



MOG Profibus 1&2 pairs, Fire Resistant, Armoured, SHF2



Store at: -40 to +70 °C

Install at: -40 to +50 °C, **Bend minimum:** 20 times O.D.

Operate at: -40 to +90 °C, **Bend minimum:** 10 times O.D.

Pull maximum: 150N

Design

Conductor : Solid or stranded bare copper 0.35mm²

Fire protection : fire resistant tape

Insulation : Polyolefin Ø 2.75mm

Pair : 2 insulated conductors stranded together into a pair

Colour code : 1.Green/red 2.Blue/brown

Assembling : No 1 pair with fillers or no 2 pairs stranded together into a compact core

Screen : Aluminium/polyester tape (100%) with tinned copper braid (coverage ≥60%)

Inner jacket : Black or purple Fire Retardant LSZH SHF1 material (Ø 8.6mm)

Armour : galvanized steel, tinned copper or bronze wires braid (nominal coverage 85%)

Outer jacket : Black or purple Fire Retardant, LSZH and UV Resistant SHF2 material

Marking : APS Finland - ww/yy - ARMORED FIRE RESISTANT PROFIBUS MARINE ...x2x0.35mm² LSZH SHF2 - IEC 60331-23 IEC60332-3-22 Cat.A - lot + meter

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 61034-1, IEC 61034-2 (Transmittance) $\geq 60\%$)
- Toxicity of evolved gas** : EN 50305 9.2
- Flame retardant** : IEC 60332-1
- Fire retardant** : IEC 60332-3-22 Cat.A
- Fire resistant** : IEC 60331-23 (Max changes in Impedance and Attenuation @ 4-16MHz : $\pm 25\%$)
- Ozone resistant** : IEC60811-2-1, DIN VDE 0472 part 805 B
- LSZH SHF2** : IEC 60092-360
- Oil resistant** : IEC 60811-404
- UV resistant** : ASTM-D-2565-99 (2008), 500 hours cycle 1, max change allowed in elongation after the test : 40%
- Cold bend & impact** : IEC 60092-350, CSA C22.2

Ordering and delivery information

Pair count	P/N	O.D [mm]	Weight [kg/km]	Packaging
1 pair (violet)	OPBX1P035F1x2	12.6	220	500 m (+/-5%)
1 pair (black)	OPBX1P035F1x2B	12.6	220	500 m (+/-5%)
2 pairs (violet)	OPBX2P035F1x2	12.6	230	500 m (+/-5%)
2 pairs (black)	OPBX2P035F1x2B	12.6	230	500 m (+/-5%)

x = "A" for Galvanized Steel wire braid, "T" for Tinned Copper wire braid, "B" for Bronze wire braid.

Electrical characteristics (IEC60092-350, IEC61784, IEC61158)

Operation voltage : 100V

Test voltage : 1000V d.c.

Resistance of the conductor @ 20°C : $\leq 55.0 \Omega/\text{km}$

Insulation resistance @ 20°C : $\geq 1\text{G}\Omega\text{km}$

Nominal Capacitance @ 800Hz : 30 pF/m Characteristic impedance : $150 \Omega \pm 15$ @ 1MHz

Nominal attenuation :	45 dB/km	@ 16MHz
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	22 dB/km	@ 4MHz
	5 dB/km	@ 38,4 KHz
	3 dB/km	@ 9,6 KHz
Baudrate :	9.6 kBits/s	@ Max. 1200m
	19.2 kBits /	@ Max. 1200m
	93.75 kBits/s	@ Max. 1200m
	187.5 kBits /s	@ Max. 1000m
	500 kBits /s	@ Max. 400m
	1.5 MBits /s	@ Max. 200m
	12 MBits /s	@ Max. 100m

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.
IEC 60811	Insulating and sheathing materials of electric cables - Test method

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