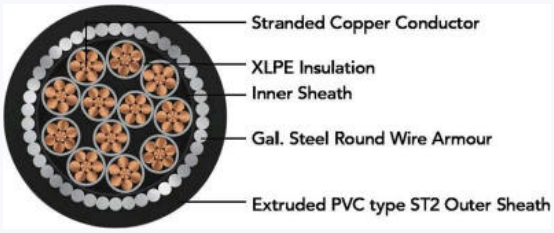
MULTICORE CONTROL CABLE · XLPE · STEEL WIRE ARMOURED · IEC 60502-1

INDOCABLES LV 2.5 CU IEC 60502-1 0.6/1 KV MC SWA CONTROL CABLE, 0.6/1 (1.2) KV AC



Images not to scale. Follow table for dimensions

APPLICATION

INDOCABLES LV 2.5 CU IEC 60502-1 0.6/1 KV MC SWA, stranded compacted copper conductor, XLPE insulated, and PVC sheathed armoured cable confirming 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

01 **Conductor:** Stranded Copper conductor as per IEC 60228, class 2

02 **Insulation:** XLPE as per IEC 60502-1

03 **Inner covering:** Extruded or Lapped PVC

04 **Armouring:** Galvanised steel wire armoured (SWA)

CHARACTERISTICS

VOLTAGE RATING	Nominal Voltage: 0.6/1 (1.2) kV
OPERATION TEMPERATURE	Max. operating temperature up to 90°C
SHORT CIRCUIT TEMPERATURE	Max. 250°C
TEST VOLTAGE	3.5kV AC
CORE IDENTIFICATION	2 Core Red, Black 3 Core Red, Yellow, Black 4 Core Red, Yellow, Blue, Black 5 Core Red, Yellow, Blue, Black, Grey

05 **Outer Sheath:** Extruded Polyvinylchloride (ST2) or Polyethylene (ST7) or Halogen free (ST8) as per IEC 60502-1

6 Core & above	●	Grey with number printing
BENDING RADIUS		Fixed installation 12 x Overall diameter

OUTSTANDING FEATURES

- HIGH LIFE
- HIGH INSULATION RESISTANCE
- FLAME RETARDANT
- LOW SMOKE
- UV RESISTANT

STANDARD FOLLOWS

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

COMPLIANCE

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

ACCREDITATIONS & APPROVAL

ISI · ISO 9001 · Make in India

CM/L 6200267409

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

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TABLE 1 WEIGHT AND DIMENSION DATA

PRODUCT CODE	NUMBER OF CORES No.	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL THICKNESS INSULATION mm	NOMINAL THICKNESS INNER COVERING mm	NOMINAL THICKNESS SHEATH mm	NOMINAL DIAMETER ARMOURING WIRE (APPROX.) mm	NOMINAL DIAMETER OVERALL (APPROX.) mm	WEIGHT (APPROX.) Kg/Km
IC-CT-02-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	2	2.5	0.70	1.00	1.80	0.80	14.1	375
IC-CT-03-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	3	2.5	0.70	1.00	1.80	0.80	14.7	425
IC-CT-04-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	4	2.5	0.70	1.00	1.80	0.80	15.6	475
IC-CT-05-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	5	2.5	0.70	1.00	1.80	1.25	17.4	600
IC-CT-06-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	6	2.5	0.70	1.00	1.80	1.25	18.5	680
IC-CT-07-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	7	2.5	0.70	1.00	1.80	1.25	18.5	710
IC-CT-08-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	8	2.5	0.70	1.00	1.80	1.25	20.0	790
IC-CT-09-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	9	2.5	0.70	1.00	1.80	1.25	21.2	870
IC-CT-10-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	10	2.5	0.70	1.00	1.80	1.25	21.9	930
IC-CT-12-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	12	2.5	0.70	1.00	1.80	1.60	23.2	1100
IC-CT-14-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	14	2.5	0.70	1.00	1.80	1.60	24.0	1210
IC-CT-16-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	16	2.5	0.70	1.00	1.80	1.60	25.0	1320
IC-CT-19-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	19	2.5	0.70	1.00	1.80	1.60	26.1	1450
IC-CT-21-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	21	2.5	0.70	1.00	1.80	1.60	27.2	1570
IC-CT-24-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	24	2.5	0.70	1.00	1.90	1.60	29.7	1770
IC-CT-27-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	27	2.5	0.70	1.00	1.90	1.60	30.2	1880
IC-CT-30-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	30	2.5	0.70	1.00	1.90	1.60	31.1	2010
IC-CT-33-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	33	2.5	0.70	1.00	1.90	1.60	32.1	2150
IC-CT-37-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	37	2.5	0.70	1.00	2.00	1.60	33.4	2330
IC-CT-44-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	44	2.5	0.70	1.20	2.10	2.00	38.2	3000
IC-CT-52-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	52	2.5	0.70	1.20	2.20	2.00	39.8	3330
IC-CT-61-00250-CU-2XL-2XWY-0660-IEC60502P1-FRLS	61	2.5	0.70	1.20	2.20	2.00	41.9	3700

The above data is approximate & subject to manufacturing tolerance.

Product codes follow the Indo Cables product-code structure: IC – LINE – CORES – SIZE – CONDUCTOR – INSULATION – DESIGNATION – VOLTAGE – STANDARD – OPTION. 2XWY denotes XLPE insulation, round steel wire armour and PVC sheath; 0660 the 600/1000 V grade; FRLS the flame-retardant low-smoke sheath option. No IEC 60502-1 item exists in the Item Master register: all 22 codes on this sheet are derived from the code structure and are pending entry.

TABLE 2 ELECTRICAL PARAMETER

Current rating and maximum DC conductor resistance.

NOMINAL CROSS SECTIONAL AREA mm²	NUMBER OF CORES No.	MAX. DC CONDUCTOR RESISTANCE AT 20°C Ω/km	CURRENT RATING	
			In Ground at 20°C Amp.	In Air at 30°C Amp.
1.5	2	7.41	44	39.6
1.5	3	7.41	37	33
1.5	4	7.41	37	33
1.5	5	7.41	37	33
1.5	6	7.41	33.5	30
1.5	7	7.41	29	25
1.5	8	7.41	25	22
1.5	9	7.41	25	22
1.5	10	7.41	25	22
1.5	12	7.41	21.6	20
1.5	14	7.41	21.6	20
1.5	16	7.41	19	17.6
1.5	19	7.41	19	17.6
1.5	21	7.41	17	15
1.5	24	7.41	17	15
1.5	27	7.41	15	14
1.5	30	7.41	15	14
1.5	33	7.41	15	14
1.5	37	7.41	15	14
1.5	44	7.41	13	12
1.5	52	7.41	13	12
1.5	61	7.41	13	12

MAXIMUM CONDUCTOR TEMPERATURE	AMBIENT AIR TEMPERATURE	GROUND TEMPERATURE	DEPTH OF LAYING	THERMAL RESISTIVITY OF SOIL
90°C	30°C	20°C	750 mm	1.5 K.m/W

TABLE 3 DE-RATING FACTORS

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

AIR TEMPERATURE °C	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 °C	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

FLAGGED FOR CONFIRMATION

01 No row on this sheet is in the register. The Item Master holds 6,461 items across IS 7098, IS 1554, IS 17505, IS 694, BS 7846, EN 50288-7 and EN 50618 — none on IEC 60502-1, and every one of its 672 control-cable items is at 1100 V. All 22 codes are derived from the code structure and need typed rows before these items go ACTIVE.

02 Every old code on the source sheet reads …XPWS2FRLSIE60502P1 — for example CTC02C2.5XPWS2FRLSIE60502P1. The register's value for IEC 60502-1 is IEC60502P1, and the ST2 sheath type is carried by the 2XWY designation (XLPE, round steel wire armour, PVC sheath). The sheath alternatives named in Construction — ST7 polyethylene and ST8 halogen-free — would each need their own designation and would change the code.

03 The electrical-parameter table reads 1.5 mm² in the cross-sectional-area column on all 22 rows, while this is the 2.5 mm² sheet. The resistance printed, 7.41 Ω/km, is the IEC 60228 class 2 value for 2.5 mm², so the area column looks carried over from the 1.5 mm² sheet. Reproduced as written; confirm the column.

04 Three of the core counts on this sheet are absent from the CORES block on tab 5 REF TABLES: 09, 21 and 33. They must be typed into that block before the workbook can build these codes.

05 6-core and 7-core carry the same nominal overall diameter, 18.5 mm, as do 12-core and 14-core armour wires and several sheath thicknesses. Reproduced as written.

06 The source sheet carried a NABL laboratory mark under Our Accreditations and an FQC (First Quality Certification) mark under Approval. Both have been removed and replaced with the ISI mark and the ISO 9001 badge, printed on every sheet. No Indian Standard governs this product: CM/L 6200267409 is the register's control-cable licence against IS 7098 Part 1 and does not certify this cable to IEC 60502-1. Confirm the correct licence, or hide the line from Tweaks.

07 The supplied icon set has no low-halogen icon. That tile is a labelled placeholder at icon size, awaiting an illustrated icon in the house style.

08 The ISO 9001 mark is a 52 × 53 px crop from a supplied screenshot and prints well below the resolution a 300 dpi sheet needs; supply a vector or print-resolution file. No RoHS or REACH mark is printed: no control-cable source sheet claims either, so the marks would be an unsupported compliance claim. Confirm whether the range is RoHS and REACH certified and supply those logo files if it is. The Make in India mark is a 76 × 39 px crop from a supplied screenshot and prints at roughly a quarter of the resolution a 300 dpi sheet needs; supply a print-resolution file or hold the mark off the sheet. The reference header shows a lockup carrying the tagline EVERY CONNECTION MATTERS. No supplied logo file contains it and the design system has no confirmed tagline, so the header prints the stacked lockup alone; supply that lockup, or confirm the tagline, to set it.