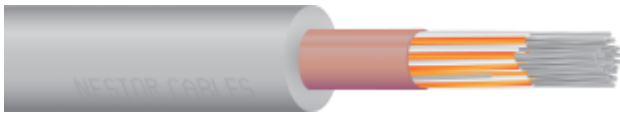


**NESMAK-HF 2 - 12 x 2 x 0,5 mm<sup>2</sup>**

## Application

Instrumentation cable for fixed installation in automation and process control systems. Can be installed indoors and also outdoors on cable trays.

Maximum rated voltage 300 V AC and 500 V DC. according to EN 50288-7

These cables shall not be connected directly to mains electricity supply or other low impedance sources. Multi-element cables for use in analogue, digital and control circuits are not designed to be used for power supply.

## Standards and Directives

Cable design and properties EN 50288-7, DIN EN 50288-7 VDE 0819-7:2006-03

Testing EN 50289-x-x, EN 50290-x-x

Fire testing EN 50399, IEC/EN 60332-1-2, IEC/EN 60332-3-22, IEC/EN 61034-2, IEC/EN 60754-2

ROHS directive EU 2011/65/EC

LVD Directive 2014/35/EU

EN 50575 Cables for general applications in construction works subject to reaction to fire requirements



## Class of reaction to fire performance

Dca -s2,d2,a2

## Fire properties

The cables are tested according to following tests:

EN 50399

Test method for bunch of cables under fire conditions – Heat release and smoke production are measured on cables during flame spread test.

IEC/EN 60332-1-2

Test for vertical flame propagation for a single insulated wire or cable

IEC/EN 60332-3-22

Test for vertical flame spread of vertically-mounted bunched wires or cables-Category A

## NESMAK-HF 2 - 12 x 2 x 0,5 mm<sup>2</sup>

### Construction

|               |                                                                                                                                                                                                 |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conductor     | Stranded annealed copper 7x0,29 mm                                                                                                                                                              |
| Insulation    | Halogen-free material                                                                                                                                                                           |
| Pair          | Two conductors twisted together. Each pair is identified by a number printed on the surface of an insulated conductor. In all pairs a-conductors are orange and b-conductors are white coloured |
| Unit          | Two or four pairs are stranded together to form a unit.                                                                                                                                         |
| Common screen | Plastic-aluminium tape with an tinned earth- conductor 7x0,29 mm                                                                                                                                |
| Sheath        | Grey (RAL 7035) halogen-free flame retardant and UV-resistant material.                                                                                                                         |

All values in this specification are nominal unless otherwise stated.

### Dimensions

| Nestor-code | SSTL-code | Cable type                  | Diameter mm | Weight kg/km | Min. sheath thickness mm | Length / Drum |
|-------------|-----------|-----------------------------|-------------|--------------|--------------------------|---------------|
| L10797      | 0217415   | NESMAK-HF 2x2x0,5+0,5       | 7,5         | 59           | 0,9                      | 1000/K6       |
| L10798      | 0217416   | NESMAK-HF 2x2x0,5+0,5 500 m | 7,5         | 59           | 0,9                      | 500/P5        |
| L10799      | 0217417   | NESMAK-HF 2x2x0,5+0,5 200 m | 7,5         | 59           | 0,9                      | 200/P4        |
| L10800      | 0217418   | NESMAK-HF 4x2x0,5+0,5       | 9,0         | 89           | 0,9                      | 1000K7        |
| L10801      | 0217419   | NESMAK-HF 4x2x0,5+0,5 500 m | 9,0         | 89           | 0,9                      | 500/P5        |
| L10802      | 0217420   | NESMAK-HF 4x2x0,5+0,5 200 m | 9,0         | 89           | 0,9                      | 200/P4        |
| L10803      | 0217421   | NESMAK-HF 8x2x0,5+0,5       | 12,3        | 152          | 0,9                      | 1000/K9       |
| L10804      | 0217422   | NESMAK-HF 8x2x0,5+0,5 200 m | 12,3        | 152          | 0,9                      | 200/P5        |
| L10805      | 0217423   | NESMAK-HF 12x2x0,5+0,5      | 13,7        | 210          | 0,9                      | 1000/K10      |

## NESMAK-HF 2 - 12 x 2 x 0,5 mm<sup>2</sup>

### LF - electrical characteristics

|                                          |                           |                        |
|------------------------------------------|---------------------------|------------------------|
| Loop resistance, at 20°C                 | Individual max., ohm/km   |                        |
|                                          | 76                        |                        |
| Mutual capacitance                       | nominal value, nF/km      |                        |
|                                          | 85                        |                        |
| Insulation resistance, 500 V DC, minimum | 2 Gohm x km               |                        |
| Dielectric strength, 1 min.              | Conductor/conductor, V DC | Conductor/Screen, V DC |
|                                          | 2000                      | 2000                   |

### Mechanical characteristics

|                                                                                                  |                                 |               |
|--------------------------------------------------------------------------------------------------|---------------------------------|---------------|
| Bending in accordance with EN 50289-3-6 and Tensile performance in accordance with EN 50289-3-16 |                                 |               |
| Temperature range                                                                                | - Transport, storage, operation | -45 to +70 °C |
|                                                                                                  | - Installation                  | -5 to +60 °C  |
| Bending radius                                                                                   | - During installation (min.)    | 15 x Diameter |
|                                                                                                  | - Final installation (min.)     | 10 x Diameter |

### Testing and inspection

|                                                                                                            |                                                                                                              |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Testing and inspection will be carried in accordance with following characteristics and standards          |                                                                                                              |
| Electrical LF-characteristics<br>IEC 60189-1                                                               | Loop resistance, mutual capacitance, Dielectric strength, Insulation resistance, short circuits, wire breaks |
| Mechanical characteristics<br>IEC 60811-1-1                                                                | Thickness of sheath<br>Diameter of cable                                                                     |
| Visual inspection of cable                                                                                 | Cable design<br>Sheath marking                                                                               |
| The LF-electrical characteristics shall be measured as a routine test in accordance with our test program. |                                                                                                              |