

6491B / H07Z-R - BS EN 50525-3-41 CABLE



APPLICATION

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.

CABLE STANDARDS

BS EN 50525-3-41 (previously BS7211)

BASEC Approved

CONSTRUCTION

Conductor: Stranded Plain Annealed Compacted Circular Copper Conductor

Sheath: Low Smoke and Zero Halogen (LSZH)

Sheath Colour: Various

CHARACTERISTICS

Voltage Rating: 450/750 Volts

Temperature Limits: -15°C to +90°C

Minimum Bending Radius:

As per cable manufacturer datasheet

CORE IDENTIFICATION

1.5mm² & 2.5mm²

Brown	Black	Green/Yellow
Grey	Blue	Violet
White	Orange	Pink

4mm² up to 300mm²

Brown	Black	Green/Yellow
Grey	Blue	

400mm², 500mm² & 630mm²

Green/Yellow

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

6491B / H07Z-R CABLE DIMENSIONS

CCC CODE	CONDUCTOR SIZE (MM ²)	STRANDING (MM)	WEIGHT (KG/KM)	OVERALL DIAMETER (MM)	BRASS A2	NYLON A2
6491B1/5	1.5	7/0.53	22	3.00	20/16	16
6491B2/5	2.5	7/0.67	33	3.65	20/16	16
6491B4	4	7/0.85	49	4.20	20/16	16
6491B6	6	7/1.04	69	4.75	20/16	16
6491B10	10	7/1.35	116	6.15	20/16	16
6491B16	16	7/1.70	175	7.10	20/16	16
6491B25	25	7/2.14	273	8.90	20S	20
6491B35	35	7/2.52	367	9.95	20S	20
6491B50	50	19/1.78	510	11.70	20	20
6491B70	70	19/2.14	715	13.35	20	25
6491B95	95	19/2.52	990	15.60	25	25
6491B120	120	37/2.03	1230	17.20	25	25
6491B150	150	37/2.25	1510	19.10	25	32
6491B185	185	37/2.52	1900	21.30	32	32
6491B240	240	61/2.25	2490	24.36	32	32
6491B300	300	61/2.52	3050	27.05	40	40
6491B400	400	61/2.85	3842	30.35	40	40
6491B500	500	61/3.20	4900	32.80	50S	50
6491B630	630	127/2.50	6334	36.50	50S	50

6491B / H07Z-R CURRENT - 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
1	2	3	4	5	6	7	8	9	10	11	12
(MM²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
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
500	-	-	783	666	990	904	1083	998	946	1253	1169
630	-	-	900	764	1130	1033	1254	1151	1088	1454	1362

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

6491B / H07Z-R CABLE - VOLTAGE DROP

CROSS SECTIONAL AREA MM ²	2 CABLES DC MVA/M	2 CABLES SINGLE-PHASE AC MVA/M						3 OR 4 CABLES THREE-PHASE AC MVA/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							
(mm ²)	(mVA/m)	(mVA/m)			(mVA/m)			(mVA/m)			(mVA/m)				(mVA/m)				(mVA/m)						
1.5	31	31			31			31			27				27				27						
2.5	19	19			19			19			16				16				16						
4	12	12			12			12			10				10				10						
6	7.9	7.9			7.9			7.9			6.8				6.8				6.8						
10	4.7	4.7			4.7			4.7			4				4				4						
16	2.9	2.9			2.9			2.9			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	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	0.70	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			
150	0.32	0.33	0.26	0.43	0.32	0.165	0.36	0.32	0.25	0.41	0.29	0.23	0.37	0.28	0.14	0.31	0.28	0.165	0.32	0.28	0.24	0.37			
185	0.25	0.27	0.26	0.37	0.26	0.165	0.30	0.25	0.25	0.36	0.23	0.23	0.32	0.22	0.14	0.26	0.22	0.165	0.28	0.22	0.24	0.33			
240	0.19	0.21	0.26	0.33	0.20	0.16	0.25	0.195	0.25	0.31	0.185	0.22	0.29	0.17	0.14	0.22	0.17	0.165	0.24	0.17	0.24	0.29			
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	0.16	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			
500	0.093	0.12	0.25	0.28	0.105	0.155	0.185	0.098	0.24	0.26	0.10	0.22	0.24	0.09	0.135	0.16	0.088	0.16	0.18	0.085	0.24	0.25			
630	0.072	0.10	0.25	0.27	0.086	0.155	0.175	0.078	0.24	0.25	0.088	0.21	0.23	0.074	0.135	0.15	0.071	0.16	0.17	0.068	0.23	0.24			

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.

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