30 HD Vision Flexible Digital coaxial cables





Van Damme now has 2 single flexible digital coaxials to add to the established 4 and 6 way flexible HD Vision low loss multicores. All are suitable for analogue, SDI and HD-SDI transmissions. The 2 single coaxials are based around industry standard RG6/U and RG59/U and their precision construction ensures that electrical performance has not been majorly affected by the use of a stranded centre conductor.

Applications

Single coaxials

- Transmission of HD-SDI, SDI and analogue video signals
- Stranded centre conductor for flexible use
- Ideal for use as patchcords, shorter HD-SDI cables and cable reel systems
- Designed for touring, outside broadcast and other dynamic uses

Multicores

- Transmission of HD-SDI, SDI and analogue video signals
- Approved by Digidesign for use with the Venue console
- MADI multicore
- Designed for touring, outside broadcast and other dynamic uses

Application notes

- Use of precision 75 Ohm components throughout any signal chain is imperative

Transmission length guidelines

These transmission lengths have been calculated throughout to a maximum attenuation of -30dB at the frequency corresponding to half of the actual signal data rate for SMPTE 259 and -20dB for SMPTE 292 and 424. SMPTE and others advise that 90% of this cable length introduces an appropriate safety factor - the chart below includes an 80% safety factor as jitter and other factors can increase dramatically in the last 20% of a cable run.

HD vision series

	SMPTE 259				SMPTE 292	SMPTE 424
Data rate (clock)	143Mb/s	177Mb/s	270Mb/s	360Mb/s	1.485Gb/s	2.97Gb/s
½ Clock Rate	72MHz	89MHz	135MHz	180MHz	743MHz	1485MHz
Stock code	Recommended transmission length					
268-275-000	249m	224m	145m	128m	47m	31m
268-175-000	320m	288m	172m	152m	63m	41m
268-475-000	420m	379m	311m	273m	85m	60m
268-675-000	420m	379m	311m	273m	85m	60m

Single Coaxials

Mechanical specification

Stock code		268-475-/268-675-000 inner coaxial	278-975-000	278-775-000
Conductor	Material	Bare ultra pure oxygen free copper	Bare ultra pure oxygen free copper	Bare ultra pure oxygen free copper
	Stranding	1 x 1.02mm	19 x 0.16mm	19 x 0.20mm
Dielectric	Material	Foamed polyethylene	Gas injected Foam skin polyethylene	Gas injected Foam skin polyethylene
	Average thickness	1.80mm	1.35mm	1.70mm
Diameter		4.70mm ±0.15	3.70mm ±0.15	4.57mm ±0.15
Screen 1	Type	Aluminium/polyester foil 125% coverage	Aluminium/polyester foil 125% coverage	Aluminium/polyester foil 125% coverage
Screen 2	Material	Tinned bare ultra pure oxygen free copper	Tinned bare ultra pure oxygen free copper	Tinned bare ultra pure oxygen free copper
Coverage		95%	95%	95%
Overall Jacket	Material	Flexible PVC composite Sky blue RAL 5015	Flexible PVC composite Jet Black RAL 9005	Flexible PVC composite Jet Black RAL 9005
	Average thickness	0.75mm	0.75mm	0.75mm
	Overall diameter	7.00mm ± 0.20	6.15mm ± 0.20	7.00mm ± 0.20

Multicores 268-475-000 & 268-675-000 overall jacket

Separator	Material	Soft tape	Coverage	>125%
Overall jacket	Material	Flexible PVC composite	Colour	Jet Black RAL 9005
Bend radius	15 x overall diameter			
Overall diameter	268-475-000	20.50mm ± 0.20	268-675-000	26.00mm ± 0.20

Electrical specifications

Stock code		268-475-/268-675-000	278-975-000	278-775-000
Resistance	Conductor	<24 Ohm/km	<40 Ohm/km	<27.8 Ohm/km
	Shield	<8 Ohm/km	<8 Ohm/km	<5.5 Ohm/km
	Insulation	>5000 MOhm/km	>5000 MOhm/km	>5000 MOhm/km
Voltage test		1000V DC 1 minute OK	1000V DC 1 minute OK	1000V DC 1 minute OK
Capacitance		58 pF/m	56pF/m	53 pF/m
Velocity of propagation	80%	80%	79%	
Impedance at 10MHz		75 Ohms ±1.5	75 Ohms ±1.5	75 Ohms ±1.5
Attenuation	5 MHz	1.45 dB/100m	1.96 dB/100m	1.77 dB/100m
	10 MHz	2.00 dB/100m	2.95 dB/100m	2.36 dB/100m
	135 MHz	7.31 dB/100m	11.48 dB/100m	9.19 dB/100m
	180 MHz	8.35 dB/100m	13.45 dB/100m	10.83 dB/100m
	270 MHz	10.30 dB/100m	16.73 dB/100m	12.12 dB/100m
	743 MHz	17.75 dB/100m	29.20 dB/100m	22.97 dB/100m
	1485 MHz	25.16 dB/100m	43.64 dB/100m	34.12 dB/100m

Characteristics & description

Stock code	Description	Weight Kg/km
268-175-000	Van Damme HD Vision flexible coax RG6/U type	70
268-275-000	Van Damme HD Vision flexible coax RG59/U type	66
268-475-000	Van Damme HD Vision 4 way dynamic multicore	446
268-675-000	Van Damme HD Vision 6 way dynamic multicore	698

• Maximum reel length 500 metres