1.85	1.85	0.31	1.90	1.85	0.19	1.85	1.85	0.28	1.85	1.60	0.27	1.65	1.60	0.165	1.60	1.60	0.19	1.60	1.60	0.27	1.65	
35	1.35	1.35	0.29	1.35	1.35	0.18	1.35	1.35	0.27	1.35	1.15	0.25	1.15	1.15	0.155	1.15	1.15	0.18	1.15	1.15	0.26	1.20	
50	0.99	1.00	0.29	1.05	0.99	0.18	1.00	0.99	0.27	1.00	0.87	0.25	0.90	0.86	0.155	0.87	0.86	0.18	0.87	0.86	0.26	0.89	
70	0.68	0.7	0.28	0.75	0.68	0.175	0.71	0.68	0.26	0.73	0.60	0.24	0.65	0.59	0.15	0.61	0.59	0.175	0.62	0.59	0.25	0.65	
95	0.49	0.51	0.27	0.58	0.49	0.17	0.52	0.49	0.26	0.56	0.44	0.23	0.50	0.43	0.145	0.45	0.43	0.17	0.46	0.43	0.25	0.49	
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.39	0.25	0.47	0.35	0.23	0.42	0.34	0.14	0.37	0.34	0.165	0.38	0.34	0.24	0.42	
300	0.155	0.175	0.25	0.31	0.16	0.16	0.22	0.155	0.25	0.29	0.15	0.22	0.27	0.14	0.14	0.195	0.135	0.165	0.21	0.135	0.24	0.27	
400	0.12	0.14	0.25	0.29	0.13	0.155	0.20	0.125	0.24	0.27	0.125	0.22	0.25	0.11	0.135	0.175	0.11	0.16	0.195	0.11	0.24	0.26	

Conductor operating temperature: 90°C

r = Resistive Component

x = Reactive Component

z = Impedance Value

*Spacings larger than one cable diameter will result in a larger voltage drop

DE-RATING FACTORS

AMBIENT TEMPERATURE	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	85°C	90°C	95°C
DE-RATING FACTOR	1.02	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	-	-	-