LV SOLAR SINGLE CORE XLPE ATA MDPE 1.8/3(3.6)kV AD7 - 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 MDPE 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.

The cable is manufactured to IEC 60228 and IEC 60502-1,and rated at 1.8/3(3.6)kV. This 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 outer sheath is UV resistant and water resistant to AD7. An AD8 version with HDPE outer sheath is also available

Key Features

Voltage Rating
1.8/3 (3.6)kV

Minimum Bending Radius
20 x 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**: Medium Density Polyethylene (MDPE)
- **Sheath Colour**: Black

Training & Testing Lab

AN ISO/IEC 17025 ACCREDITED FACILITY

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.

ISO/IEC 17025 Accredited Testing Laboratory

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 MDPE 1.8/3(3.6)kV AD7 - 70mm² to 630mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall Diameter(mm)	Weight(Kg/Km)
LVSOLAR1X70/AD7	70	1	2	1.08	21.6	490
LVSOLAR1X95/AD7	95	1	2	1.08	23	585
LVSOLAR1X120/AD7	120	1	2	1.16	24.8	690
LVSOLAR1X150/AD7	150	1	2	1.16	26.1	780
LVSOLAR1X185/AD7	185	1	2	1.24	27.9	925
LVSOLAR1X240/AD7	240	1	2	1.32	30.5	1120
LVSOLAR1X300/AD7	300	1	2	1.32	32.8	1325
LVSOLAR1X400/AD7	400	1	2	1.40	36.1	1660
LVSOLAR1X500/AD7	500	1	2.2	1.48	40	2075
LVSOLAR1X630/AD7	630	1	2.4	1.64	44.4	2605

31196

SINGLE CORE 3.6 KV AL/XLPE/PVC/ATA/MDPE 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.