INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
MC-3 SWA · IEC 60502-1

LV-48
SHEET NO.

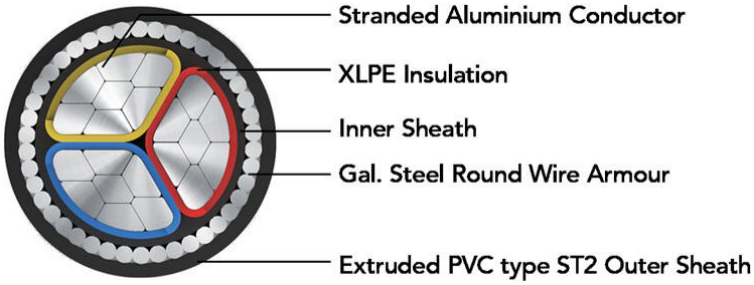
LOW VOLTAGE POWER CABLE · MC-3 SWA · THREE-CORE ALUMINIUM ARMOURED

0.6/1 (1.2) KV AC · 3-CORE ALUMINIUM

Stranded compacted aluminium conductor · XLPE insulated · PVC inner covering · galvanized steel wire armoured · PVC sheathed · conforming to IEC 60502-1

0.6/1 (1.2) kV Nominal voltage	**90** °C max. Operation temperature	**250** °C Short circuit temperature	**4–630** mm² Size range, 3 core

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 SWA, stranded compacted aluminium 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.

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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 Aluminium 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, 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

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

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WEIGHT & DIMENSION DATA

Product code	Nominal cross-sectional area mm²	Nominal thickness of insulation mm	Nominal thickness of inner covering mm	Nominal thickness of sheath mm	Armouring wire diameter mm	Overall diameter (approx.) mm	Weight (approx.) kg/km
IC-PW-03-00400-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	4	0.70	1.00	1.40	0.80	14.5	350
IC-PW-03-00600-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	6	0.70	1.00	1.50	1.25	17.3	500
IC-PW-03-01000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	10	0.70	1.00	1.50	1.25	18.5	630
IC-PW-03-01600-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	16	0.70	1.00	1.60	1.25	18.0‡	670
IC-PW-03-02500-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	25	0.90	1.00	1.70	1.60	22.8	990
IC-PW-03-03500-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	35	0.90	1.00	1.80	1.60	24.9	1180
IC-PW-03-05000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	50	1.00	1.00	1.90	1.60	28.0	1450
IC-PW-03-07000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	70	1.10	1.00	2.10	2.00	32.3	2010
IC-PW-03-09500-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	95	1.10	1.20	2.20	2.00	35.7	2440
IC-PW-03-12000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	120	1.20	1.20	2.30	2.00	38.6	2800
IC-PW-03-15000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	150	1.40	1.40	2.50	2.50	43.9	3700
IC-PW-03-18500-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	185	1.60	1.40	2.60	2.50	47.8	4300
IC-PW-03-24000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	240	1.70	1.40	2.80	2.50	52.5	5200
IC-PW-03-30000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	300	1.80	1.60	3.00	2.50	57.5	6170
IC-PW-03-40000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	400	2.00	1.60	3.30	2.50	63.2	7300
IC-PW-03-50000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	500	2.20	1.80	3.50	3.15	72.3	9850
IC-PW-03-63000-AL-2XL-A2XWY-0660-IEC 60502P1-FRLS†	630	2.40	1.80	3.80	3.15	79.4	11750

The above data is approximate & subject to manufacturing tolerance. Codes read 03 = three core · AL · 2XL XLPE · A2XWY aluminium / 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. ‡ The source gives 18.0 mm overall diameter at 16 mm², below the 18.5 mm given at 10 mm² — reproduced as written, flagged for check.

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ELECTRICAL CHARACTERISTICS

Current ratting and maximum DC conductor resistance.

Nominal cross-sectional area mm^2	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
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

Max. 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

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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

Temperatures in °C, as given in the source table.

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