INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
AS/NZS 5000.1 · RFH

RC-11
SHEET NO.

SOLAR PV DC TWO SINGLE CORES TWISTED · ALUMINIUM · ANTI TERMITE · HALOGEN FREE · 1500 V DC

INDOCABLES SOLAR AS NZS 5000 RFH — TWIST ANTI TERMITE

PHOTOVOLTAIC POWER CABLE, HALOGEN FREE, REDUCED FIRE HAZARD — AS/NZS 5000.1

INDO CABLES ITEM CODE

IC-SO-02-«SIZE»-AL-HFI-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. These codes are derived from the register's own code structure using conductor AL, insulation HFI, designation A2XH and option blocks ATR, UV and ZHFR. Item IDs and ACTIVE status must be issued by the code steward before quoting or sale.

APPLICATION

INDOCABLES halogen free, reduced fire hazard, two single cores twisted cable with cross linked insulation 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; identification black, and black with red strip.

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

Images not to scale. Follow table for dimensions

CHARACTERISTICS

CONSTRUCTION

INDO CABLES
+91 80 3533 3289
+91 80 3310 0785
+91 70 1100 5815

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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 +90 °C
Maximum conductor temperature: +90 °C

BENDING RADIUS
For fixed installation > 15 D. For occasional moved > 25 D

TEST VOLTAGE
6.5 kV AC 50 Hz

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

INSULATION
Cross linked halogen free flame retardant material, Colour: Black

ANTI TERMITE JACKET
Polyamide (Nylon), Colour: Black

SHEATH
Reduced Fire Hazard Material

CORE IDENTIFICATION
Black & Black with red Strip

OUTSTANDING FEATURES

Halogen free

Cross-linked

High life

UV, ozone resistant

Hydrolysis resistant

Termite resistant

STANDARD FOLLOWS

- IEC 60228
- AS/NZS 5000.1
- AS/NZS 3808
- EN 50618

COMPLIANCE

Surface resistance of sheath	EN 50618
Long term resistance of insulation	EN 50618
Environmental stress crack resistance	AS/NZS 3808
Carbon black content & dispersion	AS/NZS 3808

NOTE Optional: HDPE sheath is available on request.

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 (core × pair)	WEIGHT (APPROX.) Kg/Km
2 × 120	1.2	0.2	1.5	20.3 x 40.6	1010
2 × 150	1.4	0.2	1.6	22.4 x 44.8	1250
2 × 185	1.6	0.2	1.6	24.4 x 48.8	1510
2 × 240	1.7	0.2	1.7	27.3 x 54.6	1900
2 × 300	1.8	0.2	1.8	29.9 x 59.8	2315
2 × 400	2.0	0.2	1.9	33.7 x 67.4	3010
2 × 500	2.2	0.2	2.0	37.2 x 74.4	3695
2 × 630	2.4	0.2	2.2	42.3 x 84.6	4750

ELECTRICAL CHARACTERISTICS

NO. OF CORES × CORE CROSS SECTIONAL AREA no. × mm²	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

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 km/W, Depth of Laying 0.5 m.

DE-RATING FACTOR

Current rating de-rating factors for other than 40 °C ambient air temperature.

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AMBIENT AIR TEMPERATURE °C	15	20	25	30	35	45	50	55	60	65	70	75	80	85
DE-RATING 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

Current rating de-rating factors for other than 25 °C ground temperature.

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

ORDERING — INDO CABLES PRODUCT CODES

Two single cores twisted, aluminium, cross-linked halogen free flame retardant insulated, polyamide anti-termite jacketed, reduced fire hazard 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 HFI, designation A2XH, options ATR, UV and ZHFR in alphabetical order.

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