

# Low Voltage Aluminium Waveform Cable - National Grid (NGED) 1kV, XLPE, PVC - 95mm<sup>2</sup> to 300mm<sup>2</sup>



## Description

National Grid (NGED) Approved Specification Aluminium Waveform cable which is used by Distribution Network Operators (DNOs) such as UKPN, WPD, ENW, NPG, SSE etc.

Aluminium Waveform cable is used as an energy supply cable most commonly found in power station distribution, panel boards and street lighting areas where mechanical protection is required. It consists of 3 or 4 aluminium conductors in sector shape with a copper conductor in a waveform lay.

## Key Features



**Voltage Rating**  
600/1000 Volts



**Minimum Bending Radius**  
95mm<sup>2</sup>: 8X Overall Diameter  
185mm<sup>2</sup>: 9X Overall Diameter  
300mm<sup>2</sup>: 10 X Overall Diameter



**Flame Retardancy**  
BS EN 60332-1-2



**Temperature Limits**  
Temperature Range: -15°C to + 70°C

## Core Colours

3 Core - Brown Black Grey

4 Core - Brown Black Grey Blue

## Standards

- BS7870 - 3-40
- BS EN/IEC 60332-1-2
- BS EN/IEC 60228
- BS7870-1

## Construction

- **Conductor:** Class 1 Solid Aluminium
- **Insulation:** Cross Linked polyethylene (XLPE)
- **Bedding:** Extruded Rubber Compound
- **Separator:** Polyester Tape (PET)
- **Waveform Conductor:** Plain Copper wire Screen
- **Separator:** Binding Tape
- **Outer Sheath:** Poly Vinyl Chloride (PVC) with UV additive
- **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

## ecovadis

## Low Voltage Aluminium Waveform Cable - National Grid (NGED) 1kV, XLPE, PVC - 95mm<sup>2</sup> to 300mm<sup>2</sup> - Dimensions

Reference	Conductor Size (mm <sup>2</sup> )	No Of Cores	Overall Diameter(mm)	Weight(Kg/Km)
NGEDWAVE3X95	95	3	36	1980
NGEDWAVE4X95	95	4	36	2300
NGEDWAVE3X185	185	3	43	3500
NGEDWAVE4X185	185	4	48	4200
NGEDWAVE3X300	300	3	53	4900
NGEDWAVE4X300	300	4	60	6170

## LV ALUMINIUM WAVEFORM - ELECTRICAL CHARACTERISTICS

Nominal Cross Section mm <sup>2</sup>	95	185	300
Maximum DC resistance of phase conductor @ 20°C (Ω/km)	0.32	0.164	0.1
Maximum DC resistance of neutral/earth conductor@ 20°C (Ω/km)	0.320	0.164	0.164
Maximum AC resistance of conductor@ 90°C (Ω/km)	0.411	0.211	0.130
Approximate Reactance@ 50Hz (Ω/km)	0.073	0.073	0.072
Approximate volt drop (mV/A/m)	0.410	0.330	0.250
Zero Phase Sequence Resistance (Ω/km)	0.241	0.124	0.084
Zero Phase Sequence Reactance (Ω/km)	0.086	0.077	0.074
Nominal internal diameter of ducts (mm)	70.0	90.0	110.0
<b>Current Ratings</b>			
Direct in ground (Amps)	244	353	461
In Ducts (Amps)	227	328	429
In Air (Amps)	232	364	508
<b>Current rating conditions</b>			
Ground temperature	15°C		
Ambient Air temperature	25°C		
Depth of burial (to top of cable)	450mm		
Thermal resistance of soil	1.2°C m/W		

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