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**ELAND<sup>®</sup>  
CABLES**

# N2XRY Cu/XLPE/PVC/SWA/PVC 0.6/1kV Cable



Eland Product Group: A9S

## APPLICATION

European name of the BS5467 cable. Multi-core PVC cable with steel wire armour (SWA). Power and auxiliary control cables for use in power networks, underground, outdoor and indoor applications and for use in cable ducting.

## CHARACTERISTICS

**Voltage Rating** U<sub>0</sub>/U  
0.6/1kV

**Temperature Rating**  
Fixed: -25°C to +90°C

### Minimum Bending Radius

1.5mm<sup>2</sup> to 16mm<sup>2</sup> - Fixed: 6 x overall diameter  
25mm<sup>2</sup> and above - Fixed: 8 x overall diameter

## CONSTRUCTION

### Conductor

Class 2 stranded copper conductor

### Insulation

XLPE (Cross-Linked Polyethylene)

### Bedding

PVC (Polyvinyl Chloride)

### Armour

SWA (Steel Wire Armour)

### Sheath

PVC (Polyvinyl Chloride)

### Core Identification

2 core: ● Brown ● Blue  
3 core: ● Brown ● Black ● Grey  
4 core: ● Brown ● Blue ● Black ● Grey  
5 core: ● Green/Yellow ● Brown ● Blue ● Black ● Grey

Alternative Core Identification

○ White cores with ● Black numbers

### Sheath Colour

● Black

## STANDARDS

BS 5467, IEC/EN 60502-1, IEC/EN 60228

Flame Retardant according to IEC/EN 60332-1-2

## THE CABLE LAB<sup>®</sup>

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.



## SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: [www.elandcables.com/company/about-us/esg-sustainability](http://www.elandcables.com/company/about-us/esg-sustainability)



## REGULATORY COMPLIANCE

This cable is compliant with European Regulation EN 50575, the Construction Products Regulation.



This cable meets the requirements of the Low Voltage Directive 2014/35/EU, the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab<sup>®</sup>.





## DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL THICKNESS OF INSULATION<br>mm | NOMINAL OVERALL DIAMETER<br>mm |         | NOMINAL WEIGHT<br>kg/km | BW / CW<br>GLAND | WRAPAROUND<br>CLEATS |
|----------------|--------------|-------------------------------------------------|---------------------------------------|--------------------------------|---------|-------------------------|------------------|----------------------|
|                |              |                                                 |                                       | UNDER<br>ARMOUR                | OVERALL |                         |                  |                      |
| A9SWA2015      | 2            | 1.5                                             | 0.6                                   | 7.3                            | 12.1    | 302                     | 20               | CC5                  |
| A9SWA2025      | 2            | 2.5                                             | 0.7                                   | 8.5                            | 13.6    | 346                     | 20               | CC6                  |
| A9SWA2040      | 2            | 4                                               | 0.7                                   | 9.4                            | 14.7    | 410                     | 20S              | CC7                  |
| A9SWA2060      | 2            | 6                                               | 0.7                                   | 10.5                           | 15.9    | 499                     | 20               | CC7                  |
| A9SWA210       | 2            | 10                                              | 0.7                                   | 12.3                           | 18      | 648                     | 20               | CC8                  |
| A9SWA216       | 2            | 16                                              | 0.7                                   | 14.3                           | 20.4    | 978                     | 20               | CC9                  |
| A9SWA225       | 2            | 25                                              | 0.9                                   | 14.7                           | 20.4    | 1290                    | 25               | CC9                  |
| A9SWA235       | 2            | 35                                              | 0.9                                   | 16.8                           | 23.3    | 1500                    | 25               | CC10                 |
| A9SWA250       | 2            | 50                                              | 1                                     | 19                             | 25.8    | 1890                    | 25               | CC11                 |
| A9SWA270       | 2            | 70                                              | 1.1                                   | 22                             | 29      | 2450                    | 32               | CC12                 |
| A9SWA295       | 2            | 95                                              | 1.1                                   | 25.1                           | 33.1    | 3300                    | 32               | CC14                 |
| A9SWA2120      | 2            | 120                                             | 1.2                                   | 27.9                           | 36.1    | 4020                    | 40               | CC16                 |
| A9SWA2150      | 2            | 150                                             | 1.4                                   | 30.9                           | 39.3    | 4750                    | 40               | CC16                 |
| A9SWA3015      | 3            | 1.5                                             | 0.6                                   | 7.8                            | 12.6    | 330                     | 20               | CC5                  |
| A9SWA3025      | 3            | 2.5                                             | 0.7                                   | 9.2                            | 14.1    | 390                     | 20S              | CC6                  |
| A9SWA3040      | 3            | 4                                               | 0.7                                   | 10                             | 15.3    | 464                     | 20S              | CC7                  |
| A9SWA3060      | 3            | 6                                               | 0.7                                   | 11.2                           | 16.6    | 568                     | 20               | CC7                  |
| A9SWA310       | 3            | 10                                              | 0.7                                   | 13.1                           | 19.5    | 866                     | 20               | CC8                  |
| A9SWA316       | 3            | 16                                              | 0.7                                   | 15.3                           | 21.6    | 1152                    | 25               | CC9                  |
| A9SWA325       | 3            | 25                                              | 0.9                                   | 18.9                           | 23.6    | 1800                    | 25               | CC11                 |
| A9SWA335       | 3            | 35                                              | 0.9                                   | 21.3                           | 25.7    | 2230                    | 32               | CC12                 |
| A9SWA350       | 3            | 50                                              | 1                                     | 21.7                           | 28.5    | 2490                    | 32               | CC12                 |
| A9SWA370       | 3            | 70                                              | 1.1                                   | 25.2                           | 32.2    | 3290                    | 32               | CC14                 |
| A9SWA395       | 3            | 95                                              | 1.1                                   | 28.8                           | 37      | 4440                    | 40               | CC16                 |
| A9SWA3120      | 3            | 120                                             | 1.2                                   | 32                             | 40.4    | 5470                    | 40               | CC16                 |
| A9SWA3150      | 3            | 150                                             | 1.4                                   | 35.9                           | 45.5    | 6930                    | 50S              | CC18                 |
| A9SWA3185      | 3            | 185                                             | 1.6                                   | 40                             | 49.8    | 8350                    | 63S              | CC20                 |
| A9SWA3240      | 3            | 240                                             | 1.7                                   | 44.9                           | 55.1    | 10400                   | 63S              | -                    |
| A9SWA3300      | 3            | 300                                             | 1.8                                   | 49.8                           | 60.2    | 12600                   | 63S              | -                    |
| A9SWA3400      | 3            | 400                                             | 2                                     | 55.8                           | 66.6    | 14600                   | 75S              | -                    |
| A9SWA4015      | 4            | 1.5                                             | 0.6                                   | 8.5                            | 13.3    | 365                     | 20S              | CC6                  |
| A9SWA4025      | 4            | 2.5                                             | 0.7                                   | 9.9                            | 15      | 438                     | 20               | CC6                  |
| A9SWA4040      | 4            | 4                                               | 0.7                                   | 11                             | 16.4    | 532                     | 20               | CC7                  |
| A9SWA4060      | 4            | 6                                               | 0.7                                   | 12.3                           | 18.7    | 764                     | 20               | CC8                  |
| A9SWA410       | 4            | 10                                              | 0.7                                   | 14.5                           | 21.1    | 1013                    | 25               | CC9                  |
| A9SWA416       | 4            | 16                                              | 0.7                                   | 17                             | 23.4    | 1360                    | 25               | CC10                 |
| A9SWA425       | 4            | 25                                              | 0.9                                   | 21                             | 26.1    | 2160                    | 32               | CC11                 |
| A9SWA435       | 4            | 35                                              | 0.9                                   | 23.6                           | 28.6    | 2690                    | 32               | CC12                 |
| A9SWA450       | 4            | 50                                              | 1                                     | 25                             | 32      | 3130                    | 32               | CC14                 |
| A9SWA470       | 4            | 70                                              | 1.1                                   | 29.5                           | 37.7    | 4500                    | 40               | CC16                 |
| A9SWA495       | 4            | 95                                              | 1.1                                   | 33.3                           | 41.7    | 5600                    | 50S              | CC18                 |
| A9SWA4120      | 4            | 120                                             | 1.2                                   | 37.5                           | 47.1    | 7400                    | 50               | CC20                 |
| A9SWA4150      | 4            | 150                                             | 1.4                                   | 41.6                           | 51.4    | 8780                    | 50               | -                    |
| A9SWA4185      | 4            | 185                                             | 1.6                                   | 46.4                           | 56.6    | 10630                   | 63S              | -                    |
| A9SWA4240      | 4            | 240                                             | 1.7                                   | 52.6                           | 63      | 13390                   | 63               | -                    |

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL THICKNESS OF INSULATION<br>mm | NOMINAL OVERALL DIAMETER |         | NOMINAL WEIGHT<br>kg/km | BW / CW<br>GLAND | WRAPAROUND<br>CLEATS |
|----------------|--------------|-------------------------------------------------|---------------------------------------|--------------------------|---------|-------------------------|------------------|----------------------|
|                |              |                                                 |                                       | UNDER ARMOUR             | OVERALL |                         |                  |                      |
| A9SWA4300      | 4            | 300                                             | 1.8                                   | 58                       | 68.8    | 16290                   | 75S              | -                    |
| A9SWA4400      | 4            | 400                                             | 2                                     | 65.4                     | 78.1    | 19800                   | 90               | -                    |
| A9SWA5015      | 5            | 1.5                                             | 0.6                                   | 9.7                      | 14.3    | 410                     | 20S              | CC6                  |
| A9SWA5025      | 5            | 2.5                                             | 0.7                                   | 11.7                     | 16.1    | 470                     | 20               | CC7                  |
| A9SWA5040      | 5            | 4                                               | 0.7                                   | 13                       | 17.8    | 710                     | 20               | CC7                  |
| A9SWA5060      | 5            | 6                                               | 0.7                                   | 14.5                     | 20      | 876                     | 25               | CC8                  |
| A9SWA510       | 5            | 10                                              | 0.7                                   | 17.2                     | 22.9    | 1165                    | 25               | CC10                 |
| A9SWA516       | 5            | 16                                              | 0.7                                   | 20                       | 26.6    | 1742                    | 32               | CC11                 |
| A9SWA525       | 5            | 25                                              | 0.9                                   | 24.7                     | 31.5    | 2323                    | 32               | CC14                 |
| A9SWA535       | 5            | 35                                              | 0.9                                   | 27.8                     | 34.8    | 2932                    | 40               | CC14                 |
| A9SWA550       | 5            | 50                                              | 1                                     | 32.4                     | 40.4    | 4192                    | 50S              | CC16                 |
| A9SWA570       | 5            | 70                                              | 1.1                                   | 35.8                     | 43.0    | 5500                    | 50S              | CC18                 |
| A9SWA595       | 5            | 95                                              | 1.1                                   | 42.1                     | 49.0    | 7145                    | 50S              | CC20                 |
| A9SWA0715      | 7            | 1.5                                             | 0.6                                   | 10.2                     | 15.2    | 470                     | 20S              | CC6                  |
| A9SWA7025      | 7            | 2.5                                             | 0.7                                   | 12.3                     | 17.1    | 600                     | 20               | CC7                  |
| A9SWA7040      | 7            | 4                                               | 0.7                                   | 13.6                     | 19.1    | 881                     | 20               | CC8                  |
| A9SWA1215      | 12           | 1.5                                             | 0.6                                   | 13.7                     | 19.4    | 780                     | 20               | CC8                  |
| A9SWA12025     | 12           | 2.5                                             | 0.7                                   | 16.3                     | 22.4    | 1000                    | 25               | CC9                  |
| A9SWA1915      | 19           | 1.5                                             | 0.6                                   | 16.2                     | 22.2    | 1000                    | 25               | CC9                  |
| A9SWA1925      | 19           | 2.5                                             | 0.7                                   | 19.9                     | 26.6    | 1540                    | 25               | CC11                 |
| A9SWA2715      | 27           | 1.5                                             | 0.6                                   | 20                       | 26.7    | 1500                    | 32               | CC11                 |
| A9SWA2725      | 27           | 2.5                                             | 0.7                                   | 24                       | 30.7    | 1950                    | 32               | CC14                 |
| A9SWA3715      | 37           | 1.5                                             | 0.6                                   | 22.3                     | 29      | 1800                    | 32               | CC12                 |
| A9SWA3725      | 37           | 2.5                                             | 0.7                                   | 26.9                     | 33.8    | 2350                    | 40               | CC14                 |

## CONDUCTORS

### Class 2 Stranded Conductors for Single Core and Multi-Core Cables

| NOMINAL CROSS<br>SECTIONAL AREA<br>mm <sup>2</sup> | MINIMUM NO. OF WIRES IN CONDUCTOR |    |                    |    |        |    | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C |
|----------------------------------------------------|-----------------------------------|----|--------------------|----|--------|----|-----------------------------------------|
|                                                    | Circular                          |    | Circular Compacted |    | Shaped |    | Annealed Copper Conductor               |
|                                                    | Cu                                | Al | Cu                 | Al | Cu     | Al | Plain Wires<br>ohms/km                  |
| 1.5                                                | 7                                 | -  | 6                  | -  | -      | -  | 12.1                                    |
| 2.5                                                | 7                                 | -  | 6                  | -  | -      | -  | 7.41                                    |
| 4                                                  | 7                                 | -  | 6                  | -  | -      | -  | 4.61                                    |
| 6                                                  | 7                                 | -  | 6                  | -  | -      | -  | 3.08                                    |
| 10                                                 | 7                                 | 7  | 6                  | 6  | -      | -  | 1.83                                    |
| 16                                                 | 7                                 | 7  | 6                  | 6  | -      | -  | 1.15                                    |
| 25                                                 | 7                                 | 7  | 6                  | 6  | 6      | 6  | 0.727                                   |
| 35                                                 | 7                                 | 7  | 6                  | 6  | 6      | 6  | 0.524                                   |
| 50                                                 | 19                                | 19 | 6                  | 6  | 6      | 6  | 0.387                                   |
| 70                                                 | 19                                | 19 | 12                 | 12 | 12     | 12 | 0.268                                   |
| 95                                                 | 19                                | 19 | 15                 | 15 | 15     | 15 | 0.193                                   |
| 120                                                | 37                                | 37 | 18                 | 15 | 18     | 15 | 0.153                                   |
| 150                                                | 37                                | 37 | 18                 | 15 | 18     | 15 | 0.124                                   |
| 185                                                | 37                                | 37 | 30                 | 30 | 30     | 30 | 0.0991                                  |
| 240                                                | 37                                | 37 | 34                 | 30 | 34     | 30 | 0.0754                                  |
| 300                                                | 61                                | 61 | 34                 | 30 | 34     | 30 | 0.0601                                  |
| 400                                                | 61                                | 61 | 53                 | 53 | 53     | 53 | 0.047                                   |

The above table is in accordance with EN 60228



## ELECTRICAL CHARACTERISTICS XLPE/PVC/SWA/PVC

## Current Carrying Capacity

| NOMINAL CROSS<br>SECTIONAL AREA<br>mm <sup>2</sup> | REFERENCE METHOD C<br>(CLIPPED DIRECT)<br>Amps |                                                   | REFERENCE METHOD E<br>(IN FREE AIR OR ON A PERFORATED CABLE<br>TRAY, HORIZONTAL OR VERTICAL)<br>Amps |                                                   | REFERENCE METHOD D<br>(DIRECT IN GROUND OR IN DUCTING IN<br>GROUND, IN OR AROUND BUILDINGS)<br>Amps |                                                   |
|----------------------------------------------------|------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------|
|                                                    | 1 Two Core Cable<br>Single-Phase<br>AC or DC   | 1 Three or 1 Four Core Cable<br>Three-Phase<br>AC | 1 Two Core Cable<br>Single-Phase<br>AC or DC                                                         | 1 Three or 1 Four Core Cable<br>Three-Phase<br>AC | 1 Two Core Cable Single-<br>Phase<br>AC or DC                                                       | 1 Three or 1 Four Core Cable<br>Three-Phase<br>AC |
| 1.5                                                | 27                                             | 23                                                | 29                                                                                                   | 25                                                | 25                                                                                                  | 21                                                |
| 2.5                                                | 36                                             | 31                                                | 39                                                                                                   | 33                                                | 33                                                                                                  | 28                                                |
| 4                                                  | 49                                             | 42                                                | 52                                                                                                   | 44                                                | 43                                                                                                  | 36                                                |
| 6                                                  | 62                                             | 53                                                | 66                                                                                                   | 56                                                | 53                                                                                                  | 44                                                |
| 10                                                 | 85                                             | 73                                                | 90                                                                                                   | 78                                                | 71                                                                                                  | 58                                                |
| 16                                                 | 110                                            | 94                                                | 115                                                                                                  | 99                                                | 91                                                                                                  | 75                                                |
| 25                                                 | 146                                            | 124                                               | 152                                                                                                  | 131                                               | 116                                                                                                 | 96                                                |
| 35                                                 | 180                                            | 154                                               | 188                                                                                                  | 162                                               | 139                                                                                                 | 115                                               |
| 50                                                 | 219                                            | 187                                               | 228                                                                                                  | 197                                               | 164                                                                                                 | 135                                               |
| 70                                                 | 279                                            | 238                                               | 291                                                                                                  | 251                                               | 203                                                                                                 | 167                                               |
| 95                                                 | 338                                            | 289                                               | 354                                                                                                  | 304                                               | 239                                                                                                 | 197                                               |
| 120                                                | 392                                            | 335                                               | 410                                                                                                  | 353                                               | 271                                                                                                 | 223                                               |
| 150                                                | 451                                            | 386                                               | 472                                                                                                  | 406                                               | 306                                                                                                 | 251                                               |
| 185                                                | 515                                            | 441                                               | 539                                                                                                  | 463                                               | 343                                                                                                 | 281                                               |
| 240                                                | 607                                            | 520                                               | 636                                                                                                  | 546                                               | 395                                                                                                 | 324                                               |
| 300                                                | 698                                            | 599                                               | 732                                                                                                  | 628                                               | 446                                                                                                 | 365                                               |
| 400                                                | 787                                            | 673                                               | 847                                                                                                  | 728                                               | -                                                                                                   | -                                                 |

Air ambient temperature: 30°C

Ground ambient temperature: 20°C

Conductor operating temperature: 90°C

## Notes

1. Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.2 of the 18th Edition of IEE Wiring Regulations).
2. Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic insulated cables (Table 4D4A) must be used (see also Regulation 523.1 of the 18th Edition of IEE Wiring Regulations).

The above table is in accordance with Table 4E4A of the 18th Edition of IEE Wiring Regulations BS7671 and IEC 60364-5-52

## Voltage Drop

| NOMINAL CROSS<br>SECTIONAL AREA<br>mm <sup>2</sup> | TWO CORE CABLE<br>DC | WO CORE CABLE<br>SINGLE-PHASE AC<br>mV/A/m |       |       | THREE OR FOUR CORE CABLE<br>THREE-PHASE AC |       |       |
|----------------------------------------------------|----------------------|--------------------------------------------|-------|-------|--------------------------------------------|-------|-------|
| 1.5                                                | 31                   | 31                                         |       |       | 27                                         |       |       |
| 2.5                                                | 19                   | 19                                         |       |       | 16                                         |       |       |
| 4                                                  | 12                   | 12                                         |       |       | 10                                         |       |       |
| 6                                                  | 7.9                  | 7.9                                        |       |       | 6.8                                        |       |       |
| 10                                                 | 4.7                  | 4.7                                        |       |       | 4                                          |       |       |
| 16                                                 | 2.9                  | 2.9                                        |       |       | 2.5                                        |       |       |
|                                                    |                      | r                                          | x     | z     | r                                          | x     | z     |
| 25                                                 | 1.85                 | 1.85                                       | 0.160 | 1.900 | 1.600                                      | 0.140 | 1.650 |
| 35                                                 | 1.35                 | 1.35                                       | 0.155 | 1.350 | 1.150                                      | 0.135 | 1.150 |
| 50                                                 | 0.98                 | 0.99                                       | 0.155 | 1.000 | 0.860                                      | 0.135 | 0.870 |
| 70                                                 | 0.67                 | 0.67                                       | 0.150 | 0.690 | 0.590                                      | 0.130 | 0.600 |
| 95                                                 | 0.49                 | 0.50                                       | 0.150 | 0.520 | 0.430                                      | 0.130 | 0.450 |
| 120                                                | 0.39                 | 0.40                                       | 0.145 | 0.420 | 0.340                                      | 0.130 | 0.370 |
| 150                                                | 0.31                 | 0.32                                       | 0.145 | 0.350 | 0.280                                      | 0.125 | 0.300 |
| 185                                                | 0.25                 | 0.26                                       | 0.145 | 0.290 | 0.220                                      | 0.125 | 0.260 |
| 240                                                | 0.195                | 0.20                                       | 0.140 | 0.240 | 0.175                                      | 0.125 | 0.210 |
| 300                                                | 0.155                | 0.16                                       | 0.140 | 0.210 | 0.140                                      | 0.120 | 0.185 |
| 400                                                | 0.12                 | 0.13                                       | 0.140 | 0.190 | 0.115                                      | 0.120 | 0.165 |

Conductor operating temperature: 90°C

r = Resistive Component

x = Reactive Component

z = Impedance Value

The above table is in accordance with Table 4E4B of the 17th Edition of IEE Wiring Regulations.

For cables having conductors of 16mm<sup>2</sup> or less cross sectional area their inductances can be ignored and (mV/A/m)r values only are tabulated. For cables having conductors greater than 16mm<sup>2</sup>, cross sectional area the impedance values are given as (mV/A/m)z, together with the resistive component (mV/A/m)r and the reactive component (mV/A/m)x.

The above paragraph is extracted from Appendix 4 of the 17th Edition of IEE Wiring Regulations.