

6181B LSZH SINGLE CORE, DOUBLE INSULATED SURFACE WIRING CABLE



APPLICATION

6181B is a Low Smoke Zero Halogen single core cable. It is double insulated with a voltage rating of 450/750V. It is a general surface wire cable for fixed installation, domestic and light industrial use. Available in Blue and Brown core, sizes from 1.5mm² – 35mm². As this cable is used internally, it is covered by current CPR regulations. This cable is BASEC Approved to 35mm².

CONSTRUCTION

Conductor: 1mm – 2.5mm solid conductor
Above 2.5mm - Plain annealed stranded circular copper conductor, single core

Insulation: Cross Link Polyethylene (XLPE)
available in Brown or Blue

Sheath: Low Smoke and Zero Halogen (LSZH)

Sheath Colour: ☒ Grey or ☐ White

CABLE STANDARDS

BS 7211

Acid gas emission to IEC60754

Smoke emission to IEC 61034

Flame propagation to IEC 60332, Low Smoke and Zero Halogen (LSZH)

BASEC Approved

CHARACTERISTICS

Voltage Rating: 450/750V Volts

Temperature Limits: -25°C to +90°C

Minimum Bending Radius:

As per cable manufacturer datasheet

CORE IDENTIFICATION

All sizes available in ☒ Brown ☐ Blue

Should not be installed at temperatures below 0°C or above +40°C

6181B LSZH CABLE - DIMENSIONS

CCC CODE	CONDUCTOR SIZE (MM ²)	STRANDING (MM)	NUMBER OF CORES	WEIGHT (KG/KM)	OVERALL DIAMETER (mm)	GLAND REF	NYLON CLEAT SIZE
6181B1**	1	1/1.13	1	28	4.5	20/16	-
6181B1/5**	1.5	1/1.38	1	34	5.1	20/16	-
6181B2/5**	2	1/1.78	1	49	6	20/16	-
6181B4	4	7/0.85	1	75	6.8	20/16	-
6181B6	6	7/1.04	1	99	7.4	20/16	-
6181B10	10	7/1.35	1	155	8.8	20S	-
6181B16	16	7/1.04	1	225	10.5	20S	0.5
6181B25	25	7/2.14	1	340	12.5	20	0.5
6181B35	35	7/2.52	1	440	13.5	25	0.6

6181B LSZH – CARRYING CAPACITY (AMPERES)

CONDUCTOR CROSS-SECTIONAL AREA	REFERENCE METHOD A (ENCLOSED IN CONDUIT THERMALLY INSULATING WALL ETC)		REFERENCE METHOD B (ENCLOSED IN CONDUIT ON A WALL OR IN TRUNKING ETC)		REFERENCE METHOD C (CLIPPED DIRECT)		REFERENCE METHOD F (IN FREE AIR ON A PERFORATED CABLE TRAY HORIZONTAL OR VERTICAL)				
	2 CABLES, SINGLE - PHASE AC OR DC	3 OR 4 CABLES, SINGLE - PHASE AC	2 CABLES, SINGLE - PHASE AC OR DC	3 OR 4 CABLES, THREE PHASE AC	2 CABLES, SINGLE PHASE AC OR DC FLAT AND TOUCHING	3 OR 4 CABLES, THREE - PHASE AC FLAT AND TOUCHING OR TREFOIL	TOUCHING			SPACED BY ONE DIAMETER	
							2 CABLES, SINGLE - PHASE AC OR DC FLAT	3 CABLES, THREE - PHASE AC FLAT	3 CABLES, THREE - PHASE AC TREFOIL	2 CABLES, SINGLE PHASE AC OR DC OR 3 CABLES THREE-PHASE AC FLAT	
										HORIZONTAL	VERTICAL
1	2	3	4	5	6	7	8	9	10	11	12
(MM ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	11	10.5	13.5	12	15.5	14	-	-	-	-	-
1.5	14.5	13.5	17.5	15.5	20	18	-	-	-	-	-
2.5	20	18	24	21	27	25	-	-	-	-	-
4	26	24	32	28	37	33	-	-	-	-	-
6	34	31	41	36	47	43	-	-	-	-	-
10	46	42	57	50	65	59	-	-	-	-	-
16	61	56	76	68	87	79	-	-	-	-	-
25	80	73	101	89	114	104	131	114	110	146	130
35	99	89	125	110	141	129	162	143	137	181	162

THE ABOVE IS IN ACCORDANCE WITH 18TH EDITION OF IET WIRING REGULATIONS.

6181B LSZH - VOLTAGE DROP

CROSS SECTIONAL AREA MM²	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)											
			CABLES TOUCHING			CABLES SPACED*							CABLES TOUCHING, TREFOIL			CABLES TOUCHING, FLAT			CABLES SPACED*, FLAT					
1	2	3			4			5			6			7			8			9				
(MM²)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)				
1.5	28.00	29.00			29.00			29.00			25.00			25.00			25.00			25.00				
2.5	18.00	18.00			18.00			18.00			15.00			15.00			15.00			15.00				
4	11.00	11.00			11.00			11.00			9.50			9.50			9.50			9.50				
6	7.3	7.30			7.30			7.3			6.40			6.40			6.40			6.40				
10	4.40	4.40			4.40			4.40			3.80			3.80			3.80			3.80				
16	2.80	2.80			2.80			2.80			2.40			2.40			2.40			2.40				
		R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z		
25	1.750	1.800	0.330	1.800	1.750	0.200	1.750	1.750	0.290	1.800	1.500	0.290	1.550	1.500	0.180	1.500	0.150	0.250	1.550	1.500	0.320	1.550		
35	1.250	1.300	0.310	1.300	1.250	0.200	1.250	1.250	0.280	1.300	1.100	0.270	1.100	1.100	0.170	1.100	1.100	0.24	1.100	1.100	0.320	1.150		

THE ABOVE IS IN ACCORDANCE WITH 18TH EDITION OF IET WIRING REGULATIONS

CONDUCTOR OPERATING TEMPERATURE: 90°C

R = RESISTIVE COMPONENT

X = REACTIVE COMPONENT

Z = IMPEDANCE VALUE

* SPACINGS LARGER THAN THOSE SPECIFIED IN METHOD 12 WILL RESULT IN LARGER VOLT DROP.

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.