INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
UL 4703 · Type PV

RC-09
SHEET NO.

SOLAR PV WIRE · SINGLE CORE · AA8000 ALUMINIUM ALLOY · EB XLPO · HALOGEN FREE · 2000 V

INDOCABLES ALUMINIUM ALLOY SOLAR CABLE

PHOTOVOLTAIC POWER CABLE — UL 4703, 2000 V

INDO CABLES ITEM CODE

IC-SO-01-«SIZE»-AA-E2X-PV-2000-UL4703-UV-ZHFR

Size field = AWG / MCM token
Per-size item codes in the ordering table

DERIVED — NOT YET IN REGISTER

The Product Code Master holds the solar line only as tinned copper XLPO to EN 50618, 1.5 kV DC, in metric sizes. These codes are derived from the register's own code structure using conductor AA, insulation E2X, designation PV, voltage 2000, standard UL4703 and options UV and ZHFR. The register carries no AWG / MCM size vocabulary, no 2000 V grade and no UL 4703 standard — the code steward must add all three and issue item IDs before quoting or sale.

APPLICATION

INDOCABLES PV halogen free flame-retardant Aluminium Alloy conductor E-Beam crosslinked Polyolefins insulated Wire is designed to use in Outdoor Solar application as per NEC 690 in wet & dry location. The cable is rated direct burial, Sunlight resistant and weatherproof.

Figure 2 — Single core wire, stranded aluminium alloy conductor under black EB XLPO insulation.

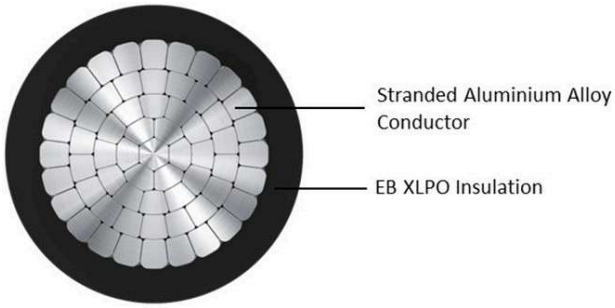

Figure 1 — Cross section: stranded aluminium alloy conductor, EB XLPO insulation.

Images not to scale. Follow table for dimensions

CHARACTERISTICS

CONSTRUCTION

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VOLTAGE RATING
Max. Rated Voltage: 2000 V
Max. Short circuit temp: 250 °C

OPERATION TEMPERATURE
Fixed: -40 °C to +90 °C

BENDING RADIUS
Fixed installation: 8–10 × D

TEST VOLTAGE
As per UL 44

CONDUCTOR
AA8000 Series Stranded Aluminium Alloy conductor as per ASTM B-801

INSULATION
Halogen free flame-retardant E-Beam crosslinked Polyolefins

CORE IDENTIFICATION
(–ve) Black, (+ve) Red

OUTSTANDING FEATURES

UV resistant

Ozone resistant

Flame retardant

High temperature resistant

Oil and gasoline resistant

Moisture resistant

STANDARD FOLLOWS

ASTM B-801 · UL 44 · UL 4703 · UL 854 · UL 1685 · CSA C22.2 No. 271

COMPLIANCE

UL 854	for USE-2
UL 44	for Type RHW-2
UL 4703	for Type PV
UL 1685	CT Flame rated (for 1/0 AWG and above)
c(UL) CSA C22.2 No. 271	RPVU90
ANSI ICEA S 95 658	NEMA WC70
FT1, FT2, FT4, VW-1	Flame test ratings
NEC NFPA 70	NEC 310, NEC Section 690.31
EPA 40 CFR part 261	for leachable lead content per TCLP
RoHS and REACH	compliant

DIMENSIONAL AND ELECTRICAL CHARACTERISTICS

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CONDUCTOR SIZE AWG/MCM	NO. OF STRANDS Nos.	CONDUCTOR DIA. mm	MAX. D.C. RESISTANCE AT 20 °C Ohm/Km	NOMINAL INSULATION THICKNESS mm	APPROX. OVERALL DIA. mm	AMPACITY IN AIR Amps	AMPACITY IN EARTH (DIRECTLY BURIED) Amps
8	7	3.4	3.52	2.15	8	60	45
6	7	4.29	2.21	2.15	8.9	85	55
4	7	5.41	1.39	2.15	10	115	75
2	7	6.81	0.875	2.15	11.4	150	100
1	19	7.59	0.693	2.66	13.2	175	115
1/0	19	8.53	0.55	2.66	14.2	205	135
2/0	19	9.55	0.436	2.66	15.2	235	150
3/0	19	10.7	0.346	2.66	16.3	270	175
4/0	19	12.1	0.274	2.66	17.7	315	205
250	37	13.2	0.232	3.04	19.6	355	230
300	37	14.5	0.194	3.04	20.9	395	260
350	37	15.6	0.166	3.04	22	445	280
400	37	16.7	0.145	3.04	23.1	480	305
500	37	18.7	0.116	3.04	26	545	350
600	61	20.7	0.0967	3.43	28.9	615	385
700	61	22.3	0.0829	3.43	30.5	670	425
750	61	23.1	0.0774	3.43	31.3	700	435
800	61	23.8	0.0725	3.43	32	725	445
900	61	25.4	0.0645	3.43	33.6	790	480
1000	61	26.9	0.058	3.43	35.1	845	500

*Above data is approximate and subject to standard manufacturing tolerance.
*The above Current Ratings is based on NEC Table No. 310.16 at ambient temperature of 30 °C

DE-RATING FACTOR

Current de-rating factors at various ambient temperature.

AMBIENT TEMPERATURE °C	21–25	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–70	71–80
CORRECTION FACTOR	1.04	1	0.96	0.91	0.87	0.82	0.76	0.71	0.58	0.41

ORDERING — INDO CABLES PRODUCT CODES

INDO CABLES
+91 80 3533 3289
+91 80 3831 0785
+91 70 1100 5815

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Single core, AA8000 aluminium alloy, halogen free flame retardant E-beam crosslinked polyolefin insulated, unsheathed, unarmoured, 2000 V, to UL 4703. Codes below are derived from the register's code structure — line SO, cores 01, conductor AA, insulation E2X, designation PV, options UV and ZHFR in alphabetical order. The size tokens are proposed: `A····` for AWG gauges, `AO···` for aught sizes, `M····` for MCM.

SIZE AWG/MCM	DERIVED ITEM CODE
8	IC-SO-01-A0008-AA-E2X-PV-2000-UL4703-UV-ZHFR
6	IC-SO-01-A0006-AA-E2X-PV-2000-UL4703-UV-ZHFR
4	IC-SO-01-A0004-AA-E2X-PV-2000-UL4703-UV-ZHFR
2	IC-SO-01-A0002-AA-E2X-PV-2000-UL4703-UV-ZHFR
1	IC-SO-01-A0001-AA-E2X-PV-2000-UL4703-UV-ZHFR
1/0	IC-SO-01-AO001-AA-E2X-PV-2000-UL4703-UV-ZHFR
2/0	IC-SO-01-AO002-AA-E2X-PV-2000-UL4703-UV-ZHFR
3/0	IC-SO-01-AO003-AA-E2X-PV-2000-UL4703-UV-ZHFR
4/0	IC-SO-01-AO004-AA-E2X-PV-2000-UL4703-UV-ZHFR
250	IC-SO-01-M0250-AA-E2X-PV-2000-UL4703-UV-ZHFR
300	IC-SO-01-M0300-AA-E2X-PV-2000-UL4703-UV-ZHFR
350	IC-SO-01-M0350-AA-E2X-PV-2000-UL4703-UV-ZHFR
400	IC-SO-01-M0400-AA-E2X-PV-2000-UL4703-UV-ZHFR
500	IC-SO-01-M0500-AA-E2X-PV-2000-UL4703-UV-ZHFR
600	IC-SO-01-M0600-AA-E2X-PV-2000-UL4703-UV-ZHFR
700	IC-SO-01-M0700-AA-E2X-PV-2000-UL4703-UV-ZHFR
750	IC-SO-01-M0750-AA-E2X-PV-2000-UL4703-UV-ZHFR
800	IC-SO-01-M0800-AA-E2X-PV-2000-UL4703-UV-ZHFR
900	IC-SO-01-M0900-AA-E2X-PV-2000-UL4703-UV-ZHFR
1000	IC-SO-01-M1000-AA-E2X-PV-2000-UL4703-UV-ZHFR

No item IDs are shown because none of these twenty items exists in the Product Code Master yet. The register's next free ID for this item class is IC1006462. UL 4703 is not an IS standard, so no BIS CM/L number applies to these items.

CERTIFICATIONS & COMPLIANCE

ISO 9001
Cert. 99 100 22646 (TÜV SÜD)

ISI
Bureau of Indian Standards

RoHS
Compliant

REACH
Compliant

Make in India
Manufactured in India

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