



# cable

## Aqua Series Super Marine Grade data multicore



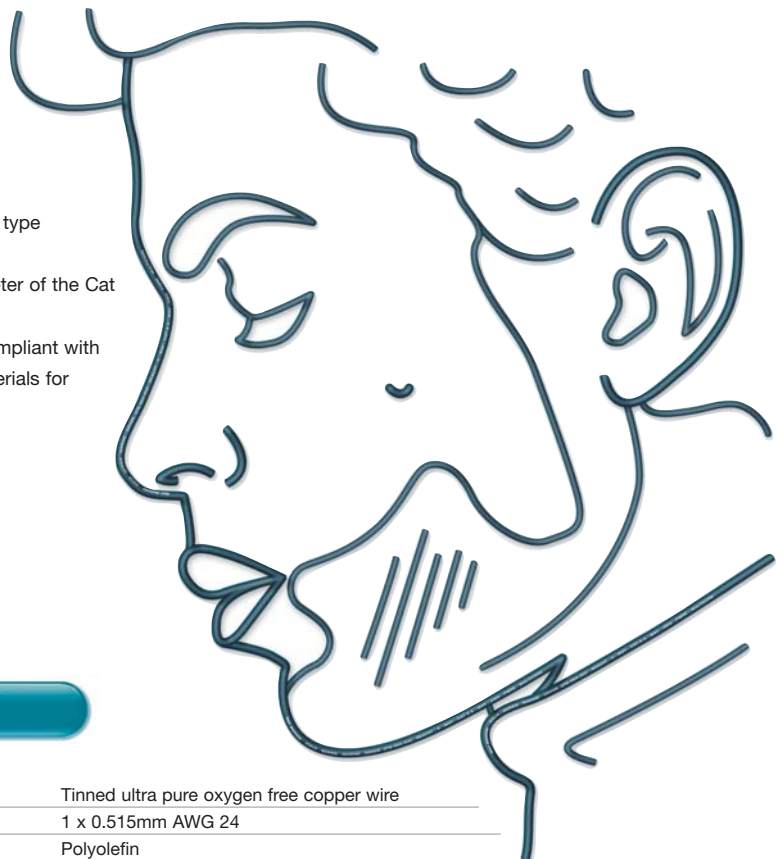
Van Damme Super Marine is an extension to the Van Damme SeaCat range. The data cable element is a Category 6 S/FTP type - individually foil screened pairs with an additional overall screen. The individual screening of the pairs gives excellent crosstalk figures and the potential to run mixed digital and analogue signals in the same cable. Category 6 rating also gives better headroom and therefore gigabit Ethernet signals will run over longer distances than with the Cat 5E SeaCat range. As with the SeaCat range 4 x OM3 multimode fibres are included in the multicore cables for 10G Ethernet use.

### Applications

- Installed distribution of 100Mbs and Gigabit Ethernet
- Integral 4 way OM3 fibre for 10G Ethernet fibre based networking
- Installation in marine vessels, schools and colleges, government premises and public buildings

### Application notes

- Cat 6 cables are solid conductor individually and overall screened type
- Fibre is OM3 50/125µm multimode type
- For patch panel to facility panel use due to the large overall diameter of the Cat 6 S/FTP element
- 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



## Cat 6 Screened S-FTP element

<b>Mechanical specification</b>		
<b>Conductor</b>	Material	Tinned ultra pure oxygen free copper wire
	Stranding	1 x 0.515mm AWG 24
<b>Insulation</b>	Material	Polyolefin
	Diameter	1.25mm ±0.07
<b>Construction</b>	2 cores twisted together with aluminium/polyester foil over; 4 pairs twisted to form cable core	
<b>Colour coding</b>	TIA/EIA-568-B: White/blue; White/orange; White/green; White/brown	
<b>Overall Screen</b>	Tinned copper braid ≥ 80% coverage	
<b>Jacket</b>	Material	SHF-1 LSZH thermoplastic polymer Ocean Blue RAL 5020
	Overall diameter	7.60mm ±0.30

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Electrical characteristics			
Resistance	Conductor	<95 Ohm/Km	
	Insulation	>5000 M Ohm/Km	
Voltage test	2500V DC 2 minute OK		
Velocity of propagation	78%		
Time delay	5.40 nsec/m maximum		
Pair skew	0.40 nsec/m maximum		
Impedance	100 Ohms ±10		
Attenuation	Frequency	Attenuation	NEXT (Near End Cross Talk)
	1 MHz	2.00 dB/100m	74.4 dB
	4 MHz	3.80 dB/100m	65.3 dB
	10 MHz	6.00 dB/100m	59.3 dB
	16 MHz	7.60 dB/100m	56.3 dB
	20 MHz	8.50 dB/100m	54.8 dB
	31.25 MHz	10.70 dB/100m	51.9 dB
	62.5 MHz	15.40 dB/100m	47.4 dB
	100 MHz	19.80 dB/100m	44.3 dB
	200 MHz	29.00 dB/100m	39.8 dB
	250 MHz	32.80 dB/100m	38.3 dB

## OM3 Fibre element

Mechanical specification			
Fibre type	Multimode; graded index 50/125 µm		
Core diameter	50.0 µm		
Cladding diameter	125.0 µm		
Secondary tight coating	Nylon; 850 µm ± 50		
Strength member	Aramid yarn		
Jacket	SHF-1 LSZH thermoplastic polymer		
Colour code	White; Yellow; Green; Black		
Overall diameter	2.00mm ± 0.15		
Optical characteristics at 20° C			
	Wavelength	Attenuation	Bandwidth
	850 nm	≤ 3.0 dB/km	≥ 400 MHz/km
	1300nm	≤ 1.0 dB/km	≥ 600 MHz/km
Overall Jacket			
Flame barrier tape	Material	Aluminium/polyester tape Al facing in	
	Coverage	>125%	
Overall jacket	Material	SHF-1 LSZH thermoplastic polymer	
	Colour	Ocean Blue RAL 5020	
Physical properties unaged			
Jacket (at 60°C)	Tensile strength	>9 N/mm <sup>2</sup>	
	Elongation	>125%	
	Heat shock test	150 °C x 1 hour - no cracks	
Halogen Emissions	0.30% Halogen acid gases according to IEC 60754-2		

## Characteristics by stock code

Stock code	Overall diameter mm	Weight Kg/km	Construction and lay up	
278-464-400	21.20mm	310mm	450 Kg/Km	4 x S-FTP Cat 6 numbered 1-4 assembled together with 4 way OM3 fibre to form cable core

- Maximum reel length 500 metres