INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
MC-3 UA · IEC 60502-1

LV-35
SHEET NO.

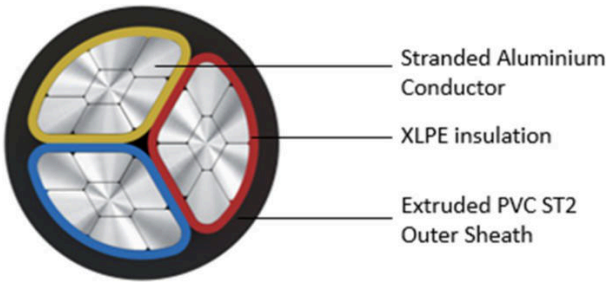
LOW VOLTAGE POWER CABLE · LV AL IEC 60502-1 · 3 CORE UNARMOURED

0.6/1 (1.2) KV · 3 CORE ALUMINIUM

Stranded compacted aluminium conductor · XLPE insulated · unarmoured · PVC sheathed 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 AL IEC 60502-1 0.6/1 KV MC-3 UA, stranded compacted aluminium conductor, XLPE insulated, and PVC sheathed unarmoured 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 Aluminium conductor as per IEC 60228, class 2
Insulation	XLPE as per IEC 60502-1
Inner covering	Extruded or Lapped PVC §
Outer sheath	Extruded Polyvinylchloride (ST2) or Polyethylene (ST7) or Halogen free (ST8) as per IEC 60502-1
Core identification	Red, Yellow, and Black
Bending radius	Fixed Installation: 12 x Overall diameter

§ The source lists an inner covering on a cable it designates unarmoured (MC-3 UA) — reproduced as written, flagged for check.

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

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

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WEIGHT & DIMENSION DATA

Product code	Nominal cross-sectional area mm²	Nominal insulation thickness mm	Nominal sheath thickness mm	Overall diameter (approx.) mm	Weight (approx.) kg/km
IC-PW-03-00400-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	4	0.70	1.30	13.2	180
IC-PW-03-00600-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	6	0.70	1.40	14.6	220
IC-PW-03-01000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	10	0.70	1.40	16.6	280
IC-PW-03-01600-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	16	0.70	1.50	18.7	370
IC-PW-03-02500-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	25	0.90	1.50	17.2 ‡	380
IC-PW-03-03500-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	35	0.90	1.60	19.3	480
IC-PW-03-05000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	50	1.00	1.70	22.4	670
IC-PW-03-07000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	70	1.10	1.90	25.9	910
IC-PW-03-09500-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	95	1.10	2.00	28.9	1160
IC-PW-03-12000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	120	1.20	2.10	31.8	1440
IC-PW-03-15000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	150	1.40	2.20	35.5	1780
IC-PW-03-18500-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	185	1.60	2.40	39.6	2200
IC-PW-03-24000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	240	1.70	2.50	44.1	2770
IC-PW-03-30000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	300	1.80	2.70	48.7	3420
IC-PW-03-40000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	400	2.00	3.00	54.4	4270
IC-PW-03-50000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	500	2.20	3.20	61.8	5580
IC-PW-03-63000-AL-2XL-A2XY-1100-IEC60502P1-FRLS †	630	2.40	3.40	68.7	6940

The above data is approximate & subject to manufacturing tolerance. Codes read 03 = 3 core · AL · 2XL XLPE · A2XY unarmoured, PVC sheathed · 1100 V grade · IEC 60502-1 · FRLS.

† All seventeen codes are derived from the Indo Cables code structure — the Item Master carries no IEC 60502-1 rows at all, so none could be looked up. Flagged for the Item Master Steward. ‡ The source gives 25 mm² a smaller overall diameter (17.2 mm) than 16 mm² (18.7 mm) — reproduced as written, flagged for check.

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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.	Max. DC conductor resistance at 20°C Ω/km
4	38	36	35	7.41
6	50	46	46	4.61
10	62	57	59	3.08
16	80	74	76	1.91
25	103	95	102	1.2
35	123	113	125	0.868
50	145	134	152	0.641
70	177	164	193	0.443
95	213	196	238	0.32
120	241	222	274	0.253
150	269	248	312	0.206
185	305	281	362	0.164
240	353	324	431	0.125
300	399	364	497	0.1
400	454	412	579	0.0778
500	516	463	673	0.0605
630	585	518	783	0.0469

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**

The source splits this table across two pages with a repeated header; the seventeen rows are reproduced here as one run. Soil thermal resistivity is printed “1.5 Km/W” in the source — reproduced as written, flagged for check (the IEC unit is K·m/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 captions the duct table “other than 30°C ground temperature” while the buried-cable table above it reads 20°C, and the duct row carries six columns against the other tables’ eight — reproduced as written, flagged for check.

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