

# NHXMH-J/O Cable



Eland Product Group: A9N

## APPLICATION

These cables are intended for fixed installation in dry and moist rooms as well as in masonry and concrete, in and under plaster; not for underground installation. For installations where fire, smoke emission and toxic fumes create a potential risk to life and equipment.

## CHARACTERISTICS

**Voltage Rating** (Uo/U)  
300/500V

**Temperature Rating**  
-5°C to +70°C

### Minimum Bending Radius

1.5mm<sup>2</sup> to 10mm<sup>2</sup>: 4x overall diameter (red. to 2x OD at termination)  
16mm<sup>2</sup> and above: 5 x overall diameter (red. to 3x OD at termination)

## CONSTRUCTION

### Conductor

1.5mm<sup>2</sup> to 10mm<sup>2</sup>: Class 1 solid Copper  
16mm<sup>2</sup> to 25mm<sup>2</sup>: Class 2 stranded Copper

### Insulation

XLPE (Cross-Linked Polyethylene) Type 2X11

### Filler

Halogen-free compound

### Sheath

Halogen-free thermoplastic polymer compound Type HM2

### Core Identification

2 core: ● Blue ● Brown  
3 core: ● Blue ● Brown ● Green/Yellow  
4 core: ● Brown ● Black ● Grey ● Green/Yellow  
5 core: ● Brown ● Black ● Grey ● Blue ● Green/Yellow  
7 core and above: number coded

### Outer Sheath Colour

● Grey

## STANDARDS

VDE 0250 part 214

Flame Retardant according to IEC/EN 60332-3-24

## THE CABLE LAB®

AN ISO/IEC 17025 AND IECCE 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®.





## DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | CONDUCTOR CLASS | NOMINAL OVERALL DIAMETER<br>mm | NOMINAL WEIGHT<br>kg/km |
|----------------|--------------|-------------------------------------------------|-----------------|--------------------------------|-------------------------|
| A9NHXMH-O1015  | 1            | 1.5                                             | 1               | 5.2                            | 92                      |
| A9NHXMH-O1025  | 1            | 2.5                                             | 1               | 5.6                            | 110                     |
| A9NHXMH-O1040  | 1            | 4                                               | 1               | 7.1                            | 135                     |
| A9NHXMH-O1060  | 1            | 6                                               | 1               | 7.4                            | 160                     |
| A9NHXMH-O110   | 1            | 10                                              | 1               | 7.8                            | 215                     |
| A9NHXMH-O116   | 1            | 16                                              | 2               | 8.8                            | 295                     |
| A9NHXMH-O2015  | 2            | 1.5                                             | 1               | 8.2                            | 110                     |
| A9NHXMH-O2025  | 2            | 2.5                                             | 1               | 9.0                            | 130                     |
| A9NHXMH-O2040  | 2            | 4                                               | 1               | 9.8                            | 173                     |
| A9NHXMH-J3015  | 3            | 1.5                                             | 1               | 8.7                            | 120                     |
| A9NHXMH-J3025  | 3            | 2.5                                             | 1               | 9.6                            | 159                     |
| A9NHXMH-J3040  | 3            | 4                                               | 1               | 11.0                           | 223                     |
| A9NHXMH-J3060  | 3            | 6                                               | 1               | 12.5                           | 320                     |
| A9NHXMH-J310   | 3            | 10                                              | 1               | 15.0                           | 520                     |
| A9NHXMH-J316   | 3            | 16                                              | 2               | 19.7                           | 850                     |
| A9NHXMH-J4015  | 4            | 1.5                                             | 1               | 9.2                            | 151                     |
| A9NHXMH-J4025  | 4            | 2.5                                             | 1               | 10.2                           | 200                     |
| A9NHXMH-J4040  | 4            | 4                                               | 1               | 12.2                           | 300                     |
| A9NHXMH-J4060  | 4            | 6                                               | 1               | 13.2                           | 395                     |
| A9NHXMH-J410   | 4            | 10                                              | 1               | 15.8                           | 595                     |
| A9NHXMH-J416   | 4            | 16                                              | 2               | 20.0                           | 935                     |
| A9NHXMH-J5015  | 5            | 1.5                                             | 1               | 10.0                           | 168                     |
| A9NHXMH-J5025  | 5            | 2.5                                             | 1               | 11.1                           | 238                     |
| A9NHXMH-J5040  | 5            | 4                                               | 1               | 13.6                           | 350                     |
| A9NHXMH-J5060  | 5            | 6                                               | 1               | 15.0                           | 480                     |
| A9NHXMH-J510   | 5            | 10                                              | 1               | 17.7                           | 773                     |
| A9NHXMH-J516   | 5            | 16                                              | 2               | 22.0                           | 1290                    |
| A9NHXMH-J525   | 5            | 25                                              | 2               | 27.0                           | 1725                    |
| A9NHXMH-J7015  | 7            | 1.5                                             | 1               | 10.2                           | 210                     |
| A9NHXMH-J7025  | 7            | 2.5                                             | 1               | 12.2                           | 300                     |

## CONDUCTORS

### Class 1 Solid Conductors for Single Core and Multi-Core Cables

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C<br>ohms/km |  |
|-------------------------------------------------|----------------------------------------------------|--|
|                                                 | Circular, Annealed Copper Conductors               |  |
|                                                 | Plain Wires                                        |  |
| 1.5                                             | 12.1                                               |  |
| 2.5                                             | 7.41                                               |  |
| 4                                               | 4.61                                               |  |
| 6                                               | 3.08                                               |  |
| 10                                              | 1.83                                               |  |

The above table is in accordance with EN 60228



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

| NOMINAL CROSS<br>SECTIONAL AREA<br>mm² | MINIMUM NO. OF WIRES IN CONDUCTOR | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C<br>ohms/km |
|----------------------------------------|-----------------------------------|----------------------------------------------------|
|                                        | Circular                          | Circular, Annealed Copper Conductors               |
|                                        | Cu                                | Plain Wires                                        |
| 16                                     | 7                                 | 1.15                                               |
| 25                                     | 7                                 | 0.727                                              |

The above table is in accordance with EN 60228

## ELECTRICAL CHARACTERISTICS

### Current Carrying Capacity (BS7671 18th Ed. Table 4E2A)

| Conductor cross- sectional area | Reference Method A<br>(enclosed in conduit in thermally insulating wall etc.) |                                            | Reference Method B<br>(enclosed in conduit on a wall or in trunking etc.) |                                            | Reference Method C<br>(clipped direct)   |                                            | Reference Method E<br>(free air or on a perforated cable tray etc, horizontal or vertical) |                                            |
|---------------------------------|-------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------|------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|
|                                 | 1 two-core cable*, single-phase AC or DC                                      | 1 three- or four-core cable three-phase AC | 1 two-core cable*, single-phase AC or DC                                  | 1 three- or four-core cable three-phase AC | 1 two-core cable*, single-phase AC or DC | 1 three- or four-core cable three-phase AC | 1 two-core cable*, single-phase AC or DC                                                   | 1 three- or four-core cable three-phase AC |
| 1                               | 2                                                                             | 3                                          | 4                                                                         | 5                                          | 6                                        | 7                                          | 8                                                                                          | 9                                          |
| (mm <sup>2</sup> )              | (A)                                                                           | (A)                                        | (A)                                                                       | (A)                                        | (A)                                      | (A)                                        | (A)                                                                                        | (A)                                        |
| 1.5                             | 18.5                                                                          | 16.5                                       | 22                                                                        | 19.5                                       | 24                                       | 22                                         | 26                                                                                         | 23                                         |
| 2.5                             | 25                                                                            | 22                                         | 30                                                                        | 26                                         | 33                                       | 30                                         | 36                                                                                         | 32                                         |
| 4                               | 33                                                                            | 30                                         | 40                                                                        | 35                                         | 45                                       | 40                                         | 49                                                                                         | 42                                         |
| 6                               | 42                                                                            | 38                                         | 51                                                                        | 44                                         | 58                                       | 52                                         | 63                                                                                         | 54                                         |
| 10                              | 57                                                                            | 51                                         | 69                                                                        | 60                                         | 80                                       | 71                                         | 86                                                                                         | 75                                         |
| 16                              | 76                                                                            | 68                                         | 91                                                                        | 80                                         | 107                                      | 96                                         | 115                                                                                        | 100                                        |
| 25                              | 99                                                                            | 89                                         | 119                                                                       | 105                                        | 138                                      | 119                                        | 149                                                                                        | 127                                        |

### Multicore 90°C thermosetting insulated and thermoplastic sheathed cables, non-armoured (COPPER CONDUCTORS)

Ambient temperature: 30°C Conductor operating temperature: 90°C

- Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).
- Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).
- For cables having flexible conductors see section 2.4 of this appendix for adjustment factors for current-carrying capacity and voltage drop.

### VOLTAGE DROP (per ampere per metre) (BS7671 18th Ed. Table 4E2B)

| Conductor cross- sectional area | Two-core cable DC | Two-core cable, single-phase AC | Three- or four-core cable, three-phase AC |
|---------------------------------|-------------------|---------------------------------|-------------------------------------------|
|                                 | 2                 | 3                               | 4                                         |
| (mm <sup>2</sup> )              | (mV/A/m)          | (mV/A/m)                        | (mV/A/m)                                  |
| 1                               | 46                | 46                              | 40                                        |
| 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                             | 4.0                                       |
| 16                              | 2.9               | 2.9                             | 2.5                                       |

Conductor operating temperature: 90°C

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.