INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
AS/NZS 5000.1 · 1.5 kV DC

RC-16
SHEET NO.

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

INDOCABLES SOLAR AS/NZS 5000 XLPO — TWIST ANTI TERMITE

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

INDO CABLES ITEM CODE

IC-SO-02-«SIZE»-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-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 ATR, 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.

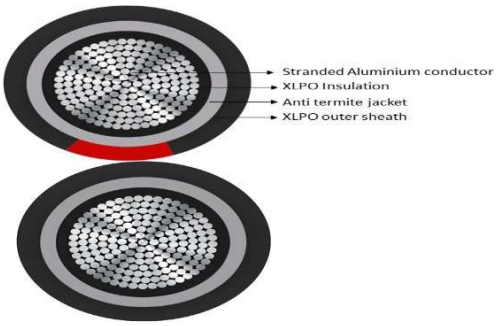

Figure 1 — Cross section of both cores: stranded aluminium conductor, XLPO insulation, anti termite jacket, XLPO outer sheath.

Images not to scale. Follow table for dimensions

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CHARACTERISTICS

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 > 15 D. For occasional moved > 25 D

TEST VOLTAGE
6.5 kV AC 50 Hz

CONSTRUCTION

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

ANTI TERMITE JACKET
Polyamide (Nylon), 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

Termite 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

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NO. OF CORES × CORE CROSS SECTIONAL AREA No. × mm²	NOMINAL INSULATION THICKNESS mm	MIN. NYLON JACKET THICKNESS mm	NOMINAL SHEATH THICKNESS mm	APPROX. OVERALL DIAMETER mm	WEIGHT (APPROX.) Kg/Km
2 × 120	1.2	0.2	1.5	20.3 x 40.6	1160
2 × 150	1.4	0.2	1.6	22.4 x 44.8	1420
2 × 185	1.6	0.2	1.6	24.4 x 48.8	1700
2 × 240	1.7	0.2	1.7	27.3 x 54.6	2160
2 × 300	1.8	0.2	1.8	29.9 x 59.8	2620
2 × 400	2.0	0.2	1.9	33.7 x 67.4	3380
2 × 500	2.2	0.2	2.0	37.2 x 74.4	4160
2 × 630	2.4	0.2	2.2	42.3 x 84.6	5440

ELECTRICAL CHARACTERISTICS

NO. OF CORES × CROSS SECTIONAL AREA No. × mm²	MAX. DC RESISTANCE AT 20 °C Ω/km	MAX. DC RESISTANCE AT 20 °C Ω/km	APPROX. CABLE CAPACITANCE mfd/km	APPROX. CABLE REACTANCE Ω/km	IMPEDANCE OF CABLE AT 90 °C Ω/km	CURRENT RATING CAPACITY Amp.		
						Two cables touching in air unenclosed from surface	Two cables touching in air on surface	Two cable cores 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, Max. Conductor Temperature at 90 °C, Ambient temperature at 40 °C in Air, Ambient temperature at 25 °C in Ground, Soil thermal resistivity 1.2 k.m/W, Depth of Laying 0.5 m.

AMBIENT AIR 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

GROUND TEMPERATURE OTHER THAN 25 °C

TEMPERATURE °C	10	15	20	30	35	40
FACTOR	1.11	1.07	1.03	0.97	0.93	0.89

ORDERING — INDO CABLES PRODUCT CODES

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

SIZE MM²	DERIVED ITEM CODE	NEAREST REGISTERED ITEM
2 × 120	IC-SO-02-12000-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-UV-ZHFR	IC1006362 · TC / XLPO / EN 50618
2 × 150	IC-SO-02-15000-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-UV-ZHFR	IC1006363 · TC / XLPO / EN 50618
2 × 185	IC-SO-02-18500-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-UV-ZHFR	IC1006364 · TC / XLPO / EN 50618
2 × 240	IC-SO-02-24000-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-UV-ZHFR	IC1006365 · TC / XLPO / EN 50618
2 × 300	IC-SO-02-30000-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-UV-ZHFR	none — size not on line SO
2 × 400	IC-SO-02-40000-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-UV-ZHFR	none — size not on line SO
2 × 500	IC-SO-02-50000-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-UV-ZHFR	none — size not on line SO
2 × 630	IC-SO-02-63000-AL-E2X-A2XH-1500-ASNZS5000P1-ATR-UV-ZHFR	none — size not on line SO

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.

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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

INDO CABLES

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