船用总线 Marine Bus cable

Profinet A UFL 4x22AWG/1 SHF2

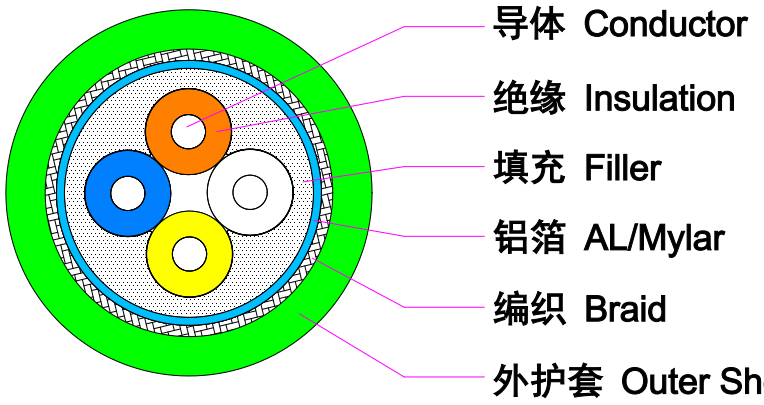
HF Flame Oil Cold UV

应用 Application

该电缆专为自动化和通信的工业现场总线系统而设计，专为船舶和海上使用而设计，专为固定应用而设计，例如过程控制和自动化，或偶尔移动机器的部件。该产品符合 IEC 61158-2 标准。

This cable is designed for industrial field bus systems of automation and communication, designed for ship and offshore use, designed for fixed applications, such as process control and automation, or occasionally moving parts of the machine. The product complying with IEC 61158-2 standard.

结构 Construction



导体 Conductor	0.65mm 单根裸铜导体（22AWG/1）	0.65mmSolid bare copper wire（22AWG/1）
绝缘 Insulation	HDPE 颜色：白，黄，蓝，橙	HDPE Color：White, Yellow, Blue, Orange
填充 Filler	LSZH	LSZH
总屏蔽 Overall screen	铝箔+镀锡铜编织，覆盖率≥85%	AL/Mylar + Tinned copper wire braid，coverage≥85%
外护套 Outer Sheath	SHF2 颜色：绿色或定制 OD：6.5±0.5mm	SHF2 Color：Green as customer's request OD：6.5±0.5mm
印字 Marking	MARINE□Cable□PROFINET□TYPE□A□UFL□4 × 22AWG/1□SHF2□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	

电气特性 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）
工作电容	Capacitance	≤60 pF/m（IEC 61158-2）
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	≥5000 MΩ.km
电容不平衡	Capacitance Unbalance（pair to ground）	≤160 pF/100m at 1kHz
传输性能	Transmission performance	IEC 61156-5

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	4.1	23.0	56.3	53.3	52.0	49.0
8	5.8	24.5	51.8	48.8	45.9	42.9
10	6.5	25.0	50.3	47.3	44.0	41.0
16	8.3	25.0	47.2	44.2	39.9	36.9
20	9.3	25.0	45.8	42.8	38.0	35.0
25	10.4	24.3	44.3	41.3	36.0	33.0
31.25	11.7	23.6	42.9	39.9	34.1	31.1
62.5	17.0	21.5	38.4	35.4	28.1	25.1
100	22.0	20.1	35.3	32.3	24.0	21.0

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 (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	8xOD(OD=cable diameter)
电缆重量	Cable weight	65 ± 5 kg/km

This cable meets RoHS requirements

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