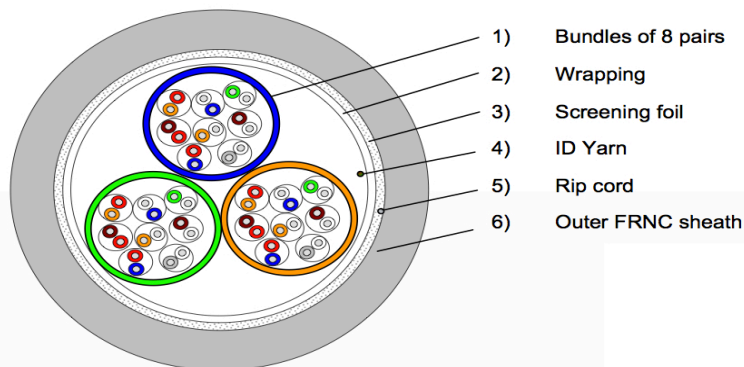


VDSL 24 pairs 0.4 mm

100 Ohm

Cable design



Cable construction

Conductor:	Bare copper wire, nominal diameter 0.4mm
Insulation:	Halogen free polyethylene, nominal diameter 0.7mm
Cabling element:	2 insulated conductors twisted together to form a pair
Bundle lay up:	8 pairs stranded together to form a bundle
Pair identification:	In each bundle the pairs shall be identified with a colour scheme in accordance with IEC Publication 60708, Appendix C ad IEC Publication 304 (see table 1)
Cable lay up:	3 bundles stranded together to form a compact and circular cable core (fillers could be used as required to aid manufacture)
Bundle identification:	Coloured synthetic tapes or threads 1st bundle blue 2nd bundle orange 3rd bundle green
Wrapping:	Synthetic tape
Screen:	ALU/PET foil or ALU/PET/ALU foil, with a total aluminium thickness 25 µm
Outer sheath:	FRNC (Flame Retardant Non Corrosive) compound, thickness 0.6mm
Sheath colour:	Grey RAL7032
Outer diameter:	≤ 9.5mm
Sheath marking:	PRYSMIAN (x) - aaaa x = factory code aaaa = production year (es. 2006) Interval: 300 mm, color: blue or black

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VDSL 24 pairs 0.4 mm 100 Ohm

Table 1 - Colour scheme

Unit number	Pair number	Colour of insulation		Unit identification (lapping colour)
		Wire a	Wire b	
1	1	White	Blue	Blue
	2	White	Orange	
	3	White	Green	
	4	White	Brown	
	5	White	Grey	
	6	Red	Blue	
	7	Red	Orange	
	8	Red	Green	
2	9	Red	Brown	Orange
	10	Red	Grey	
	11	Black	Blue	
	12	Black	Orange	
	13	Black	Green	
	14	Black	Brown	
	15	Black	Grey	
	16	Yellow	Blue	
3	17	Yellow	Orange	Green
	18	Yellow	Green	
	19	Yellow	Brown	
	20	Yellow	Grey	
	21	Violet	Blue	
	22	Violet	Orange	
	23	Violet	Green	
	24	Violet	Brown	

Mechanical & environment properties

Minimum bending radius

8 x overall cable diameter (static)
10 x overall cable diameter (dynamic)

Temperature range:

Installation: - 5/+50 °C
Operation (fixed installation) and storage: -20/+70 °C

Flammability (single cable)

IEC 60332-1

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VDSL 24 pairs 0.4 mm

100 Ohm

Electrical properties at 20 °C

Loop resistance	ohm / km	Max. ≤ 150
Insulation resistance	Mohm×km	≥ 5000
Test voltage		1000 V _{AC} or 1500 V _{DC} 1 minute
Maximum mutual capacitance	nF/km	≤ 55
Capacitance unbalance at 800 Hz		
- Pair to pair	pF / 500m	250
- Pair to ground	pF / 500m	750
Characteristic impedance from 1 to 30 MHz	ohm	100 ± 15
Attenuation		
1 MHz	dB / 100 m	3.2
4 MHz	dB / 100 m	6.6
10 MHz	dB / 100 m	10.9
16 MHz	dB / 100 m	13.5
20 MHz	dB / 100 m	15.4
30 MHz	dB / 100 m	18.5
Near end crosstalk		
1 MHz	dB	60
4 MHz	dB	51
10 MHz	dB	45
16 MHz	dB	42
20 MHz	dB	40.5
30 MHz	dB	37
Far end crosstalk		
1 MHz	dB/100m	60
4 MHz	dB/100m	51
10 MHz	dB/100m	45
16 MHz	dB/100m	42
20 MHz	dB/100m	40.5
30 MHz	dB/100m	37

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