

SENSOR & TRANSDUCER CABLES

Catalogue





Introduction

Nexans has a great expertise in research and development of special and customised sensor cables for industrial instrumentation: load cells, pressure, displacement, temperature, vibration detectors, flow-meters, process control and analysis.

These sensor cables cover markets such as aerospace, transport (including automotive), defence, naval, gas or water utilities, petrochemical, industrial equipments and electronics.

The excellent mechanical and chemical characteristics of our cables grant them with high resistance for operating in harsh environment.

The recommended operating temperatures are between - 90°C to +200°C with a maximum voltage of up to 750 volts.

Our cables are available in many different styles including hook-up wires, coaxial cables, multicore cables, multi-pair cables and composite cables.

Our research and development department will meet any specific requirement from our customers, regarding the chemical, mechanical and electrical properties of the cables.



Sensors Market Needs

Physical and mechanical requirements

Our sensor cable designs are ideally suited to applications which perform under very harsh ambient conditions, particularly, high frequency connections operating at high temperature:

- ❑ Resistance to wear and cut through,
- ❑ High tensile strength,
- ❑ Low noise cable,
- ❑ High or very low operating temperature, etc.

They meet the usual requirements of the market :

- ❑ Cylindrical and ease of moulding,
- ❑ Good flexibility,
- ❑ Matt or gloss appearance,
- ❑ Small bulk volume and low weight, etc.

Chemical and environmental requirements

Our sensor cables are well suited to work under very severe conditions and have an excellent chemical resistance:

- ❑ Excellent resistance to sea water, mould and fungus,
- ❑ Excellent resistance to solvents such as oil, skydrol, petrol, isopropyl alcohol and aliphatic hydrocarbons,
- ❑ Resistance to sunlight, ozone, weather conditions,
- ❑ Flame and fire retardant, etc.

Electrical requirements

We meet a large number of electrical specifications in terms of operating voltage and electromagnetic protection.

Approval requirements

In addition, our cables can be approved according to the request : customer specifications, UL, VDE, IEC, RAQ, MIL,...



Technology

Construction : mainly 1, 2, 4, 6, 8, 12 cores

Vent tube(s)* : polyamide or PE (a vent tube assembly is possible)

Mechanical support* : 1, 2 or 4 aramid or steel strength members, aramid braid

Conductors : AWG 18 to AWG 28 (stranded or solid), tin plated copper, silver plated copper, silver plated copper covered steel

Insulation : LSZH, PTFE, PP, PE, TPE halogen free, PVC

Assembly* : polyester tape or polyimide tape

Drain wire* : tin plated copper

Electrical protection : one or two braids (tin or silver plated copper) with or without foil (polyester / aluminium)

Outer jacket : one or two jackets with one or double layer in PUR, FEP, PUR + FEP, polyimide + PTFE, halogen free TPE, TPE, PVC

* *optional*



Summary

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Part 1

Analysis



Filotex[®]

Sensor Cable 4 Conductors AWG 26

PRODUCT REFERENCES

FILOTEX Ref : **ET 2PB 808**

CONSTRUCTION

- ① CONDUCTOR (A) :
7 x 0,15 mm Tinned Copper
Section 0.12 mm² / AWG26
Insulation : PVC
Ø = 0.90 mm ± 0.10mm
- ② TAPE : Polyester
- ③ SCREEN :
Tinned Copper 0.10 mm
- ④ INNER JACKET PVC grey
Ø = 3.20 mm
- ⑤ SCREEN :
Tinned Copper 0.12 mm
- ⑥ OUTER JACKET : PVC grey
Ø = 5.00 mm ± 0.15 mm

Applications

- ❑ Sensor Cable for Data Transmission (ex :signal 4 – 20 mA),
- ❑ Example : pH measurement transducer,
- ❑ Very flexible cable.

Main data

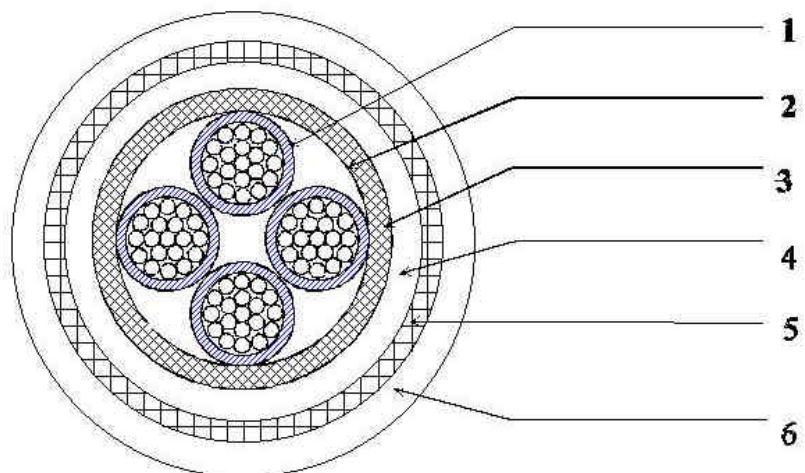
- ❑ Cable Conductor : AWG26,
- ❑ Cylindrical cable,
- ❑ Excellent electromagnetic protection (EMI) due to the 2 braids,
- ❑ Operating temperature : -30°C to + 80°C.

Color Code

- ❑ Conductor : White, Red, Black, Light blue,

Electrical values

- ❑ Operating voltage : 250V.



Part 2

Displacement



Sensor Cable 6 Conductors

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref: **ET 268832**

CONSTRUCTION

- ① 1 CORE : 12 x 0.2 mm tin plated copper (0.377 mm²; AWG 22)
- ② 2 CORES : 19 x 0.25 mm tin plated copper (0.93 mm²; AWG 18). PVC insulation. Polyamid jacket.
- ③ FILLER
- ④ 3 CORES : 19 x 0.12 mm tin plated copper (0.93 mm²; AWG 24). PVC insulation. Polyamid jacket.
- ⑤ Polyester aluminium tape
- ⑥ Polyurethane jacket
Ø = 6.6 mm ± 0.25 mm.

Application

- ❑ This cable is particularly recommended for displacement transducers with an excellent resistance to sea-water.

Main characteristics

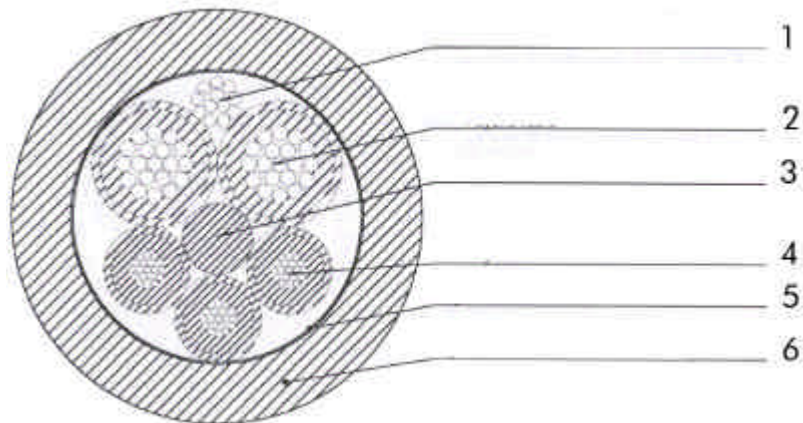
- ❑ Operating temperature of the cores : -40 °C to +105 °C,
- ❑ Operating temperature of the cable : -40 °C to +105 °C,
- ❑ Operating voltage : 600 V,
- ❑ Excellent resistance to hydrolysis and micro organisms,
- ❑ Excellent resistance to abrasion and cut through,
- ❑ Flame retardant cable,
- ❑ Easy moulding,
- ❑ Average weight of the cable : 61.5 kg/km.

Electrical data

- ❑ Linear resistance of the core AWG 18 at 20 °C : 20.6 ohms/km max.,
- ❑ Linear resistance of the core AWG 22 at 20 °C : 50.9 ohms/km max.,
- ❑ Insulation resistance of the cores AWG 18 & 22 at 20 °C K : 1000 MOhms /km mini. .

Colour coding

- ❑ Core AWG 18 : white, blue,
- ❑ Core AWG 22 : Red, yellow, green,
- ❑ Outer jacket : Black.



Part 3

High temperature vibration

ELECTRONIC



Filotex[®]

COAXIAL 95 OHMS
200 °C PTFE
OD 3.58 mm

PRODUCT REFERENCES

FILOTEX Ref:
M17/95-RG180

CONSTRUCTION

① CONDUCTORS

7 x 0.10 mm stranded silver plated copper clad steel 0.30.

② DIELECTRIC

Extruded PTFE $\varnothing = 2.59 \pm 0.08$ mm.

③ SCREEN

Single braid. Silver plated copper.

④ JACKET

$T^{\circ} = 200$ °C FEP
 $\varnothing = 3.58 \pm 0.10$ mm

To MIL 17 US specification

Main applications

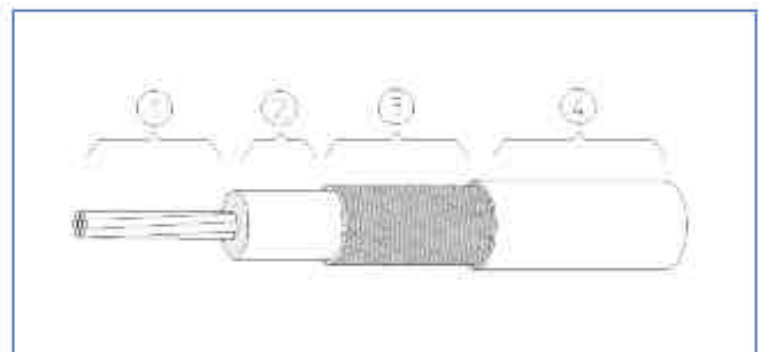
This coaxial cable is particularly recommended for high frequency connections operating at high temperature or on equipment expected to work under severe chemical requirements and very difficult conditions.

Main characteristics

- ❑ Operating temperature : -90 °C to +200 °C (FEP outer jacket),
- ❑ Continuous working voltage : 900 V,
- ❑ Maximal operating frequency : 3 GHz,
- ❑ Good resistance to aircraft fluids.
- ❑ Good resistance to flame NEC 32070/C1 & C2 (CFI 332.1).

Electrical data

- ❑ Capacitance : < 50.5 pF/m,
- ❑ Relative velocity of propagation : 69.5 %,
- ❑ Characteristic impedance : $95 \pm 5 \Omega$ at 200 MHz,
- ❑ Nominal attenuation : 41 dB/100 m at 400 MHz.



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 **Nexans**

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Part 4

Temperature measurement



KZ 04

Unscreened hook-up wires High temperature

Filotex[®]

PRODUCT IN THE RANGE

- KZ 04
- KZ 05
- KZ 06

CONSTRUCTION

① CONDUCTOR

Stranded silvered copper wires

② INSULATION

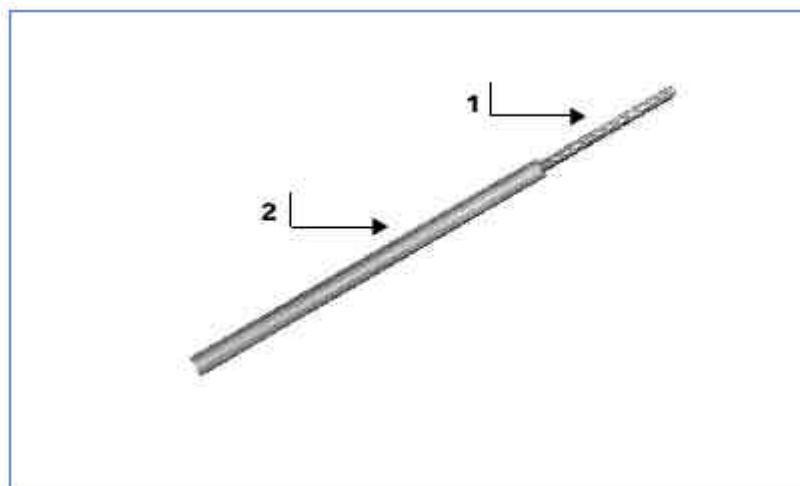
extruded polytetrafluorethylene (PTFE) (radial thickness according to the gauges : from 0.15 mm up to 0.18 mm)

To NF C 93-523 French specification

- ☐ Operating voltage : 250 volts
- ☐ Operating temperature : -55 °C up to +200 °C (ambient temperature + rise)

Main characteristics

- ☐ **Application :**
 - Internal wiring in electronic equipment
 - Aircrafts and satellites
- ☐ Operating frequency : up to 2000 Hz
- ☐ Excellent chemical resistance
- ☐ They are fire retardant (to NFC 32070/C1 French specification)



UNSCREENED HOOK-UP WIRES

| Reference FILOTEX | CONDUCTOR | | | | D.C. resist. at 20°C (Ohms/Km) | Overall diameter | | Maximum weight Kg / Km |
|----------------------|--------------|----------------------------------|--------------------------|-----------------|--------------------------------------|------------------|-------|---------------------------|
| | Gauge AWG | Cross section mm ² | Construction n x Ø mm | Nom. Ø mm | | mini. | maxi. | |
| | | | | | mm | | | |

| | | | | | | | | |
|------------|----|-------|-----------|------|------|------|------|------|
| KZ 04 — 01 | 32 | 0,035 | 7 x 0.08 | 0.24 | 546 | 0.48 | 0.58 | 0.95 |
| KZ 04 — 02 | 30 | 0,055 | 7 x 0.10 | 0.30 | 349 | 0.56 | 0.66 | 1.3 |
| KZ 04 — 03 | 28 | 0,093 | 7 x 0.13 | 0.39 | 201 | 0.63 | 0.73 | 1.75 |
| KZ 04 — 04 | 26 | 0,14 | 7 x 0.16 | 0.48 | 132 | 0.74 | 0.84 | 2.4 |
| KZ 04 — 05 | 24 | 0,22 | 7 x 0.20 | 0.60 | 86 | 0.86 | 0.96 | 3.4 |
| KZ 04 — 06 | 22 | 0,34 | 7 x 0.25 | 0.75 | 54.4 | 1.01 | 1.11 | 5.0 |
| KZ 04 — 07 | 20 | 0,60 | 19 x 0.20 | 1.00 | 31.3 | 1.30 | 1.40 | 8.25 |

**KZ 05**

Unscreened hook-up wires High temperature

Filotex®

PRODUCT IN THE RANGE

- KZ 04
- **KZ 05**
- KZ 06

To NF C 93-523 French specification

- ☐ Operating voltage : 600 volts
- ☐ Operating temperature : -55 °C up to +200 °C (ambient temperature + rise)

Main characteristics

- ☐ **Application :**
 - Internal wiring in electronic equipment
 - Aircrafts and satellites
- ☐ Operating frequency : up to 2000 Hz
- ☐ Excellent chemical resistance
- ☐ They are fire retardant (to NFC 32070/C1 French specification)

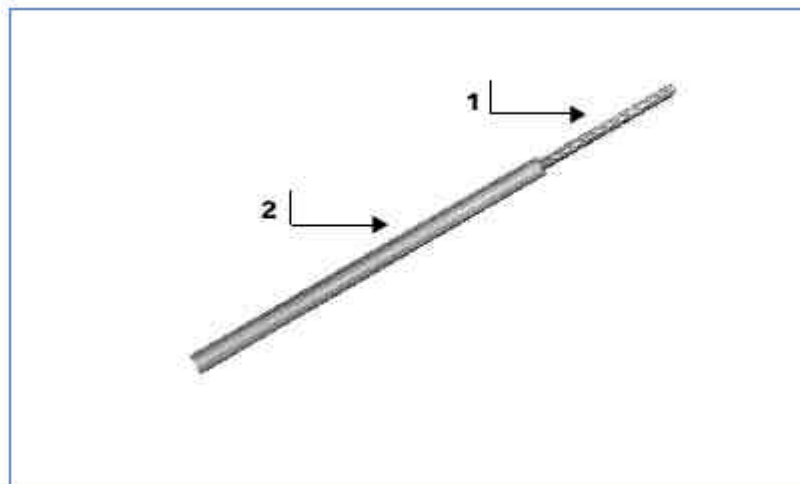
CONSTRUCTION

① CONDUCTOR

Stranded silvered copper wires

② INSULATION

extruded polytetrafluorethylene (PTFE) (radial thickness according to the gauges : from 0.28 mm up to 0.30 mm)



UNSCREENED HOOK-UP WIRES

| Reference FILOTEX | CONDUCTOR | | | | D.C. resist. at 20°C (Ohms/Km) | Overall diameter | | Maximum weight Kg / Km |
|----------------------|--------------|----------------------------------|--------------------------|-----------------|--------------------------------------|------------------|-------|---------------------------|
| | Gauge AWG | Cross section mm ² | Construction n x Ø mm | Nom. Ø mm | | mini. | maxi. | |
| | | | | | mm | | | |

| | | | | | | | | |
|------------|----|-------|-----------|------|------|------|------|------|
| KZ 05 — 01 | 32 | 0,035 | 7 x 0.08 | 0.24 | 546 | 0.63 | 0.84 | 1.65 |
| KZ 05 — 02 | 30 | 0,055 | 7 x 0.10 | 0.30 | 349 | 0.71 | 0.91 | 2.1 |
| KZ 05 — 03 | 28 | 0,093 | 7 x 0.13 | 0.39 | 201 | 0.79 | 1.00 | 2.6 |
| KZ 05 — 04 | 26 | 0,14 | 7 x 0.16 | 0.48 | 132 | 0.89 | 1.10 | 3.4 |
| KZ 05 — 05 | 24 | 0,22 | 7 x 0.20 | 0.60 | 86 | 1.04 | 1.22 | 4.5 |
| KZ 05 — 06 | 22 | 0,34 | 7 x 0.25 | 0.75 | 54.4 | 1.17 | 1.37 | 6.2 |
| KZ 05 — 07 | 20 | 0,60 | 19 x 0.20 | 1.00 | 31.3 | 1.42 | 1.62 | 9.5 |
| KZ 05 — 08 | 18 | 0.93 | 19 x 0.25 | 1.25 | 20.5 | 1.67 | 1.92 | 14.1 |
| KZ 05 — 09 | 16 | 1.34 | 19 x 0.30 | 1.50 | 13.9 | 1.92 | 2.27 | 20.0 |
| KZ 05 — 10 | 14 | 1.91 | 27 x 0.30 | 1.85 | 10.0 | 2.30 | 2.66 | 27.0 |
| KZ 05 — 11 | 12 | 3.18 | 45 x 0.30 | 2.45 | 6.0 | 2.89 | 3.24 | 42.5 |

Part 5

Load cell



Sensor Cable 4 Conductors AWG 20

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref : **ET 298096**

CONSTRUCTION

- ① 4 cores (0°56 AWG 20)
7 x 0.32 mm tinned copper
conductor. Polypropylene
Ø = 1.76 mm.
- ② 7 x 0.32 mm tinned copper
drain wire.
- ③ Identification thread.
- ④ Polyester separator tape.
- ⑤ Aluminum polyester tape.
- ⑥ Black polyurethane jacket
Ø = 7.50 mm ± 0.20 mm.

Application

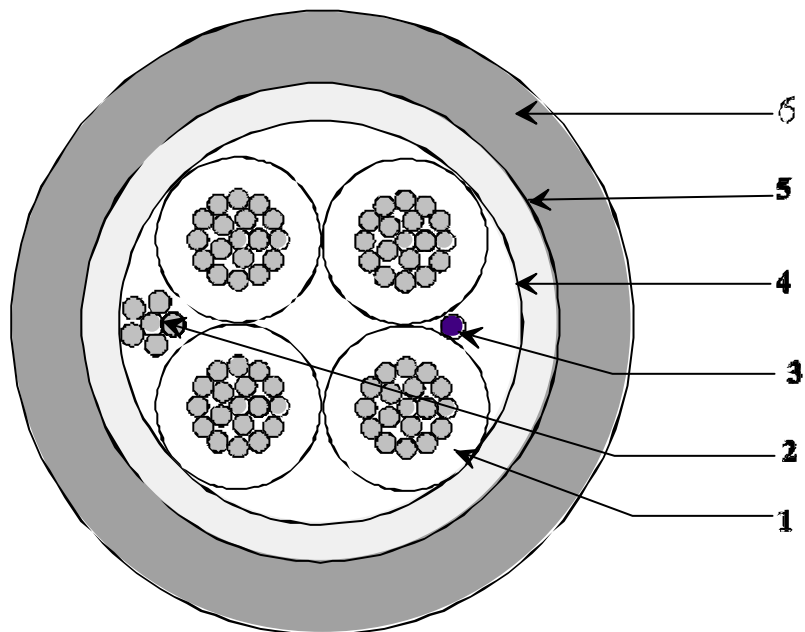
- ❑ Sensor cable for Data Transmission,
- ❑ Example : load cell sensor.

Characteristics

- ❑ Operating voltage : 250 Volts,
- ❑ Operating temperature: -40 °C to +85 °C,
- ❑ Insulation resistance : > 5000 M ohms,
- ❑ Linear resistance : = 35.0 ohms/km.

Color coding

- ❑ Black, red, green, white.





Sensor Cable 4 Conductors AWG 22

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref : **ET 288 948**

CONSTRUCTION

- ① CONDUCTOR (A) :
7 x 0,30 mm Tinned Copper
Section 0.485 mm² /
AWG22
Insulation : Polyolefine
Ø = 1.50 mm ± 0.10mm
- ② FILLER : Polyamide
- ③ SCREEN : Tinned Copper
- ④ TAPE : Separator
- ⑤ JACKET : Polyurethane
Ø = 7.60 mm ± 0.10 mm

Applications

- ❑ Sensor Cable for Data Transmission,
- ❑ Example : Load Cell sensor.

Main data

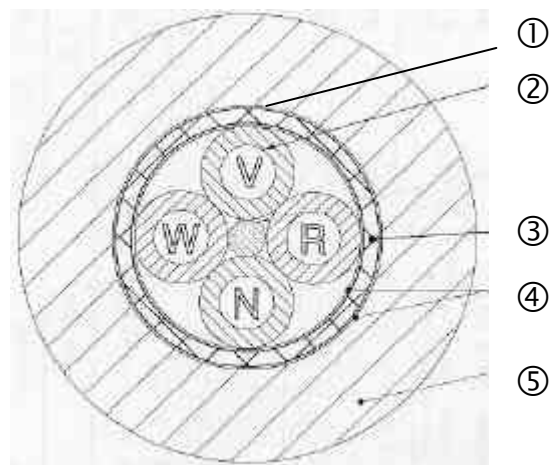
- ❑ Cable Conductor : AWG22,
- ❑ Cylindrical cable,
- ❑ Excellent mechanical resistance (abrasion, tear and adherence properties),
- ❑ Operating temperature : -20°C to + 85°C,
- ❑ Average cable weight : 80 kg / km,
- ❑ Jacket in gloss finish.

Color Code

- ❑ Conductor : White, Red, Black, Green,
- ❑ Jacket : black.

Electrical values

- ❑ Operating voltage : 250V,
- ❑ Conductor resistance : ≤ 36.0 Ω / km,
- ❑ Insulation resistance : > 2.000 MΩ.km.





Sensor Cable 6 Conductors AWG 22

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref : **ET 289 400**

CONSTRUCTION

- ① FILLER
- ② 6 CORES :
7 x 0,25 mm Tinned Copper
Section 0.34 mm² / 22 AWG
Insulation : Polyethylene
Ø = 2.00 mm
- ③ DRAIN WIRE :
12 x 0.20 mm Tinned Copper
- ④ JACKET : PVC
semi – conducting
Ø = 6.70 mm
- ⑤ SCREEN : Braid
0.13mm Tinned Copper
- ⑥ JACKET : PVC Black
Ø = 8.80 mm ± 0.20 mm

Applications

- ❑ Sensor Cable for Data Transmission,
- ❑ Example : Load Cell sensor for truck load measurement,
- ❑ High EMI protection.

Main data

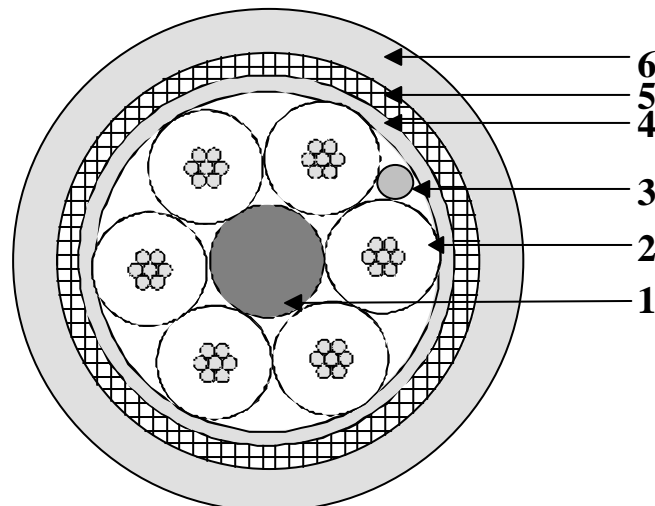
- ❑ Cable Conductor : 22 AWG,
- ❑ Cylindrical cable,
- ❑ Excellent EMI protection due to the braid + semi – conducting protection (for dynamic use),
- ❑ Operating temperature : -20°C to + 75°C.

Color Code

- ❑ Conductor :
- ❑ Jacket : black.

Electrical values

- ❑ Operating voltage : 500V.



Part 6

Level measurement



Transducer Cable (6 X 0°50) Resistant to hydrocarbon

Filotex[®]

PRODUCT REFERENCE

FILOTEX Ref : **2PC167**

CONSTRUCTION

- ① DRAIN WIRE :
7 x 0,30 mm Tinned Copper
(0.49 mm²/AWG22),
- ② CONDUCTORS :
16 x 0,20 mm Tinned Copper
(0.50 mm²/AWG20),

INSULATION :
PVC Ø = 1.50 mm nom,
- ③ NYLON VENT TUBE :
1.5 x 2.1,
- ④ SEPARATOR TAPE
Ø = 5.20 mm nom,
- ⑤ POLYESTER / ALU FOIL :
Alu inside Kr ≥ 25%,
- ⑥ FILLER
- ⑦ JACKET : HYDROCARBON FLUID
RESISTANT
Ø = 7.70 mm ± 0,25

Main Characteristics

Application : Transducer cable,

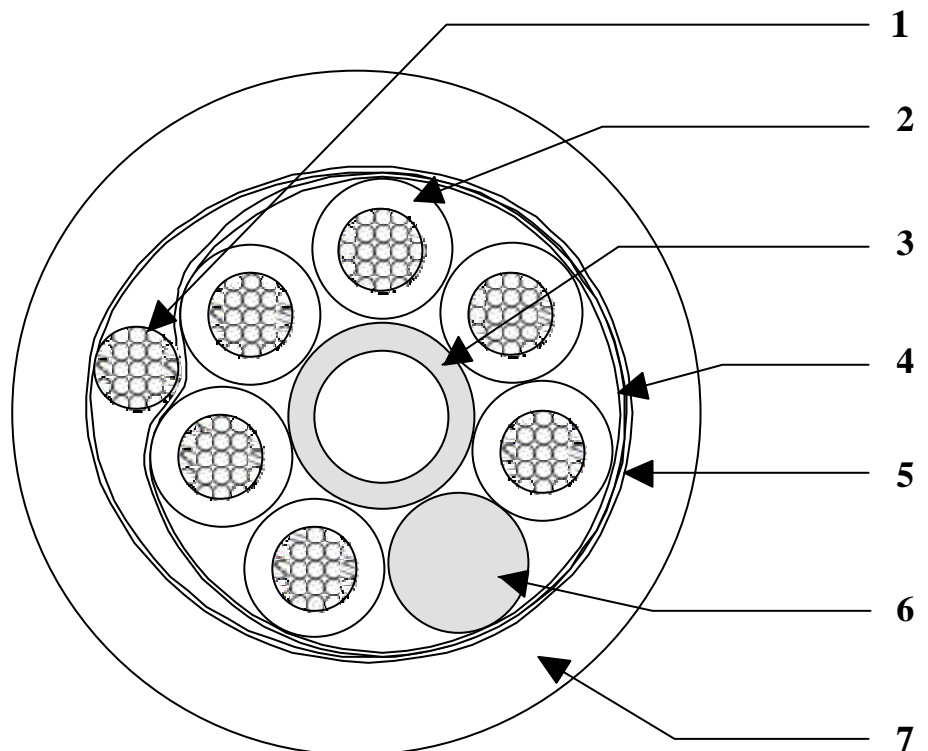
- ❑ Good resistance to hydrocarbon,
- ❑ Flexible jacket,
- ❑ Min. installation bend diameter : 92 mm,
- ❑ Approximative weight : 70 g/m,
- ❑ Operating temperature : -30°C to +105°C,

Color code

- ❑ Insulation of core : red / blue / brown / white / green / black,
- ❑ Outer jacket : black,

Electrical values

- ❑ Operating voltage : 250 V,





Sensor Cable 6 Conductors AWG 24

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref : **ET 2PA 417**

CONSTRUCTION

- ① VENT TUBE : Polyamide
OD = 2.50 x 1.50 mm
- ② Fillers
- ③ 6 CONDUCTORS
7 x 0.20 mm Tinned Copper
Section = 0.22mm²
AWG24
Insulation: Polyolefine
Ø = 1,20 mm ± 0,05 mm
- ④ DRAIN : Tinned Copper
7x0.20mm (AWG24)
- ⑤ TAPE : Polyester Aluminum
- ⑥ TAPE : waterproof
- ⑦ Aramid
- ⑧ JACKET : Polyurethane
black, Ø = 7.40 mm ± 0.20

White marking (Customer name)

Applications

- ❑ Cable sensor for in water tank,
- ❑ Including a vent tube for fluid level measurement regardless of atmospheric pressure changes,
- ❑ High mechanical resistance.

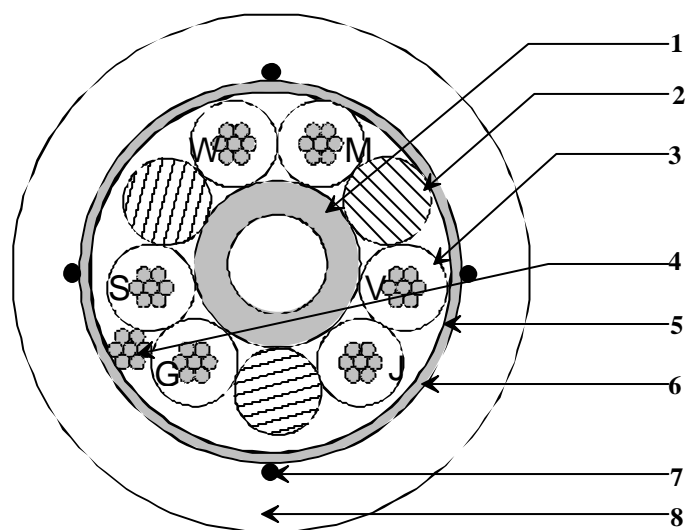
Main data

- ❑ Special cable with 6 cores,
- ❑ Conductor cross section : AWG 24,
- ❑ Operating temperature : -30 to +75°C,
- ❑ Breaking load : >100 kg,
- ❑ Bending radius : 10 Ø.

Electrical data

- ❑ Operating voltage : 500V
- ❑ Insulation resistance : > 5000 MΩ

Cores Color Coding : DIN 47100 (brown, green, yellow, grey, pink and white).





Sensor Cable 6 Conductors AWG 24

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref : **ET 277 370**

CONSTRUCTION

- ① 6 CONDUCTORS
7x0.20 mm Tinned Copper
Section=0.216mm² AWG24
Insulation: Polyolefine
Ø = 1,15 mm
- ② VENT TUBE : Polyamide
OD = 1.14 x 0.60 mm
- ③ Fillers Aramid
- ④ Drain flat cable 7x0.20mm
- ⑤ TAPE : Polyester separator
- ⑥ TAPE : Polyester Aluminum
- ⑦ JACKET : Polyurethane
black, Ø = 5.70 mm±0.25

White marking (Customer name)

Applications

- ❑ Cable sensor for use in water tank,
- ❑ Including a vent tube for fluid level measurement regardless of atmospheric pressure changes,
- ❑ High mechanical resistance.

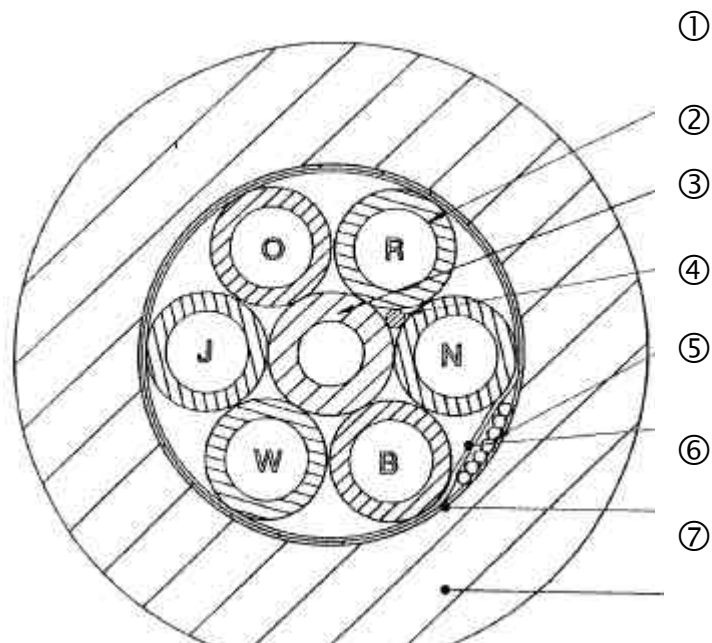
Main data

- ❑ Special cable with 6 cores,
- ❑ Conductor cross section : AWG 24,
- ❑ Operating temperature : -30 to +85°C,
- ❑ Breaking load : > 75 kg.

Electrical data

- ❑ Operating voltage : 300V

Cores Color Coding : red, black, blue, white, yellow, orange.



Part 7

Pressure measurement

ELECTRONIC



Sensor Cable 2 Conductors AWG 22

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref : **ET 2PA 850**

CONSTRUCTION

- ① 2 CONDUCTORS
7 x 0.25 mm Tinned Copper
Section = 0.34mm² AWG22
Insulation : Polyethylene
Ø = 1,50 mm ± 0,05 mm
- ② 6 FILLERS PVC
- ③ 2 aramid Fillers
- ④ VENT TUBE : Polyamide
OD = 2.50 x 1.50 mm
- ⑤ TAPE : Polyester
- ⑥ DRAIN WIRE :
7x0.20 Tin Copper (AWG22)
- ⑦ TAPE : Polyester Aluminum
- ⑧ JACKET : Polyurethane
Ø = 9.00 mm ± 0.20

Applications

- ❑ Cable sensor for hydrostatic pressure measurement,
- ❑ Including a vent tube for water pressure measurement regardless of atmospheric pressure changes,
- ❑ High mechanical resistance.

Main data

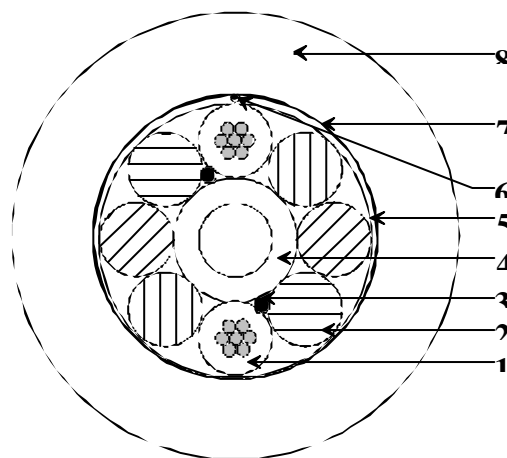
- ❑ Special cable with 2 cores,
- ❑ Conductor cross section : AWG 22,
- ❑ Operating temperature : -30 to +75°C,
- ❑ Breaking load : >100 kg,
- ❑ Average cable weight : 75 kg / km.

Electrical data

- ❑ Operating voltage : 500V

Jacket Printing

- ❑ Conductor color : red and blue





Sensor Cable 4 Conductors AWG 24

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref. : **ET 123923**
ET 124815

CONSTRUCTION

- ① Assembly 4 cores AWG24
Conductor 7 x 0.20 mm
Silver plated copper
Insulation PTFE
OD = 0.91 ± 0.05 mm
- ② Separator tape Polyimide
- ③ Screen
Silver plated copper 0.10 mm
- ④ Jacket Polyimide + PTFE
OD = 3.0 mm max

Applications

- ❑ Cable sensor for pressure measurement,
- ❑ High mechanical resistance and EMI protection.

Main data

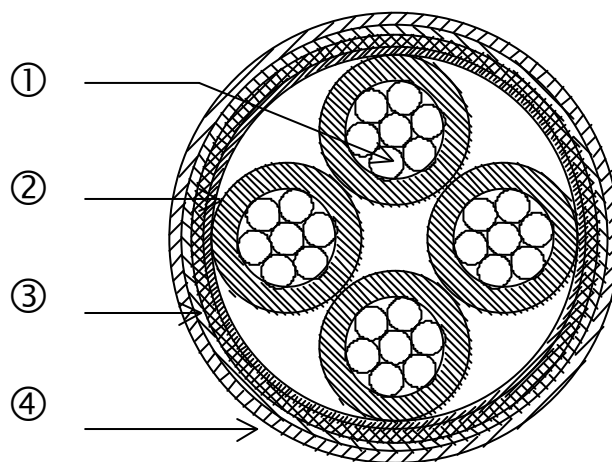
- ❑ Conductor cross section : AWG 24,
- ❑ Operating temperature : 260°C (max.),
- ❑ Nominal cable weight : 22 g / m

Color code

- ❑ Conductor : 1.Green / 2. Blue / 3. Yellow / 4. Red

Electrical data

- ❑ Operating voltage : 250V





Filotex[®]

PRODUCT REFERENCE

FILOTEX Ref : 2PC506

Transducer Cable (6 X 0°22) Resistant to hydrocarbon

Main Characteristics

Application : Transducer cable,

- ❑ Low halogen,
- ❑ Good resistance to hydrocarbon,
- ❑ Flexible jacket,
- ❑ Min. installation bend diameter : 95 mm,
- ❑ Approximative weight : 65 g/m,
- ❑ Operating temperature : -30°C to +80°C,

Color code

- ❑ Insulation of core : White/Blue/Black/Yellow/Red/Orange,
- ❑ Outer jacket : black,

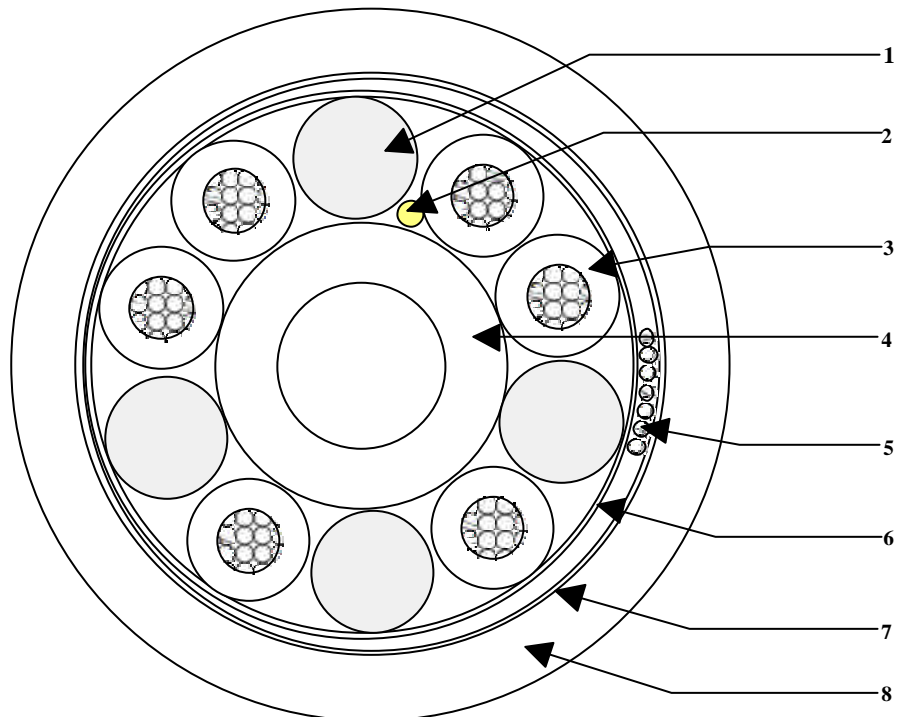
CONSTRUCTION

- ① FILLERS
- ② ARAMID REINFORCEMENT
- ③ WIRES :
Conductor :
7 x 0,20 mm Tinned Copper
(0.22 mm²/AWG24),

Insulation :
PE Ø = 1.15 mm nom,
- ④ NYLON VENT TUBE :
1.90 x 3.00,
- ⑤ DRAIN WIRE :
7 x 0,20 mm Tinned Copper
(0.22 mm²/AWG24),
- ⑥ POLYESTER SEPARATOR TAPE
Ø = 5.57 mm nom,
- ⑦ POLYESTER / ALU FOIL :
Alu inside Kr ≥ 25%,
- ⑧ JACKET: HYDROCARBON
FLUID
RESISTANT
Ø = 7.90 mm ± 0,20

Electrical values

- ❑ Operating voltage : 300 V,





Sensor Cable 8 Conductors AWG 24

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref. : **ET 2PA899**

ET 2PB099

CONSTRUCTION

- ① 4 FILLERS : Aramid
- ② VENT TUBE : Polyamide
Ø = 2.40 x 3.20 mm
- ③ 8 CONDUCTORS
7 x 0.20 mm Tinned Copper
Section = 0.22mm² AWG24
Insulation : Polypropylene
Ø = 1,10 mm ± 0,05 mm
- ④ TAPE : Polyester
- ⑤ DRAIN WIRE : 7x0.20 Tin Cu
- ⑥ TAPE : Polyester Aluminum
- ⑦ JACKET : Polyurethane
Ø = 8.05 mm ± 0.15

Applications

- ❑ Cable sensor for pressure measurement,
- ❑ Including a vent tube for water pressure measurement regardless of atmospheric pressure changes,
- ❑ High mechanical resistance.

Main data

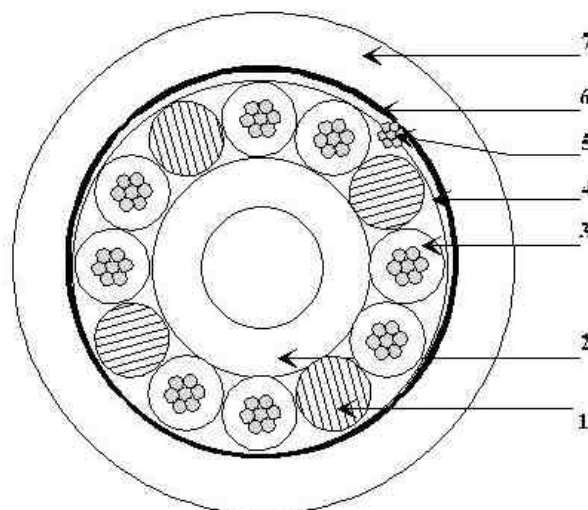
- ❑ Special cable with 8 cores,
- ❑ Conductor cross section : AWG 24,
- ❑ Operating temperature : 85°C (max.),
- ❑ Bending radius (static) : 6 Ø,
Bending radius (dynamic) 12 Ø.

Electrical data

- ❑ Operating voltage : 250V.

Jacket Printing (white color each meter)

- ❑ Conductor color code : green, white, black, brown, violet, red, blue, yellow.



ELECTRONIC



Filotex®

Sensor Cable 8 x 0.25mm² + Vent Tube PUR Jacket

PRODUCT REFERENCES

FILOTEX Ref : **ET 2PC042**

CONSTRUCTION

- ① TUBE :
Polyamide vent tube
Ø = 2.00 x 1.00 mm
- ② 8 CORES :
14 x 0.15 Plain Copper
(0.25 mm² / 24 AWG)
PVC Insulation Ø = 1.30 mm
- ③ TAPE
Polyester separator
- ④ SCREEN
0.15mm tinned copper braid
- ⑤ JACKET PUR
Ø = 7.50 mm ± 0.20 mm

Applications

- ❑ Cable sensor for water pressure measurement,
- ❑ To be used in harsh environment : in sewer and cleaning water system.

Main data

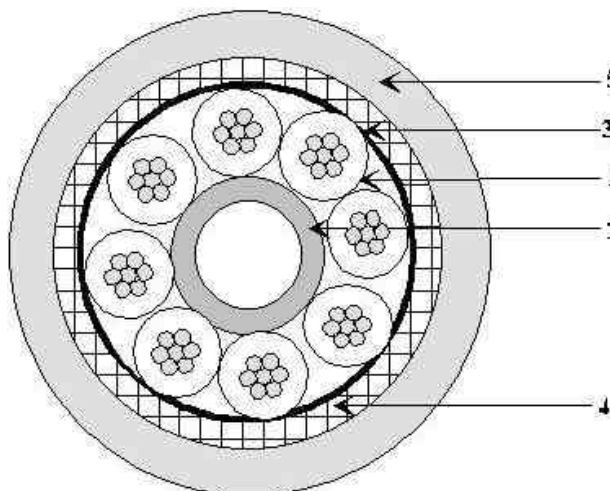
- ❑ Water resistant (see and salted water),
- ❑ transversal water tightness,
- ❑ Operating temperature : -40°C to +90°C,
- ❑ Bending radius static : 6 Ø
- ❑ Bending radius dynamic : 12 Ø.

Color code

- ❑ Cores : Brown-Green-White-Grey
Blue-Red-Black-Yellow
- ❑ Jacket : BLACK RAL 9005

Electrical values

- ❑ Operating Voltage : 300 V maxi
- ❑ Linear resistance : <= 85 Ohms/Km



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Sensor Cable 12 Conductors AWG 24

Filotex[®]

PRODUCT REFERENCES

FILOTEX Ref : **ET 2PB 518**

CONSTRUCTION

- ① VENT TUBE : Polyamide
Ø = 2.40 x 3.20 mm
- ② 12 CONDUCTORS
7 x 0.20 mm Tinned Copper
Section = 0.22mm² AWG24
Insulation : Polypropylene
Ø = 1,10 mm ± 0,05 mm
- ③ TAPE : Polyester
- ④ DRAIN WIRE : 7x0.20 TinCu
- ⑤ TAPE : Polyester Aluminum
- ⑥ JACKET : Polyurethane
black, Ø = 8.05 mm ± 0.15

Applications

- ❑ Cable sensor for pressure measurement,
- ❑ Including a vent tube for water pressure measurement regardless of atmospheric pressure changes.

Main data

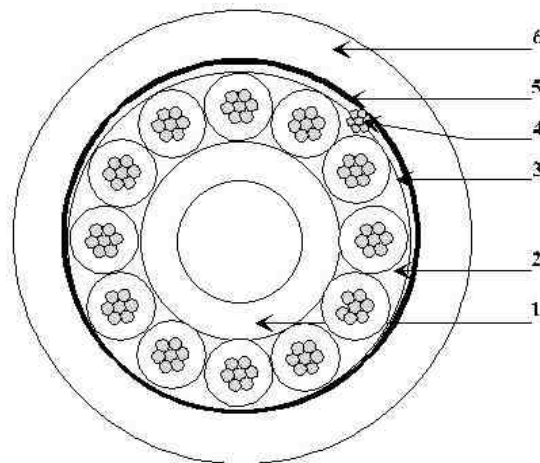
- ❑ Special cable with 12 cores,
- ❑ Conductor cross section : AWG 24,
- ❑ Operating temperature : 85°C (max.),
- ❑ Bending radius (static) : 6 Ø,
Bending radius (dynamic) 12 Ø.

Electrical data

- ❑ Operating voltage : 250V

Jacket Printing (white color each meter)

- ❑ Conductor color code : green, yellow, white, black, brown, turquoise, violet, pink, red, blue, grey



Part 8

**CCD cameras applications :
Cables used with CCD cameras for medical,
industrial and
video-surveillance applications.**



Filotex®

STUDY 123602 9 channels 38 AWG coax + 5 x 38 AWG wires

Video Endoscopy cable

PRODUCT REFERENCES

FILOTEX Ref : ET 123 602

CONSTRUCTION

Video camera Cable

- ① Core A :
AWG 38 stranded silver plated alloy,
FEP insulation
Ø = .34 ±.02mm
AWG 44 silver plated copper
Helicoidal screen
Ø = .44mm nominal
FEP jacket Ø = .53 ± .02 mm
- ② Core B :
AWG 38 stranded silver plated alloy,
FEP insulation
Ø = .34 ±.05mm
- ③ Fillers
9 Cores (A) + 5 cores (B) +
Fillers twisted
Ø = 2.05 mm nominal
- ④ PTFE tape
Ø = 2.07 mm nominal.
- ⑤ AWG 40 tin plated copper braid 85 % coverage
Ø = 2.5mm nominal
- ⑥ Medical PVC Ø = 3.45 ±.1mm

Characteristics

- ❑ Very flexible cable with an extremely good mechanical behaviour.
- ❑ Withstands miscellaneous sterilisation processes.

Applications

Video Endoscopy cable assemblies

Electrical performances

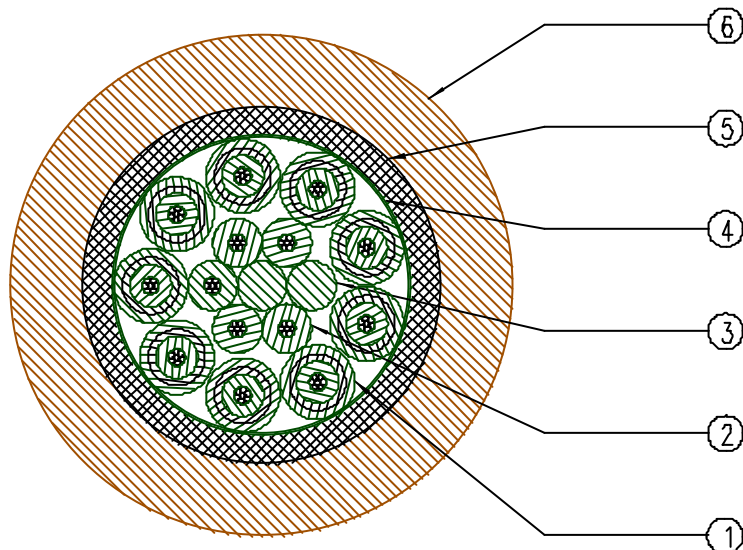
- ❑ Characteristic impedance (core A) : 50 nominal
- ❑ Linear capacitance (core A) : 95 ± 10 pF/m (at 95%) (29pF/ft)
- ❑ Continuous operating voltage : 24 V eff.
- ❑ Test voltage between core and screen : 350 V DC 1 mn

Thermal performances

- ❑ Operating temperature : - 30°C to + 85 °C (100°C at peak)

Mechanical performances

- ❑ Minimum bending radius : 5 x Overall diameter .



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STUDY 124692

9 channels 32 AWG coax + 3 x 26 AWG wires

Filotex®

Video Endoscopy cable

PRODUCT REFERENCES

FILOTEX Ref : ET 124 692

CONSTRUCTION

Video camera Cable

- ① Core A :
AWG 32 stranded silver plated alloy.
FEP insulation
Ø = .65 ±.03mm
AWG 44 silver plated copper
Helicoidal screen
Ø = .75mm nominal
FEP jacket Ø = .91 ± .05mm
- ② Core B :
AWG 26 stranded tin plated copper.
FEP insulation
Ø = .81 ±.05mm
9 Cores (A) + 3 cores (B)
twisted Ø = 3.6mm nominal
- ③ PTFE tape
Ø = 3.65mm nominal.
- ④ AWG 40 tin plated copper
braid 85 % coverage
Ø = 4.1mm nominal
- ⑤ Medical PVC
Ø = 5.0 ± .2mm

Characteristics

- ❑ Very flexible cable with an extremely good mechanical behaviour.
- ❑ Withstands miscellaneous sterilisation processes.

Applications

- ❑ Video endoscopy cable assemblies

Electrical performances

- ❑ Characteristic impedance core (A) : 50 nominal
- ❑ Linear capacitance core (A) : 95 ± 10 pF/m (at 95%).(29 pF/ft)
- ❑ Continuous operating voltage : 24 V eff.
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Thermal performances

- ❑ Operating temperature : - 30°C to + 85 °C (100 °C at peak)

Mechanical performances

- ❑ Minimum bending radius : 5 x Overall diameter

