H05Z-K/H07Z-K BS EN 50525-3-41 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.

Construction:

Class 5 flexible copper conductor according to BS EN 60228 (previously BS 6360)

Insulation:

LSZH (Low Smoke Zero Halogen) Type EI5 thermosetting insulation according to BS EN 50363

Cable standard:

BS EN 50525-3-41 (previously BS 7211 Table 3 and 4b CENELEC HD22.9), BS EN/IEC 60332-1-2, BS EN/IEC 50267-2-1, BS EN/IEC 60754

The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved products drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

Characteristics:

Voltage Rating (Uo/U)
H05Z-K - 0.5mm2 to 1mm2: 300/500V
H07Z-K - 1.5mm2 to 240mm2: 450/750V

Temperature Rating:
–25°C to +90°C

Minimum Bending Radius:
Up to 35mm^2: 4 x overall diameter
50mm^2 and above: 6 x overall diameter

Sheath Colour:

- Black
- Blue
- Brown
- Green
- Grey
- Green/Yellow
- Orange
- Pink
- Red
- Violet
- White
- Yellow

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Colour Codes:

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

Dimensions:

Order code	Part No.	Colour	Nominal cross sectional area mm^2	Thickness of insulation mm	Nominal overall diameter		Minimum resistance of insulation at 90°C Mohms/km	Nominal weight kg/km
					Lower limit mm	Upper limit mm		
02-0358	UNILZSHBK0005	Black	0.50	0.6	1.9	2.4	0.015	8.7
02-0359	UNILZSHBK00075	Black	0.75	0.6	2.2	2.8	0.011	11.3
02-0360	UNILZSHBK0010	Black	1.00	0.6	2.4	2.9	0.01	13.9
02-0361	UNILZSHBK0015	Black	1.50	0.7	2.8	3.5	0.010	19.3
02-0362	UNILZSHBK0025	Black	2.50	0.8	3.4	4.3	0.009	30.9
02-0363	UNILZSHBK0040	Black	4.00	0.8	3.9	4.9	0.007	44.9
02-0364	UNILZSHBK0060	Black	6.00	0.8	4.4	5.5	0.006	64.2
02-0365	UNILZSHBL00005	Blue	0.50	0.6	1.9	2.4	0.015	8.7
02-0366	UNILZSHBL0075	Blue	0.75	0.6	2.2	2.8	0.011	11.3
02-0367	UNILZSHBL0010	Blue	1.00	0.6	2.4	2.9	0.01	13.9
02-0368	UNILZSHBL0015	Blue	1.50	0.7	2.8	3.5	0.010	19.3
02-0369	UNILZSHBL0025	Blue	2.50	0.8	3.4	4.3	0.009	30.9
02-0370	UNILZSHBL0040	Blue	4.00	0.8	3.9	4.9	0.007	44.9
02-0371	UNILZSHBL0060	Blue	6.00	0.8	4.4	5.5	0.006	64.2
02-0372	UNILZSHBR00005	Brown	0.50	0.6	1.9	2.4	0.015	8.7
02-0373	UNILZSHBR0075	Brown	0.75	0.6	2.2	2.8	0.011	11.3
02-0374	UNILZSHBR0010	Brown	1.00	0.6	2.4	2.9	0.01	13.9
02-0375	UNILZSHBR0015	Brown	1.50	0.7	2.8	3.5	0.010	19.3
02-0376	UNILZSHBR0025	Brown	2.50	0.8	3.4	4.3	0.009	30.9
02-0377	UNILZSHBR0040	Brown	4.00	0.8	3.9	4.9	0.007	44.9
02-0378	UNILZSHBR0060	Brown	6.00	0.8	4.4	5.5	0.006	64.2
02-0379	UNILZSHGN0005	Green	0.50	0.6	1.9	2.4	0.015	8.7
02-0380	UNILZSHGN0075	Green	0.75	0.6	2.2	2.8	0.011	11.3
02-0381	UNILZSHGN0010	Green	1.00	0.6	2.4	2.9	0.01	13.9
02-0382	UNILZSHGN0015	Green	1.50	0.7	2.8	3.5	0.010	19.3
02-0383	UNILZSHGN0025	Green	2.50	0.8	3.4	4.3	0.009	30.9
02-0384	UNILZSHGR0005	Grey	0.50	0.6	1.9	2.4	0.015	8.7
02-0385	UNILZSHGR0075	Grey	0.75	0.6	2.2	2.8	0.011	11.3
02-0386	UNILZSHGR0010	Grey	1.00	0.6	2.4	2.9	0.01	13.9
02-0387	UNILZSHGR0015	Grey	1.50	0.7	2.8	3.5	0.010	19.3
02-0388	UNILZSHGR0025	Grey	2.50	0.8	3.4	4.3	0.009	30.9
02-0389	UNILZSHGR0040	Grey	4.00	0.8	3.9	4.9	0.007	44.9
02-0391	UNILZSHGR0060	Grey	6.00	0.8	4.4	5.5	0.006	64.2

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Dimensions:

Order code	Part No.	Colour	Nominal cross sectional area mm^2	Thickness of insulation mm	Nominal overall diameter		Minimum resistance of insulation at 90°C Mohms/km	Nominal weight kg/km
					Lower limit mm	Upper limit mm		
02-0392	UNILZSHGY00005	Green/Yellow	0.50	0.6	1.9	2.4	0.015	8.7
02-0393	UNILZSHGY0075	Green/Yellow	0.75	0.6	2.2	2.8	0.011	11.3
02-0394	UNILZSHGY0010	Green/Yellow	1.00	0.6	2.4	2.9	0.01	13.9
02-0395	UNILZSHGY0015	Green/Yellow	1.50	0.7	2.8	3.5	0.010	19.3
02-0396	UNILZSHGY0025	Green/Yellow	2.50	0.8	3.4	4.3	0.009	30.9
02-0397	UNILZSHGY0040	Green/Yellow	4.00	0.8	3.9	4.9	0.007	44.9
02-0398	UNILZSHGY0060	Green/Yellow	6.00	0.8	4.4	5.5	0.006	64.2
02-0399	UNILZSHOR0005	Orange	0.50	0.6	1.9	2.4	0.015	8.7
02-0400	UNILZSHOR0075	Orange	0.75	0.6	2.2	2.8	0.011	11.3
02-0401	UNILZSHOR0010	Orange	1.00	0.6	2.4	2.9	0.01	13.9
02-0402	UNILZSHOR0015	Orange	1.50	0.7	2.8	3.5	0.010	19.3
02-0403	UNILZSHOR0025	Orange	2.50	0.8	3.4	4.3	0.009	30.9
02-0404	UNILZSHPK0005	Pink	0.50	0.6	1.9	2.4	0.015	8.7
02-0405	UNILZSHPK0075	Pink	0.75	0.6	2.2	2.8	0.011	11.3
02-0406	UNILZSHPK0010	Pink	1.00	0.6	2.4	2.9	0.01	13.9
02-0407	UNILZSHPK0015	Pink	1.50	0.7	2.8	3.5	0.010	19.3
02-0408	UNILZSHPK0025	Pink	2.50	0.8	3.4	4.3	0.009	30.9
02-0409	UNILZSHRD00005	Red	0.50	0.6	1.9	2.4	0.015	8.7
02-0410	UNILZSHRD00075	Red	0.75	0.6	2.2	2.8	0.011	11.3
02-0411	UNILZSHRD0010	Red	1.00	0.6	2.4	2.9	0.01	13.9
02-0412	UNILZSHRD0015	Red	1.50	0.7	2.8	3.5	0.010	19.3
02-0413	UNILZSHRD0025	Red	2.50	0.8	3.4	4.3	0.009	30.9
02-0414	UNILZSHVI00005	Violet	0.50	0.6	1.9	2.4	0.015	8.7
02-0415	UNILZSHVI0075	Violet	0.75	0.6	2.2	2.8	0.011	11.3
02-0416	UNILZSHVI0010	Violet	1.00	0.6	2.4	2.9	0.01	13.9
02-0417	UNILZSHVI0015	Violet	1.50	0.7	2.8	3.5	0.010	19.3
02-0418	UNILZSHVI0025	Violet	2.50	0.8	3.4	4.3	0.009	30.9
02-0419	UNILZSHWH00005	White	0.50	0.6	1.9	2.4	0.015	8.7
02-0420	UNILZSHWH0075	White	0.75	0.6	2.2	2.8	0.011	11.3
02-0421	UNILZSHWH0010	White	1.00	0.6	2.4	2.9	0.01	13.9
02-0422	UNILZSHWH0015	White	1.50	0.7	2.8	3.5	0.010	19.3
02-0423	UNILZSHWH0025	White	2.50	0.8	3.4	4.3	0.009	30.9
02-0424	UNILZSHYW0005	Yellow	0.50	0.6	1.9	2.4	0.015	8.7
02-0425	UNILZSHYW0075	Yellow	0.75	0.6	2.2	2.8	0.011	11.3
02-0426	UNILZSHYW0010	Yellow	1.00	0.6	2.4	2.9	0.01	13.9
02-0427	UNILZSHYW0015	Yellow	1.50	0.7	2.8	3.5	0.010	19.3
02-0428	UNILZSHYW0025	Yellow	2.50	0.8	3.4	4.3	0.009	30.9

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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
		Plain wires ohms/km
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

The above table is in accordance with BS EN 60228 (previously BS 6360).

Electrical Characteristics:

Current Carrying Capacity

Nominal cross sectional area mm^2	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	
	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
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

Ambient temperature: 30°C

Conductor operating temperature: 90°C

1. Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see also Regulation 512.1.2).
2. Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic insulated cables (Table 4D1A) must be used (see Regulation 523.1).

The above table is in accordance with Table 4E1A of the 17th Edition of IEE Wiring Regulations.

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Electrical Characteristics:

Current Carrying Capacity

Nominal cross sectional area mm^2	2 Cables DC mV/A/m	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)		
			Cable Touching	Cable Spaced		Cable Touching Trefoil	Cable Touching Flat	Cable Spaced*
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

Conductor operating temperature: 90°C

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

The above table is in accordance with Table 4E1B of the 17th Edition of IEE Wiring Regulations.For cables having conductors of 16mm2 or less cross-sectional area their inductances can be ignored and (mV/A/m)r values only are tabulated. For cables having conductors greater than 16mm2, cross-sectional area the impedance values are given as (mV/A/m)z, together with the resistive component (mV/A/m)r and the reactive component (mV/A/m)x.

The above paragraph is extracted from Appendix 4 of the 17th Edition of IEE Wiring Regulations.

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	1.0	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	–	–	–