



cable

Aqua Series Marine Grade SeaCat data multicores



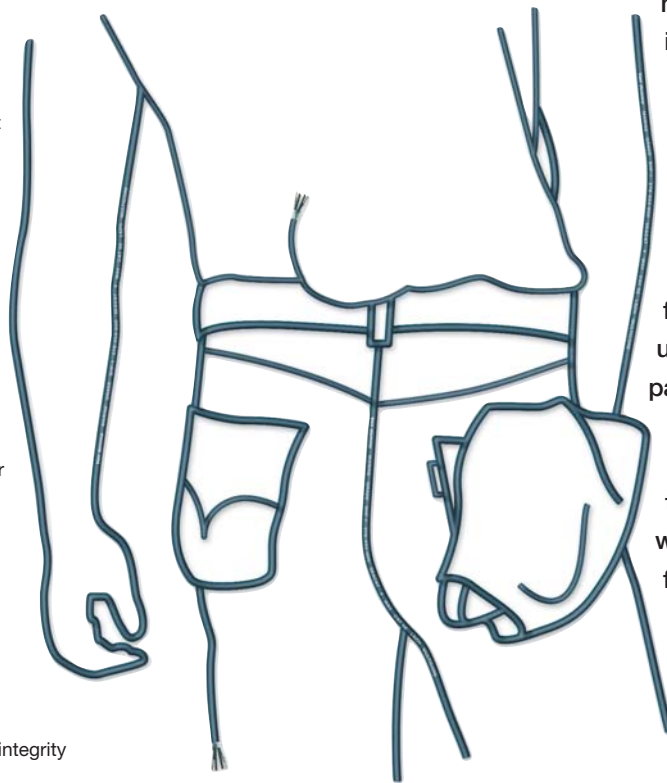
The Van Damme SeaCat range comprises two cables for networking installations - a 4 way Cat 5E screened solid conductor multicore and an 8 way version which also contains a 4 way OM3 multimode fibre for potential 10G Ethernet applications. As with the SeaCat multicore these cables are Low Smoke Zero Halogen jacketed and are fire retardant and fire resistant making them ideal for public building and marine installations. The 8 way

Applications

- Installed distribution of 100Mbs and Gigabit Ethernet
- 278-458-400 8 way multicore has an 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 5E cables are solid conductor screened type
- Fibre is OM3 50/125µm multimode type
- 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



multicore is an ideal solution for multiple data line installations as the included OM3 fibre can be simply left unterminated for future networking upgrades - particularly useful in the marine sector where cable pulls travel through waterproof and fireproof bulkheads making cable upgrades difficult and expensive to retrofit.

Cat 5E Screened S-FTP element

Mechanical specification Conductor	Material	Tinned ultra pure oxygen free copper wire
	Stranding	1 x 0.515mm AWG 24
Insulation	Material	Polyolefin
	Diameter	1.00mm ±0.05
Construction		2 cores twisted together; 4 pairs twisted to form cable core
Colour coding		TIA/EIA-568-B: White/blue; White/orange; White/green; White/brown
Separator		Polyester tape
Screens	Foil	Aluminium/polyester foil >125% coverage Al facing outward
	Braid	Tinned copper braid ≥ 40% coverage
Jacket	Material	SHF-1 LSZH thermoplastic polymer Ocean Blue RAL 5020
	Overall diameter	6.00mm ±0.30

aqua series

Electrical characteristics			
Resistance	Conductor	<95 Ohm/Km	
	Insulation	>5000 M Ohm/Km	
Voltage test	2500V DC 2 minute OK		
Velocity of propagation	68%		
Time delay	5.40 nsec/m maximum		
Pair skew	0.40 nsec/m maximum		
Impedance	100 Ohms ±10		
	Frequency	Attenuation	NEXT (Near End Cross Talk)
	1 MHz	3.20 dB/100m	62 dB
	4 MHz	6.50 dB/100m	53 dB
	10 MHz	9.90 dB/100m	47 dB
	16 MHz	9.90 dB/100m	44 dB
	20 MHz	12.30 dB/100m	42 dB
	31.25 MHz	13.80 dB/100m	40 dB
	62.5 MHz	25.70 dB/100m	35 dB
	100 MHz	33.00 dB/100m	32 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
	1300 nm	≤ 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	
Overall Jacket Jacket (at 60°C)			
	Tensile strength	>9 N/mm ²	
	Elongation	>125%	
	Heat shock test	150 °C x 1 hour – no cracks	
Halogen Emissions	≤0.30% Halogen acid gases according to IEC 60754-2		

Multicores characteristics by stock code

Stock code	Overall diameter	Bend radius	Weight	Construction and lay up
278-454-000	16.50mm	245mm	360 Kg/Km	4 x S/UTP Cat 5E numbered 1-4 assembled together to form cable core
278-458-400	22.50mm	340mm	680 Kg/Km	8 x S/UTP Cat 5E numbered 1-8 assembled together with 4 way OM3 fibre to form cable core

- Maximum reel length 500 metres