

SOLAR DC CABLE · TWO SINGLE CORES TWISTED · ALUMINIUM · EB XLPO INSULATED & SHEATHED · HALOGEN FREE

INDOCABLES SOLAR AS/NZS 5000 XLPO — TWISTED

PHOTOVOLTAIC POWER CABLE, HALOGEN FREE, FLAME RETARDANT — AS/NZS 5000.1

INDO CABLES ITEM CODE

IC-S0-02-«SIZE»-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR

Size field = sq.mm × 100

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, in sizes up to 240 sq.mm. These codes are derived from the register's own code structure using conductor AL, insulation E2X, designation A2XH, voltage 1500 and options UV and ZHFR — all registered values. Standard ASNZS5000P1 is not yet in tab 5 and must be typed there. The register carries no reference value for a twisted construction. Item IDs and ACTIVE status must be issued by the code steward before quoting or sale.

APPLICATION

INDOCABLES low smoke, halogen free, two single cores twisted cable with electron beam cross linked insulation and sheath is designed to use for Photovoltaic installation at the Direct current side. These cables are suitable for permanent outdoor use under variable climatic condition.



Figure 2 — Two single cores twisted, cut back to the stranded aluminium conductors. Core identification black and black with red strip.

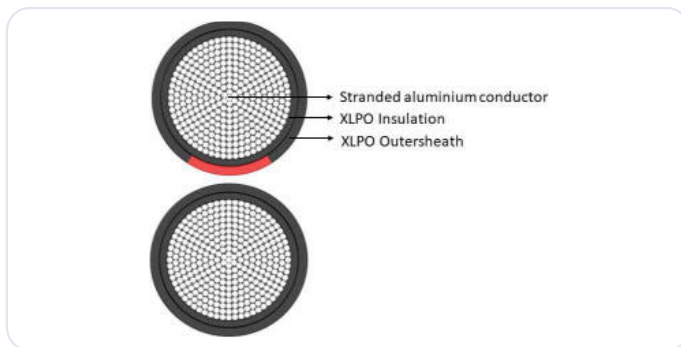


Figure 1 — Cross section of both cores: stranded aluminium conductor, XLPO insulation, XLPO outer sheath.

Images not to scale. Follow table for dimensions

CHARACTERISTICS

CONSTRUCTION

INDO CABLES

91807833289

91808810785

917011005815

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VOLTAGE RATING

Nominal Voltage: 1500 V DC between conductors as well as conductor and earth.

Max permitted voltage: 1800 V

OPERATION TEMPERATURE

Fixed: -40 °C to +120 °C

Maximum conductor temperature: +120 °C

BENDING RADIUS

For fixed installation: > 6 D

TEST VOLTAGE

6.5 kV AC 50 Hz

CONDUCTOR

Aluminium conductor as per IEC 60228, class 2 / AS-NZS 5000.1

INSULATION

E-Beam cross linked halogen free and flame-retardant compound (XLPO). Colour: Black

SHEATH

E-Beam cross linked halogen free and flame-retardant compound (XLPO)

CORE IDENTIFICATION

Black & Black with red Strip

OUTSTANDING FEATURES


Halogen free



Electron beam
cross-linked



Flame retardant



High life



UV, ozone resistant



Hydrolysis resistant



High temperature
resistant

STANDARD FOLLOWS

IEC 60228

AS/NZS 5000.1

AS/NZS 3808

EN 50618

IEC 60332-1-2

UL 4703

IEC 62930

COMPLIANCE

Fire Performance

EN 60332-1

Smoke Emission

IEC 61034 / EN 50268-2

Halogen free material

EN 50267-2-1 / IEC 60754-2

Toxicity

EN 50305

Resistance to ozone

EN 50396

Weathering / UV

HD 605/A1 or DIN 53667

Life Expectancy

IEC 60216

DIMENSIONS AND WEIGHTS

SOLAR DC CABLE • TWO SINGLE CORES TWISTED • ALUMINIUM • EB XLPO INSULATED & SHEATHED • HALOGEN FREE

NO. OF CORES × CORE CROSS SECTIONAL AREA No. × mm ²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	APPROX. OVERALL DIAMETER mm	WEIGHT (APPROX.) kg/km
2 × 120	1.2	1.5	18.7 × 37.4	1050
2 × 150	1.4	1.6	20.8 × 41.6	1300
2 × 185	1.6	1.6	22.8 × 45.6	1570
2 × 240	1.7	1.7	25.7 × 51.4	2010
2 × 300	1.8	1.8	28.3 × 56.6	2460
2 × 400	2.0	1.9	32.1 × 64.2	3200
2 × 500	2.2	2.0	35.6 × 71.2	3950
2 × 630	2.4	2.2	40.7 × 81.4	5210

ELECTRICAL CHARACTERISTICS

NO. OF CORES × SIZE No. × mm ²	MAX. DC RESISTANCE AT 20 °C Ω/km	MAX. AC RESISTANCE AT 90 °C Ω/km	APPROX. CABLE CAPACITANCE mfd/km	APPROX. CABLE REACTANCE Ohm/km	IMPEDANCE OF CABLE AT 90 °C Ohm/km	CURRENT RATING CAPACITY Amp.		
						Two cables touching in air unenclosed, spaced from surface	Two cable touching in air on surface	Two cable touching in enclosure, underground
2 × 120	0.253	0.325	0.81	0.0982	0.339	305	253	252
2 × 150	0.206	0.265	0.77	0.0965	0.282	350	291	283
2 × 185	0.164	0.212	0.75	0.0945	0.231	406	340	329
2 × 240	0.125	0.162	0.81	0.0918	0.186	485	408	388
2 × 300	0.100	0.130	0.85	0.089	0.158	562	473	440
2 × 400	0.0778	0.103	0.87	0.089	0.135	660	559	516
2 × 500	0.0605	0.0813	0.9	0.0869	0.118	772	656	590
2 × 630	0.0469	0.0649	0.92	0.0853	0.107	904	772	695

DE-RATING FACTOR

Current Ratings are based on AS/NZS 3008 std, Continuous Conductor Temperature at 90 °C & Ambient temperature at 40 °C in Air.

AMBIENT TEMPERATURE OTHER THAN 40 °C

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TEMPERATURE °C	15	20	25	30	35	45	50	55	60	65	70	75	80	85
FACTOR	1.26	1.20	1.15	1.10	1.05	0.94	0.88	0.81	0.73	0.65	0.57	0.47	0.34	0.19

ORDERING — INDO CABLES PRODUCT CODES

Two single cores twisted, aluminium, electron beam cross-linked halogen free flame retardant XLPO insulated and XLPO sheathed, unarmoured, 1.5 kV DC, to AS/NZS 5000.1. Codes below are derived from the register's code structure — line S0, cores 02, conductor AL, insulation E2X, designation A2XH, voltage 1500, options UV and ZHFR in alphabetical order.

SIZE MM ²	DERIVED ITEM CODE	NEAREST REGISTERED ITEM
2 × 120	IC-S0-02-12000-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR	IC1006362 · TC / XLPO / EN 50618
2 × 150	IC-S0-02-15000-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR	IC1006363 · TC / XLPO / EN 50618
2 × 185	IC-S0-02-18500-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR	IC1006364 · TC / XLPO / EN 50618
2 × 240	IC-S0-02-24000-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR	IC1006365 · TC / XLPO / EN 50618
2 × 300	IC-S0-02-30000-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR	none — size not on line S0
2 × 400	IC-S0-02-40000-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR	none — size not on line S0
2 × 500	IC-S0-02-50000-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR	none — size not on line S0
2 × 630	IC-S0-02-63000-AL-E2X-A2XH-1500-ASNZS5000P1-UV-ZHFR	none — size not on line S0

No item IDs are shown because none of these eight items exists in the Product Code Master yet. The register's next free ID for this item class is IC1006462. AS/NZS 5000.1 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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