INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
MC-3.5 SFA · IEC 60502-1

LV-23
SHEET NO.

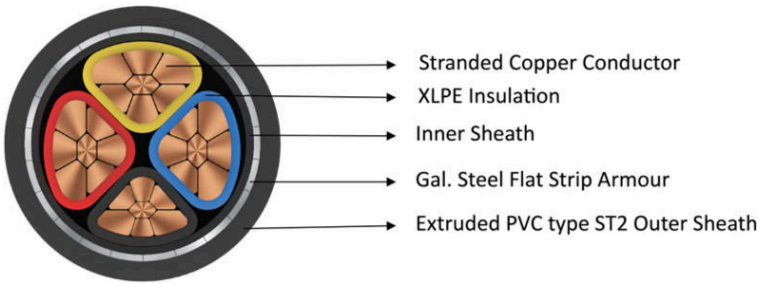
LOW VOLTAGE POWER CABLE · MC-3.5 SFA · FLAT STRIP ARMOURED

0.6/1 (1.2) KV AC · 3.5-CORE COPPER

Stranded compacted copper · XLPE insulated · PVC inner covering · galvanized flat strip armoured · PVC sheathed · manufactured to IEC 60502-1

0.6/1 (1.2) kV Nominal voltage · AC	**+90** °C Max. operating temperature	**250** °C Max. short-circuit temperature	**3.5** kV AC 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 MC-3.5 SFA, 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

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 Flat Strip armoured (FSA)
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	3.5kV 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`

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WEIGHT & DIMENSION DATA

Product code	Nominal cross-sectional area mm²	Nominal thickness mm			Armouring dimension mm	Overall diameter (approx.) mm	Weight (approx.) kg/km
		Insulation	Inner covering	Sheath			
IC-PW-3H-02500-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	25	0.90	1.00	1.70	4 x 0.20	21.8	1230
IC-PW-3H-03500-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	35	0.90	1.00	1.70	4 x 0.20	23.8	1530
IC-PW-3H-05000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	50	1.00	1.00	1.90	4 x 0.20	27.6	2140
IC-PW-3H-07000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	70	1.10	1.20	2.00	4 x 0.20	31.7	2910
IC-PW-3H-09500-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	95	1.10	1.20	2.20	4 x 0.50	35.9	4070
IC-PW-3H-12000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	120	1.20	1.20	2.30	4 x 0.50	39.5	5080
IC-PW-3H-15000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	150	1.40	1.40	2.40	4 x 0.50	44.1	6130
IC-PW-3H-18500-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	185	1.60	1.40	2.60	4 x 0.50	48.6	7540
IC-PW-3H-24000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	240	1.70	1.60	2.80	4 x 0.50	54.4	9570
IC-PW-3H-30000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	300	1.80	1.60	3.00	4 x 0.50	59.6	11770
IC-PW-3H-40000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	400	2.00	1.60	3.20	4 x 0.50	65.8	15160
IC-PW-3H-50000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	500	2.20	1.80	3.50	4 x 0.50	74.9	18970
IC-PW-3H-63000-CU-2XL-2XFY-1100-IEC60502P1-FRLS†	630	2.40	1.80	3.80	4 x 0.80	83.5	24160

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 (3H 3.5-core · Cu · 2XL XLPE · 2XFY flat-strip-armoured designation · 1100 · IEC60502P1 · FRLS sheath, mirroring the original codes) and are flagged for registration.

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ELECTRICAL CHARACTERISTICS

Current ratting 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 **90°C** | Ambient air temperature **30°C** | Ground temperature **20°C** | Depth of laying **750 mm**

Thermal resistivity of soil **1.5 Km/W**

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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.

NOTES

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

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

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