



LEDBURN CABLES IS  
AN INDEPENDENTLY  
OWNED CABLE  
DISTRIBUTOR.

## MULTICORE CABLES-318B LSZH H05Z1Z1-F CABLE 300/500V

*Suitable for medium duty appliances e.g. washing machines*

**Application:** Suitable for medium duty appliances e.g. washing machines

**Conductor:** Flexible Copper, class 5

**Insulation:** LSZH (Low Smoke Zero Halogen)

**Conductor identification:**

2 core: Brown & Blue, 3 core: Brown, Blue & Green/Yellow

4 core: Brown, Grey, Black & Green/Yellow, 5 core: Brown, Grey, Black, Blue & Green/Yellow

**Sheath:** LSZH (Low smoke zero halogen)

**Operating temperature:** Conductor temperature: Max 70°C, Insulation temperature: Min -50°C, Max +70°C for fixed installation, Sheath temperature: Min -50°C, Max +70°C for fixed installation

**Short circuit temperature:** Max. temperature of short circuit 150 °C

**Colour:** Black, White or Grey

**Voltage:** 300/500V

**Min bending radius:** 6 x Overall Diameter

**Standards:** BS EN 50525-3-11: Cables with special fire performance - Flexible cables with halogen-free thermoplastic insulation, and low emission of smoke. EN 61034-2: Measurement of smoke density of cables burning under defined conditions. Test procedure and requirements.

EN 60332-1-2: Tests on electric and optical fibre cables under fire conditions. Test for vertical flame propagation for a single insulated wire or cable. Procedure for 1 kW pre-mixed flame.

# Specification

Size (sqmm)	No. of cores	RT of insulation (mm)	RT of sheath (mm)	Nom. Overall diameter (mm)	Weight (kg/km)	Part No.		
						Black	White	Grey
0.75	2	0.6	0.8	6.3	55	45341	45342	45564
1	2	0.6	0.8	6.6	64	45385	45343	45565
1.5	2	0.7	0.8	7.5	84	45372	45373	45566
2.5	2	0.8	1.0	9.2	129	45144	45388	45567
4	2	0.8	1.1	10.5	179	45392	45489	-
0.75	3	0.6	0.8	6.7	67	45344	45305	45568
1	3	0.6	0.8	7.0	77	45389	45219	45569
1.5	3	0.7	0.9	8.2	106	45378	45357	45570
2.5	3	0.8	1.1	10.0	163	45335	45398	45571
4	3	0.8	1.2	11.4	226	45397	45351	45588
0.75	4	0.6	0.8	7.3	81	45500	45466	45572
1	4	0.6	0.9	7.9	99	45472	45465	45573
1.5	4	0.7	1.0	9.2	136	45473	45464	45574
2.5	4	0.8	1.1	10.9	200	45499	45471	45575
4	4	0.8	1.2	12.4	281	45467	45487	45590
0.75	5	0.6	0.9	8.1	101	45443	45444	45576
1	5	0.6	0.9	8.6	120	45445	45446	45577
1.5	5	0.7	1.1	10.2	168	45447	45448	45578
2.5	5	0.8	1.2	12.1	249	45449	45450	45579
4	5	0.8	1.4	14.0	356	-	-	45582

Size (sqmm)	No. of cores	Max. Conductor resistance at 20°C (ohms/km)	Minimum insulation resistance @ 70°C (MΩkm)
0.75	2	26.00	0.011
1	2	19.50	0.010
1.5	2	13.30	0.010
2.5	2	7.980	0.0095
4	2	4.950	0.0078
0.75	3	26.00	0.011
1	3	19.50	0.010
1.5	3	13.30	0.010
2.5	3	7.980	0.0095
4	3	4.950	0.0078
0.75	4	26.00	0.011
1	4	19.50	0.010
1.5	4	13.30	0.010
2.5	4	7.98	0.0095
4	4	4.95	0.0078
0.75	5	26.00	0.011
1	5	19.50	0.010
1.5	5	13.30	0.010
2.5	5	7.98	0.0095
4	5	4.95	0.0078

# Harmonised Codes-Technical Information

## Part 1 of the designation

**Table 1a: Relationship to standards**

Symbol	Relationship of cable to standards
H	Cable conforming with harmonised standards
A	Recognised National Type of cable listed in the relevant Supplement to harmonised standards

**Table 1b: Rated voltage**

Symbol	Value, U <sup>?</sup> /U <sup>*</sup>
01	=100/100V; (<300/300V)
03	300/300V
05	300/500V
07	450/750V

The rated voltages not yet harmonised are given in brackets

## Part 2 of the designation

**Table 2a: Insulating and non-metallic sheathing materials**

Note: The descriptions given for the symbols are used in certain instances to cover a group of materials which have similar performance requirements for a given cable type will be found in the appropriate cable standard.

Symbol	Material
B	Ethylene-propylene rubber
G	Ethylene-vinyl-acetate
J	Glass-fibre braid
M	Mineral
N	Polychloroprene (or equivalent material)
N2	Special polychloroprene compound for covering of welding cables according to HD 22.6
N4	Chlorosulfonated polyethylene or chlorinated polyethylene
N8	Special water resistant polychloroprene compound
Q	Polyurethane
Q4	Polyamide
R	Ordinary ethylene propylene rubber or equivalent synthetic elastomer for a continuous operating temperature of 60°C
S	Silicone rubber

<b>T</b>	Textile braid, impregnated or not, on assembled cores
<b>T6</b>	Textile braid, impregnated or not, on individual cores of a multi-core cable
<b>V</b>	Ordinary PVC
<b>V2</b>	PVC compound for a continuous operating temperature of 90°C
<b>V3</b>	PVC compound for cables installed at low temperature
<b>V4</b>	Cross-linked PVC
<b>V5</b>	Special oil resistant PVC compound
<b>Z</b>	Polyolefin-based cross-linked compound having low level of emission of corrosive gases and which is suitable for use in cables which, when burned, have low emission of smoke
<b>Z1</b>	Polyolefin-based thermoplastic compound having low level of emission of corrosive gases and which is suitable for use in cables which, when burned, have low emission of smoke

### Table 2b Metallic coverings

Symbol	Sheath, concentric conductors and screens
<b>C</b>	Concentric copper conductor
<b>C4</b>	Copper screen as braid over the assembled cores

### Table 2c: Special constructional components of a cable

Note: These symbols, when required, are to follow the symbols selected from any of the previous tables 2a and 2b.

Symbol	Constructional components
<b>D3</b>	Strain-bearing element consisting of one or more textile components, placed at the centre of a round cable or distributed inside a flat cable.
<b>D5</b>	Central heart (non strain-bearing for lift cables only)
<b>D9</b>	Strain-bearing element consisting of one or more metallic components, placed at the centre of a round cable or distributed inside a flat cable.

### Table 2d: Special construction of cable

Note: These symbols, when required, are to follow the symbols selected from any of the previous tables 2a to 2c.

Symbol	Special construction
<b>No Symbol</b>	Circular construction of cable
<b>H</b>	Flat construction of "divisible" cables and cores, either sheathed or non-sheathed
<b>H2</b>	Flat construction of "non-divisible" cables and cores
<b>H6</b>	Flat cable having three or more cores, according to DH 359 or EN 50214
<b>H7</b>	Cable having a double layer insulation applied by extrusion
<b>H8</b>	Extensible lead

## Table 2e: Conductor material

Note: These symbols, when required are to follow after a dash, the symbols selected from any previous tables 2a to 2d.

Symbol	Conductor material
No Symbol	Copper
-A	Aluminium

## Table 2f: Conductor form

Note: These symbols are to follow after a dash (already included in the symbol –A, in the case of aluminium conductors) the symbols selected from any of the previous tables 2a to 2e. For cables containing two forms of conductors the symbol shall designate the form of the phase conductor only.

Symbol	Conductor form
-D	Flexible conductor for use in arc welding cables to HD 22 Part 6 (flexibility to different from class 5 of HD 383)
-E	Highly flexible conductor for use in arc welding cables to HD22 Part 6 (flexibility different from Class 6 of HD 383)
-F	Flexible conductor of a flexible cable or cord (flexibility according to Class 5 of HD 383)
-H	Highly flexible conductor of a flexible cable or cord (flexibility according to Class 6 of HD 383)
-K	Flexible conductor of a cable for fixed installations (unless otherwise specified, flexibility according to Class 5 of HD 383)
-R	Rigid, round conductor, stranded
-U	Rigid round conductor, solid
-Y	Tinsel conductor

## Part 3 of the designation

### Table 3: Number(s) of cores and nominal cross-section(s) of conductors

Symbol	Number and size of conductors
(number)	Number, n of cores
X	Times, where a green/yellow core is not included
G	Times, when a green/yellow core is included
(number)*	Nominal cross-section, s, of conductor in mm <sup>2</sup>
Y	For a tinsel conductor where the cross-section is not specified

Countries are free to assign the “N” (placed after the conductor cross-section) to indicate that the cores are identified by number.

## General Examples

nXs or nGs	n cores of s mm <sup>2</sup> conductor cross-section
nXs+n-Xs-	n cores of s mm <sup>2</sup> and n- cores of s- mm <sup>2</sup> conductor cross-section
nXs/s-	n cores of s mm <sup>2</sup> conductor cross-section and concentric conductor of s- mm <sup>2</sup> cross-section
nXs + n-Xs-/s <sup>®</sup>	n cores of s mm <sup>2</sup> + n- cores of s- mm <sup>2</sup> conductor cross-section + concentric conductor of s <sup>®</sup> mm <sup>2</sup> cross-section

## Particular Examples

4 G 50	A cable with four cores having 50mm <sup>2</sup> conductor cross-section, one of the cored being green/yellow
4 X 50	A4-core cable without green/yellow core, all the cores having 50mm <sup>2</sup> conductor cross-section
3X50 + 1G25	A cable with four cores, three of which have 50mm <sup>2</sup> conductor cross-section, while the green/yellow core has a reduced

	conductor cross-section of 25mm <sup>2</sup>
<b>3X70/35</b>	A cable with three cores having 70mm <sup>2</sup> conductor cross-section and a concentric conductor of 35mm <sup>2</sup> cross-section
<b>2 X Y</b>	A2-core cord with tinsel conductors

**Table 4: Survey of symbols and their sequence in cable designations(1)**

1	2	3	4	5	6	7	8	9	10	11
Part 1	2	3	4	5	Part 2	7	8	9	Part 3	11
<b>Related Standard</b>	Rated voltage	Insulating material	Metallic covering (s)	Non-metallic sheath (2)	Constructional components & special instructions	Conductor material	Conductor forms	No. of cores	Time	Conductor size mm <sup>2</sup>
				Symbols according to table (s)						
<b>1a</b>	1b	2a	2b	2c and 2d	2e	2f	3			
<b>H</b>	01	B	C	B	D3	No	-D	1	X	Y
					D5	Symbol:	-E	2		0.5
<b>A</b>	03	G	C4	G	D9	Copper	-F	3	G	
					-----	-H	4			0.75
	05	J		J	No symbol:	-A	-K	5		
					Circular		-R		Etc	
	07	M			Construction		-U			
					Of cable		-Y			
		N, N4		N, N2, 4, 8						
					H					2.5
		R		Q, Q4	H2					
					H6					4
		S		R	H7					
					H8					R
				S						
		V, V2		T, T6						
		V3, V4								16
				V, V1, V2						
		Z, Z1		V4, V5						25
				Z, Z1						etc

(1) If two or more symbols listed in the same column need to be used in a given designation, they shall follow each other in their radial sequence starting from the core axis to cable axis.

(2) The symbols might change their position in the designation with respect to the construction of the cable.

# 4H3A, 17th Edition-Technical Information

**TABLE 4F3A Flexible cords, non-armoured (Copper Conductors)  
CURRENT-CARRYING CAPACITY (amperes): and MASS SUPPORTABLE (kg):**

Conductor cross-sectional area	current carrying capacity		Maximum mass supportable by twin flexible cord (see Regulations 522.7.2 & 559.6.1.5)
	single-phase a.c.	three-phase a.c.	
1	2	3	4
(mm <sup>2</sup> )	(A)	(A)	(kg)
0.5	3	3	2
0.75	6	6	3
1	10	10	5
1.25	13	-	5
1.5	16	16	5
2.5	25	20	5
4	32	25	5

**Notes-** Where cable is on a reel see the notes to Table 4F1A

## Rating factor for ambient temperature

60°C thermoplastic or thermosetting insulated cords:					
Ambient Temp (°C)	35	40	45	50	55
Rating Factor	0.91	0.82	0.71	0.58	0.41

90°C thermoplastic or thermosetting insulated cords:					
Ambient Temp (°C)	35 to 50	55	60	65	70
Rating Factor	1.0	0.96	0.83	0.67	0.47

180°C thermosetting insulated cords:						
Ambient Temp (°C)	35 to 120	125	130	135	140	145
Rating Factor	1.0	0.96	0.85	0.74	0.60	0.42

Glass fibre cords:						
Ambient Temp (°C)	35 to 150	155	160	165	170	175

Rating Factor	1.0	0.92	0.82	0.71	0.57	0.40
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**TABLE 4F3B****VOLTAGE DROP (per ampere per metre):Conductor operating temperature:60°C\***

Conductor cross-sectional area (mm <sup>2</sup> )	d.c or single-phase a.c. (mV/A/m)	three-phase a.c. (mV/A/m)
1	2	3
0.5	93	80
0.75	62	54
1	46	40
1.25	37	-
1.5	32	27
2.5	19	16
4	12	10

**Notes**

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

90°C thermoplastic or thermosetting insulated	1.09
180°C thermosetting insulated	1.31
185°C glass fibre	1.43

# 4H3A-Technical Information

**TABLE 4H3A Flexible Cords  
(Copper Conductors).****CURRENT-CARRYING CAPACITY (amperes): and MASS SUPPORTABLE (kg):**

Conductor cross-sectional area (mm <sup>2</sup> )	current carrying capacity		Maximum mass supportable by twin flexible cord (see Regulations 522.7.2 & 559.6.1.5) (kg)
	single-phase a.c. (A)	three-phase a.c. (A)	
1	2	3	4
0.5	3	3	2
0.75	6	6	3
1	10	10	5
1.25	13	-	5



1.5	16	16	5
2.5	25	20	5
4	32	25	5

**Notes**

Where cable is on a reel see the notes to Table 4H1A

**Rating factor for ambient temperature**

60°C rubber and pvc cords::					
Ambient Temp (°C)	35	40	45	50	55
Correction factor	0.91	0.82	0.71	0.58	0.41

85°C rubber cords having h.o.f.r. sheath or a heat-resisting pvc sheath and for 85°C and 90°C heat-resisting cords: :

Ambient Temp (°C)	35 to 50	55	60	65	70
Correction factor	1.0	0.96	0.83	0.67	0.47

150°C rubber cords:

Ambient Temp (°C)	35 to 120	125	130	135	140	145
Correction factor	1.0	0.96	0.85	0.74	0.60	0.42

Glass fibre cords:

Ambient Temp (°C)	35 to 150	155	160	165	170	175
Correction factor	1.0	0.92	0.82	0.71	0.57	0.40

**TABLE 4F3B****VOLTAGE DROP (per ampere per metre): Conductor operating temperature: 60°C\***

Conductor cross-sectional area (mm <sup>2</sup> )	d.c or single-phase a.c. (mV/A/m)	three-phase a.c. (mV/A/m)
1	2	3
0.5	93	80
0.75	62	54
1	46	40
1.25	37	-
1.5	32	27
2.5	19	16
4	12	10

**Notes**

The tabulated values above are for 60°C rubber-insulated and pvc-insulated flexible cords and for other types of flexible cords they are to be multiplied by the following factors:

85°C rubber or 85°C and 90°C pvc-insulated	1.09
150°C rubber insulated	1.31
185°C glass fibre	1.43

# Parts options

Part No.	Core	Size	Colour/Reference
45341	2	0.75sqmm (Class 5)	Black
45342	2	0.75sqmm (Class 5)	White
45564	2	0.75sqmm (Class 5)	Grey
45385	2	1.0sqmm (Class 5)	Black
45343	2	1.0sqmm (Class 5)	White
45565	2	1.0sqmm (Class 5)	Grey
45372	2	1.5sqmm (Class 5)	Black
45373	2	1.5sqmm (Class 5)	White
45566	2	1.5sqmm (Class 5)	Grey
45144	2	2.5sqmm (Class 5)	Black
45388	2	2.5sqmm (Class 5)	White
45567	2	2.5sqmm (Class 5)	Grey
45489	2	4.0sqmm (Class 5)	White
45392	2	4.0sqmm (Class 5)	Black
45344	3	0.75sqmm (Class 5)	Black
45305	3	0.75sqmm (Class 5)	White
45568	3	0.75sqmm (Class 5)	Grey
45389	3	1.0sqmm (Class 5)	Black
45219	3	1.0sqmm (Class 5)	White
45569	3	1.0sqmm (Class 5)	Grey
45378	3	1.5sqmm (Class 5)	Black
45357	3	1.5sqmm (Class 5)	White
45570	3	1.5sqmm (Class 5)	Grey
45335	3	2.5sqmm (Class 5)	Black
45398	3	2.5sqmm (Class 5)	White
45571	3	2.5sqmm (Class 5)	Grey
45397	3	4.0sqmm (Class 5)	Black
45351	3	4.0sqmm (Class 5)	White
45588	3	4.0sqmm (Class 5)	Grey
45589	3	6.0sqmm (Class 5)	Grey
45592	3	16sqmm (Class 5)	Grey
45500	4	0.75sqmm (Class 5)	Black
45466	4	0.75sqmm (Class 5)	White
45572	4	0.75sqmm (Class 5)	Grey
45472	4	1.0sqmm (Class 5)	Black
45465	4	1.0sqmm (Class 5)	White
45573	4	1.0sqmm (Class 5)	Grey
45464	4	1.5sqmm	White
45473	4	1.5sqmm (Class 5)	Black
45574	4	1.5sqmm (Class 5)	Grey
45499	4	2.5sqmm (Class 5)	Black
45471	4	2.5sqmm (Class 5)	White
45575	4	2.5sqmm (Class 5)	Grey
45467	4	4.0sqmm (Class 5)	Black
45487	4	4.0sqmm (Class 5)	White
45590	4	4.0sqmm (Class 5)	Grey
45443	5	0.75sqmm (Class 5)	Black
45444	5	0.75sqmm (Class 5)	White
45576	5	0.75sqmm (Class 5)	Grey

45445	5	1.0sqmm (Class 5)	Black
45446	5	1.0sqmm (Class 5)	White
45577	5	1.0sqmm (Class 5)	Grey
45447	5	1.5sqmm (Class 5)	Black
45448	5	1.5sqmm (Class 5)	White
45578	5	1.5sqmm (Class 5)	Grey
45449	5	2.5sqmm (Class 5)	Black
45450	5	2.5sqmm (Class 5)	White
45579	5	2.5sqmm (Class 5)	Grey
45582	5	4.0sqmm (Class 5)	Grey
45390	7	0.75sqmm (Class 5)	Black
45387	7	1.0sqmm (Class 5)	Black
45380	7	1.5sqmm (Class 5)	Black
45382	7	2.5sqmm (Class 5)	Black
45396	12	0.75sqmm (Class 5)	Black
45399	12	1.0sqmm (Class 5)	Black
45383	12	1.5sqmm (Class 5)	Black
45381	12	2.5sqmm (Class 5)	Black
45517	25	1.0sqmm (Class 5)	Black
45475	27	1.5sqmm (Class 5)	Black
45516	27	2.5sqmm (Class 5)	Black
45469	50	1.5sqmm (Class 5)	Black