

SOLAR PV DC CABLE · SINGLE CORE · ALUMINIUM CONDUCTOR · REDUCED FIRE HAZARD SHEATH · 1500 V DC

INDOCABLES SOLAR AS NZS 5000 RFH

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

INDO CABLES ITEM CODE

IC-S0-01-«SIZE»-AL-HFI-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. These codes are derived from the register's own code structure. Three reference values do not yet exist in it: insulation HFI, designation A2XH and standard ASNZS5000P1. Item IDs and ACTIVE status must be issued by the code steward before quoting or sale.

APPLICATION

INDOCABLES halogen free, reduced fire hazard, single core 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 — Single core; identification black, and black with red strip.

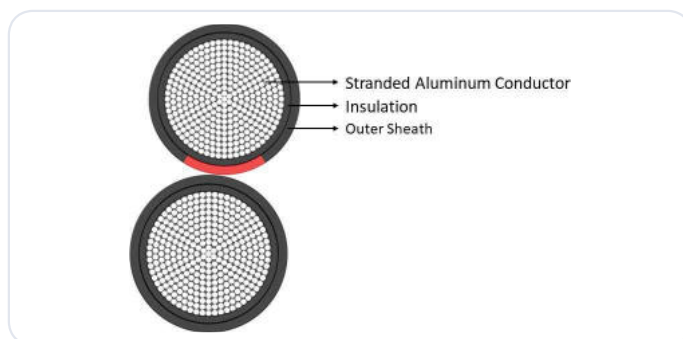


Figure 1 — Cross section: stranded aluminium conductor, insulation, outer sheath.

Images not to scale. Follow table for dimensions

CHARACTERISTICS

CONSTRUCTION

INDO CABLES

91 8075500000

91 8089107850

91 7011005815

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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

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

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. × mm ²	NOMINAL INSULATION THICKNESS mm	NOMINAL SHEATH THICKNESS mm	APPROX. OVERALL DIAMETER mm	WEIGHT (APPROX.) Kg/Km
1 × 120	1.2	1.5	18.7	455
1 × 150	1.4	1.6	20.8	570
1 × 185	1.6	1.6	22.8	690
1 × 240	1.7	1.7	25.7	885
1 × 300	1.8	1.8	28.3	1085
1 × 400	2.0	1.9	32.0	1415
1 × 500	2.2	2.0	35.6	1755
1 × 630	2.4	2.2	40.7	2270

ELECTRICAL CHARACTERISTICS

NO. OF CORES × CORE CROSS SECTIONAL AREA 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 Ωhm/km	IMPEDANCE OF CABLE AT 90 °C Ωhm/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
1 × 120	0.253	0.325	0.81	0.0982	0.339	305	253	252
1 × 150	0.206	0.265	0.77	0.0965	0.282	350	291	283
1 × 185	0.164	0.212	0.75	0.0945	0.231	406	340	329
1 × 240	0.125	0.162	0.81	0.0918	0.186	485	408	388
1 × 300	0.100	0.130	0.85	0.089	0.158	562	473	440
1 × 400	0.0778	0.103	0.87	0.089	0.135	660	559	516
1 × 500	0.0605	0.0813	0.9	0.0869	0.118	772	656	590
1 × 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.

DE-RATING FACTOR

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

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

Single core, aluminium, cross-linked halogen free flame retardant insulated, 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 S0, cores 01, conductor AL, insulation HFI, designation A2XH, options UV and ZHFR in alphabetical order.

SIZE MM ²	DERIVED ITEM CODE	NEAREST REGISTERED ITEM
1 × 120	IC-S0-01-12000-AL-HFI-A2XH-1500-ASNZS5000P1-UV-ZHFR	IC1006347 · TC / XLPO / EN 50618
1 × 150	IC-S0-01-15000-AL-HFI-A2XH-1500-ASNZS5000P1-UV-ZHFR	IC1006348 · TC / XLPO / EN 50618
1 × 185	IC-S0-01-18500-AL-HFI-A2XH-1500-ASNZS5000P1-UV-ZHFR	IC1006349 · TC / XLPO / EN 50618
1 × 240	IC-S0-01-24000-AL-HFI-A2XH-1500-ASNZS5000P1-UV-ZHFR	IC1006350 · TC / XLPO / EN 50618
1 × 300	IC-S0-01-30000-AL-HFI-A2XH-1500-ASNZS5000P1-UV-ZHFR	none — size not on line S0
1 × 400	IC-S0-01-40000-AL-HFI-A2XH-1500-ASNZS5000P1-UV-ZHFR	none — size not on line S0
1 × 500	IC-S0-01-50000-AL-HFI-A2XH-1500-ASNZS5000P1-UV-ZHFR	none — size not on line S0
1 × 630	IC-S0-01-63000-AL-HFI-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

INDO CABLES

91 80 6580289

91 80 88107850

91 7011005815