



# cable

## Aqua Series Marine Grade SeaSat coaxial multicore LSZH



Van Damme SeaSat Coaxial Multicore LSZH is a three way RG6 type multicore cable for satellite television and HD-SDI high definition video signal distribution originally designed and specified for the Marine market. Its Low Smoke Zero Halogen jacket materials and fire resistance and retardancy qualities make it ideal for installations in marine vessels and public buildings whilst its excellent electrical properties meet the demanding criteria of broadcast and post production facilities - in fact this cable is ideal for any installation that may require the

distribution of multiple satellite and/or HD-SDI signals.

### Applications

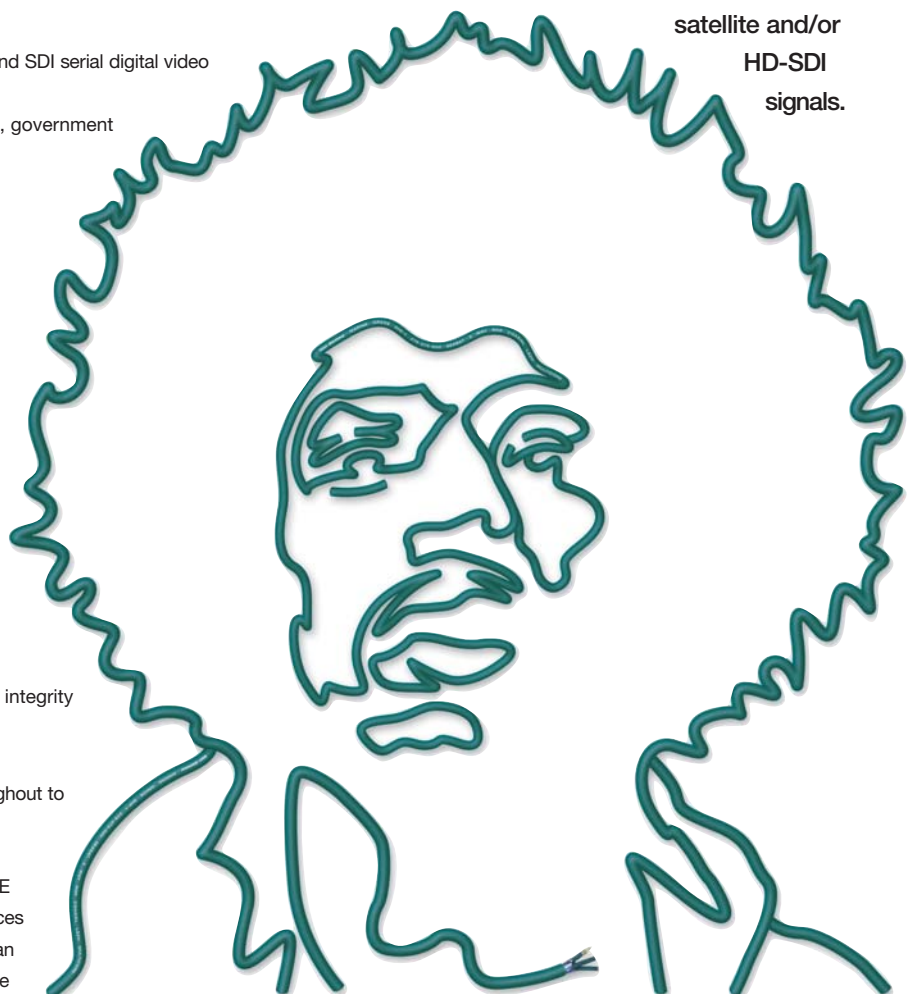
- Installed distribution of satellite television signals
- Installed distribution of HD-SDI high definition video and SDI serial digital video
- Also suitable for analogue video signals
- Installation in public buildings, schools and colleges, government premises and marine vessels

### Application notes

- Meets the electrical requirements of CAI (UK Confederation of Aerial Industries) for type 100 satellite coaxial cable
- Jacket material specified as the thermoplastic polymer SHF-1; compliant with IEC 60092 Electrical Installations in ships pt. 359 - Sheathing materials for shipboard power and communication cables
- Fully tested and compliant with the following IEC standards (see glossary for full description)
  - IEC 60332.1 Fire resistance of a single cable
  - IEC 60332.3C Fire resistance of bunched cables
  - IEC 60754.1 Amount of Halogen Gas Emissions
  - IEC 60754.2 Degree of acidity of released gases
  - IEC 60134.2 Measurement of smoke density
- Ultra pure oxygen free copper for outstanding sonic integrity

### 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.

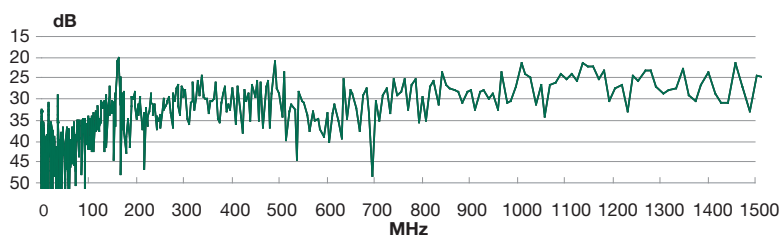


	SMPTE 259		SMPTE 292		SMPTE 424
Data rate (clock)	143Mb/s	177Mb/s	270Mb/s	360Mb/s	1.485Gb/s
½ Clock Rate	72MHz	89MHz	135MHz	180MHz	743MHz
Recommended transmission length	443m	399m	328m	287m	90m

# aqua series

<b>Mechanical specification</b>			
<b>Conductor</b>			
Material	Bare ultra pure oxygen free copper		
Stranding	1 x 1.02mm		
<b>Dielectric</b>			
Material	Foamed polyethylene		
Average thickness	1.80mm		
Diameter	4.70mm ±0.15		
<b>Screen 1</b>			
Type	≥35µm Aluminium/polyester foil 125% coverage		
<b>Screen 2</b>			
Material	Tinned bare ultra pure oxygen free copper		
Coverage	95%		
Dimension	24x6x0.15mm		
<b>Overall jacket</b>			
Material	SHF-1 LSZH thermoplastic polymer Water Blue RAL 5021		
Overall diameter	6.80mm ± 0.20		
<b>Overall jacket Flame barrier tape</b>			
Material	Aluminium/polyester tape Al facing in		
Coverage	>125%		
<b>Overall jacket</b>			
Material	SHF-1 LSZH thermoplastic polymer		
Colour	Water Blue RAL 5021		
<b>Bend radius</b>			
	245mm		
<b>Physical properties un-aged</b>			
<b>Jacket (at 60°C)</b>			
Tensile strength	>9 N/mm <sup>2</sup>		
Elongation	>125%		
Heat shock test	150 °C x 1 hour - no cracks		
<b>Halogen Emissions</b>			
	≤0.30% Halogen acid gases according to IEC 60754-2		
<b>Electrical characteristics</b>			
<b>Resistance</b>			
Conductor	<25 Ohm/Km		
Shield	<8 Ohm/Km		
Insulation	>5000 M Ohm/Km		
<b>Voltage test</b>			
	1500V DC 1 minute OK		
<b>Capacitance</b>			
	60 pF/m		
<b>Velocity of propagation</b>			
	78%		
<b>Impedance at 10MHz</b>			
	75 Ohms ±2		
<b>Attenuation</b>			
5 MHz	1.45 dB/100m	460 MHz	15.00 dB/100m
50 MHz	4.60 dB/100m	743 MHz	17.75 dB/100m
100 MHz	6.38 dB/100m	860 MHz	19.50 dB/100m
135 MHz	7.31 dB/100m	1000 MHz	21.50 dB/100m
180 MHz	8.35 dB/100m	1485 MHz	25.16 dB/100m
200 MHz	8.81 dB/100m	1750 MHz	29.00 dB/100m
270 MHz	10.30 dB/100m	2150 MHz	32.50 dB/100m
400 MHz	12.65 dB/100m		

## Structural return loss



## Characteristics by stock code

Stock code	Overall diameter mm	Weight Kg/km	Construction and lay up
278-375-000	16.50mm	360 Kg/Km	3 x coax numbered 1-3 assembled to form cable core; flame barrier tape over

- Maximum reel length 500 metres