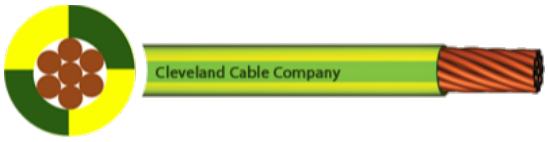
6491B Cable (H07Z-R)- BS EN 50525-3-41, LSZH - 1.5mm² to 630mm²



Description

Most suited for use in conduit and for fixed protection installation. Can be used in lighting installations, switch and control gear and also in appliances. The Low Smoke Zero Halogen outer sheath is ideal in applications where fire, smoke, emissions and toxic fumes would create a potential threat.

Key Features

Voltage Rating
450/750 Volts

Minimum Bending Radius
Fixed: 6 x overall diameter

Flame Retardancy
BS EN 60332-1-2

Temperature Limits
Temperature Range: 0°C to +90°C

Core Colours

Standard Colours available:

1.5mm² & 2.5mm²

Brown | Blue | Green Yellow | Black | Grey | Violet | White | Orange | Pink

4mm² - 10mm²

Brown | Blue | Green Yellow | Black | Grey

16mm² - 300mm²

Brown | Blue | Green Yellow | Black | Grey | Pink

400mm² 500mm² & 630mm²

Green Yellow

Standards

- Conforms to H07Z-R
- BS EN/IEC 60228
- IEC/EN 61034-1/2,
- BS EN/IEC 60332-1-2

Construction

- **Conductor**: Class 2 stranded copper conductor
- **Sheath**: Low Smoke Zero Halogen (LSZH)
- **Sheath Colour**: Various

QA Lab

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.

CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

ecovadis
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

6491B Cable (H07Z-R)- BS EN 50525-3-41, LSZH - 1.5mm² to 630mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Nylon A2	Brass A2
6491B1/5	1.5	1	7/0.53	3	22	16	20/16
6491B2/5	2.5	1	7/0.67	3.65	33	16	20/16
6491B4	4	1	7/0.85	4.2	49	16	20/16
6491B6	6	1	7/1.04	4.75	69	16	20/16
6491B10	10	1	7/1.35	6.15	116	16	20/16
6491B16	16	1	7/1.70	7.1	175	16	20/16
6491B25	25	1	7/2.14	8.9	273	20	20S
6491B35	35	1	7/2.52	9.95	367	20	20S
6491B50	50	1	19/1.78	11.7	510	20	20
6491B70	70	1	19/2.14	13.35	715	25	20
6491B95	95	1	19/2.52	15.6	990	25	25
6491B120	120	1	37/2.03	17.2	1230	25	25
6491B150	150	1	37/2.25	19.1	1510	32	25
6491B185	185	1	37/2.52	21.3	1900	32	32
6491B240	240	1	61/2.25	24.36	2490	32	32
6491B300	300	1	61/2.52	27.05	3050	40	40
6491B400EY	400	1	61/2.85	30.35	3842	40	40
6491B500EY	500	1	61/3.20	32.8	4900	50	50S
6491B630EY	630	1	127/2.50	36.5	6334	50	50S

Single-core 90 °c thermosetting insulated cables, non-armoured, with or without sheath COPPER CONDUCTORS)
Reproduced from *BS7671:2018*

TABLE 4E1A

CURRENT-CARRYING CAPACITY (amperes)

Ambient temperature: 30°C
Conductor operating temperature:90°C

Conductor cross sectional area	Reference Method A (enclosed in conduit in 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 or on a perforated cable tray etc horizontal or vertical etc) Touching			Reference Method G (in free air) Spaced by one cable diameter	
	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 and 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	2 cables, single-phase AC or DC or 3 cables three-phase AC flat	
										Horizontal	Vertical
mm^2	A	A	A	A	A	A	A	A	A	A	A
1	14	13	17	15	19	17.5	-	-	-	-	-
1.5	19	17	23	20	25	23	-	-	-	-	-
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
500	-	-	783	666	990	904	1083	998	946	1253	1169
630	-	-	900	764	1130	1033	1254	1151	I088	1454	1362
800	-	-	-	-	1288	1179	1358	1275	1214	1581	1485
1000	-	-	-	-	1443	1323	1520	1436	1349	1775	1671

Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5). Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 12. I .5). For cables having flexible conductors see section 2.4 of this appendix for adjustment factors for current-carrying capacity and voltage drop.

Single-core 90 °c thermosetting insulated cables, non-armoured, with or without sheath (COPPER CONDUCTORS) Reproduced from *BS7671:2018 Wiring Regulations*

TABLE 4E1B

VOLTAGE DROP (per ampere per metre)

Conductor operating temperature:90°C

Conductor cross sectional area	2 cables, DC	2 cables, single-phase AC									3 or 4 cables, three-phase AC											
		Reference Methods A & B (enclosed in conduit or trunking)			References Methods C, F & G (clipped direct, on tray or in free air)						Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C, F & G (clipped direct, on tray or in free air)								
					Cables touching			Cables spaced*						Cables touching, Trefoil			Cables touching, Flat			Cables spaced* Flat		
(mm2)	(mV/ Alm)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
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			4.0			4.0			4.0			4.0		
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	1.850	1.850	0.310	1.900	1.850	0.190	1.850	1.850	0.280	1.850	1.600	0.270	1.650	1.600	0.165	1.600	1.600	0.190	1.600	1.600	0.270	1.650
35	1.350	1.350	0.290	1.350	1.350	0.180	1.350	1.350	0.270	1.350	1.150	0.250	1.150	1.150	0.155	1.150	1.150	0.180	1.150	1.150	0.260	1.200
50	0.990	1.000	0.290	1.050	0.990	0.180	1.000	0.990	0.270	1.000	0.870	0.250	0.900	0.860	0.155	0.870	0.860	0.180	0.870	0.860	0.260	0.890
70	0.680	0.700	0.280	0.750	0.680	0.175	0.710	0.680	0.260	0.730	0.600	0.240	0.650	0.590	0.150	0.610	0.590	0.175	0.620	0.590	0.250	0.650
95	0.490	0.510	0.270	0.580	0.490	0.170	0.520	0.490	0.260	0.560	0.440	0.230	0.500	0.430	0.145	0.450	0.430	0.170	0.460	0.430	0.250	0.490
120	0.390	0.410	0.260	0.480	0.390	0.165	0.430	0.390	0.250	0.470	0.350	0.230	0.420	0.340	0.140	0.370	0.340	0.165	0.380	0.340	0.240	0.420
150	0.320	0.330	0.260	0.430	0.320	0.165	0.360	0.320	0.250	0.410	0.290	0.230	0.370	0.280	0.140	0.310	0.280	0.165	0.320	0.280	0.240	0.370
185	0.250	0.270	0.260	0.370	0.260	0.165	0.300	0.250	0.250	0.360	0.230	0.230	0.320	0.220	0.140	0.260	0.220	0.165	0.280	0.220	0.240	0.330
240	0.190	0.210	0.260	0.330	0.200	0.160	0.250	0.195	0.250	0.310	0.185	0.220	0.290	0.170	0.140	0.220	0.170	0.165	0.240	0.170	0.240	0.290
300	0.155	0.175	0.250	0.310	0.160	0.160	0.220	0.155	0.250	0.290	0.150	0.220	0.270	0.140	0.140	0.195	0.135	0.160	0.210	0.135	0.240	0.270
400	0.120	0.140	0.250	0.290	0.130	0.155	0.200	0.125	0.240	0.270	0.125	0.220	0.250	0.110	0.135	0.175	0.110	0.160	0.195	0.110	0.240	0.260
500	0.093	0.120	0.250	0.280	0.105	0.155	0.185	0.098	0.240	0.260	0.100	0.220	0.240	0.090	0.135	0.160	0.088	0.160	0.180	0.085	0.240	0.250
630	0.072	0.100	0.250	0.270	0.086	0.155	0.175	0.078	0.240	0.250	0.088	0.210	0.230	0.074	0.135	0.150	0.071	0.160	0.170	0.068	0.230	0.240
800	0.056		-		0.072	0.150	0.170	0.064	0.240	0.250		-		0.062	0.130	0.145	0.059	0.155	0.165	0.055	0.230	0.240
1000	0.045		-		0.063	0.150	0.165	0.054	0.240	0.240		-		0.055	0.130	0.140	0.050	0.155	0.165	0.047	0.230	0.240

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

31196