MV SOLAR SINGLE CORE XLPE AWA MDPE 18/30(36)kV AD7 - 50mm² to 800mm²



Description

This is a Medium Voltage (MV) armoured power cable used to transmit high-voltage electricity. It is primarily used in renewable energy projects, such as solar parks and wind farms, to route generated power from inverters and collection stations into the wider electrical grid. This 18/30(36)kV cable features extruded inner and outer semi-conductive layers, copper tape screening, PVC bedding and aluminium wire armour for mechanical protection. The MDPE outer sheath provides durability for external installation.

Suitable for fixed installation on cable trays, within conduits, or directly buried in ducts. The cable is manufactured generally to IEC 60502-2. Outer sheath is UV resistant and water resistant to AD7.

Key Features

Voltage Rating
18/30 (36)kV

Minimum Bending Radius
15 x Overall Diameter

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

Standards

- IEC 60502-2
- BS EN/IEC 60228

Construction

- **Conductor**: Class 2 Stranded Circular Compacted Aluminium Conductor
- **Inner Semi-Conductor**: Bonded Semi-Conductive Material
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Outer Semi Conductor**: Extruded Outer Semi Conductor (Strippable Type)
- **Screen**: Copper Tape Screen (CTS)
- **Bedding**: Polyvinyl Chloride (PVC)
- **Armour**: Aluminium Wire Armour (AWA)
- **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
31196

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

MV SOLAR SINGLE CORE XLPE AWA MDPE 18/30(36)kV AD7 - 50mm² to 800mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall Diameter(mm)	Weight(Kg/Km)
MVSOLARAW1X50/AD7	50	1	8	2.2	36.4	1345
MVSOLARAW1X70/AD7	70	1	8	2.2	38	1480
MVSOLARAW1X95/AD7	95	1	8	2.3	39.7	1635
MVSOLARAW1X120/AD7	120	1	8	2.3	41.1	1785
MVSOLARAW1X150/AD7	150	1	8	2.4	44.5	2100
MVSOLARAW1X185/AD7	185	1	8	2.5	45.6	2250
MVSOLARAW1X240/AD7	240	1	8	2.6	48	2540
MVSOLARAW1X300/AD7	300	1	8	2.6	50.6	2845
MVSOLARAW1X400/AD7	400	1	8	2.7	53.3	3275
MVSOLARAW1X500/AD7	500	1	8	2.8	56.7	3770
MVSOLARAW1X630/AD7	630	1	8	3	61.6	4520
MVSOLARAW1X800/AD7	800	1	8	3.1	67	5410

SINGLE CORE 36 KV AL/XLPE/AWA/MDPE BESS AND SOLAR CABLE

Size (MM^2)	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 free air
	(Ω/Km)	(Ω/Km)	(μF/Km)	(A/Km)	(W/Km)	(Ω/Km)	(KA)	A	A
1 X 50	0.641	0.822	0.141	0.799	57.52	0.159	4.69	176	192
1 X 70	0.443	0.569	0.157	0.887	63.84	0.148	6.56	216	238
1 X 95	0.32	0.411	0.171	0.968	69.68	0.141	8.9	257	288
1 X 120	0.253	0.325	0.184	1.043	75.09	0.137	11.24	291	330
1 X 150	0.206	0.265	0.205	1.16	83.53	0.129	14.06	325	374
1 X 185	0.164	0.211	0.213	1.208	86.95	0.127	17.33	366	427
1 X 240	0.125	0.161	0.236	1.334	96.06	0.121	22.49	414	500
1 X 300	0.1	0.129	0.258	1.46	105.11	0.116	28.11	464	570
1 X 400	0.0778	0.101	0.281	1.59	114.5	0.112	37.48	524	656
1 X 500	0.0605	0.079	0.309	1.746	125.72	0.108	46.85	592	755
1 X 630	0.0469	0.062	0.348	1.969	141.76	0.105	59.03	662	861
1 X 800	0.0367	0.049	0.397	2.247	161.82	0.101	74.96	736	979

Maximum conductor operating temperature:

Initial temperature at S.C.C for metallic screen: 90 °C

Maximum conductor temperature during S.C: 80 °C

250 °C

Laying conditions at Flat touching formation are as below:

Soil thermal resistivity	100 ˚C.Cm/Watt
Burial Depth	0.8 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.