AFNOR NF M 87 - 202 IOS Armoured Fire retardant

- Instrumentation cables 250 V
- Individual & Overall Screen (IOS)
- Hydrocarbons resistant

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 where hydrocarbons may be present and mechanical protections are needed (refinery areas, chemical plant…). 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 = collective screen (EG), individual screen + collective 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 mm ² (1 x 0.80 mm) or stranded plain copper cross - section 0.88 mm ² (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)

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

Inner sheath:
- Polyvinyl chloride (PVC)

Armour:
- 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 FA IEC 60332 - 3 - 22(A) + metric marking

Fire retardant	Chemical resistance	Electro magnetic interference resistance	Operating temp.	Max.conductor temp.in service
EN IEC 60332 - 3 - 22 (cat A)	Hydrocarbons resistant	Yes	- 20 … 60 ° C	70 ° C

CONTACT

Market information
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CHARACTERISTICS

구조적 특성	
도체 재료	베어 구리
절연	폴리염화비닐
Individual screen	Tinned copper drain wire + aluminium/polyester tape
Individual sheath	PVC
Overall screen	Tinned copper drain wire + aluminium/polyester tape
내피	폴리염화비닐
Armour type	스틸 밴드
피복	폴리염화비닐
전기적 특성	
Operating voltage	250 V
사용 특성	
Fire retardant	EN IEC 60332 - 3 - 22 (cat A)
Chemical resistance	Hydrocarbons resistant
Electro magnetic interference resistance	Yes
操作度范	- 20 ... 60 ° C
Max. conductor temperature in service	70 ° C
Standard	NFM

SECTION 0.5MM

Reference	Name	Diam. over inner sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	무게(근사치) [kg/km]
	03 IP 05 EI FA	11.7	12.7	14.4	15.9	344
	07 IP 05 EI FA	16.2	17.3	19.1	21.1	565
	07 IT 05 EI FA	17.8	18.8	20.6	22.7	671
	12 IP 05 EI FA	20.9	21.9	23.8	26.2	840
	12 IT 05 EI FA	22.6	23.6	25.4	28.0	1005
	19 IP 05 EI FA	26.1	27.2	29.1	32.1	1205
	27 IP 05 EI FA	30.8	31.8	33.8	37.2	1575


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


Chemical resistance
Hydrocarbons resistant


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]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	무게(근사치) [kg/km]
	03 IP 09 EI FA	15.1	15.2	18.5	20.4	465
	07 IP 09 EI FA	19.9	21.0	22.9	25.3	792
	07 IT 09 EI FA	19.9	21.0	22.9	25.3	792
	12 IP 09 EI FA	26	27.1	29.0	32.0	1205
	12 IT 09 EI FA	26	27.1	29.0	32.0	1205
	19 IP 09 EI FA	31.9	33.0	34.8	38.4	1709
	27 IP 09 EI FA	37.7	38.7	40.6	44.8	2275

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

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

Chemical resistance
Hydrocarbons resistant

Electro magnetic interference resistance
Yes

Operating temp.
- 20 ... 60 ° C

Max.conductor temp.in service
70 ° C