INDO CABLES
EVERY CONNECTION MATTERS

**PRODUCT DATASHEET**
SC UA · IEC 60502-1

**LV-27**
SHEET NO.

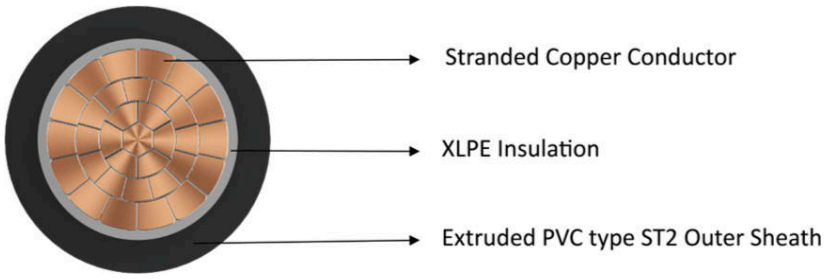
LOW VOLTAGE POWER CABLE · SC UA · SINGLE CORE UNARMOURED

# 0.6/1 (1.2) KV · SINGLE-CORE COPPER

Circular compacted or stranded copper conductor · XLPE insulated · PVC sheathed · unarmoured · conforming to IEC 60502-1

| | | | |
|---|---|---|---|
| **0.6/1** (1.2) kV | **90** °C max. | **250** °C | **3.5** kV AC |
| Nominal voltage | Operating temperature | Short-circuit temperature | Test voltage |

CABLE / SIDE VIEW · INDOCABLES sheath print




CROSS-SECTION · construction callouts

*Images not to scale. Follow table for dimensions.*

## APPLICATION

INDOCABLES LV CU IEC 60502-1 0.6/1 KV SC UA, stranded compacted copper conductor, XLPE insulated, and PVC sheathed unarmoured cable conforming to IEC 60502-1 is suitable for fixed installation such as distribution network or industrial installation. These cable cables are designed for systems with rated AC voltage 1KV (Um=1.2 KV) & ≤1.5 KV (with a maximum 1.8 KV DC) between two live conductor.

## CONSTRUCTION

| | |
|---|---|
| **Conductor** | Circular Compacted or Stranded Copper conductor as per IEC 60228, class 2 |
| **Insulation** | XLPE as per IEC 60502-1 |
| **Outer sheath** | Extruded Polyvinylchloride (ST2) or Polyethylene (ST7) or Halogen free (ST8) as per IEC 60502-1 |
| **Core identification** | Red / Yellow / Blue / Black / Grey / Natural |
| **Bending radius** | Fixed installation 12 x Overall diameter |

## OUTSTANDING FEATURES

High life

High insulation resistance

Flame retardant



Low halogen · Low smoke

UV resistant

## STANDARD FOLLOWS

IEC 60228 IEC 60502-1 IEC 60332-1-2

NOTES

The above cable is also available with EPR/HEPR insulation type.

## COMPLIANCE

| | |
|---|---|
| Conductor resistance | IEC 60228 |
| Insulation resistance | IEC 60502-1 |
| Shrinkage test | IEC 60811-503 |
| Flame retardant test | IEC 60332-1-2 |

## WEIGHT & DIMENSION DATA

| Product code | Nominal cross-sectional area mm² | Nominal thickness mm | | Overall diameter (approx.) mm | Weight (approx.) kg/km |
|---|---|---|---|---|---|
| | | Insulation | Sheath | | |
| IC-PW-01-00400-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 4 | 0.70 | 1.40 | 7.0 | 80 |
| IC-PW-01-00600-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 6 | 0.70 | 1.40 | 7.4 | 100 |
| IC-PW-01-01000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 10 | 0.70 | 1.40 | 8.3 | 150 |
| IC-PW-01-01600-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 16 | 0.70 | 1.40 | 9.0 | 220 |
| IC-PW-01-02500-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 25 | 0.90 | 1.40 | 10.4 | 300 |
| IC-PW-01-03500-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 35 | 0.90 | 1.40 | 11.4 | 400 |
| IC-PW-01-05000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 50 | 1.00 | 1.40 | 13.0 | 550 |
| IC-PW-01-07000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 70 | 1.10 | 1.40 | 14.7 | 750 |
| IC-PW-01-09500-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 95 | 1.10 | 1.50 | 16.4 | 1010 |
| IC-PW-01-12000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 120 | 1.20 | 1.50 | 18.1 | 1260 |
| IC-PW-01-15000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 150 | 1.40 | 1.60 | 20.1 | 1570 |
| IC-PW-01-18500-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 185 | 1.60 | 1.60 | 22.1 | 1920 |
| IC-PW-01-24000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 240 | 1.70 | 1.70 | 24.7 | 2460 |
| IC-PW-01-30000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 300 | 1.80 | 1.80 | 27.2 | 3060 |
| IC-PW-01-40000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 400 | 2.00 | 1.90 | 30.2 | 3810 |
| IC-PW-01-50000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 500 | 2.20 | 2.00 | 34.3 | 5040 |
| IC-PW-01-63000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 630 | 2.40 | 2.20 | 38.3 | 6330 |
| IC-PW-01-80000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 800 | 2.60 | 2.30 | 42.5 | 7980 |
| IC-PW-01-100000-CU-2XL-2XY-0660-IEC60502P1-FRLS† | 1000 | 2.80 | 2.40 | 47.0 | 9930 |

The above data is approximate & subject to manufacturing tolerance. †IEC 60502-1 items are not registered in the Indo Cables Item Master — all codes above are derived from the published code structure (01 single core · CU · 2XL XLPE · 2XY copper / XLPE / PVC sheath, unarmoured · 0660 600/1000 V · IEC60502P1 · FRLS, mirroring the FRLS option carried in the original codes) and are flagged for registration.

## ELECTRICAL CHARACTERISTICS

Current rating and maximum DC conductor resistance.

| Nominal cross-sectional area mm² | Buried direct in the ground at 20°C | | In single way ducts at 30°C | | In air at 30°C | | Max. DC conductor resistance at 20°C Ω/km |
|---|---|---|---|---|---|---|---|
| | Flat touching Amp. | Trefoil Amp. | Flat touching Amp. | Trefoil Amp. | Flat touching Amp. | Trefoil Amp. | |
| 4 | 58 | 51 | 46 | 43 | 53 | 45 | 4.61 |
| 6 | 72 | 63 | 57 | 53 | 67 | 57 | 3.08 |
| 10 | 97 | 83 | 76 | 70 | 91 | 78 | 1.83 |
| 16 | 124 | 106 | 97 | 89 | 119 | 103 | 1.15 |
| 25 | 160 | 136 | 124 | 114 | 158 | 139 | 0.727 |
| 35 | 191 | 162 | 148 | 136 | 194 | 169 | 0.524 |
| 50 | 225 | 191 | 174 | 160 | 233 | 206 | 0.387 |
| 70 | 275 | 233 | 213 | 195 | 296 | 262 | 0.268 |
| 95 | 337 | 281 | 256 | 233 | 374 | 333 | 0.193 |
| 120 | 383 | 319 | 291 | 264 | 436 | 389 | 0.153 |
| 150 | 428 | 355 | 324 | 294 | 495 | 443 | 0.124 |
| 185 | 483 | 401 | 365 | 330 | 571 | 515 | 0.0991 |
| 240 | 556 | 461 | 420 | 379 | 674 | 608 | 0.0754 |
| 300 | 622 | 515 | 469 | 422 | 770 | 697 | 0.0601 |
| 400 | 703 | 580 | 528 | 473 | 894 | 811 | 0.047 |
| 500 | 785 | 646 | 589 | 525 | 1023 | 928 | 0.0366 |
| 630 | 870 | 714 | 651 | 578 | 1162 | 1057 | 0.0283 |
| 800 | 947 | 779 | 707 | 626 | 1297 | 1185 | 0.0221 |
| 1000 | 1010 | 834 | 751 | 668 | 1417 | 1307 | 0.0176 |

Maximum conductor temperature **90°C** · Ambient air temperature **30°C** · Ground temperature **20°C** · Depth of laying **750 mm** · Thermal resistivity of soil **1.5 Km/W**

Source heads this current-rating table “De-Rating Factor” and sets its column labels as a single merged block; column values are reproduced exactly as written, with the arrangement sub-heads read as flat touching / trefoil. Flagged for check.

## DE-RATING FACTOR

**Current rating de-rating factors for other than 30°C ambient air temperature.**

| Air temperature | 20 | 25 | 35 | 40 | 45 | 50 | 55 | 60 |
|---|---|---|---|---|---|---|---|---|
| De-rating factor | 1.08 | 1.04 | 0.96 | 0.91 | 0.87 | 0.82 | 0.76 | 0.71 |

**Current rating de-rating factors for other than 20°C ground temperature.**

| Ground temperature | 10 | 15 | 25 | 30 | 35 | 40 | 45 | 50 |
|---|---|---|---|---|---|---|---|---|
| De-rating factor | 1.07 | 1.04 | 0.96 | 0.93 | 0.89 | 0.85 | 0.8 | 0.76 |

**Current rating de-rating factors for other than 30°C ground temperature for cables in ducts.**

| Ground temperature | 15 | 25 | 35 | 40 | 45 | 50 |
|---|---|---|---|---|---|---|
| De-rating factor | 1.12 | 1.04 | 0.96 | 0.91 | 0.87 | 0.82 |

Source gives the duct table six reference temperatures (15–50°C) against eight for the other two tables, and heads it “other than 30°C ground temperature” while the stated ground condition is 20°C — reproduced as written, flagged for check.

## OUR ACCREDITATIONS & APPROVAL

**ISO 9001**
Cert. 99 100 22646 (TÜV SÜD)

**ISI**
Bureau of Indian Standards · CM/L 6200267409

**RoHS**
Compliant

**REACH**
Compliant

**Make in India**
Manufactured in India