LV SOLAR SINGLE CORE XLPE ATA HDPE 1.8/3(3.6)kV AD8 - 70mm² to 630mm²

Description

Low voltage single core power cable with stranded compacted aluminium conductor, XLPE insulation, PVC bedding, aluminium tape armour and UV resistant HDPE outer sheath. This is a heavy-duty, low-voltage single-core power line engineered specifically for large-scale solar energy and photovoltaic systems.

The aluminium conductor is insulated with XLPE, capable of handling extreme heat, moisture, and chemical exposure. To withstand severe physical environments, the cable is wrapped in protective aluminium tape armour and encased in a tough high-density polyethylene outer jacket, which shields the conductor from soil pressure, rodent damage, and physical abrasion.

Manufactured to IEC 60228 and IEC 60502-1, this 1.8/3(3.6)kV cable is designed for power distribution applications and is available in sizes from 70mm² to 630mm². Suitable for external installation, cables can be installed on cable trays, within conduits or buried in ducts. The cable is water resistant to AD8 for installation where additional protection against water ingress is required.

Key Features

Voltage Rating
1.8/3 (3.6)kV

Minimum Bending Radius
20x Overall Diameter

Temperature Limits
Temperature Range: -15°C to +90°C

Standards

- IEC 60502-1
- BS EN/IEC 60228

Construction

- **Conductor**: Class 2 Stranded Circular Compacted Aluminium Conductor
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Bedding**: Polyvinyl Chloride (PVC)
- **Armour**: Aluminium Tape Armour (ATA)
- **Outer Sheath**: High Density Polyethylene (HDPE)
- **Sheath Colour**: Black

QA Lab

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.

CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

ecovadis
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

LV SOLAR SINGLE CORE XLPE ATA HDPE 1.8/3(3.6)kV AD8 - 70mm² to 630mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall Diameter(mm)	Weight(Kg/Km)
LVSOLAR1X70/AD8	70	1	2	1.08	21.6	495
LVSOLAR1X95/AD8	95	1	2	1.08	23	590
LVSOLAR1X120/AD8	120	1	2	1.16	24.8	690
LVSOLAR1X150/AD8	150	1	2	1.16	26.1	785
LVSOLAR1X185/AD8	185	1	2	1.24	27.9	930
LVSOLAR1X240/AD8	240	1	2	1.32	30.5	1125
LVSOLAR1X300/AD8	300	1	2	1.32	32.8	1330
LVSOLAR1X400/AD8	400	1	2	1.40	36.1	1660
LVSOLAR1X500/AD8	500	1	2.2	1.48	40	2080
LVSOLAR1X630/AD8	630	1	2.4	1.64	44.4	2610

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SINGLE CORE 3.6 KV AL/XLPE/PVC/ATA/HDPE SOLAR FARM CABLE

Conductor Size	Maximum Conductor DC Resistance at 20 °C	Conductor AC Resistance at 90 °C and 50Hz	Capacitance	Charging Current	Dielectric Losses	Reactance at 50 Hz	Conductor S.C.C for 1 sec	Current Carrying Capacity		
								Laid in ground	Laid in duct	Laid in free air
(MM^2)	(Ω/Km)	(Ω/Km)	(μF/Km)	(A/Km)	(W/Km)	(Ω/Km)	(KA)	(A)	(A)	(A)
1 X 70	0.443	0.569	0.157	0.887	63.84	0.148	6.56	228	177	221
1 X 95	0.32	0.411	0.171	0.968	69.68	0.141	8.9	272	213	269
1 X 120	0.253	0.325	0.184	1.043	75.09	0.137	11.24	310	245	311
1 X 150	0.206	0.265	0.205	1.16	83.53	0.129	14.06	347	274	355
1 X 185	0.164	0.211	0.213	1.208	86.95	0.127	17.33	393	315	410
1 X 240	0.125	0.161	0.236	1.334	96.06	0.121	22.49	456	368	487
1 X 300	0.1	0.129	0.258	1.46	105.11	0.116	28.11	515	422	562
1 X 400	0.0778	0.102	0.281	1.59	114.5	0.112	37.48	588	488	658
1 X 500	0.0605	0.08	0.309	1.746	125.72	0.108	46.85	670	563	770
1 X 630	0.0469	0.0641	0.348	1.969	141.76	0.105	59.03	759	648	895

Maximum conductor operating temperature: 90 °C
Initial temperature at S.C.C for metallic screen: 80 °C
Maximum conductor temperature during S.C: 250 °C

Laying conditions at Flat touching formation are as below:

Soil thermal resistivity	100 ˚C.Cm/Watt
Burial Depth	0.5 m
Ground temperature	20 °C
Air Temperature	30 °C
Frequency	50 Hz

The above data is approximate and subjective to manufacturing tolerance.
Insulation and Sheath thickness will be measured according to related Standard

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.