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

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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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
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

SECTION 0.5MM

Reference	Name	Diam. over inner sheath [mm]	Lead cover diameter [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	03 IP 05 EI PF	11.6	13.8	15.6	17.5	19.3	837
	07 IP 05 EI PF	15.8	18.2	20.0	21.9	24.2	1248
	07 IT 05 EI PF	17.8	20.4	22.2	24.3	26.8	1549
	12 IP 05 EI PF	20.3	22.9	24.7	26.7	29.4	1798
	12 IT 05 EI PF	22.6	25.4	27.2	29.3	32.3	2175
	19 IP 05 EI PF	25.2	28.2	30.0	32.0	35.3	2552
	27 IP 05 EI PF	29.5	32.7	34.5	36.6	40.3	3232

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

Chemical resistance
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Electro magnetic interference resistance
Yes

Operating temp.
-20 ... 60 °C

Max.conductor temp.in service
70 °C

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SECTION 0.88MM

Reference	Name	Diam. over inner sheath [mm]	Lead cover diameter [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	03 IP 09 EI PF	14.3	16.7	18.5	20.5	22.6	1086
	07 IP 09 EI PF	19.2	21.8	23.6	25.6	28.3	1678
	07 IT 09 EI PF	21.9	24.7	26.5	28.6	31.6	2074
	12 IP 09 EI PF	25.1	28.1	29.9	31.9	35.2	2510
	12 IT 09 EI PF	27.8	30.8	32.6	34.7	38.3	2924
	19 IP 09 EI PF	30.8	34	35.8	37.8	41.7	3366
	27 IP 09 EI PF	36.3	39.9	41.7	43.9	48.5	4500

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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Operating temp.
-20 ... 60 °C

Max.conductor temp.in service
70 °C