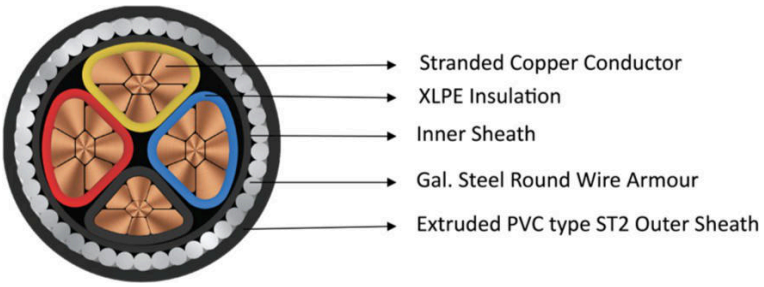
LOW VOLTAGE POWER CABLE · MC-3.5 SWA · 3.5-CORE COPPER WIRE ARMOURED

0.6/1 (1.2) KV AC · 3.5-CORE COPPER

Circular compacted or stranded copper conductor · XLPE insulated · extruded or lapped PVC inner covering · galvanized steel wire armoured · PVC, PE or halogen-free sheathed · conforming to IEC 60502-1

0.6/1 (1.2) kV Nominal voltage	**90** °C max. Operation temperature	**250** °C Short circuit temperature	**25–630** mm² Size range, 3.5 core

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 MC-3.5 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.

CHARACTERISTICS & CONSTRUCTION

Voltage rating	Nominal voltage 0.6/1 (1.2) kV
Operation temperature	Max. operating temperature up to 90°C · Max. short circuit temperature 250°C
Conductor	Circular Compacted or Stranded Copper conductor as per IEC 60228, class 2
Insulation	XLPE as per IEC 60502-1
Inner covering	Extruded or Lapped PVC
Armouring	Galvanized steel wire armoured (SWA)
Outer sheath	Extruded Polyvinylchloride (ST2) or Polyethylene (ST7) or Halogen free (ST8) as per IEC 60502-1
Core identification	Red, Yellow, Blue, and Black
Bending radius	Fixed installation 12 x Overall diameter
Test voltage	3.5 kV AC

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`

COMPLIANCE

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

OUR ACCREDITATIONS & APPROVAL

ISI
Bureau of Indian Standards · CM/L 6200267409

ISO 9001
Cert. 99 100 22646 (TÜV SÜD)

RoHS
Compliant

REACH
Compliant

Make in India
Manufactured in India

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

WEIGHT & DIMENSION DATA

Product code	Nominal cross-sectional area mm²	Nominal thickness insulation mm	Nominal thickness inner covering mm	Nominal thickness sheath mm	Nominal diameter armouring wire mm	Overall diameter (approx.) mm	Weight (approx.) kg/km
IC-PW-3H-02500-CU-2XL-2XWY-0660-IEC60502P1-FRLS	25	0.90	1.00	1.80	1.60	24.8	1730
IC-PW-3H-03500-CU-2XL-2XWY-0660-IEC60502P1-FRLS	35	0.90	1.00	1.80	1.60	26.8	2100
IC-PW-3H-05000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	50	1.00	1.00	2.00	1.60	30.6	2400
IC-PW-3H-07000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	70	1.10	1.20	2.10	2.00	35.5	3870
IC-PW-3H-09500-CU-2XL-2XWY-0660-IEC60502P1-FRLS	95	1.10	1.20	2.30	2.00	39.1	4930
IC-PW-3H-12000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	120	1.20	1.20	2.40	2.50	43.7	6380
IC-PW-3H-15000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	150	1.40	1.40	2.60	2.50	48.5	7620
IC-PW-3H-18500-CU-2XL-2XWY-0660-IEC60502P1-FRLS	185	1.60	1.40	2.70	2.50	52.8	9160
IC-PW-3H-24000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	240	1.70	1.60	2.90	2.50	58.5	11410
IC-PW-3H-30000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	300	1.80	1.60	3.10	2.50	63.8	13780
IC-PW-3H-40000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	400	2.00	1.60	3.40	3.15	71.5	18190
IC-PW-3H-50000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	500	2.20	1.80	3.70	3.15	80.6	22410
IC-PW-3H-63000-CU-2XL-2XWY-0660-IEC60502P1-FRLS	630	2.40	1.80	3.90	3.15	88.4	27400

The above data is approximate & subject to manufacturing tolerance. Codes read 3H = 3.5 core · CU · 2XL XLPE · 2XWY copper / XLPE / round steel wire armour / PVC sheath · 0660 = 600/1000 V · IEC 60502-1 · FRLS.

† IEC 60502-1 items are not registered in the Indo Cables Item Master — every code above is derived from the published code structure and 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 Amp.	In single way Ducts at 30°C Amp.	In air at 30°C Amp.	Maximum DC conductor resistance at 20°C Ω/km
25	132	122	131	0.727
35	158	146	162	0.524
50	187	173	197	0.387
70	229	211	249	0.268
95	274	252	307	0.193
120	310	284	352	0.153
150	347	317	402	0.124
185	391	357	464	0.0991
240	451	409	550	0.0754
300	507	456	631	0.0601
400	570	508	728	0.047
500	640	562	836	0.0366
630	714	616	957	0.0283

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 Km/W

DE-RATING FACTOR

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

Air temperature	20°C	25°C	35°C	40°C	45°C	50°C	55°C	60°C
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°C	15°C	25°C	30°C	35°C	40°C	45°C	50°C
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°C	25°C	35°C	40°C	45°C	50°C
De-rating factor	1.12	1.04	0.96	0.91	0.87	0.82

† The source duct table lists no 20°C column and none at its own 30°C base, while the buried table is based on 20°C — reproduced as written, flagged for check.