6491X Cable (H07V-R) BS EN 50525-2-31, PVC - 1.5mm² to 630mm²



Description

6491X is a general PVC earth cable. For use in fixed installations, in trunking or conduit. May be surface mounted. Stranded, plain, annealed, compacted, circular copper, conductor. PVC outer sheath. Harmonised code HO7V-R. 450/750 volts grade to BS EN 50525-2-31. This cable is BASEC approved.

Key Features

Voltage Rating
450/750 Volts

Minimum Bending Radius
(Less than 12mm²): 3 X Overall Diameter
(More than 12mm²): 4 X Overall Diameter
(More than 25mm²): 5 X Overall Diameter

Flame Retardancy
BS EN 60332-1-2

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

Core Colours

1.5mm - 2.5mm

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

4mm - 300mm

Brown | Blue | Green Yellow | Black | Grey

50mm & 95mm

also available in Green

400mm to 630mm

Green Yellow

Standards

- BS EN 50525-2-31
- IEC 60228
- BS EN/IEC 60332-1-2
- Conforms to H07V-R

Construction

- **Conductor**: Class 2 stranded copper conductor
- **Sheath**: PVC (Polyvinyl Chloride)
- **Sheath Colour**: Various

Training & Testing Lab

AN ISO/IEC 17025 ACCREDITED FACILITY

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.

ISO/IEC 17025 Accredited Testing Laboratory

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.

CLEVELAND CABLE COMPANY

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

ecovadis

6491X Cable (H07V-R) BS EN 50525-2-31, PVC - 1.5mm² to 630mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Nylon A2	Brass A2
6491X1/5	1.5	1	7/0.53	3	21	16	20/16
6491X2/5	2.5	1	7/0.67	3.65	35	16	20/16
6491X4	4	1	7/0.85	4.2	50	16	20/16
6491X6	6	1	7/1.04	4.75	71	16	20/16
6491X10	10	1	7/1.35	6.15	120	16	20/16
6491X16	16	1	7/1.70	7.1	180	16	20/16
6491X25	25	1	7/2.14	8.9	280	20	20S
6491X35	35	1	7/2.52	9.95	380	20	20S
6491X50	50	1	19/1.78	11.7	510	20	20
6491X70	70	1	19/2.14	13.35	720	25	20
6491X95	95	1	19/2.52	15.6	990	25	25
6491X120	120	1	37/2.03	17.2	1200	25	25
6491X150	150	1	37/2.25	19.1	1500	32	25
6491X185	185	1	37/2.52	21.3	1900	32	32
6491X240	240	1	61/2.25	24.3	2500	32	32
6491X300	300	1	61/2.52	27.05	3000	40	40
6491X400EY	400	1	61/2.85	30.35	3950	40	40
6491X500EY	500	1	61/3.20	32.8	4950	50	50S
6491X630EY	630	1	127/2.50	36.5	6250	50	50S

Single core 70°C thermoplastic insulated cables, non-armoured, with or without sheath (COPPER CONDUCTORS) Reproduced from *BS7671:2018 Wiring regulations*

TABLE 4D1A

CURRENT-CARRYING CAPACITY (amperes):

Ambient temperature: 30 °C
Conductor operating temperature: 70 °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 horizontal or vertical)				
							Touching			Spaced by one diameter	
	2 cables, single-phase AC or DC	3 or4 cables, three-phase AC	2 cables, single-phase AC or DC	3 or4 cables, three-phase AC	2 cables, single-phase AC or DC flat and touching	3 or4 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
I	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					
IO	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
800	-	-	-	-	1030	943	1086	1020	971	1265	1188
1000	-	-	-	-	1154	1058	1216	1149	1079	1420	1337

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Single core 70°C thermoplastic insulated cables, non-armoured, with or without sheath (COPPER CONDUCTORS) Reproduced from BS7671:2018 Wiring regulations

TABLE 4D1B

VOLTAGE DROP (per ampere per metre): Conductor operating temperature: 70 °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)			Reference Methods C & F (clipped direct, on tray or in free air)						Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C & F (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		
mm^2	(mV/Nm)	(mV/Afm)			(mV/Afm)			(mV/Afm)			(mV/Afm)			(mV/Afm)			(mV/Afm)			(mV/Afm)		
1	44	44			44			44			38			38			38			38		
1.5	29	29			29			29			25			25			25			25		
2.5	18	18			18			18			15			15			15			15		
4	11	11			11			11			9.5			9.5			9.5			9.5		
6	7.3	7.3			7.3			7.3			6.4			6.4			6.4			6.4		
10	4.4	4.4			4.4			4.4			3.8			3.8			3.8			3.8		
16	2.8	2.8			2.8			2.8			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
25	1.75	1.80	0.33	1.80	1.75	0.20	1.75	1.75	0.29	1.80	1.50	0.29	1.55	1.50	0.175	1.50	1.50	0.25	1.55	1.50	0.32	1.55
35	1.25	1.30	0.31	1.30	1.25	0.195	1.25	1.25	0.28	1.30	1.10	0.27	1.10	1.10	0.170	1.10	1.10	0.24	1.10	1.10	0.32	1.15
50	0.93	0.95	0.30	1.00	0.93	0.190	0.95	0.93	0.28	0.97	0.81	0.26	0.85	0.80	0.165	0.82	0.80	0.24	0.84	0.80	0.32	0.86
70	0.63	0.65	0.29	0.72	0.63	0.185	0.66	0.63	0.27	0.69	0.56	0.25	0.61	0.55	0.160	0.57	0.55	0.24	0.60	0.55	0.31	0.63
95	0.46	0.49	0.28	0.56	0.47	0.180	0.50	0.47	0.27	0.54	0.42	0.24	0.48	0.41	0.155	0.43	0.41	0.23	0.47	0.40	0.31	0.51
120	0.36	0.39	0.27	0.47	0.37	0.175	0.41	0.37	0.26	0.45	0.33	0.23	0.41	0.32	0.150	0.36	0.32	0.23	0.40	0.32	0.30	0.44
150	0.29	0.31	0.27	0.41	0.30	0.175	0.34	0.29	0.26	0.39	0.27	0.23	0.36	0.26	0.150	0.30	0.26	0.23	0.34	0.26	0.30	0.40
185	0.23	0.25	0.27	0.37	0.24	0.170	0.29	0.24	0.26	0.35	0.22	0.23	0.32	0.21	0.145	0.26	0.21	0.22	0.31	0.21	0.30	0.36
240	0.180	0.195	0.26	0.33	0.185	0.165	0.25	0.185	0.25	0.31	0.17	0.23	0.29	0.160	0.145	0.22	0.160	0.22	0.27	0.160	0.29	0.34
300	0.145	0.160	0.26	0.31	0.150	0.165	0.22	0.150	0.25	0.29	0.14	0.23	0.27	0.130	0.140	0.190	0.130	0.22	0.25	0.130	0.29	0.32
400	0.105	0.130	0.26	0.29	0.120	0.160	0.20	0.115	0.25	0.27	0.12	0.22	0.25	0.105	0.140	0.175	0.105	0.21	0.24	0.100	0.29	0.31
500	0.086	0.110	0.26	0.28	0.098	0.155	0.185	0.093	0.24	0.26	0.10	0.22	0.25	0.086	0.135	0.160	0.086	0.21	0.23	0.081	0.29	0.30
630	0.068	0.094	0.25	0.27	0.081	0.155	0.175	0.076	0.24	0.25	0.08	0.22	0.24	0.072	0.135	0.150	0.072	0.21	0.22	0.066	0.28	0.29
800	0.053		-		0.068	0.150	0.165	0.061	0.24	0.25		-		0.060	0.130	0.145	0.060	0.21	0.22	0.053	0.28	0.29
1000	-0.042		-		0.059	0.150	0.160	0.050	0.24	0.24		-		0.052	0.130	0.140	0.052	0.20	0.21	0.044	0.28	0.28

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