

6491X / H07V-R - BS EN 50525-2-3 PVC CABLE



APPLICATION

This is a general PVC earth cable. For use in fixed installations, used in trunking or conduit, may be surface mounted. Stranded, plain, annealed, compacted, circular copper, conductor. PVC outer sheath. Harmonised code H07V-R. 450/750 volts grade to BS EN 50525-2-3. This cable is BASEC approved.

CABLE STANDARDS

BS EN 50525-2-3
Flame propagation to BS EN 50265
BASEC Approved

CONSTRUCTION

Conductor: Stranded Plain Annealed
Compacted Circular Copper Conductor
Sheath: Poly Vinyl Chloride (PVC)
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	

4mm² upto 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

6491X / H07V-R PVC CABLE - DIMENSIONS

CCC CODE	CONDUCTOR SIZE (MM ²)	STRANDING (MM)	WEIGHT (KG/KM)	OVERALL DIAMETER (MM)	BRASS A2	NYLON A2
6491X1/5	1.5	7/0.53	21	3	20/16	16
6491X2/5	2.5	7/0.67	35	3.65	20/16	16
6491X4	4	7/0.85	50	4.2	20/16	16
6491X6	6	7/1.04	71.4	75	20/16	16
6491X10	10	7/1.35	120	6.15	20/16	16
6491X16	16	7/1.70	180	7.1	20/16	16
6491X25	25	7/2.14	280	8.9	20S	20
6491X35	35	7/2.52	380	9.95	20S	20
6491X50	50	19/1.78	510	11.7	20	20
6491X70	70	19/2.14	720	13.35	20	25
6491X95	95	19/2.52	990	15.6	25	25
6491X120	120	37/2.03	1200	17.2	25	25
6491X150	150	37/2.25	1500	19.1	25	32
6491X185	185	37/2.52	1900	21.3	32	32
6491X240	240	61/2.25	2500	24.3	32	32
6491X300	300	61/2.52	3000	27.05	40	40
6491X400	400	61/2.85	3950	30.35	40	40
6491X500	500	61/3.20	4950	32.8	50S	50
6491X630	630	127/2.50	6250	36.5	50S	50

6491X / H07V-R PCV CABLE - 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	VERTICAL	
1	2	3	4	5	6	7	8	9	10	11	12	
(MM ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
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	

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

6491X / H07V-R PCV CABLE - VOLTAGE DROP

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 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		
1	2	3			4			5			6			7			8			9		
(mm ²)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
1.50	28.00	29.00			29.00			29.00			25.00			25.00			25.00			25.00		
2.50	18.00	18.00			18.00			18.00			15.00			15.00			15.00			15.00		
4.00	11.00	11.00			11.00			11.00			9.50			9.50			9.50			9.50		
6.00	7.3	7.30			7.30			7.3			6.40			6.40			6.40			6.40		
10.00	4.40	4.40			4.40			4.40			3.80			3.80			3.80			3.80		
16.00	2.80	2.80			2.80			2.80			2.40			2.40			2.40			2.40		
		R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z
25	1.750	1.800	0.330	1.800	1.750	0.200	1.750	1.750	0.290	1.800	1.500	0.290	1.550	1.500	0.180	1.500	0.150	0.250	1.550	1.500	0.320	1.550
35	1.250	1.300	0.310	1.300	1.250	0.200	1.250	1.250	0.280	1.300	1.100	0.270	1.100	1.100	0.170	1.100	0.100	0.24	1.100	1.100	0.320	1.150
50	0.930	0.950	0.300	1.000	0.930	0.190	0.950	0.930	0.280	0.970	0.81	0.260	0.850	0.800	0.170	0.820	0.800	0.24	0.840	0.800	0.320	0.860
70	0.630	0.650	0.290	0.720	0.630	0.190	0.660	0.630	0.270	0.690	0.560	0.250	0.61	0.550	0.160	0.57	0.550	0.24	0.600	0.550	0.31	0.630
95	0.460	0.490	0.280	0.560	0.47	0.180	0.500	0.47	0.270	0.540	0.420	0.24	0.480	0.41	0.160	0.430	0.41	0.230	0.47	0.400	0.31	0.51
120	0.360	0.390	0.270	0.47	0.370	0.180	0.410	0.370	0.260	0.450	0.330	0.230	0.41	0.320	0.150	0.360	0.320	0.230	0.400	0.320	0.300	0.440
150	0.290	0.31	0.270	0.41	0.300	0.180	0.340	0.290	0.260	0.390	0.270	0.230	0.360	0.260	0.150	0.300	0.260	0.230	0.340	0.260	0.300	0.400
185	0.230	0.250	0.270	0.370	0.24	0.170	0.290	0.24	0.260	0.350	0.220	0.230	0.320	0.21	0.150	0.260	0.21	0.220	0.31	0.21	0.300	0.360
240	0.180	0.200	0.260	0.330	0.190	0.170	0.250	0.190	0.250	0.31	0.170	0.230	0.290	0.160	0.150	0.220	0.160	0.220	0.270	0.160	0.290	0.340
300	0.150	0.160	0.260	0.31	0.150	0.170	0.220	0.150	0.250	0.290	0.140	0.230	0.270	0.130	0.140	0.190	0.130	0.220	0.250	0.130	0.290	0.320
400	0.11	0.130	0.260	0.290	0.120	0.160	0.200	0.120	0.250	0.270	0.120	0.220	0.250	0.11	0.140	0.180	0.11	0.21	0.24	0.100	0.290	0.31
500	0.086	0.11	0.260	0.280	0.090	0.155	0.185	0.093	0.24	0.260	0.100	0.220	0.250	0.086	0.135	0.160	0.086	0.21	0.230	0.081	0.290	0.300
630	0.068	0.094	0.250	0.270	0.081	0.155	0.175	0.076	0.24	0.250	0.080	0.220	0.24	0.072	0.135	0.150	0.072	0.21	0.220	0.066	0.280	0.290

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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