



- 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<sup>2</sup> (1 x 0.80 mm) or stranded plain copper cross-section 0.88 mm<sup>2</sup> (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



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



Chemical resistance  
 Hydrocarbons resistant



Magnetic interference resistance  
 Yes



Operating temp.  
 -20 ... 60 °C



Max. conductor temp. in service  
 70 °C

## Marking

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

## 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
Armour type	Steel tapes
Outer sheath	PVC

### Electrical characteristics

Operating voltage	250 V
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### Usage characteristics

Fire retardant	EN IEC 60332-3-22 (cat A)
Chemical resistance	Hydrocarbons resistant
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]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [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

## SECTION 0.88MM

Reference Name	Diam. over inner sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [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