# AFNOR NF M 87-202 IOS Lead Covered Armoured Fire retardant

**27 IP 05 EI PF**


## CONTACT

Market information
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- Instrumentation cables 250 V
- Individual & Overall Screen (IOS)
- **Hydrocarbons resistant and enhanced resistance to aromatics**

## STANDARDS

**Test** IEC 60332-3-22 Cat.A

## APPLICATIONS

These instrumentation and communication cables are used to **transmit analogue or digital signals in measurement and process control**. They are well adapted to **underground use** in industrial applications, in moist areas, where **chemical and mechanical protection are needed. The lead cover brings an enhanced resistance to aromatics hydrocarbons. The individual screening of each pair limits the consequence of crosstalk.**

## Nexans code

- 1st serie = number of pairs, triples or quads: 01 to 27
- 2nd serie = pair (IP), triple (IT), quad (IQ) - 3rd serie = conductor 05 (1 x 0.8 mm), 09 (7 x 0.4 mm) or 15 (7 x 0.52 mm)
- 4th serie = overall screen (EG), individual screen + overall screen (EI)
- 5th serie = mechanical protection: without metal tape (SF), with steel tape (FA), with lead and steel tape (PF)

## Design

Conductor:
- Solid plain copper 0.50 mm² (1 x 0.80 mm) or stranded plain copper cross-section 0.88 mm² (7 x 0.40 mm)

Insulation:
- Polyvinyl chloride (PVC)

Individual screen:
- Polyester tape
- Tinned copper drain wire
- Aluminium/polyester tape

Individual sheath:
- Polyvinyl chloride (PVC)

Overall screen:
- Polyester tape
- Tinned copper drain wire
- Aluminium/polyester tape

Inner sheath:
- Polyvinyl chloride (PVC)

Lead covering

Armour:
- Paraffin-waxed crepe paper
- Double steel tape

Outer sheath:
- Polyvinyl chloride (PVC)
- Colour: light-blue or grey

## Core identification

Pair: natural - red
Triple: natural - red - blue
Blue individual sheath printed with pair/triple number

## Marking

NEXANS 279- Number of pair/triple IP/IT 05/09 EI PF IEC 60332-3-22(A)+ metric marking

Fire retardant
**EN IEC 60332-3-22 (cat A)**

Chemical resistance
**Hydrocarbons resistant and enhanced resistances to aromatics**

Electro magnetic interference resistance
**Yes**

Operating temp.
**-20...60 °C**

Max.conductor temp.in service
**70 °C**

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**27 IP 05 EI PF**

## CHARACTERISTICS

| | |
|---|---|
| **Construction characteristics** | |
| Conductor material | Plain copper |
| Insulation | PVC |
| Individual screen | Tinned copper drain wire + aluminium/polyester tape |
| Individual sheath | PVC |
| Overall screen | Tinned copper drain wire + aluminium/polyester tape |
| Inner sheath | PVC |
| Lead Sheath | Yes |
| Armour type | Steel tapes |
| Outer sheath | PVC |
| **Dimensional characteristics** | |
| Conductor cross-section | 0.5 mm² |
| Number of pairs | 27 |
| Number of triples | - |
| Conductor diameter | 0.8 mm |
| Diameter over insulation | 1.6 mm |
| Diameter over inner sheath | 29.5 mm |
| Lead cover diameter | 32.7 mm |
| Diameter over armour | 34.5 mm |
| Minimum outer diameter | 36.6 mm |
| Maximum outer diameter | 40.3 mm |
| Approximate weight | 3232 kg/km |
| **Electrical characteristics** | |
| Operating voltage | 250 V |
| **Usage characteristics** | |
| Fire retardant | EN IEC 60332-3-22 (cat A) |
| Chemical resistance | Hydrocarbons resistant and enhanced resistances to aromatics |
| Electro magnetic interference resistance | Yes |
| Operating temperature, range | -20 ... 60 °C |
| Max. conductor temperature in service | 70 °C |
| Standard | NFM |

Fire retardant
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Electro magnetic interference resistance
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Max.conductor temp.in service
**70 °C**

## ELECTRICAL DATA NF M 87202

### Electrical data

| Section | Maximum Voltage (V) | Voltage Test (V) | DC Lineic resistance at 20°C (Ω/km) | Self Inductance mH/km | | Capacitance between cond. (nF/km) |
|---|---|---|---|---|---|---|
| | | | | Non Armoured | Armoured | |
| 05 | 250 | 2 000 | 37.5 | 0.33 | 0.38 | ≤145 |
| 09 | 250 | 2 000 | 21.4 | 0.31 | 0.36 | ≤160 |
| 15 | 250 | 2 000 | 12.1 | 0.31 | 0.36 | ≤180 |

## SELLING AND DELIVERY INFORMATION

Minimum bending radius:

10 x outer diameter
To be doubled during laying operations

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