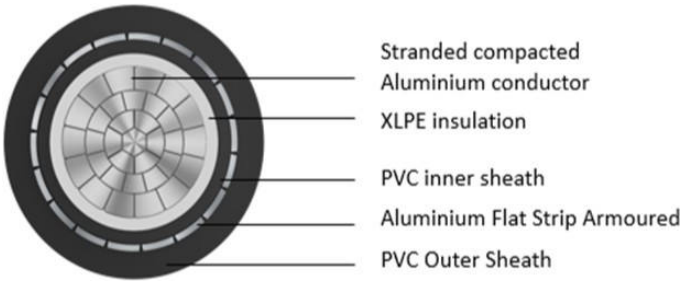
LOW VOLTAGE POWER CABLE · LV AL IEC 60502-1 · SINGLE CORE STRIP ARMOURED

0.6/1 (1.2) KV · SINGLE CORE ALUMINIUM

Stranded compacted aluminium conductor · XLPE insulated · aluminium flat strip armoured · PVC sheathed to IEC 60502-1

0.6/1 (1.2) kV Nominal voltage	**+90** °C max. Operating temperature	**250** °C 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 AL IEC 60502-1 0.6/1 KV SC SFA, 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 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
Armouring	Aluminium 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 / Black / Natural
Bending radius	Fixed Installation: 12 x Overall diameter

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

Parth Chhaperia +918073533289 **Aryan Chhaperia** +91808810785 **Neelmani Chaudhary** +91 7011005815
cables@micagroup.net

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 dimension n x mm	Overall diameter (approx.) mm	Weight (approx.) kg/km
IC-PW-01-09500-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	95	1.10	1.00	1.60	4 x 0.5	19.6	570
IC-PW-01-12000-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	120	1.20	1.00	1.60	4 x 0.5	21.3	680
IC-PW-01-15000-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	150	1.40	1.00	1.70	4 x 0.5	23.3	800
IC-PW-01-18500-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	185	1.60	1.00	1.80	4 x 0.5	25.5	950
IC-PW-01-24000-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	240	1.70	1.00	1.80	4 x 0.5	27.9	1150
IC-PW-01-30000-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	300	1.80	1.00	1.90	4 x 0.5	30.4	1400
IC-PW-01-40000-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	400	2.00	1.20	2.10	4 x 0.5	34.0	1750
IC-PW-01-50000-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	500	2.20	1.20	2.20	4 x 0.5	38.1	2230
IC-PW-01-63000-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	630	2.40	1.20	2.30	4 x 0.5	41.9	2750
IC-PW-01-80000-AL-2XL-A2XFaY-1100-IEC 60502P1-FRLS †	800	2.60	1.40	2.40	4 x 0.5	46.5	3400
IC-PW-01-100000-AL-2XL-A2XFaY-1100-IEC60502P1-FRLS †‡	1000	2.80	1.40	2.60	4 x 0.5	51.2	4180

The above data is approximate & subject to manufacturing tolerance. Codes read 01 = single core · AL · 2XL XLPE · A2XFaY aluminium strip armour, PVC sheath · 1100 V grade · IEC 60502-1 · FRLS.

† All eleven codes are derived from the Indo Cables code structure — the Item Master carries no IEC 60502-1 rows, so none could be looked up. Flagged for the Item Master Steward. ‡ The source code on the 1000 mm² row transposes its insulation letters against the other ten rows — noted, and not carried into the derived code.

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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		In single way ducts at 30°C		In air at 30°C		Max. DC conductor resistance at 20°C Ω/km
	Flat touching Amp.	Trefoil Amp.	Flat touching Amp.	Trefoil Amp.	Flat Amp.	Trefoil Amp.	
95	262	218	199	181	290	259	0.32
120	298	248	226	206	339	304	0.253
150	333	276	252	229	385	345	0.206
185	377	313	285	258	447	403	0.164
240	436	362	329	298	528	477	0.125
300	490	406	369	333	606	550	0.1
400	559	463	421	378	712	648	0.0778
500	635	524	476	426	826	754	0.0605
630	716	590	536	477	955	872	0.0469
800	799	657	596	528	1091	998	0.0367
1000	877	718	652	575	1229	1124	0.0291

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**

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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