

Low Voltage Aluminium LSZH Waveform Cable



Eland Product Group: A1S

APPLICATION

A 3 phased shaped aluminium conductor with helical concentric copper neutral/earth conductors for use on IDNO adoptable networks with LSZH sheathing for internal installations.

CHARACTERISTICS

Voltage Rating Uo/U
0.6/1kV

Minimum Bending Radius during installation

95mm²: 8 x overall diameter
185mm²: 9 x overall diameter
300mm²: 10 x overall diameter

CONSTRUCTION

Conductor

Class 2 solid aluminium conductor

Insulation

XLPE (Cross-linked Polyethylene)

Separator

Binding Yarns or Tape

Bedding

Rubber

Screen

Copper Wires in helical concentric lay

Outer Sheath

LSZH (Low Smoke Zero Halogen)

Sheath Colour

● Orange

STANDARDS

BS 7870-3-50, BS 7870-1, IEC/EN 60228

Flame retardant according to IEC/EN 60332-1-2,
IEC/EN 60332-3-24

Low Smoke according to IEC/EN 61034-1/2

ISO/IEC 17025 LABORATORY TESTED

This product is subject to the Quality Assurance protocols of The Cable Lab®, an ISO/IEC 17025 accredited cable testing laboratory. Testing includes vertical flame, conductor resistance, tensile & elongation, and dimensional consistency, verified to published standards and approved product drawings.



REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab® as meeting the requirements of the BSI RoHS Trusted Kitemark™.





DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	MINIMUM AVERAGE THICKNESS OF INSULATION mm	MINIMUM THICKNESS OF INSULATION AT ANY POINT mm	MINIMUM AVERAGE THICKNESS OF OUTER SHEATH mm	MINIMUM THICKNESS OF OUTER SHEATH AT ANY POINT mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
A1S3095-LSOH	3	95	1.1	0.89	2.1	1.68	36	1980
A1S3185-LSOH	3	185	1.6	1.34	2.5	2.02	46	3520
A1S3300-LSOH	3	300	1.8	1.52	2.8	2.28	56	4810
A1S4095-LSOH	4	95	1.1	1.05	2.2	2.1	36	2300
A1S4185-LSOH	4	185	1.8	1.65	2.65	2.55	48	4200
A1S4300-LSOH	4	300	1.9	1.8	3.25	3.1	60	6100

CONDUCTORS

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM DC RESISTANCE PHASE CONDUCTOR AT 20°C ohm/km	MAXIMUM DC RESISTANCE NEUTRAL/ EARTH CONDUCTOR AT 20°C ohm/km	MAXIMUM AC RESISTANCE CONDUCTOR AT 90°C ohm/km
95	0.320	0.320	0.411
185	0.164	0.164	0.211
300	0.100	0.164	0.130

The above table is in accordance with EN 60228

CONCENTRIC NEUTRAL/EARTH CONDUCTOR

NOMINAL CROSS SECTIONAL AREA mm ²	APPROX. NO. OF WIRES	NOMINAL DIAMETER OF WIRES mm	APPROX. LENGTH OF LAY mm
95	22	1.85	250
185	41	1.85	300
300	41	1.85	440

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL REACTANCE AT 50Hz ohms/km	NOMINAL VOLTAGE DROP mV/A/m	ZERO PHASE SEQUENCE RESISTANCE ohms/km	ZERO PHASE SEQUENCE REACTANCE ohms/km	SHORT CIRCUIT RATING FOR 1 SECOND kA
95	0.073	0.25	0.241	0.086	6.6
185	0.073	0.33	0.124	0.077	14.2
300	0.072	0.41	0.084	0.074	22.7

NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL INTERNAL DIAMETER DUCTS mm	CURRENT RATING A		
		Direct in Ground	In Ducts	In Air
95	70	244	227	232
185	90	353	328	364
300	110	461	429	508

*Buried direct in ground 0.45mtr deep, +15°C ambient, soil thermal resistivity of 1.2°C m/w.

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.