

6491X / H07V-R / H07V-U EN 50525-2-31



APPLICATION

6491X Cable H07V-R/H07V-U is suitable for power and lighting circuits and building wiring. The cable is intended for use in semi-flush exposed conduits and embedded conduits as well as in closed installation ducts, and is ideal for the internal wiring of appliances.

CHARACTERISTICS

Voltage Rating U_0/U
0.6/1kV

Temperature Rating
Fixed: -15°C to +70°C

Minimum Bending Radius

1.5mm² to 16mm² - Fixed: 6 x overall diameter
25mm² and above - Fixed: 8 x overall diameter

CONSTRUCTION

Conductor

Class 2 stranded copper conductor

Insulation

PVC (Polyvinyl Chloride)

CABLE THIRD-PARTY ACCREDITATIONS

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

STANDARDS

BS 5467, IEC/EN 60502-1, IEC/EN 60228
Flame Retardant according to IEC/EN 60332-1-2



INSULATION COLOUR



Note

5mm² to 10mm² also available as H07V-U Class 1 solid copper conductor



DIMENSIONS

NOMINAL CROSS SECTIONAL AREA	NOMINAL THICKNESS OF INSULATION	NOMINAL OVERALL DIAMETER	NOMINAL WEIGHT
mm ²	mm	mm	kg/km
1.5	0.7	2.9	22
2.5	0.8	3.6	32
4	0.8	4.1	50
6	0.8	4.7	71
10	1	5.9	110
16	1	6.8	164
25	1.2	8.4	256
35	1.2	9.4	346
50	1.4	11	473
70	1.4	12.7	674
95	1.6	14.7	913
120	1.6	16.2	1150
150	1.8	18	1416
185	2	20	1749
240	2.2	23	2317
300	2.4	25.2	3049
400	2.6	28.4	3657
500	2.8	31.8	4700
630	2.8	38.1	5890

COLOUR CODES

COLOUR	Black	Blue	Grey	Green/ Yellow	Red	Yellow	Brown	White
CODE	BK	BL	GR	GY	RD	YW	BR	WH



CONDUCTORS

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

NOMINAL CROSS SECTIONAL AREA mm ²	MINIMUM NO. OF WIRES IN CONDUCT mm						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
	circular		Circular Compacted		Shaped		
	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
630	91	91	53	53	53	53	0.0283



ELECTRICAL CHARACTERISTICS XLPE/PVC/SWA/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) Amps					
								Touching			Spaced by one diameter 2 Cables Single-Phase AC or DC or 3 Cables Three-Phase AC flat	
	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 flat	3 Cables Phase AC flat Three-	3 Cables Three Phase AC trefoil	Horizontal	Vertical	
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	
50	119	108	151	134	182	167	196	174	167	219	197	
70	151	136	192	171	234	214	251	225	216	281	254	
95	182	164	232	207	284	261	304	275	264	341	311	
120	210	188	269	239	330	303	352	321	308	396	362	
150	240	216	300	262	381	349	406	372	356	456	419	
185	273	245	341	296	436	400	463	427	409	521	480	
240	321	286	400	346	515	472	546	507	485	615	569	
300	367	328	458	394	594	545	629	587	561	709	659	
400	-	-	546	467	694	634	754	689	656	852	795	
500	-	-	626	533	792	723	868	789	749	982	920	
630	-	-	720	611	904	826	1005	905	855	1138	1070	

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									3 OR 4 CABLES THREE-PHASE AC mV/A/m															
		Reference			Reference Methods C, F and G						Reference			Reference Methods C, F and G												
		Methods A and B enclosed in conduit or trunking)			Cables Touching			Cables Spaced*			Methods A and B enclosed in conduit or trunking)			Cables touching, Trefoil			Cables touching, Flat			Cables spaced*, Flat						
		(clipped direct, on tray or in free air)			(clipped direct, on tray or in free air)			(clipped direct, on tray or in free air)			(clipped direct, on tray or in free air)			(clipped direct, on tray or in free air)			(clipped direct, on tray or in free air)									
1.5	28	29	29	29	29	29	29	29	29	25	25	25	25	25	25	25	25	25	25	25	25	25	25			
2.5	18	18	18	18	18	18	18	18	18	15	15	15	15	15	15	15	15	15	15	15	15	15	15			
4	11	11	11	11	11	11	11	11	11	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5			
6	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4			
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8			
16	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4			
		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	1.75	1.8	0.3	1.8	1.8	0.2	1.75	1.75	0.3	1.8	1.5	0.3	1.6	1.5	0.18	1.5	0.15	0.3	1.6	1.5	0.3	1.6	1.5	0.3	1.6	
35	1.25	1.3	0.3	1.3	1.3	0.2	1.25	1.25	0.3	1.3	1.1	0.3	1.1	1.1	0.17	1.1	1.1	0.2	1.1	1.1	0.3	1.2	1.1	1.1	0.3	1.2
50	0.93	0.95	0.3	1	0.9	0.19	0.95	0.93	0.3	1	0.8	0.3	0.9	0.8	0.17	0.82	0.8	0.2	0.8	0.8	0.3	0.9	0.8	0.8	0.3	0.9
70	0.63	0.65	0.3	0.7	0.6	0.19	0.66	0.63	0.3	0.7	0.6	0.3	0.6	0.55	0.16	0.57	0.55	0.2	0.6	0.55	0.3	0.6	0.55	0.3	0.6	
95	0.46	0.49	0.3	0.6	0.5	0.18	0.5	0.47	0.3	0.5	0.4	0.2	0.5	0.41	0.16	0.43	0.41	0.2	0.5	0.4	0.3	0.5	0.4	0.3	0.5	
120	0.36	0.39	0.3	0.5	0.4	0.18	0.41	0.37	0.3	0.5	0.3	0.2	0.4	0.32	0.15	0.36	0.32	0.2	0.4	0.32	0.3	0.4	0.32	0.3	0.4	
150	0.29	0.31	0.3	0.4	0.3	0.18	0.34	0.29	0.3	0.4	0.3	0.2	0.4	0.26	0.15	0.3	0.26	0.2	0.3	0.26	0.3	0.26	0.3	0.26	0.3	0.4
185	0.23	0.25	0.3	0.4	0.2	0.17	0.29	0.24	0.3	0.4	0.2	0.2	0.3	0.21	0.15	0.26	0.21	0.2	0.3	0.21	0.3	0.21	0.3	0.21	0.3	0.4
240	0.18	0.2	0.3	0.3	0.2	0.17	0.25	0.19	0.3	0.3	0.2	0.2	0.3	0.16	0.15	0.22	0.16	0.2	0.3	0.16	0.3	0.16	0.3	0.16	0.3	0.3
300	0.15	0.16	0.3	0.3	0.2	0.17	0.22	0.15	0.3	0.3	0.1	0.2	0.3	0.13	0.14	0.19	0.13	0.2	0.3	0.13	0.3	0.13	0.3	0.13	0.3	0.3
400	0.11	0.13	0.3	0.3	0.1	0.16	0.2	0.12	0.3	0.3	0.1	0.2	0.3	0.11	0.14	0.18	0.11	0.2	0.2	0.1	0.3	0.1	0.3	0.1	0.3	0.3
500	0.086	0.11	0.3	0.3	1	0.16	0.19	0.09	0.2	0.3	0.1	0.2	0.3	0.09	0.14	0.16	0.09	0.2	0.2	0.08	0.3	0.08	0.3	0.08	0.3	0.3
630	0.068	0.09	0.3	0.3	0.08	0.16	0.18	0.08	0.2	0.3	0.1	0.2	0.2	0.07	0.14	0.15	0.07	0.2	0.2	0.07	0.3	0.07	0.3	0.07	0.3	0.3



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

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



METSEC

