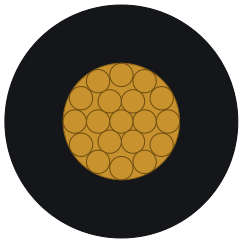
6491X / H07V-R Single Core PVC Cable

SORIVO Product Series: **single core wiring cable** | 450/750 V | Class 2 stranded | PVC Type TI1 | BS EN 50525-2-31



- PVC insulation, Type TI1 — 0.7 mm at 1.5 mm²
- Class 2 stranded plain copper, IEC 60228

APPLICATION

Single-core non-sheathed cable for wiring inside conduit, trunking and enclosures: lighting and power final circuits, control panels, switchgear and machine wiring where the cable is protected by the enclosure. The UK designation 6491X and the European designation H07V-R are the same product — Class 2 stranded, 450/750 V, PVC.

CONSTRUCTION

Conductor
Class 2 stranded plain copper, IEC 60228

Insulation
PVC Type TI1

Cores
Single core, non-sheathed

Colour
Brown, blue, black, red, yellow, green/yellow, grey, white; violet available

ONE CABLE, THREE CLASS NUMBERS

6491X is the British designation and covers three European types by conductor class: **H07V-U** (Class 1 solid), **H07V-R** (Class 2 stranded — this datasheet) and **H07V-K** (Class 5 flexible). The designation "6491X" alone leaves the conductor class open.

STANDARDS AND STATUS

- BS EN 50525-2-31 — single core non-sheathed cables with thermoplastic PVC insulation, 450/750 V
- IEC 60228 — Class 2 stranded conductor
- IEC / EN 60332-1-2 — single vertical flame test
- CPR (EU) 305/2011 — classified to EN 13501-6, product standard EN 50575
- RoHS 2011/65/EU
- 6491X is the historic BS 6004 designation; BS 6004 is withdrawn

TECHNICAL PARAMETERS

Rated Voltage
450/750 V (U_0/U)

Conductor
Class 2 stranded plain copper

Insulation
PVC Type TI1

Conductor Temperature
+70 °C continuous; +160 °C short circuit

Min. Operating Temperature
-15 °C, fixed installation

Test Voltage
2500 V AC

Insulation Resistance
10 MΩ·km

Cross-sections
1.5–16 mm² stocked; others available

450/750 V	+70 °C	Class 2
U_0/U	PVC	IEC 60228

DIMENSIONS

Table 1 — insulation thickness and diameter range

AREA mm²	INSULATION mm	OVERALL DIAMETER mm	WEIGHT kg/km	MAX. DCR AT 20 °C Ω/km
1.5	0.7	2.7 – 3.3	23	12.1
2.5	0.8	3.3 – 4.0	35	7.41
4	0.8	3.8 – 4.6	51	4.61
6	0.8	4.3 – 5.2	71	3.08
10	1.0	5.6 – 6.7	120	1.83
16	1.0	6.4 – 7.8	170	1.15

Diameter is given as a range, not a nominal value. The product standard sets minimum and maximum overall diameters; a single nominal figure is either a tolerance the cable cannot hold or a measurement of one sample.

CURRENT-CARRYING CAPACITY

Table 2 — BS 7671 Table 4D1A, 30 °C ambient, 70 °C conductor

AREA mm²	METHOD A, SINGLE-PHASE A	METHOD B, SINGLE-PHASE A	METHOD B, THREE-PHASE A
1.5	14.5	17.5	15.5
2.5	20	24	21
4	26	32	28
6	34	41	36
10	46	57	50
16	61	76	68

These are reference values under one set of conditions, not a rating. BS 7671 applies correction factors for ambient temperature, grouping, thermal insulation and installation length. Method A is a cable in conduit within a thermally insulating wall; Method B is conduit or trunking on a wall. The same 1.5 mm² cable is 14.5 A or 17.5 A depending which one applies.

CLASS 1 OR CLASS 2

When the stranded conductor earns its price

- **Solid (Class 1)** is cheaper, marginally smaller in diameter and holds its shape in a terminal. It is also stiff, and above about 6 mm² it is awkward to pull through bends without kinking.
- **Stranded (Class 2)** pulls through conduit and trunking far more easily and seats better in larger terminals. The cost is a slightly larger diameter for the same area.
- **Flexible (Class 5)** is for a cable that moves or is terminated in a crimp. Do not substitute it where the installation is fixed and the terminal is a screw — the fine strands creep.

DESIGNATION AND CONDUCTOR CLASS

Table 3 — conductor class is part of the product

DESIGNATION	CONDUCTOR CLASS	CROSS-SECTIONS
6491X / H07V-U	Class 1 — solid	1.5–10 mm² typically
6491X / H07V-R	Class 2 — stranded	1.5–630 mm²
6491X / H07V-K	Class 5 — flexible	0.5–240 mm²
6491B / H07Z-R	Class 2 — stranded, LSZH	1.5–16 mm²

PVC contains halogen — this cable is not low-smoke and halogen-free. Where that matters — tunnels, public buildings, escape routes — the equivalent is 6491B / H07Z-R to BS EN 50525-3-41, a different compound and a different specification.

INSTALLATION

Table 4 — minimum bend radius

AREA	MINIMUM BEND RADIUS
Up to 10 mm²	3 × OD
10 to 25 mm²	4 × OD
Above 25 mm²	5 × OD

- **Fixed installation only.** Class 2 stranded is not a flex; a cable that moves will work-harden at the terminations.
- **-15 °C is the operating limit of the installed cable**, not an installation temperature — do not pull PVC at that temperature.
- The cable relies on the conduit or enclosure for mechanical protection; it has no sheath.

COMPLIANCE WORDING

- Manufactured to BS EN 50525-2-31; conductor to IEC 60228 Class 2.
- CPR: Eca to EN 13501-6 (CPR EU 305/2011); the DoP is raised for the delivered batch where the project calls for one.
- RoHS 2011/65/EU. Third-party certificates quoted where held; BASEC approval is not claimed as standard.
- EN 13501-6 classification and IEC 60332-1-2 are separate systems — one is a construction product class, the other a flame test on the cable.

Disclaimer. The information in this datasheet is for guidance only and is subject to change without notice. Dimensions and masses are nominal and subject to manufacturing tolerance; confirm against the certificate of the delivered product. This document is uncontrolled once printed or forwarded — the current revision, issued under document number SORIVO-TM-SC-001, governs. © 2026 SORIVO. All rights reserved. Current ratings are reference values from BS 7671 Table 4D1A under the conditions stated and must be corrected for ambient temperature, grouping and enclosure. Diameters are given as the standard's minimum and maximum, not as nominal values.