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

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.

Construction:

Conductor
H07V-R: Class 2 stranded copper conductor to BS EN 60228 (previously BS 6360)
H07V-U: Class 1 solid copper conductor to BS EN 60228
(previously BS 6360)

Insulation
PVC (Polyvinyl Chloride) Type TI1 according to BS EN 50363

Cable Standards:

BS EN 50525-2-31 (previously BS 6004) BASEC approved, BS EN/IEC 60332-1-2

The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

Characteristics:

Voltage Rating (Uo/U)
450/750V

Temperature Rating
–15°C to +70°C

Minimum Bending Radius
Up to 10mm²: 3 x overall diameter
10mm² to 25mm²: 4 x overall diameter
Above 25mm²: 5 x overall diameter

Insulation colour
Black, Blue, Grey
Brown, Green/Yellow

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Dimensions:

Order code	Part No.	Nominal cross sectional area mm	Nominal thickness of insulation mm	Nominal overall diameter mm	Nominal weight kg/km
02-0241	UECGY0015	1.5	0.7	2.9	22
02-0242	UECBL0015	1.5	0.7	2.9	22
02-0243	UECBR0015	1.5	0.7	2.9	22
02-0244	UECGR0015	1.5	0.7	2.9	22
02-0245	UECBK0015	1.5	0.7	2.9	22
02-0246	UECGY0025	2.5	0.8	3.6	32
02-0247	UECBL0025	2.5	0.8	3.6	32
02-0248	UECBR0025	2.5	0.8	3.6	32
02-0249	UECGR0025	2.5	0.8	3.6	32
02-0266	UECBK0025	2.5	0.8	3.6	32

Colour codes:

Colour	Black	Blue	Grey	Brown	Green/Yellow
Code	BK	BL	GR	BR	GY

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 conductors at 20°C
	Circular		Circular compacted		Shaped		Annealed copper conductor
	Cu	Al	Cu	Al	Cu	Al	Plain wires ohms/km
1.5	7	–	6	–	–	–	12.1
2.5	7	–	6	–	–	–	7.41

The above table is in accordance with BS EN 60228 (previously BS 6360)

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Electrical characteristics:

Current Carrying Capacity and Voltage Drop

Nominal cross sectional area mm²	Reference method A (enclosed in conduit in thermally insulating wall etc.) Amps		Reference method B (enclosed in conduit on a wall or in a trunking etc.) Amps		Reference method C (Clipped direct) Amps	
	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 Single-Phase AC	2 cables Single-Phase AC or DC flat or touching	3 or 4 cables Three-Phase AC flat and touching or trefoil
1.5	14.5	13.5	17.5	15.5	20	18
2.5	20	18	24	21	27	25

Ambient temperature: 30°C
Conductor operating temperature: 70°C
The above table is in accordance with Table 4D1A of the 17th Edition of IEE Wiring Regulations.

Voltage Drop

Nominal cross sectional area mm²	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 method C (clipped direct)		Reference methods A and B (enclosed in conduit or trunking	Reference method C (clipped direct)		
			Cable touching	Cable spaced		Cable touching trefoil	Cable touching flat	Cable spaced* flat
1.5	28	29	29	29	25	25	25	25
2.5	18	18	18	18	15	15	15	15

Conductor operating temperature: 70°C

*Spacings larger than one cable diameter will result in a larger voltage drop.

The above table is in accordance with Table 4D1B of the 17th Edition of IEE Wiring Regulations.

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 17th Edition of IEE Wiring Regulations

De-rating factors:

For Ambient Air Temperatures other than 30°C

Air temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C
De-rating factor	1.03	1.0	0.94	0.87	0.79	0.71	0.61