

NYCWY Power Cable

Eland Product Group A9N

Application

For use where increased electrical and mechanical protection is required, preferably for underground laying, especially in subscriber networks, power stations as well as control cables for the transmission of control impulses and test data.

Standards

VDE0276 part 603, CENELEC HD603 S1, IEC 60502

Conductor

rm conductor: Class 1 solid plain copper to BS EN 60228:2005 (previously BS6360), VDE0295, IEC 60228, CENELEC HD383
 sm conductor: Class 2 stranded, round plain copper conductor, multi wire to BS EN 60228:2005 (previously BS6360), VDE0295, IEC 60228, CENELEC HD383
 sm conductor: Class 2 stranded, sectorial plain copper conductor to BS EN 60228:2005 (previously BS6360), VDE0295, IEC 60228, CENELEC HD383

Insulation

PVC (Polyvinyl Chloride) DIV4 to HD 603.1

Bedding

PVC (Polyvinyl Chloride)

Concentric Conductor

Waveconal outer conductor – copper wires and contrahelical copper tape (reverse lay copper tape)

Sheath

PVC (Polyvinyl Chloride) DMV5 to HD 603.1

Sheath Colour

Black

Voltage Rating

600/1000V

Temperature Rating

Fixed: -30°C to +70°C
 Flexing: -5°C to +50°C

Minimum Bending Radius

Single Core: 15 x overall diameter
 Multi-Core: 12 x overall diameter

Core Identification

Up to and including 5 cores:
 colour coded or number coded



Dimensions

Resistance Values (ohms per kilometre)

Eland Part Numbers	No. of Cores x Nominal Cross Sectional Area # x mm ²	Conductor Type	Nominal Overall Diameter mm	Nominal Weight kg/Km
NYCWY Cable - 2 Cores				
A9NYCWY02010/10	2 x 10.0	re / 10.0	19.0	650.0
A9NYCWY02016/16	2 x 16.0	re / 16.0	21.5	850.0
A9NYCWY02025/25	2 x 25.0	rm / 25.0	24.5	1210.0
NYCWY Cable - 3 Cores				
A9NYCWY03010/10	3 x 10.0	re / 10.0	19.5	730.0
A9NYCWY03016/16	3 x 16.0	re / 16.0	22.0	1000.0
A9NYCWY03025/16	3 x 25.0	rm / 16.0	26.0	1550.0
A9NYCWY03025/25	3 x 25.0	rm / 25.0	26.0	1600.0
A9NYCWY03035/35	3 x 35.0	sm / 35.0	27.5	1850.0
A9NYCWY03035/16	3 x 35.0	sm / 16.0	27.0	1750.0
A9NYCWY03050/50	3 x 50.0	sm / 50.0	29.5	2450.0
A9NYCWY03050/25	3 x 50.0	sm / 25.0	29.0	2250.0
A9NYCWY03070/70	3 x 70.0	sm / 70.0	34.0	3350.0
A9NYCWY03070/35	3 x 70.0	sm / 35.0	33.0	2950.0
A9NYCWY03095/95	3 x 95.0	sm / 95.0	38.5	4550.0
A9NYCWY03095/50	3 x 95.0	sm / 50.0	38.0	4100.0
A9NYCWY03120/70	3 x 120.0	sm / 70.0	41.0	5050.0
A9NYCWY03120/120	3 x 120.0	sm / 120.0	42.0	5550.0
A9NYCWY03150/70	3 x 150.0	sm / 70.0	45.0	6000.0
A9NYCWY03150/150	3 x 150.0	sm / 150.0	46.0	6900.0
A9NYCWY03185/95	3 x 185.0	sm / 95.0	50.0	7550.0
A9NYCWY03185/185	3 x 185.0	sm / 185.0	51.0	8500.0
A9NYCWY03240/120	3 x 240.0	sm / 120.0	57.0	9950.0
NYCWY Cable - 4 Cores				
A9NYCWY04010/10	4 x 10.0	re / 10.0	20.5	890.0
A9NYCWY04016/16	4 x 16.0	re / 16.0	23.5	1250.0
A9NYCWY04025/16	4 x 25.0	rm / 16.0	28.0	1800.0
A9NYCWY04035/16	4 x 35.0	sm / 16.0	29.0	2050.0
A9NYCWY04050/25	4 x 50.0	sm / 25.0	33.0	2700.0
A9NYCWY04070/35	4 x 70.0	sm / 35.0	37.0	3750.0
A9NYCWY04095/50	4 x 95.0	sm / 50.0	43.5	5000.0
A9NYCWY04120/70	4 x 120.0	sm / 70.0	47.0	6350.0
A9NYCWY04150/70	4 x 150.0	sm / 70.0	51.0	7650.0
A9NYCWY04185/95	4 x 185.0	sm / 95.0	56.0	9350.0
A9NYCWY04240/120	4 x 240.0	sm / 120.0	62.5	11600.0

re = round conductor, rm = stranded conductor, sm = sectional conductor

Conductors

Class 1 solid conductors for Single Core and Multi-Core cables

1	2
Nominal Cross Sectional Area mm ²	Maximum Resistance of Conductor at 20°C Circular, Annealed Copper Conductors Plain ohms/Km
10.00	1.8300
16.00	1.1500

Table in accordance with BS EN 60228:2005 (previously BS6360)



Class 2 stranded conductors for Single Core and Multi-Core cables

1	2	4	6	8
Nominal Cross Sectional Area mm ²	Minimum Number of Wires in the Conductor			Maximum Resistance of Conductor at 20°C Annealed Copper Conductor Plain Wires ohms/Km
	Circular	Circular Compacted	Shaped	
	Cu	Cu	Cu	
25.0	7	6	6	0.7270
35.0	7	6	6	0.5240
50.0	19	6	6	0.3870
70.0	19	12	12	0.2680
95.0	19	15	15	0.1930
120.0	37	18	18	0.1530
150.0	37	18	18	0.1240
185.0	37	30	30	0.0991
240.0	37	34	34	0.0754

Table in accordance with BS EN 60228:2005 (previously BS6360)

Electrical Characteristics

Current Carrying Capacity (amperes), laying in ground (20°C)

Nominal Cross-sectional Area mm ²	Multicore cables A
10.0	79
16.0	102
25.0	133
35.0	160
50.0	190
70.0	234
95.0	280
120.0	319
150.0	357
185.0	402
240.0	463

Current Carrying Capacity (amperes), laying in air (30°C)

Nominal Cross-sectional Area mm ²	Multicore cables A
10.0	60
16.0	80
25.0	108
35.0	132
50.0	160
70.0	202
95.0	249
120.0	289
150.0	329
185.0	377
240.0	443

Conversion factors for multicore cable (≥5 cores)

The conversion factors are to be used for laying cables in ground or in air, to values given in above tables.

Number of loaded cores n	Laying in Ground f	Laying in air f
5	0.70	0.75
7	0.60	0.65
10	0.50	0.55
14	0.45	0.50
19	0.40	0.45
24	0.35	0.40
40	0.30	0.35
61	0.25	0.30

Note: valid for cross-section 1.5 to 10mm²