船用网线 Marine Ethernet cable

HF Flame Oil Cold UV Fire

CAT 7 AFR S/FTP 4PR 23AWG/1 SHF2 (TCWB)



应用 Application

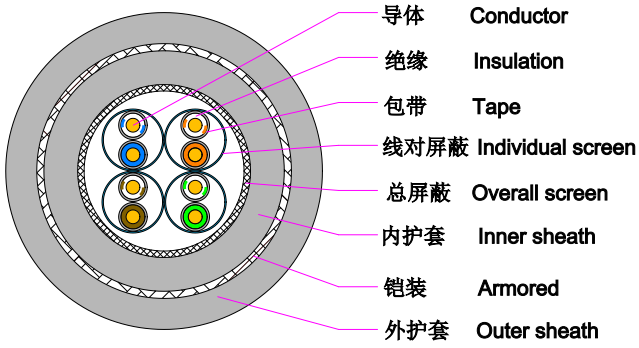
符合 IEC 61156-6 标准的高性能海上 LAN 电缆,带宽高达 600 MHz。

High performance offshore LAN cable compliant with IEC 61156-6 category 7 standards bandwidths up to 600 MHz.

铜导体，发泡 PE 绝缘，耐火云母带，铝箔对屏蔽，镀锡铜编织总屏蔽，SHF1 内护套，镀锡铜丝铠装，SHF2 外护套。

BC conductor, Foam PE insulation, Fire-resistant Mica tape, Foil screened pairs with an overall tinned copper braid, SHF1 inner sheath, Tinned copper wire armored , SHF2 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 颜色： 1、白/蓝，蓝 2、白/橙，橙 3、白/绿，绿 4、白/棕，棕	Foam PE Color：1、White/Blue，Blue 2、White/Orange，Orange 3、White/Green，Green 4、White/Brown，Brown
包带 Tape	耐火云母带	Fire-resistant Mica tape
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	SHF2 颜色：灰色或定制 OD：12.5 ± 0.8mm	SHF2 Color ： Grey or as customer's request OD：12.5 ± 0.8mm
印字 Marking	Hysin□MARINE□Cable□CAT7□AFR□S/FTP□4PR□23AWG/1□SHF2□TCWB□IEC60331-23□IEC60332-3-22□****m□xxxxxx□WW/YY 注：□ 表示空格；****m 表示计米；xxxxxx 表示批号;WW/YY 表示周数/年份 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 61156-6）
电容不平衡	Capacitance Unbalance（pair to ground）	≤160pF/100m at 1kHz(IEC 61156-6)
传输性能	Transmission performance	IEC 61156-6

Frequency 频率 MHz	ATT dB/100m Max.最大	RL dB Min.最小	NEXT dB Min.最小	PSNEXT dB Min.最小	ELFEXT dB Min.最小	PSELFEXT dB Min.最小
4	5.6	23.0	78.0	75.0	78.0	75.0
8	7.9	24.5	78.0	75.0	77.2	74.2
10	8.8	25.0	78.0	75.0	75.3	72.3
20	12.4	25.0	78.0	75.0	69.3	66.3
31.25	15.6	23.3	78.0	75.0	65.4	62.4
62.5	22.3	20.7	75.5	72.5	59.4	56.4
100	28.5	19.0	72.4	69.4	55.3	52.3
200	41.2	16.4	67.9	64.9	51.5	48.5
250	46.5	15.6	66.4	63.4	49.3	46.3
300	51.3	15.6	65.2	62.2	45.8	42.8
400	60.0	15.6	63.4	60.4	43.3	40.3
500	67.9	15.6	61.9	58.9	41.3	38.3
600	75.1	15.6	60.7	57.7	39.7	36.7

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
耐火性	Fire resistance	IEC 60331-23
耐油	Oil resistance (SHF2)	IRM902, 100℃×24H
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	200±10 kg/km

This cable meets RoHS requirements.

Prepared by: J.Zhou	Checked by: CL.Wang	Approved by: SY.Xiang