



MOG Cat.5e S/FTP 4 pairs ARMoured AWG23/7 SHF1

EMC screened, stranded conductor SHF1, Fire Retardant IEC60332-3-22 Cat.A

O5ESF4P23F1, DO210316.0

Type Approval: DNV TAE000004E [Pending Update]



Store at : 0 to +50 °C

Install at : -10 to +50 °C, **Bend minimum :** 20 times O.D.

Operate at : -30 to +80 °C, **Bend minimum :** 15 times O.D.

Pull maximum : 100N

Design

Conductor : Stranded bare copper AWG23/7

Insulation : Cellular polyolefin

Pair : 2 insulated conductors stranded together into a pair

Colour code : 1.White/blue 2.White/orange 3. White/green 4.White/brown (IEC 708-1)

Screen 1 : Aluminium/polyester or Aluminium/polyester/aluminium tape over each single pair

Screen 2 : tinned copper wire braid

Inner jacket : Fire Retardant SHF1 material, LSZH (nominal Ø 8.3mm)

Armour : Galvanized steel, tinned copper or bronze wire braid. Coverage ≥80%.

Outer jacket : Fire Retardant and UV Resistant SHF1 material, LSZH

Marking : APS Finland – ww/yy – ARMoured S/FTP 4x2xAWG23/7 Cat.5e SHF1 – CE - DNV TAE000004E
IEC60332-3-22 Cat A – lot + m

Applications

LAN Horizontal Wiring (IEEE 802.3 : Ethernet, Fast Ethernet, Gigabit Ethernet as far as applicable)

IEEE 802.5 : ISDN, FDDI, ATM, Cable sharing

IEEE 802.3at Type 1 (PoE), IEEE 802.3at Type 2 (PoE+), IEEE 802.3at Type 2 (PoE++)

EN 50288-5-1, EN 50288-10-1, EN 50173, EN 50174-2, ISO/IEC 11801 2., IEC 61156-5, TIA/EIA-568-B.2-10,

UL Subject 444

Environmental properties and Fire Performances

Degree of acidity of gases : IEC 60754-1, IEC 60754-2 (pH value $\geq 4,3$ and Conductivity $\leq 10\mu\text{S}/\text{mm}$)

Halogen acid gas : IEC 60754-1, IEC 60754-2 (Halogen acid gas emission $\leq 0.5\%$)

Smoke Emission : IEC 61034-2, EN 50268-2 (Transmittance) $\geq 60\%$

Toxicity of evolved gas : EN 50305 9.2

Flame retardant : IEC 60332-1-2

Fire retardant : IEC 60332-3-22 Cat.A

Oil resistant : intermittent splash – permanent resistance available upon request

UV resistant : IEC60811-2-1, ASTM-D-2565-92A

Electrical characteristics (IEC 60811, EN 50288-4-2)

Test voltage : 0.7kV a.c. for 1 minute

Resistance of the conductor @ 20°C : $\leq 69,5 / \text{km}$

Insulation resistance : $\geq 500 \text{ M}\Omega \times \text{km}$

Nominal Capacitance @ 800÷1000MHz : 45 pF/m Average characteristic impedance : $100 \pm 5 \Omega$ @ 100MHz

Transfer impedance : $\leq 3 \text{ m}\Omega/\text{m}$ @ 10MHz

Typical Value

Frequency (MHz) :	1	4	10	20	31.25	62.5	100	150
Attenuation dB/100m (nominal)	1.8	3.3	5.4	7.4	9.6	13.9	17.5	22.4
NEXT dB (nominal)	95	95	92	88	87	86	84	83
ACR dB/100m (nominal)	93	92	87	81	77	72	66	61
ELFEXT dB (nominal)	90	88	87	85	81	77	72	68
Return Loss dB (nominal)	25	28	30	30	30	28	27	26

Ordering and delivery information

Pair Count	Armour Type	Part Number	O.D [mm]	Weight [kg/km]	Packaging [drum]
4 pairs	GSWB	O5ESF4P23F1A1x	11.40	140	500m ± 5%
4 pairs	TCWB	O5ESF4P23F1T1x	11.50	135	500m ± 5%
4 pairs	BWB	O5ESF4P23F1B1x	11.55	150	500m ± 5%

x = G [Grey] / B [Black] / E [Blue] / O [Orange]

Recommended connectivity



Keystone jack : L07.01.J74xx

RJ45 plug : LabLAN Series

Panel : L16.01.001

Patch cords : L07.01.PC72Lxxx / L07.01.PC73Lxxx / L07.01.PC74Lxxx / L07.01.PC75Lxxx

Other standards of reference

IEC 60092-370	Electrical installations in ships: Guidance on the selection of cables for telecommunication and data.
IEC 60092-360	Electrical installations in ships: Insulating and sheathing materials for shipboard and offshore units.
DNV TAP 827.50/2	Type Approval Program
ABS SVR	Rules for building and classing. Steel Vessels.
ABS SMR	Rules for building and classing. Steel vessels under 90 meters.
CEI EN 50288-1	Multi-element metallic used in analogue and digital communication and control : Generic Specification
CEI EN 50288-2-1	Sectional specification for screened cables characterized up to 100MHz
CEI EN 50288-5-1	Sectional specification for screened cables characterized up to 250MHz
CEI EN 50288-4-2	Sectional specification for screened cables characterized up to 600MHz
CEI EN 50289 series	Communication cables - Specifications for test methods
IEC 60811	Insulating and sheathing materials of electric cables - Test method
Standards	EIA/TIA 568-C.2, ISO/IEC 11801, UL444, UL1581, UL1666
Applications	100Base-TX, 100Base-T, 100VG-AnyLAN, 1000Base-TX, ATM

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