# 船用网线 Marine Ethernet cable

HF Flame Oil Cold UV

## CAT 6A AFL S/FTP 4PR 23AWG/1 SHF1 (TCWB)



## 应用 Application

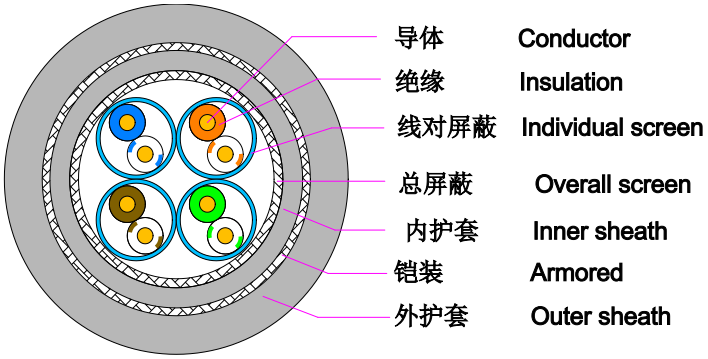
符合 IEC 61156-5 标准的高性能海上 LAN 电缆，带宽高达 500 MHz。

High performance offshore LAN cable compliant with IEC 61156-5 category 6A standards bandwidths up to 500 MHz.

铜导体，发泡 PE 绝缘，铝箔对屏蔽，镀锡铜编织总屏蔽，SHF1 内护套，镀锡铜丝铠装，SHF1 外护套。

BC conductor ,Foam PE insulation ,Foil screened pairs with an overall tinned copper braid ,SHF1 inner sheath, Tinned copper wire armored ,SHF1 Outer sheath.

## 结构 Construction




| | | |
|---|---|---|
| 导体 Conductor | 单根铜丝（23AWG/1） | Solid Bare copper wire（23AWG/1） |
| 绝缘 Insulation | 发泡 PE<br>颜色： 1、白/蓝，蓝 2、白/橙，橙<br>3、白/绿，绿 4、白/棕，棕 | Foam PE<br>Color：1、White/Blue，Blue 2、White/Orange，Orange<br>3、White/Green，Green 4、White/Brown，Brown |
| 线对屏蔽 Individual screen | 铝箔 | AL/Mylar |
| 总屏蔽 Overall screen | 镀锡铜编织，覆盖率≥40% | Tinned copper braiding, coverage≥40% |
| 内护套 Inner Sheath | SHF1 | SHF1 |
| 铠装 Armored | 镀锡铜丝铠装，覆盖率≥90% | Tinned copper wire braiding, coverage≥90% |
| 外护套 Outer Sheath | SHF1<br>颜色：灰色或定制<br>OD：11.5 ± 0.8mm | SHF1<br>Color ：Grey or as customer's request<br>OD：11.5 ± 0.8mm |
| 印字 Marking | Hysin□MARINE□Cable□CAT6A□AFL□S/FTP□4PR□23AWG/1□SHF1□TCWB□IEC60332-3-22□****m□xxxxxx□WW/YY<br>注：□ 表示空格；****m 表示计米；xxxxxx 表示批号;WW/YY 表示周数/年份<br>Note：□ means blank；****m means meters；xxxxxx means batch number；WW/YY means week/year | |

## 电气性能 Electrical Characteristics（20℃）

| | | |
|---|---|---|
| 导体直流电阻 | Conductor DC resistance | ≤95 Ω/km |
| 电阻不平衡 | DC Resistance Unbalance | ≤2%（within a pair），≤5%（between pairs） |
| 特性阻抗 | Characteristic impedance | 100±10 Ω@100MHz |
| 介电强度 | Dielectric Strength | DC 1kV for 1min（conductor to conductor, conductor to screen） |
| 绝缘电阻 | Insulation Resistance | ≥5000MΩ.km（IEC 61156-5） |
| 电容不平衡 | Capacitance Unbalance（pair to ground） | ≤160pF/100m at 1kHz(IEC 61156-5) |
| 传输性能 | Transmission performance | IEC 61156-5 |

| Frequency<br>频率<br>MHz | ATT<br>dB/100m<br>Max.最大 | RL<br>dB<br>Min.最小 | NEXT<br>dB<br>Min.最小 | PSNEXT<br>dB<br>Min.最小 | ELFEXT<br>dB<br>Min.最小 | PSELFEXT<br>dB<br>Min.最小 |
|---|---|---|---|---|---|---|
| 4 | 3.80 | 23.0 | 66.3 | 63.3 | 56.0 | 53.0 |
| 8 | 5.31 | 24.5 | 61.8 | 58.8 | 49.9 | 46.9 |
| 10 | 5.93 | 25.0 | 60.3 | 57.3 | 48.0 | 45.0 |
| 16 | 7.49 | 25.0 | 57.2 | 54.2 | 43.9 | 40.9 |
| 20 | 8.38 | 25.0 | 55.8 | 52.8 | 42.0 | 39.0 |
| 31.25 | 10.50 | 23.6 | 52.9 | 49.9 | 38.1 | 35.1 |
| 62.5 | 14.99 | 21.5 | 48.4 | 45.4 | 32.1 | 29.1 |
| 100 | 19.14 | 20.1 | 45.3 | 42.3 | 28.0 | 25.0 |
| 200 | 27.58 | 18.0 | 40.8 | 37.8 | 22.0 | 19.0 |
| 250 | 31.07 | 17.3 | 39.3 | 36.3 | 20.0 | 17.0 |
| 300 | 34.27 | 17.3 | 38.1 | 35.1 | 18.5 | 15.5 |
| 400 | 40.05 | 17.3 | 36.3 | 33.3 | 16.0 | 13.0 |
| 500 | 45.26 | 17.3 | 34.8 | 31.8 | 14.0 | 11.0 |

## 其他性能 Other Characteristics

| | | |
|---|---|---|
| 工作温度 | Operating temperature | -40℃ to 90℃ |
| 安装温度 | Installation temperature | -20℃ to 60℃ |
| 卤酸气体 | Acid Gas Release Mounts | ≤5mg/g (IEC 60754-1) |
| 燃烧气体 PH 值 | Burning Occur Gas Acidity | PH≥4.3 (IEC 60754-2) |
| 燃烧气体导电率 | Burning Occur Gas conductivity | <10 μS/mm (IEC 60754-2) |
| 烟密度 | Smoke density | ≥60%（IEC 61034-2） |
| 阻燃性 | Flame resistance | IEC 60332-3-22, IEC 60332-1-2 |
| 耐油 | Oil resistance (SHF1) | IRM902, 70℃×4H |
| 抗紫外线 | UV resistance | UL1581 |
| 护套材料性能 | The jacket material performance | IEC 60092-360 |
| 最小弯曲半径 | Min.Bending radius | 15xOD(OD=cable diameter) |
| 重量 | Weight | 175±10 kg/km |

This cable meets RoHS requirements.

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