

6491B / H07Z-R / EN 50525-3-41 Cable



APPLICATION

Suitable for use in conduit and for fixed, protected installation. For installations where fire, smoke emission and toxic fume create a potential risk to life and equipment.

CHARACTERISTICS

Voltage Rating Uo/U

450/750V

Temperature Rating

Fixed: 0°C to +90°C

Minimum Bending Radius

6 x overall diameter

CONSTRUCTION

Conductor

Class 2 stranded copper conductor

Insulation

LSZH (Low Smoke Zero Halogen)

CABLE THIRD-PARTY ACCREDITATIONS

Cables are tested and accredited by Kenya Bureau and Standards (KEBS)

STANDARDS

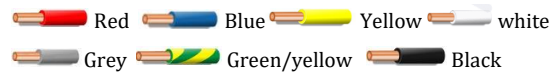
EN 50525-3-41, EN 60228

Flame Retardant according to IEC/EN 60332-1-2

Halogen Free according to IEC/EN 61034-1/2,
IEC/EN 60754-1/2



Insulation colour



DIMENSIONS

NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
1.5	0.7	3.4	22
2.5	0.8	4.1	35
4	0.8	4.7	50
6	0.8	5.4	72
10	1	6.8	121
16	1	8	182
25	1.2	9.8	285
35	1.2	11	390
50	1.4	13.2	510
70	1.4	15.1	710
95	1.6	17	980
120	1.6	19	1220
150	1.8	21	1500
185	2	23.5	1910
240	2.2	26.5	2490
300	2.4	29.5	3100
400	2.6	33.5	3950
500	2.8	37	5000
630	2.8	41	6350



CONDUCTORS

Class 2 Stranded Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm ²	MINIMUM NO. OF WIRES IN CONDUCTOR						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor
	Cu	Al	Cu	Al	Cu	Al	Plain Wires
1.5	7	-	6	-	-	-	12.1
2.5	7	-	6	-	-	-	7.41
4	7	-	6	-	-	-	4.61
6	7	-	6	-	-	-	3.08
10	7	7	6	6	-	-	1.83
16	7	7	6	6	-	-	1.15
25	7	7	6	6	6	6	0.727
35	7	7	6	6	6	6	0.524
50	19	19	6	6	6	6	0.387
70	19	19	12	12	12	12	0.268
95	19	19	15	15	15	15	0.193
120	37	37	18	15	18	15	0.153
150	37	37	18	15	18	15	0.124
185	37	37	30	30	30	30	0.0991
240	37	37	34	30	34	30	0.0754
300	61	61	34	30	34	30	0.0601
400	61	61	53	53	53	53	0.047
500	61	61	53	53	53	53	0.0366
600	91	91	53	53	53	53	0.0283

COLOUR CODES

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



ELECTRICAL CHARACTERISTICS XLPE/PVC/AWA/PVC

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 IN WALL OR IN TRUNKING ETC) Amps		REFERENCE METHOD C (CLIPPED DIRECT) Amps		REFERENCE METHOD F IN FREE AIR OR ON A PERFORATED CABLE TRAY ETC HORIZONTAL OR VERTICAL ETC TOUCHING Amps			REFERENCE METHOD G IN FREE AIR) SPACED 1 x OD 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	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC	3 Cables Three-Phase AC		Horizontal	Vertical
								Flat	Trefoil		
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

Air ambient temperature:
30°C Ground ambient
temperature: 20°C
Conductor operating temperature: 90°C

Notes

- 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 Regulation 512.1.2 of the 17th Edition of IEE Wiring Regulations).
- 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 4D4A) must be used (see also Regulation 523.1 of the 17th Edition of IEE Wiring Regulations).

The above table is in accordance with Table 4E4A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52



VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA mm ²	2 CABLES DC mV/A/m	2 CABLES SINGLE-PHASE AC mV/A/m									REFERENCE METHODS C, F AND G 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	Cables Spaced*		Cables touching, Trefoil	Cables touching, Flat	Cables spaced*, Flat	Cables touching, Trefoil	Cables touching, Flat	Cables spaced*, Flat									
1.5	31	31	31	31	31	31	31	31	31	31	27	27	27	27	27	27	27	27	27	27	27	27
2.5	19	19	19	19	19	19	19	19	19	19	16	16	16	16	16	16	16	16	16	16	16	16
4	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10	10	10	10	10	10
6	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
10	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4	4	4	4	4	4	4	4	4	4	4	4
16	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	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	1.85	1.85	0.3	1.9	1.85	0.19	1.85	1.85	0.3	1.9	1.6	0.3	1.7	1.6	0.17	1.6	1.6	0.19	1.6	1.6	0.3	1.7
35	1.35	1.35	0.3	1.4	1.35	0.18	1.35	1.35	0.3	1.4	1.15	0.3	1.2	1.15	0.16	1.15	1.15	0.18	1.15	1.15	0.3	1.2
50	0.99	1	0.3	1.1	0.99	0.18	1	0.99	0.3	1	0.87	0.3	0.9	0.86	0.16	0.87	0.86	0.18	0.87	0.86	0.3	0.9
70	0.68	0.7	0.3	0.8	0.68	0.18	0.71	0.68	0.3	0.7	0.6	0.2	0.7	0.59	0.15	0.61	0.59	0.18	0.62	0.59	0.3	0.7
95	0.49	0.51	0.3	0.6	0.49	0.17	0.52	0.49	0.3	0.6	0.44	0.2	0.5	0.43	0.15	0.45	0.43	0.17	0.46	0.43	0.3	0.5
120	0.39	0.41	0.3	0.5	0.39	0.17	0.43	0.39	0.3	0.5	0.35	0.2	0.4	0.34	0.14	0.37	0.34	0.17	0.38	0.34	0.2	0.4
150	0.32	0.33	0.3	0.4	0.32	0.17	0.36	0.32	0.3	0.4	0.29	0.2	0.4	0.28	0.14	0.31	0.28	0.17	0.32	0.28	0.2	0.4
185	0.25	0.27	0.3	0.4	0.26	0.17	0.3	0.25	0.3	0.4	0.23	0.2	0.3	0.22	0.14	0.26	0.22	0.17	0.28	0.22	0.2	0.3
240	0.19	0.21	0.3	0.3	0.2	0.16	0.25	0.2	0.3	0.3	0.19	0.2	0.3	0.17	0.14	0.22	0.17	0.17	0.24	0.17	0.2	0.3
300	0.155	0.18	0.3	0.3	0.16	0.16	0.22	0.16	0.3	0.3	0.15	0.2	0.3	0.14	0.14	0.2	0.14	0.16	0.21	0.14	0.2	0.3
400	0.12	0.14	0.3	0.3	0.13	0.16	0.2	0.13	0.2	0.3	0.13	0.2	0.3	0.11	0.14	0.18	0.11	0.16	0.2	0.11	0.2	0.3
500	0.093	0.12	0.3	0.3	0.11	0.16	0.19	0.1	0.2	0.3	0.1	0.2	0.2	0.09	0.14	0.16	0.09	0.16	0.18	0.09	0.2	0.3
630	0.072	0.1	0.3	0.3	0.09	0.16	0.18	0.08	0.2	0.3	0.09	0.2	0.2	0.07	0.14	0.15	0.07	0.16	0.17	0.07	0.2	0.2



Conductor operating temperature: 90°C

R = Resistive Component

x = Reactive Component

z = Impedance Value

The above table is in accordance with Table 4E4B of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

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 18th Edition of IEE Wiring Regulations BS7671

METSEC

All of the above information, including drawings, illustrations and graphic designs, reflects our present understanding and is to the best of our knowledge and belief correct reliable. Users, however, should independently evaluate the suitability of each product for the desired application. Under no circumstances does this constitute an assurance any particular quality or performance. Such an assurance is only provided in the context of our product specifications or explicit contractual arrangements. Our liability for products set forth our standard terms and conditions of sale

