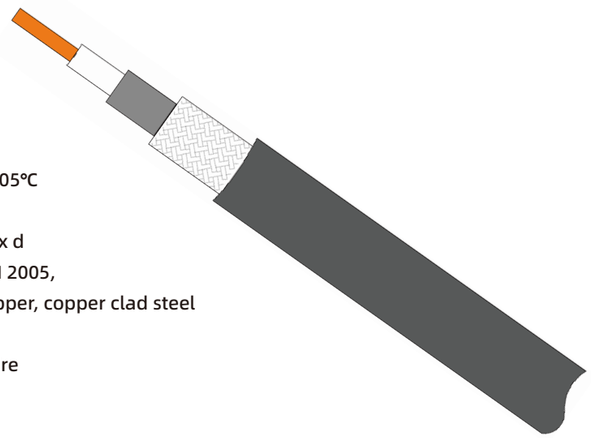
01

COAXIAL CABLE

同轴线缆

COAXIAL CABLE
同轴线缆

RG174LL 3G传输同轴电缆
RG174LL 3G transmission coaxial cable



● 产品说明/Product description

产品名称\Product name：RG174LL
温度等级\Temperature rating：-40℃~85℃ to -40℃~105℃
额定电压\Rated voltage：60V
弯曲半径\Bending radius: Single 5 x d ， Multiple 10 x d
参考标准\Reference standard：ISO6722,MIL-DTL-17H 2005,
导体材质\Conductor material：裸铜、铜包钢\bare copper, copper clad steel
绝缘材质\Insulation material：聚乙烯\Polyethylene
编织屏蔽\Braided Shield：镀锡铜丝\Tinned copper wire
护套材质\Sheath Material：聚氯乙烯\PVC

● 产品介绍/Product description

基于MIL-DTL-17H标准的美标同轴电缆RG174LL，用于汽车内倒车影像和雷达等末端模拟信号传输，相对于其它车用数据线缆，具备重量轻，成本低的优势。105℃级RG174作为85℃的改进版，将能适应于更多的使用环境。

The American standard coaxial cable RG174 based on the MIL-DTL-17H standard is used for the transmission of end analog signals such as reversing images and radars in automobiles. Compared to other automotive data cables, it has the advantages of light weight and low cost. As an improved version of 85 ℃, the 105 ℃ RG174 will be able to adapt to more usage environments.

● 产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径 Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率 Braided shield coverage %	外径 Outer diameter mm	导体电阻 Conductor resistance Ω/km(20℃)	参考电容 Reference capacitors Pf/m
LY174LL(xx)-50	1/0.45	Solid PE	1.52±0.05	AL/PETP/AL	90min	2.80±10	285MAX	106 nom
LY174LL(xx)-50	1/0.45	Solid PE	1.52±0.05	AL/PETP/AL	90min	2.80±10	285MAX	106 nom
LY174LL(xx)-50	1/0.54	Foamed PE	1.57±0.08	AL/PETP/AL	85min	2.80±10	73.4MAX	85 nom
LY174LL(xx)-50	1/0.45	Solid PE	1.52±0.05	AL/PETP/AL	85min	2.80±10	114.8MAX	106 nom

● 电气性能\Electrical characteristics

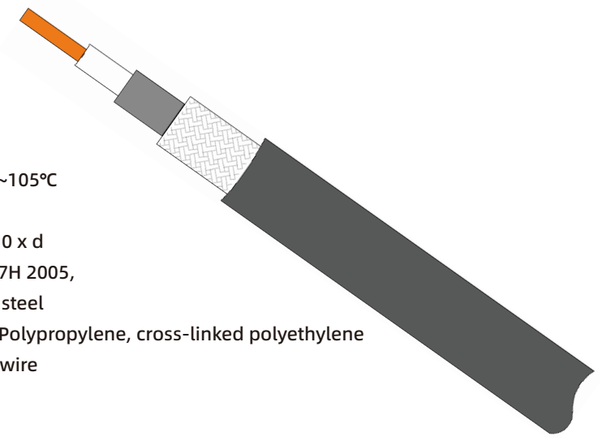
项目 Types	单位 unit	LY174LL(xx)-50	LY174LL(xx)-50	LY174LL(xx)-50	LY174LL(xx)-50
阻抗 impedance	Ω	50±3	50±3	50±3	50±3
电容 Capacitance	Pf/m	106 nom	106 nom	85 nom	106 nom
导体电阻 Conductor DCR@20℃	Ω/KM	285MAX	285MAX	73.4MAX	114.8MAX
耐电压 Testing Voltange	V（AC）	1000	1000	1000	1000
火花电压 Spark Test Voltage	V/min	1750	1750	1750	1750

● 插入损耗\Insertion loss

Frequency (MHz)	LY174LL(xx)-50 dB/100m（NOM）	LY174LL(xx)-50 dB/100m（NOM）	LY174LL(xx)-50 dB/100m（NOM）	LY174LL(xx)-50 dB/100m（NOM）
1	/	/	/	1.2
10	/	/	/	8.6
50	/	/	14.8	17.9
100	/	34.4	20.3	23.8
200	34.4	49.5	/	32.8
400	49.6	67.2	/	46.9
500	/	/	45.6	/
700	67.3	79.5		63.6
900	79.5	84.3	61.4	72.3
1000	84.3	92.4	65.0	76.5
1100	/	/	/	80.5
1200	92.5	101.2	/	84.1
1300	/	/	/	88.1
1400	101.3	109.8	/	91.6
1500	/	/	80.4	94.9
1600	109.9	115.6	/	98.5
1800	115.7	123.0	/	/
2000	123.0		93.5	111.2
2300	131.2		/	120.1
2333			/	121.2
2345			101.7	/
2400			/	123.0
2500			105.3	
3000			116.5	

COAXIAL CABLE
同轴线缆

RG174LL 4G传输同轴电缆
RG174LL 4G transmission coaxial cable



产品说明/Product description

产品名称\Product name：RG174
温度等级\Temperature rating：-40℃~85℃ to -40℃~105℃
额定电压\Rated voltage：60V
弯曲半径\Bending radius: Single 5 x d， Multiple 10 x d
参考标准\Reference standard：ISO6722,MIL-DTL-17H 2005,
导体材质\Conductor material：铜包钢\copper clad steel
绝缘材质\Insulation material：聚丙烯、交联聚乙烯\Polypropylene, cross-linked polyethylene
编织屏蔽\Braided Shield：镀锡铜丝\Tinned copper wire
护套材质\Sheath Material：聚氯乙烯\PVC

产品介绍/Product description

基于MIL-DTL-17H标准的美标同轴电缆RG174，用于汽车内倒车影像和雷达等末端模拟信号传输，相对于其它车用数据线缆，具备重量轻，成本低的优势。105℃级RG174作为85℃的改进版，将能适应于更多的使用环境。

The American standard coaxial cable RG174 based on the MIL-DTL-17H standard is used for the transmission of end analog signals such as reversing images and radars in automobiles. Compared to other automotive data cables, it has the advantages of light weight and low cost. As an improved version of 85 ℃, the 105 ℃ RG174 will be able to adapt to more usage environments.

产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	外径 Outer diameter mm
LY174LL(xx)-50	7/0.16	XL PE	1.52±0.05	AL/PETP/AL	85min	2.80±10
LY174LL(xx)-50	7/0.16	Polypropylene	1.52±0.05	AL/PETP/AL	90min	2.80±10

注:XX为流水号
Note:XX is the running number

电气性能\Electrical characteristics

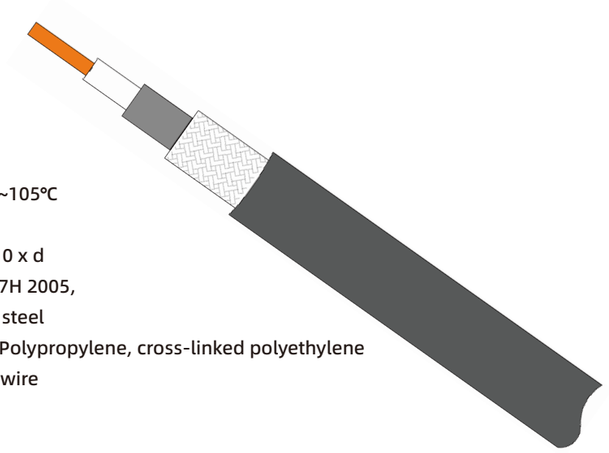
项目 Types	单位 unit	LY174LL(xx)-50	LY174LL(xx)-50
阻抗 impedance	Ω	50±3	50±3
电容 Capacitance	Pf/m	106 nom	106 nom
导体电阻 Conductor DCR@20℃	Ω/KM	317MAX	317MAX
耐电压 Testing Voltange	V（AC）	1000	1000
火花电压 Spark Test Voltage	V/min	1750	1750

插入损耗\Insertion loss

Frequency (MHz)	LY174LL(xx)-50 dB/100m（NOM)	LY174LL(xx)-50 dB/100m（NOM)
100	27.6	27.6
200	38.6	38.6
500	60.5	60.5
750	76.5	76.5
800	78.6	78.6
1000	88.0	88.0
1200	97.3	97.3
1500	109.5	109.5
1800	121.0	121.0
2000	128.6	128.6
2200	136.8	136.8
2250	138.5	138.5
2500	147.4	147.4
2800	156.7	156.7
3000	161.7	161.7
3500	175	175
3750	181.0	181.0
4000	187.0	187.0

COAXIAL CABLE
同轴线缆

RG174LL 6G传输同轴电缆
RG174LL 6G transmission coaxial cable



● 产品说明/Product description

产品名称\Product name：RG174
温度等级\Temperature rating：-40℃~85℃ to -40℃~105℃
额定电压\Rated voltage：60V
弯曲半径\Bending radius: Single 5 x d， Multiple 10 x d
参考标准\Reference standard：ISO6722,MIL-DTL-17H 2005,
导体材质\Conductor material：铜包钢\copper clad steel
绝缘材质\Insulation material：聚丙烯、交联聚乙烯\Polypropylene, cross-linked polyethylene
编织屏蔽\Braided Shield：镀锡铜丝\Tinned copper wire
护套材质\Sheath Material：聚氯乙烯\PVC

● 产品介绍/Product description

基于MIL-DTL-17H标准的美标同轴电缆RG174，用于汽车内倒车影像和雷达等末端模拟信号传输，相对于其它车用数据线缆，具备重量轻，成本低的优势。105℃级RG174作为85℃的改进版，将能适应于更多的使用环境。

The American standard coaxial cable RG174 based on the MIL-DTL-17H standard is used for the transmission of end analog signals such as reversing images and radars in automobiles. Compared to other automotive data cables, it has the advantages of light weight and low cost. As an improved version of 85 ℃, the 105 ℃ RG174 will be able to adapt to more usage environments.

● 产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	外径 Outer diameter mm
LY174LL(xx)-50	1/0.45	XL PE	1.52±0.05	AL/PETP/AL	85min	2.80±10
LY174LL(xx)-50	7/0.16	Polypropylene	1.58±0.05	AL/PETP/AL	85min	2.80±10

注:XX为流水号
Note:XX is the running number

● 电气性能\Electrical characteristics

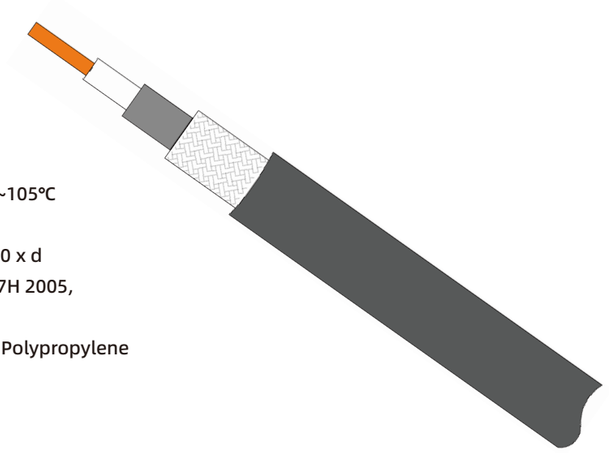
项目 Types	单位 unit	LY174LL(xx)-50	LY174LL(xx)-50
阻抗 impedance	Ω	50±3	50±3
电容 Capacitance	Pf/m	106 nom	106 nom
导体电阻 Conductor DCR@20℃	Ω/KM	317MAX	317MAX
耐电压 Testing Voltange	V（AC）	1000	1000
火花电压 Spark Test Voltage	V/min	1750	1750

● 插入损耗\Insertion loss

Frequency (MHz)	LY174LL(xx)-50 dB/100m（NOM)	LY174LL(xx)-50 dB/100m（NOM)
50	/	23.5
100	27.6	32.0
200	38.6	/
400	53.2	59.7
500	60.5	/
600	66.9	/
750	76.5	/
800	78.6	84.0
1000	88.0	95.0
1200	97.3	/
1500	109.5	119.0
1800	121.0	/
2000	128.6	139.0
2200	136.8	141.0
2250	138.5	/
2500	147.4	/
2800	156.7	/
3000	161.7	176.0
3500	175.0	/
3750	181.0	/
4000	187.0	/
4500	201.0	/
5000	213.0	/
5500	226.0	264.2
6000	238.0	280.0

COAXIAL CABLE
同轴线缆

RTK031 6G传输同轴电缆
RTK031 6G transmission coaxial cable



● 产品说明/Product description

产品名称\Product name：RTK031
温度等级\Temperature rating：-40℃~85℃ to -40℃~105℃
额定电压\Rated voltage：60V
弯曲半径\Bending radius: Single 5 x d， Multiple 10 x d
参考标准\Reference standard：ISO6722,MIL-DTL-17H 2005,
导体材质\Conductor material：裸铜\Bare copper
绝缘材质\Insulation material：发泡聚丙烯\Foamed Polypropylene
编织屏蔽\Braided Shield：镀锡铜丝\Tinned copper
护套材质\Sheath Material：聚氯乙烯\PVC

● 产品介绍/Product description

基于 MIL -C17标准的美标同轴电缆RTK031，最早专门用于车内天线系统的连接，同时可以用于汽车内高清的倒车影像和视频等信号传输连接的需求，它具备极佳的高频传输性能，105℃级赋予RTK031更广的使用场景。

The American standard coaxial cable RG302 based on the MIL-C17 standard was first specifically used for the connection of car antenna systems, and can also be used for the transmission and connection of high-definition reverse images and videos in cars. It has excellent high-frequency transmission performance, and the 105 ℃ level gives RG302 a wider range of usage scenarios.

● 产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	外径 Outer diameter mm
RTK031(xx)-50	7/0.27	Foamed Polypropylene	2.10±0.05	AL/PETP/AL	90min	3.30±10
RTK031(xx)-50	7/0.254	Foamed Polypropylene	2.05±0.05	AL/PETP/AL	90min	3.30±10
注:XX为流水号 Note:XX is the running number						

● 电气性能\Electrical characteristics

项目 Types	单位 unit	RTK031(xx)-50	RTK031(xx)-50
阻抗 impedance	Ω	50±3	50±3
电容 Capacitance	Pf/m	94 nom	94nom
导体电阻 Conductor DCR@20℃	Ω/KM	52.0MAX	56.0MAX
耐电压 Testing Voltange	V（AC）	1000	1000
火花电压 Spark Test Voltage	V/min	1750	1750

● 插入损耗\Insertion loss

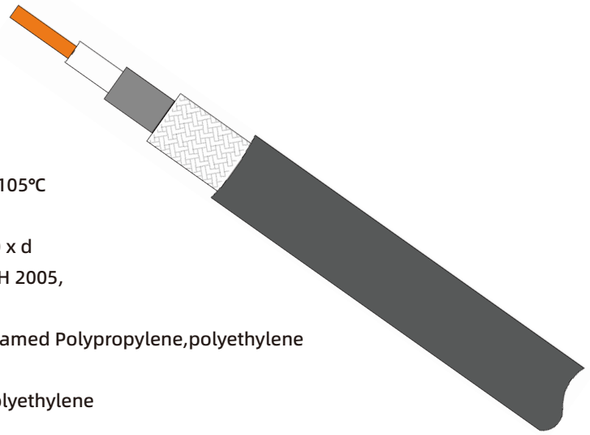
Frequency (MHz)	RTK031(xx)-50 dB/100m（NOM)	RTK031(xx)-50 dB/100m（NOM)
200	21.1	21.1
400	30.3	30.3
800	43.7	43.7
1000	48.9	48.9
1200	53.6	53.6
1500	60.5	60.5
1800	66.3	66.3
2000	74.0	74.0
2800	84.4	84.4
3000	88.1	88.1
3500	96.6	96.6
4000	104.2	104.2
4500	112.3	112.3
5000	120.4	120.4
5500	127.8	127.8
5600	129.3	129.3
6000	134.9	134.9

COAXIAL CABLE

同轴线缆

RG58LL 6G传输同轴电缆

RG58LL 6G transmission coaxial cable



● 产品说明/Product description

产品名称\Product name：RG58LL
温度等级\Temperature rating：-40℃~85℃ to -40℃~105℃
额定电压\Rated voltage：60V
弯曲半径\Bending radius: Single 5 x d， Multiple 10 x d
参考标准\Reference standard：ISO6722,MIL-DTL-17H 2005,
导体材质\Conductor material：裸铜\Bare copper
绝缘材质\Insulation material：发泡聚丙烯/聚乙烯\Foamed Polypropylene,polyethylene
编织屏蔽\Braided Shield：镀锡铜丝\Tinned copper
护套材质\Sheath Material：聚氛乙烯/聚乙烯\ PVC/Polyethylene

● 产品介绍/Product description

基于 MIL -C17标准的美标同轴电缆RG58，最早专门用于车内天线系统的连接，同时可以用于汽车内高清的倒车影像和视频等信号传输连接的需求，它具备极佳的高频传输性能，105℃级赋予RG58更广的使用场景。

The American standard coaxial cable RG58 based on the MIL-C17 standard was first specifically used for the connection of car antenna systems, and can also be used for the transmission and connection of high-definition reverse images and videos in cars. It has excellent high-frequency transmission performance, and the 105 ℃ level gives RG58 a wider range of usage scenarios.

● 产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	外径 Outer diameter mm
RG58LL(xx)-50	1/1.02	Foamed Polypropylene	2.90±0.05	AL/PETP/AL	85min	4.90±10
RG58LL(xx)-50	19/0.20	Foamed Polypropylene	2.90±0.05	AL/PETP/AL	90min	4.95±10

注:XX为流水号
Note:XX is the running number

● 电气性能\Electrical characteristics

项目 Types	单位 unit	RG58LL(xx)-50	RG58LL(xx)-50
阻抗 impedance	Ω	50±3	50±3
电容 Capacitance	Pf/m	82 nom	84nom
导体电阻 Conductor DCR@20℃	Ω/KM	21.0MAX	21.0MAX
耐电压 Testing Voltange	V（AC）	1000	1000
火花电压 Spark Test Voltage	V/min	1750	1750

● 插入损耗\Insertion loss

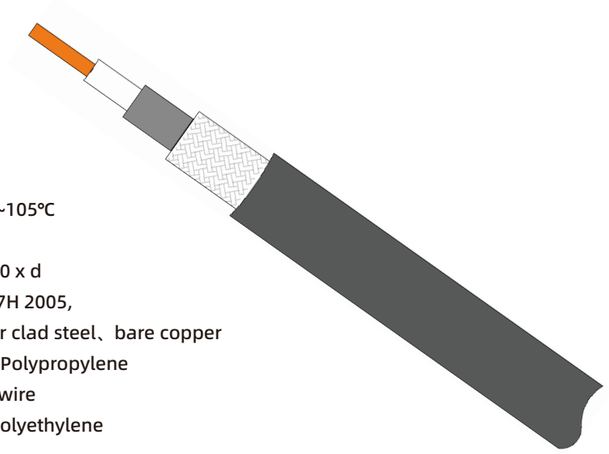
Frequency (MHz)	RG58(xx)-50 dB/100m（NOM)	RG58(xx)-50 dB/100m（NOM)
200	16.08	20.1
400	22.67	30.3
500	25.30	43.7
700	30.02	/
900	34.12	/
1000	35.99	48.9
1200	39.60	53.6
1600	45.70	/
1800	48.69	66.3
1900	50.10	/
2000	51.51	74.0
2400	55.77	/
2600	58.56	/
2700	59.71	/
2800	60.70	84.4
3000	62.50	88.1
3200	64.30	/
3400	65.78	/
3600	68.08	/
4000	75.12	104.2
5000	85.31	120.4
6000	95.46	134.9

COAXIAL CABLE

同轴线缆

RTK-044 20G传输同轴电缆

RTK-044 20G transmission coaxial cable



● 产品说明/Product description

产品名称\Product name：RTK-044
温度等级\Temperature rating：-40℃~85℃ to -40℃~105℃
额定电压\Rated voltage：60V
弯曲半径\Bending radius: Single 5 x d ， Multiple 10 x d
参考标准\Reference standard：ISO6722,MIL-DTL-17H 2005,
导体材质\Conductor material：铜包钢、裸铜\copper clad steel、bare copper
绝缘材质\Insulation material：发泡聚丙烯\Foamed Polypropylene
编织屏蔽\Braided Shield：镀锡铜丝\Tinned copper wire
护套材质\Sheath Material：聚氯乙烯/聚乙烯\ PVC/Polyethylene

● 产品介绍/Product description

基于MIL-DTL-17H标准的美标同轴电缆RTK-044，用于汽车内倒车影像和雷达等末端模拟信号传输，相对于其它车用数据线缆，具备重量轻，成本低的优势。105℃级RTK-044作为85℃的改进版，将能适应于更多的使用环境。

The American standard coaxial cable RTK-044 based on the MIL-DTL-17H standard is used for the transmission of end analog signals such as reversing images and radars in automobiles. Compared to other automotive data cables, it has the advantages of light weight and low cost. As an improved version of 85 ℃, the 105 ℃ RTK-044 will be able to adapt to more usage environments.

● 产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	外径 Outer diameter mm
RTK-044(xx)-50	1/0.86	Foamed Polypropylene	2.40±0.05	AL/PETP	95min	3.55±10
RTK-044(xx)-50	1/0.86	Foamed Polypropylene	2.35±0.05	CU/PETP	95min	3.35±10

注:XX为流水号
Note:XX is the running number

● 电气性能\Electrical characteristics

项目 Types	单位 unit	RTK-044(xx)-50	RTK-044(xx)-50
阻抗 impedance	Ω	50±3	50±3
电容 Capacitance	Pf/m	90 nom	90nom
导体电阻 Conductor DCR@20℃	Ω/KM	33.9MAX	33.9MAX
耐电压 Testing Voltange	V（AC）	1000	1000
火花电压 Spark Test Voltage	V/min	1750	1750

● 插入损耗\Insertion loss

Frequency (MHz)	RTK-044(xx)-50 dB/100m（NOM)	RTK-044(xx)-50 dB/100m（NOM)	Frequency (MHz)	RTK-044(xx)-50 dB/100m（NOM)	RTK-044(xx)-50 dB/100m（NOM)
50	10	10	2000	64	64
90	13	13	2100	66	66
100	14	14	2345	70	70
107.9	15	15	2400	71	71
200	20	20	2500	72	72
240	21	21	3000	80	80
400	28	28	3600	89	89
420	28.2	28.2	3775	91	91
440	29	29	3900	93	93
452.5	30	30	4000	94	94
465.5	30	30	4200	97	97
500	31	31	4250	98	98
600	34	34	5000	108	108
700	37	37	5500	114	114
800	40	40	5600	115	115
900	43	43	5800	118	118
1000	45	45	5930	119	119
1492	55	55	6000	120	120
1500	55	55	8000	144	144
1607	57	57	16000	229	229
1800	61	61	20000	268	268

02

CAR MULTIMEDIA DATA LINE

车载多媒体数据线

ETHERNET DATA CABLE

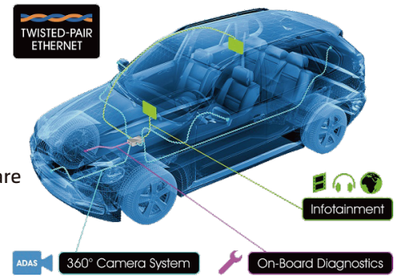
以太网数据线

100M UTP以太网数据线缆

100M UTP Ethernet data cable

产品说明/Product description

产品名称\Product name：UTP以太网数据线\UTP Ethernet data cable
温度等级\Temperature rating：-40℃~105℃，-40℃~125℃
额定电压\Rated voltage：DC 60V
参考标准\Reference standard：ISO6722,DIN EN 13602、TC9
导体材质\Conductor material：
合金铜,裸铜绞线\Stranded copper alloy wire bare\Stranded copper wire bare
绝缘材质\Insulation material：聚丙烯\Polypropylene
护套材质\Sheath Material：热塑性弹性体\TPE-S



产品介绍/Product description

用于汽车系统以太网总线，旨在为了获得一套具有灵活性和可扩展性的以太网布线方案，它可以提高车辆的安全性和舒适性，并提供信息娱乐，同时显著降低车内网络的复杂性和布线成本。代替 CAN 总线并作为5G通信的最佳配套总线，100M以太网数据缆是最新的版本，它为车联网提供了一个完全满足100M数据传输的选择。

Tinned copper is used for the Ethernet bus of automotive systems, aiming to obtain a flexible and scalable Ethernet wiring solution that can improve the safety and comfort of vehicles, provide information and entertainment, and significantly reduce the complexity and wiring costs of the vehicle's internal network. Replacing the CAN bus and serving as the best supporting bus for 5G communication, the 100M Ethernet data cable is the latest version, providing a completely suitable choice for 100M data transmission for the Internet of Vehicles.

产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	护套材质 Sheath material	外径 Outer diameter mm
LY-547	7/0.154	Polypropylene	0.85±0.05	/	TPE-S	3.20±10
LY-546	7/0.254	Polypropylene	1.26±0.05	/	TPE-S	3.80±10

电气性能\Electrical characteristics

项目 Types	ZRF	单位 unit	Frequency (MHz)	Values
impedance	/	Ω	/	100±5
Conductor DCR@20℃	/	Ω/KM	/	180
Insertion Loss (IL), max	Sdd21	dB/m	1MHz	0.06
			10MHz	0.16
			33MHz	0.31
			66MHz	0.45
Return Loss (RL), min	Sdd11, Sdd22	dB	1MHz	20
			20MHz	20
			66MHz	15
LongitudinalConversion Loss (LCL), min	Sdc11, Sdc22	dB	1MHz	46
			50MHz	46
			200MHz	34
Longitudinal Conversion Transmission Loss (LCTL), min	Sdc12, Sdc21	dB	1MHz	46
			50MHz	46
			200MHz	34

ETHERNET DATA CABLE

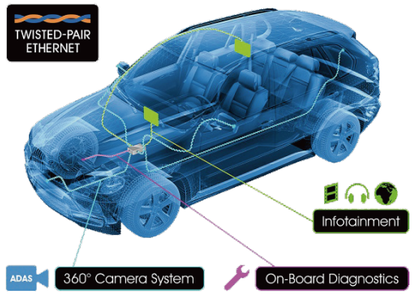
以太网数据线

1000M UTP以太网数据线

1000M UTP Ethernet data cable

产品说明/Product description

产品名称\Product name：UTP以太网数据线\UTP Ethernet data cable
温度等级\Temperature rating：-40℃~105℃，-40℃~125℃
额定电压\Rated voltage：DC 60V
参考标准\Reference standard：IISO6722,DIN EN 13602
导体材质\Conductor material：合金铜,镀锡铜绞线\
Stranded copper alloy wire bare ,stranded copper wire tin plated
绝缘材质\Insulation material：聚丙烯\Polypropylene
护套材质\Sheath Material：热塑性弹性体\TPE-S



产品介绍/Product description

用于汽车系统以太网总线，旨在为了获得一套具有灵活性和可扩展性的以太网布线方案，它可以提高车辆的安全性和舒适性，并提供信息娱乐，同时显著降低车内网络的复杂性和布线成本。代替 CAN 总线并作为5G通信的最佳配套总线，1000M以太网数据缆是最新的版本，它为车联网提供了一个完全满足5G数据传输的选择。

Tinned copper is used for the Ethernet bus of automotive systems, aiming to obtain a flexible and scalable Ethernet wiring solution that can improve the safety and comfort of vehicles, provide information and entertainment, and significantly reduce the complexity and wiring costs of the vehicle's internal network. Replacing the CAN bus and serving as the best supporting bus for 5G communication, the 1000M Ethernet data cable is the latest version, providing a completely suitable choice for 5G data transmission for the Internet of Vehicles.

产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	护套材质 Sheath material	外径 Outer diameter mm
LY-647	7/0.154	Polypropylene	0.83±0.05	/	TPE-S	3.20±10
LY-676	7/0.16	Polypropylene	0.82±0.05	/	TPE-S	3.20±10

电气性能\Electrical characteristics

项目 Types	ZRF	单位 unit	Frequency (MHz)	Values
impedance	/	Ω	/	100±5
Conductor DCR@20℃	/	Ω/KM	/	180
Insertion Loss (IL), max	Sdd21	dB/m	1MHz	0.040
			10MHz	0.114
			100MHz	0.369
			600MHz	0.959
Return Loss (RL), min	Sdd11, Sdd22	dB	1MHz	22
			10MHz	22
			100MHz	19
			600MHz	14
LongitudinalConversion Loss (LCL), min	Sdc11, Sdc22	dB	1MHz	55
			10MHz	55
			100MHz	54
			600MHz	45
Longitudinal Conversion Transmission Loss (LCTL), min	Sdc12, Sdc21	dB	1MHz	55
			10MHz	55
			100MHz	54
			600MHz	45

ETHERNET DATA CABLE

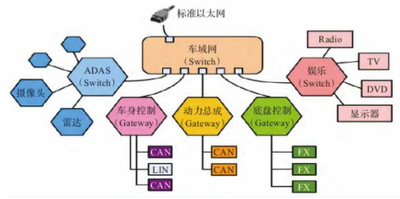
以太网数据线

STP-1000M 千兆网数据线

STP-1000M UTP Ethernet data cable

产品说明/Product description

产品名称\Product name：STP-1000M 以太网数据线\STP-1000M Ethernet data cable
温度等级\Temperature rating：-40℃~105℃
额定电压\Rated voltage：DC 60V
参考标准\Reference standard：IISO6722,DIN EN 13602
导体材质\Conductor material：合金铜\tin-copper alloy
绝缘材质\Insulation material：发泡聚丙烯\Foamed Polypropylene
护套材质\Sheath Material：聚氯乙烯\PVC



产品介绍/Product description

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产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	中被材质 Mid-Quilt Material	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	护套材质 Sheath material	外径 Outer diameter mm
LY-647-4	7/0.154	Foamed Polypropylene	0.95±0.05	Polyprpylene	AL/PETP/AL	90min	PVC	4.10±20

电气性能\Electrical characteristics

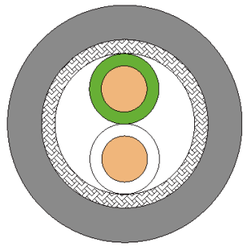
项目 Types	ZRF	单位 unit	Frequency (MHz)	Values
impedance	/	Ω	/	100±5
Conductor DCR@20℃	/	Ω/KM	/	180
Insertion Loss (IL), max	Sdd21	dB/m	1MHz	0.039
			10MHz	0.114
			100MHz	0.369
			600MHz	0.958
Return Loss (RL), min	Sdd11, Sdd22	dB	1MHz	22
			10MHz	22
			400MHz	14
			600MHz	14
LongitudinalConversion Loss (LCL), min	Sdc11, Sdc22	dB	1MHz	50
			50MHz	50
			200MHz	40
			600MHz	33
Longitudinal Conversion Transmission Loss (LCTL), min	Sdc12, Sdc21	dB	1MHz	46
			50MHz	46
			200MHz	37
			600MHz	30

ETHERNET DATA CABLE

以太网数据线

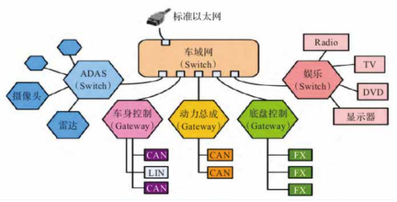
STP-10000M 万兆网数据线

STP-10000M Ethernet data cable



● 产品说明/Product description

产品名称\Product name：STP-10000M 万兆网数据线\STP-10000M Ethernet data cable
温度等级\Temperature rating：-40℃~105℃
额定电压\Rated voltage：DC 60V
参考标准\Reference standard：IISO6722,DIN EN 13602
导体材质\Conductor material：镀锡铜绞合\Stranded copper wire tin plated
绝缘材质\Insulation material：发泡聚丙烯\Foamed Polypropylene
护套材质\Sheath Material：热塑性弹性体,聚氯乙烯\TPE-S,PVC



● 产品介绍/Product description

用于汽车系统以太网总线，旨在为了获得一套具有灵活性和可扩展性的以太网布线方案，它可以提高车辆的安全性和舒适性，并提供信息娱乐，同时显著降低车内网络的复杂性和布线成本。代替 CAN 总线并作为5G通信的最佳配套总线，10000M以太网数据缆是最新的版本，它为车联网提供了一个完全满足10000M数据传输的选择。

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● 产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	中被材质 Mid-Quilt Material	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	护套材质 Sheath material	外径 Outer diameter mm
LY-683-3	7/0.16	Foamed Polypropylene	0.95±0.05	/	AL/PETP/AL	85min	PVC	3.80±10

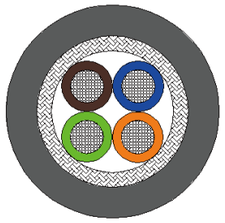
● 电气性能\Electrical characteristics

项目 Types	ZRF	单位 unit	Frequency (MHz)	Values
impedance	/	Ω	/	100±5
ConductorDCR@20℃	/	Ω/KM	/	180
Insertion Loss (IL), max	Sdd21	dB/m	5MHz	0.13
			100MHz	0.29
			1000MHz	1.0
			3000MHz	2.0
Return Loss (RL), min	Sdd11, Sdd22	dB	5500MHz	3.0
			5MHz	22
			100MHz	22
			1000MHz	20
			2000MHz	20
			3000MHz	15
			5500MHz	15

HIGH SPEED DATA CABLE

HSD车载数据线

HSD Ethernet data cable



产品说明/Product description

产品名称\Product name：HSD数据线\HSD Ethernet data cable
温度等级\Temperature rating：-40℃~105℃
额定电压\Rated voltage：DC 60V
参考标准\Reference standard：ISO19642
导体材质\Conductor material：镀锡铜\Tinned Copper
绝缘材质\Insulation material：聚丙烯\Polypropylene
护套材质\Sheath Material：聚氯乙烯\PVC

产品介绍/Product description

HSD连接系统（HIGH SPEED DATA）是一种高性能数据连接系统，属于全屏蔽型互连系统。可防止串扰和外部来源的干扰。最早由ROSENBERGER在2007年推出，引领了当时车载数字信号传输的新趋势。
HSD为汽车行业开发界面提供了两对差分信号对，因此不仅可以依据低压差分信号（LVDS）发送数据，广泛应用于汽车信息娱乐模块、摄像头、抬头显示等，还可以用于USB 2.0 / 3.0、以太网（10BASE-T1S ,100BASE-TX，100BASE-T1，1000BASE-T1，BROADR-REACH）规范，具有很高的屏蔽效率

The HSD connection system (High Speed Data) is a high-performance data connection system that belongs to the full screen interconnection system. It can prevent crosstalk and interference from external sources. It was first introduced by Rosenberger in 2007 and led the new trend of in vehicle digital signal transmission at that time.
HSD provides two pairs of differential signal pairs for the development interface of the automotive industry. Therefore, it can not only send data based on Low Voltage Differential Signal (LVDS) and is widely used in automotive infotainment modules, cameras, head up displays, etc., but also in USB 2.0/3.0, Ethernet (10Base-T1s, 100BASE-TX, 100BASE-T1000BASE-T1, BroadR Reach) specifications, with high shielding efficiency

产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	护套材质 Sheath material	外径 Outer diameter mm
LY-535	7/0.16	Polypropylene	1.22±0.05	AL/PETP/AL	90min	PVC	4.60±10
LY-636	7/0.16	Polypropylene	1.22±0.05	AL/PETP/AL	90min	PVC	4.60±10

电气性能\Electrical characteristics

项目 Types	单位 unit	LY-535	LY-636
阻抗 impedance	Ω	100±6	100±6
电容 Capacitance	Pf/m	≤250	≤250
导体电阻 Conductor DCR@20℃	Ω/KM	140.0MAX	140.0MAX
耐电压 Testing Voltange	V（AC）	1000	1000
火花电压 Spark Test Voltage	V/min	1500	1500

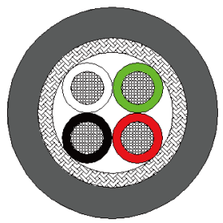
插入损耗\Insertion loss

Frequency (MHz)	LY-535 dB/m（MAX）	LY-636 dB/m（MAX）
1	0.05	1.0
10	0.15	/
50	0.25	2.3
100	0.33	3.3
400	0.71	7.1
500	0.81	8.1
1000	1.24	11.3
1500		14.0
2000		16.4
2500		19.0
3000		22.0

HIGH SPEED DATA CABLE

HSC USB车载数据线

HSC Ethernet data cable



产品说明/Product description

产品名称\Product name：HSC USB车载数据线\HSC Ethernet data cable
温度等级\Temperature rating：-40℃~105℃
额定电压\Rated voltage：DC 60V
参考标准\Reference standard：ISO19642
导体材质\Conductor material：镀锡铜\Tinned Copper
绝缘材质\Insulation material：聚丙烯\Polypropylene
护套材质\Sheath Material：聚氯乙烯\PVC

产品介绍/Product description

HSC连接系统是一种高性能数据连接系统，属于全屏蔽型互连系统。可防止串扰和外部来源的干扰。最早由ROSENBERGER在2007年推出，引领了当时车载数字信号传输的新趋势。
HSC为汽车行业开发界面提供了两对差分信号对，因此不仅可以依据低压差分信号（LVDS）发送数据，广泛应用于汽车信息娱乐模块、摄像头、抬头显示等，还可以用于USB 2.0 / 3.0、以太网（10BASE-T1S ,100BASE-TX，100BASE-T1，1000BASE-T1，BROADR-REACH）规范，具有很高的屏蔽效率。

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产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	护套材质 Sheath material	外径 Outer diameter mm
HSC(xx)-1G	7/0.16	Polypropylene	1.08±0.05	AL/PETP	90min	PVC	4.60±10

注:XX为流水号
Note:XX is the running number

电气性能\Electrical characteristics

项目 Types	单位 unit	HSC(xx)
阻抗 impedance	Ω	90±6
电容 Capacitance	Pf/m	≤150
导体电阻 Conductor DCR@20℃	Ω/KM	125.0MAX
耐电压 Testing Voltange	V（AC）	1000
火花电压 Spark Test Voltage	V/min	1500

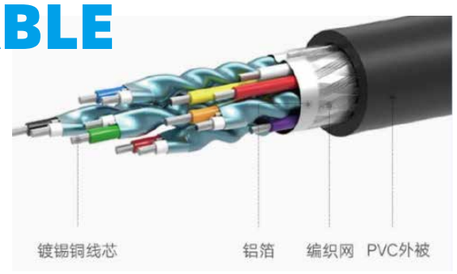
插入损耗\Insertion loss

Frequency (MHz)	HSC(xx) dB/m（MAX）
0.064	0.08
0.256	0.11
0.512	0.13
0.772	0.15
1	0.20
4	0.39
8	0.57
12	0.67
24	0.95
48	1.35
96	1.90
200	3.20
400	5.80

HIGH SPEED DATA CABLE

USB3.1车载数据线

USB3.1 Ethernet data cable



● 产品说明/Product description

产品名称\Product name：USB3.1车载数据线\USB3.1 Ethernet data cable
温度等级\Temperature rating：-40℃~105℃
额定电压\Rated voltage：DC 60V
参考标准\Reference standard：
ISO19642、USB协会标准\ISO19642、USB Association Standard
导体材质\Conductor material：镀锡铜\Tinned Copper
绝缘材质\Insulation material：
FEP、聚丙烯\fluorinated ethylene propylene copolymer、Polypropylene
护套材质\Sheath Material：聚氯乙烯\PVC

● 产品介绍/Product description

USB 3.1 数据线数据传输速度提升至10GBPS,与USB 3.0技术相比，新USB技术使用一个更高效的数据编码系统，并提供一倍以上的有效数据吞吐率。它完全向下兼容现有的USB连接器与线缆；
USB 3.1新增USB A/V影音传输。使用USB来传输画面其实有很大的便利性，除了USB介面本身就相当广泛外，还能省去一条电源线，直接以USB供电；
新的USB AV 3.1提供9.8GBPS频宽，最高支持4096 X 2304 @ 30FPS的4K显示画面，4K显示的规格已和HDMI 2.0一样，同时USB AV也支援HDCP影像加密技术，搭配更大的电力供应，较大尺寸的显示器可望也能藉由USB AV 3.1来显示4K解析度。另外，现有的装置和显示器可透过USB AV转接器，以USB线来传送影音。USB线将取代其它显示介面，成为最实用的影音传输线材。

The data transmission speed of USB 3.1 data line has been increased to 10Gbps. Compared with USB 3.0 technology, the new USB technology uses a more efficient data encoding system and provides more than twice the effective data throughput. It is fully backward compatible with existing USB connectors and cables;

USB 3.1 adds USB A/V video transmission. Using USB to transmit images actually has great convenience. In addition to the USB interface itself being quite extensive, it can also save a power cord and directly use USB for power supply;

The new USB AV 3.1 provides a bandwidth of 9.8Gbps and supports up to 4096 x 2304 @ 30FPS of 4K display. The specifications for 4K display are the same as HDMI 2.0. At the same time, USB AV also supports HDCP image encryption technology, paired with a larger power supply, and larger displays are expected to display 4K resolution through USB AV 3.1. In addition, existing devices and displays can transfer audio and video through a USB AV adapter using a USB cable. USB cable will replace other display interfaces and become the most practical audio and video transmission cable.

● 产品结构/Product structure

规格型号 Specification	导体外径 Conductor O.D. mm	绝缘材质 Insulation material	绝缘外径. Insulation O.D. mm	铝箔屏蔽 Aluminium foil shielding	编织屏蔽覆盖率% Braided shield coverage %	护套材质 Sheath material	外径 Outer diameter mm
USB3.1 (xx)-15G	7/0.10	FEP	0.70±0.05	AL/PETP	90min	PVC	5.50±10

注:XX为流水号
Note:XX is the running number

● 电气性能\Electrical characteristics

项目 Types	单位 unit	USB3.1(xx)
阻抗 impedance	Ω	90±5
延迟差 Propagation Delay Skew	Pf/m	≤15
导体电阻 Conductor DCR@20℃	Ω/KM	381.0MAX
耐电压 Testing Voltange	V（AC）	1000
火花电压 Spark Test Voltage	V/min	1500

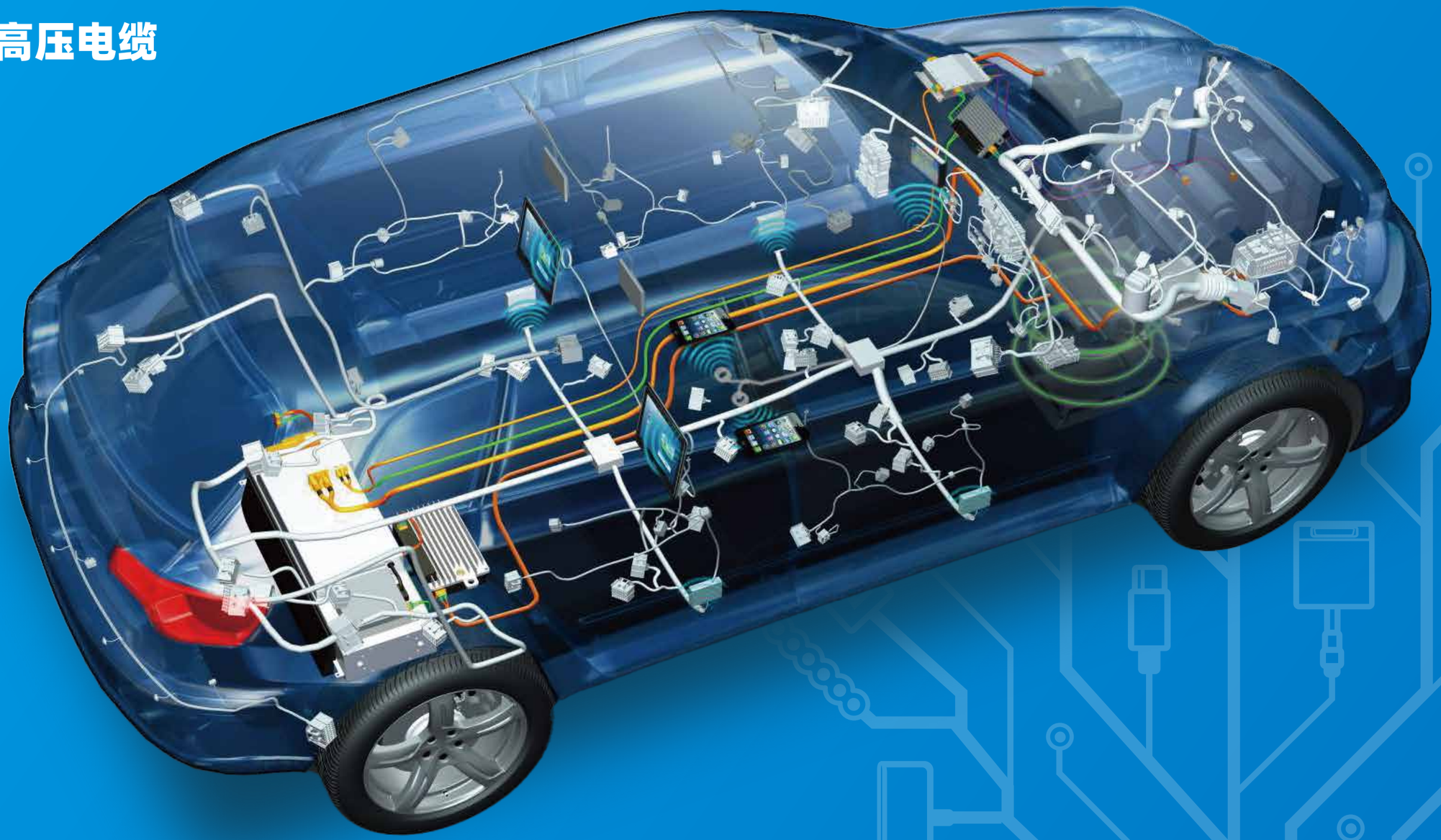
● 插入损耗\Insertion loss

Frequency (GHz)	USB3.1(xx) dB/m（MAX）
0.1	2
2.5	4.0
5	6.0
10	11.0
15	20.0

03

NEW ENERGY VEHICLES HIGH VOLTAGE CABLE

新能源汽车高压电缆



HIGH VOLTAGE AND LOW VOLTAGE CABLES FOR NEW ENERGY VEHICLES

新能源汽车高压低压线缆

执行标准/Executive standard

汽车电线的型号和颜色执行标准OC/T 414-2016。

The type and color of automotive wires follow thestandard OC/T 414-2016.

型号编制方法/Model preparation method

型号依序由类型、额定电压、规格结构和颜色标记编制组成

The model is composed of type, rated voltage, specification structure and color marking in sequence

类型/Type

类型标记依序由系列代码、导体材料代码、结构特征代码和温度等级代码组成，可以补充所用绝缘和护套(如果有)包覆材料的种类(缩写)代码。

The type marking consists of series code, conductor material code, structural feature code andComposition of the temperature class code, which can supplement the insulation and sheath (if any) cladding usedThe type (abbreviation) code of the material.

系列代码/Series code

Q-代表汽车用电线(电缆)。

Q- stands for automotive wires (cables).

导体材料代码/Conductor material code

代码/the code	意义/significance
T	电工铜(省略) Electrical copper (omitted)
L	电工铝 Electrical Aluminum
TJ	铜合金 copper alloy
LJ	铝台金 Aluminum alloy

结构特征代码/Structural feature code

代码/the code		意义/significance	
B		薄壁绝缘,见GB/T 25085的表4/For thin-wall insulation, see Table 4 of GB/T 25085	
C		超薄壁绝缘，见GB/T 25085的表4/Ultra-thin-wall insulation, see Table 4 of GB/T 25085	
Z		厚壁绝缘,见GB/T 25085的表4/For thick-wall insulation, see Table 4 of GB/T 25085	
J		交联(热固性)材料/Cross-linked (thermoset) materials	
H		带护套电缆(非屏蔽)(参见 GB/T 25087)/Sheathed cable (unshielded) (see GB/T 25087)	
P	P1	屏蔽护套电缆(参见 GB/T 25087) Shielded sheathed cable (see GB/T 25087)	薄膜屏蔽/Film shielding
	P2		金属编织屏蔽/Metal Braid Shield
	P3		金属丝缠绕屏蔽/Wire wound shielding

包覆材料代码(应为材料种类的缩写)。CLADDING MATERIAL CODE (SHOULD BE THE ABBREVIATION OF MATERIAL TYPE).

代码/the code	材料种类/Type of material
PVC	聚氯乙烯/Polyvinyl chloride
XLPE	交联聚乙烯/Cross-linked polyethylene
PP	聚丙烯/Polypropylene
PUR	聚氨酯/Polyurethane
TPE	热塑性弹性体/Thermoplastic elastomers
EPDM	三元乙丙橡胶/EPDM rubber
XLPO	交联聚烯烃/Cross-linked polyolefin
ETFE	乙烯-四氟乙烯共聚物/Ethylene-tetrafluoroethylene copolymer
SIR	硅橡胶/Silicone Rubber
FEP	聚全氟乙丙烯/Perfluoroethylene-polyethylene

汽车用高压电缆作为高压输电电缆，主要应用在电池包、电池管理系统、逆变器、电机控制器、电动机、空调系统、充电回路间的高压输电部分的连接，广泛用于混合动力乘用车、纯电动乘用车、纯电动客车、纯电动货运车辆等新能源汽车中。

High-voltage cables for automobiles are used as high-voltage transmission cables, mainly used in battery packs, battery tubesManagement system, inverter, motor controller, motor, air conditioning system, charging circuit The connection of the high-voltage power transmission part of the system is widely used in hybrid electric passenger vehicles and pure electric passenger vehiclesVehicles, pure electric passenger cars, pure electric freight vehicles and other new energy vehicles.

高压电缆分为高压部分信号采集线和高压部分电力传输线两部分。信号采集线一般采用小截面高压电缆即可，截面积从0.35MM2~6.0MM2;电力传输部分电缆一般根据承载电流不同可采用6MM2~120MM2的电缆。根据对柔韧性、圆整性的不同要求和需要,导体绞合形式可以分为A、B、C三种绞合结构.大截面高压电缆推荐采用C型绞合结构。

The high-voltage cable is divided into two parts: the signal acquisition line of the high-voltage part and the power transmission line of the high-voltage part.The signal acquisition line generally adopts a small cross-section high-voltage cable, and the cross-sectional area is from0.35mm2~6.0mm2; the power transmission part of the cable can generally vary according to the carrying currentUse 6mm2~120mm2 cables. According to different requirements for flexibility and roundnessand needs, the conductor stranding form can be divided into three stranding structures: A, B, and C. Large cross-section high-voltage The cable is recommended to use C-type twisted structure.

高压电缆的耐热等级从100°C到180°C,分为4个温度等级以适应车内环境不同的需要。

The heat-resistant grade of high-voltage cables is from 100°C to 180°C, and is divided into 4 temperature grades to suit the needs of vehicles.The needs of different internal environments.

高压电缆额定电压分为两种，薄壁高压电缆为AC600V/DC900V,厚壁绝缘高压电缆为AC1000V/DC1500V。

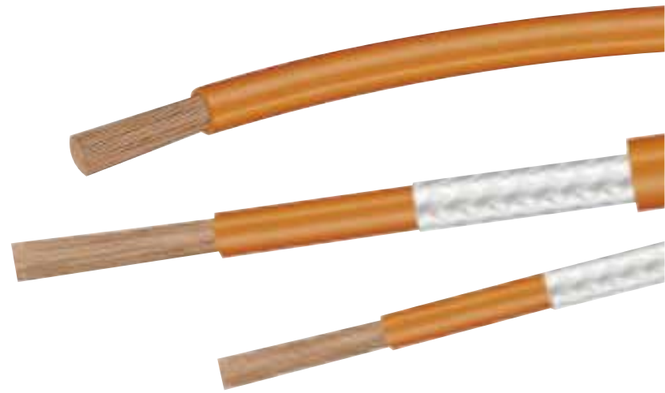
The rated voltage of high-voltage cables is divided into two types, thin-walled high-voltage cables are AC600V/DC900V,Thick-wall insulated high-voltage cables are AC1000V/DC1500V.

电力传输部分的单芯高压电缆的绝缘和护套均为橙色为了区分,也有护套颜色采用双色的设计。信号采集有多种颜色提供,有单色,也有双色。多芯屏蔽护套高压电缆，线芯的颜色组合一般为固定组合,护套颜色为橙色。

The insulation and sheath of the single-core high-voltage cables in the power transmission part are all orange in order to distinguish them.There is a two-color design for the sheath color. Signal acquisition is available in a variety of colors, including monochrome,Also available in two-tone. For multi-core shielded sheathed high-voltage cables, the color combination of cores is generally fixed Combined, sheath color is orange.

目前高压电缆中,德系车型一般以180°C薄壁硅橡胶绝缘高压电缆为主,美系车型一般采用150°C辐照交联薄壁绝缘高压电缆为主，国内车型一般选用125C或150°C辐照交联厚壁绝缘高压电缆。

The insulation and sheath of the single-core high-voltage cables in the power transmission part are all orange in order to distinguish them.There is a two-color design for the sheath color. Signal acquisition is available in a variety of colors, including monochrome,Also available in two-tone. For multi-core shielded sheathed high-voltage cables, the color combination of cores is generally fixed Combined, sheath color is orange.



产品标准 Product Standards	产品结构 product structure	额定电压 Rated voltage	规格 Specification
QC/T 1037标准 QC/T 1037 standard	屏蔽电缆 Shielded cable	AC 600 / DC 900V	1.5平方~70平方 1.5 square to 70 square
		AC 1000 / DC 1500V	10平方~120平方 10 square to 120 square
	非屏蔽电缆 unshielded cable	AC 600 / DC 900V	1.5平方~70平 1.5 square to 70 square方
		AC 1000 / DC 1500V	10平方~120平方 10 square to 120 square
	多芯屏蔽电缆 Multi-core shielded cable	AC 600 / DC 900V	2~5芯*1.5平方、2~5芯*2.5平方、2~5芯*4平方、2~5芯*6平方 2~5 cores*1.5 square meters, 2~5 cores*2.5 square meters, 2~5 cores*4 square, 2~5 cores*6 square

EV CABLE

新能源汽车车内高压线 AC600V/DC900

HIGH VOLTAGE LINES IN NEW ENERGY VEHICLES AC600V/DC900

- **产品说明/Product description**

额定温度/Rated temperature：-40℃~125℃,150℃
额定电压/Rated voltage：AC600V/DC900
参考标准/Reference standards：QC/T 1037-2016

- **产品介绍/Product description**

混合动力&纯电动汽车高压动力电缆是目前新能源汽车电动动力单元上用于连接电机、电池、控制模块的一组线缆，其有柔软、耐高温、耐油，电缆通过编织屏蔽层，还具有电磁屏蔽等特性。

Hybrid power & pure electric vehicles high voltage power cable, as a part of electric power unit of new energy automobile, is used to connect motor, battery and control module. It has a lot of excellent performances, such as soft, high temperature resistance, oil resistance ect. With the optimization of braided shielding layer,model specially have the feature of electromagnetic shielding.

- **产品结构/Product structure**

产品系列 Product Series	规格 Specification	导体绞合外径 Conductor Stranded Outer Diameter	导体电阻 Conductor resistance	参考允载电流 Reference allowable current	非屏蔽最大外径 Unshielded maximum outer diameter	屏蔽最大外径 Shielding maximum outer diameter
AC600/DC900 单芯高压线 AC600/DC900 Single core high-voltage wire	1.5mm2	1.80	12.70	18	2.40	4.20
	2.5mm2	2.20	7.60	25	3.0	4.80
	4mm2	2.80	4.71	35	3.70	5.70
	6mm2	3.40	3.14	45	4.30	6.70
	10mm2	4.50	1.82	70	6.0	8.80
	16mm2	5.80	1.16	95	7.20	10.0
	25mm2	7.20	0.743	130	8.70	12.40
	35mm2	8.50	0.527	160	10.40	14.50
	50mm2	10.50	0.368	210	12.20	16.30
	70mm2	12.50	0.259	260	14.40	18.50

以上产品规格、尺寸、结构可能因为技术进步而有所改变，同类规格可根据客户使用需求进行设计制造。
The above product specifications, dimensions, and structures may change due to technological progress, and similar specifications can be designed and manufactured according to customer needs.

EV CABLE

新能源汽车车内高压线 AC1000V/DC1500

1500HIGH VOLTAGE CABLE AC1000V/DC1500 FOR THE INTERIOR OF NEW ENERGY VEHICLES

- **产品说明/Product description**

额定温度/Rated temperature：-40℃~125℃,150℃
额定电压/Rated voltage：AC1000/DC1500V
参考标准/Reference standards：QC/T 1037-2016

- **产品介绍/Product description**

混合动力&纯电动汽车高压动力电缆是目前新能源汽车电动动力单元上用于连接电机、电池、控制模块的一组线缆，其有柔软、耐高温、耐油，电缆通过编织屏蔽层，还具有电磁屏蔽等特性。

Hybrid power & pure electric vehicles high voltage power cable, as a part of electric power unit of new energy automobile, is used to connect motor, battery and control module. It has a lot of excellent performances, such as soft, high temperature resistance, oil resistance ect. With the optimization of braided shielding layer,model specially have the feature of electromagnetic shielding.

- **产品结构/Product structure**

产品系列 Product Series	规格 Specification	导体绞合外径 Conductor Stranded Outer Diameter	导体电阻 Conductor resistance	参考允载电流 Reference allowable current	非屏蔽最大外径 Unshielded maximum outer diameter	屏蔽最大外径 Shielding maximum outer diameter
AC1000/DC1500 单芯高压线 AC1000/DC1500 Single core high-voltage wire	10mm2	4.50	1.82	70	6.50	9.90
	16mm2	5.60	1.16	95	8.30	11.70
	25mm2	7.20	0.743	130	10.40	14.50
	35mm2	8.50	0.527	160	11.60	15.70
	50mm2	10.50	0.368	210	13.50	18.0
	70mm2	12.50	0.259	260	15.50	20.00
	95mm2	14.80	0.196	320	18.00	22.50
	120mm2	16.50	0.153	320	19.70	24.20

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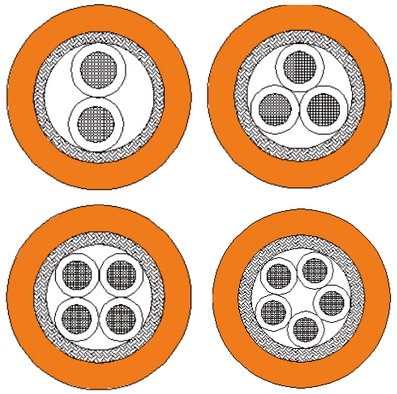
EV CABLE

新能源汽车多芯屏蔽高压电缆

MULTI-CORE SHIELDED HIGH-VOLTAGE CABLES FOR NEW ENERGY VEHICLES



产品说明/Product description

额定温度/Rated temperature：-40℃~125℃,150℃
额定电压/Rated voltage：AC 600V/DC900V
参考标准/Reference standards：QC/T 1037-2016

产品介绍/Product description

混合动力&纯电动汽车高压动力电缆是目前新能源汽车电动动力单元上用于连接电机、电池、控制模块的一组线缆，其有柔软、耐高温、耐油，电缆通过编织屏蔽层，还具有电磁屏蔽等特性。

Hybrid power & pure electric vehicles high voltage power cable, as a part of electric power unit of new energy automobile, is used to connect motor, battery and control module. It has a lot of excellent performances, such as soft, high temperature resistance, oil resistance ect. With the optimization of braided shielding layer,model specially have the feature of electromagnetic shielding.

产品结构/Product structure

产品系列 Product Series	芯数 chip	规格 Specification	导体绞合外径 Conductor Stranded Outer Diameter	导体电阻 Conductor resistance	参考允载电流 Reference allowable current	屏蔽最大外径 Shielding maximum outer diameter
AC 600V/DC900V 多芯屏蔽高压电缆 AC 600V/DC900V Core shielded high voltagecable	2	1.5mm2	1.60	12.70	13	8.50
	3				11	9.10
	4				10	9.70
	5				9	10.30
	2	2.5mm2	2.10	7.60	18	9.90
	3				16	10.40
	4				14	11.10
	5				13	12.10
	2	4mm2	2.70	4.71	26	11.30
	3				22	12.10
	4				20	13.30
	5				18	14.50
	2	6mm2	3.40	3.14	33	12.80
	3				29	14.10
	4				26	15.10
	5				23	16.30

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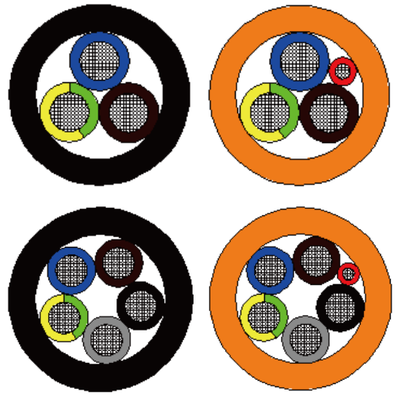
CHARGING CABLE

欧标电动汽车充电线

EURO ELECTRIC VEHICLE CHARGING CABLE



产品说明/Product description

额定温度/Rated temperature：-40℃~90℃
额定电压/Rated voltage：AC 300/500V、 450/750V；DC 1000V
参考标准/Reference standards：EN 50620、IEC62893

产品介绍/Product description

电动汽车充电电缆是电动汽车充电装置与充电基础设施，对电动汽车进行电力传输，并配备一定数量的信号线、控制线、电源辅助线等来确保整个充电过程控制准确、操作安全无误。一般使用于充电站、停车场、酒店、小区、车库等区域，便携式充电电缆可放置在车内。

The electric vehicle charging cable is the electric vehicle charging device and the charging infrastructure, carries on the electric power transmission to the electric vehicle, and equipped with a certain number of signal lines, control lines, power supply auxiliary lines to ensure the whole charging process control accurate, safe operation. Generally used in charging stations, car parks, hotels, residential areas, garages and other areas, portable charging cables can be placed in the car

产品结构/Product structure

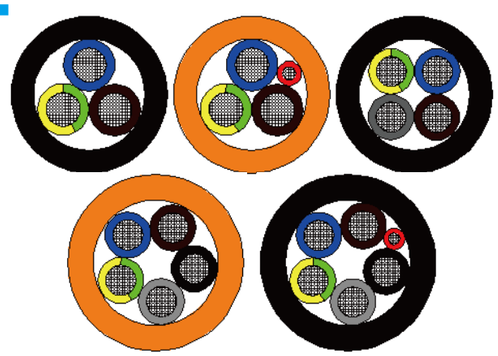
型号 type	规格 Specification	导体绞合外径 Conductor Stranded Outer Diameter	导体电阻 Conductor esistance	参考允载电流 Reference allowable current	无屏蔽外径 Maximum outside diameter unshielded
H05BZ5-F	3×1.5mm2+(0～2)×(0.5～0.75)mm2	1.6	13.3	14A	9.0
	3×2.5mm2+(0～2)×(0.5～0.75)mm2	2.1	7.98	25A	10.1
H07BZ5-F	3×1.5mm2+(0～2)×(0.5～0.75)mm2	1.6	13.3	14A	8.9
	3×2.5mm2+(0～2)×(0.5～0.75)mm2	2.1	7.98	25A	10.0
	3×4.0mm2+(0～2)×(0.5～0.75)mm2	2.8	4.95	35A	11.5
	3×6.0mm2+(0～2)×(0.5～0.75)mm2	3.5	3.30	44A	13.5
	3×10.0mm2+(0～2)×(0.5～0.75)mm2	4.5	1.91	62A	16.3
	3×16mm2+(0～2)×(0.5～0.75)mm2	5.7	1.21	82A	19.0
	5×2.5mm2+(0～2)×(0.5～0.75)mm2	2.1	7.98	20A	13.5
	5×4.0mm2+(0～2)×(0.5～0.75)mm2	2.8	4.95	30A	15.0
	5×6.0mm2+(0～2)×(0.5～0.75)mm2	3.5	3.30	38A	16.5
	5×10.0mm2+(0～2)×(0.5～0.75)mm2	4.5	1.91	54A	20.0
	5×16mm2+(0～2)×(0.5～0.75)mm2	5.7	1.21	71A	23.5

以上产品规格、尺寸、结构可能因为技术进步而有所改变，同类规格可根据客户使用需求进行设计制造。
The above product specifications, dimensions, and structures may change due to technological progress, and similar specifications can be designed and manufactured according to customer needs.

CHARGING CABLE

国标电动汽车充电线

NATIONAL STANDARD ELECTRIC VEHICLE CHARGING CABLE



● 产品说明/Product description

额定温度/Rated temperature：-40℃~90℃

额定电压/Rated voltage：AC 450V/750V

参考标准/Reference standards：GB/T 33594-2017

● 产品介绍/Product description

电动汽车充电电缆是电动汽车充电装置与充电基础设施，对电动汽车进行电力传输，并配备一定数量的信号线、控制线、电源辅助线等来确保整个充电过程控制准确、操作安全无误。一般使用于充电站、停车场、酒店、小区、车库等区域，便携式充电电缆可放置在车内。

The electric vehicle charging cable is the electric vehicle charging device and the charging infrastructure, carries on the electric power transmission to the electric vehicle, and equipped with a certain number of signal lines, control lines, power supply auxiliary lines to ensure the whole charging process control accurate, safe operation. Generally used in charging stations, car parks, hotels, residential areas, garages and other areas, portable charging cables can be placed in the car.

● 产品结构/Product structure

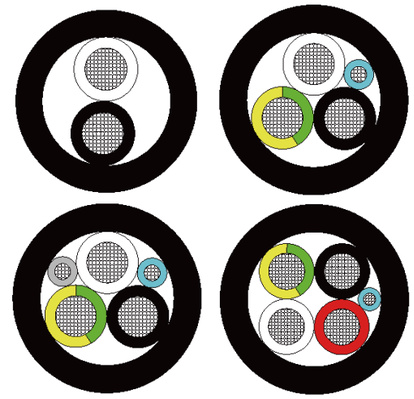
型号 type	规格 Specification	导体绞合外径 Conductor Stranded Outer Diameter	导体电阻 Conductor esistance	参考允载电流 Reference allowable current	TPE护套无屏蔽外径 TPE she-ath	TPU护套无屏蔽外径 TPU sheath unshielded OD
EV-SS	3×1.5mm2+(0～2)×(0.5～0.75)mm2	1.6	13.3	13A	10.6	10.1
EV-RSS	3×2.5mm2+(0～2)×(0.5～0.75)mm2	2.1	7.98	18A	11.8	11.2
EV-SSPS	3×4.0mm2+(0～2)×(0.5～0.75)mm2	2.8	4.95	25A	14.4	13.6
EV-RSSPS	3×6.0mm2+(0～2)×(0.5～0.75)mm2	3.5	3.30	34A	15.8	15.3
EV-S90S90	3×10.0mm2+(0～2)×(0.5～0.75)mm2	4.5	1.91	50A	18.6	17.6
EV-RS90S90	3×16mm2+(0～2)×(0.5～0.75)mm2	5.7	1.21	67A	21.8	20.8
EV-S90S90PS90	4×2.5mm2+(0～2)×(0.5～0.75)mm2	2.1	7.98	18A	16.8	15.1
EV-RS90S90PS90	4×4.0mm2+(0～2)×(0.5～0.75)mm2	2.8	4.95	25A	19.5	18.0
EV-S90U	4×6.0mm2+(0～2)×(0.5～0.75)mm2	3.5	3.30	34A	21.2	19.6
EV-RS90U	5×2.5mm2+(0～2)×(0.5～0.75)mm2	2.1	7.98	18A	14.6	13.8
EV-S90S90U	5×4.0mm2+(0～2)×(0.5～0.75)mm2	2.8	4.95	25A	17.8	16.9
EV-RS90S90U	5×6.0mm2+(0～2)×(0.5～0.75)mm2	3.5	3.30	34A	19.6	19.0
	5×10.0mm2+(0～2)×(0.5～0.75)mm2	4.5	1.91	50A	23.0	21.8

以上产品规格、尺寸、结构可能因为技术进步而有所改变，同类规格可根据客户使用需求进行设计制造。
The above product specifications, dimensions, and structures may change due to technological progress, and similar specifications can be designed and manufactured according to customer needs.

CHARGING CABLE

美标电动汽车充电线

AMERICAN STANDARD ELECTRIC VEHICLE CHARGING CABLE



● 产品说明/Product description

额定温度/Rated temperature：-40℃~105℃

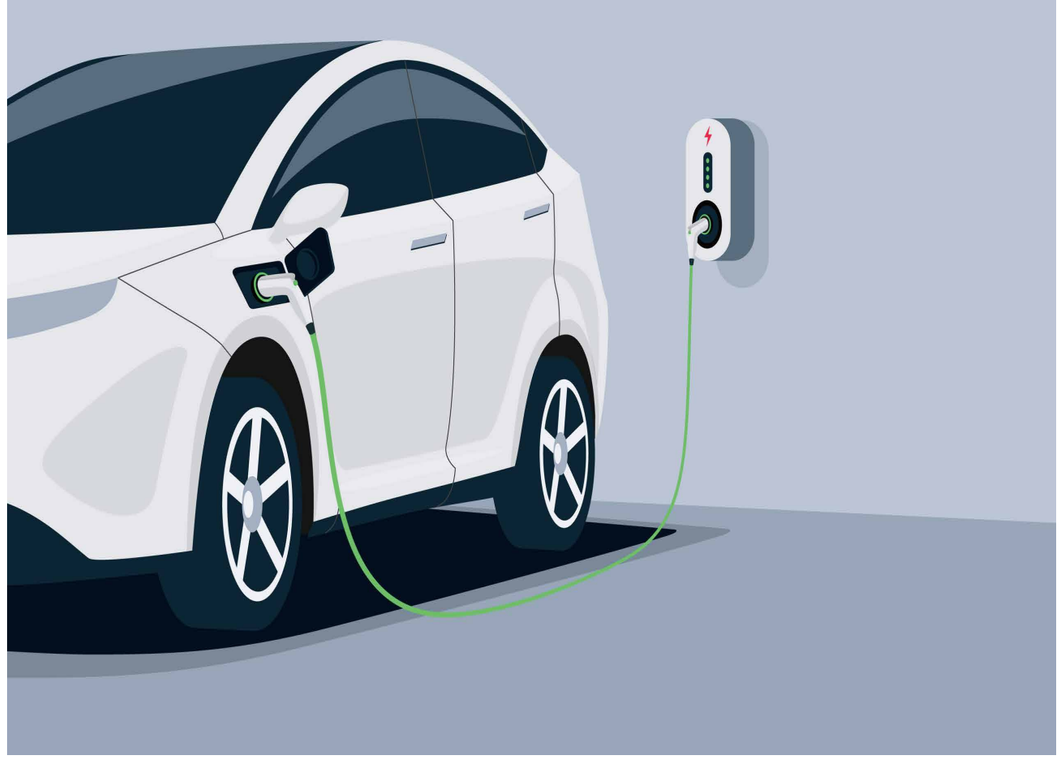
额定电压/Rated voltage：300V/600V/1000V

参考标准/Reference standards：UL62、UL2263

● 产品介绍/Product description

电动汽车充电电缆是电动汽车充电装置与充电基础设施，对电动汽车进行电力传输，并配备一定数量的信号线、控制线、电源辅助线等来确保整个充电过程控制准确、操作安全无误。一般使用于充电站、停车场、酒店、小区、车库等区域，便携式充电电缆可放置在车内。

The electric vehicle charging cable is the electric vehicle charging device and the charging infrastructure, carries on the electric power transmission to the electric vehicle, and equipped with a certain number of signal lines, control lines, power supply auxiliary lines to ensure the whole charging process control accurate, safe operation. Generally used in charging stations, car parks, hotels, residential areas, garages and other areas, portable charging cables can be placed in the car.



CHARGING CABLE

美标电动汽车充电线

AMERICAN STANDARD ELECTRIC VEHICLE CHARGING CABLE

● **产品结构/Product structure**

型号 type	规格 Specification	导体绞合外径 Conductor Stranded Outer Diameter	导体电阻 Conductor resistance	参考允载电流 Reference allowable current	完成外径 Finished outer diameter
600V or 1000V EVE(TPE)	3×16AWG	1.5/1.2	14.1	12A	11.0±0.4
	3×14AWG	1.9/1.2	8.88	16A	12.0±0.5
	3×12AWG	2.4/1.2	5.58	23A	14.5±0.5
	3×10AWG	3.0/1.2	3.51	32A	15.8±0.5
	2×8AWG+10AWG	4.3/3.0	2.23/3.51	46A	21.0±0.6
	2×6AWG+8AWG	5.4/4.3	1.40/2.23	63A	23.5±0.8
	2×4AWG+6AWG	6.6/5.4	0.882/1.4	75A	27.4±0.8
	3×16AWG+1×18AWG	1.5/1.2	14.1/22.4	12A	11.5±0.5
	3×14AWG+1×18AWG	1.9/1.2	8.88/22.4	16A	13.6±0.5
	3×12AWG+1×18AWG	2.4/1.2	5.58/22.4	23A	14.8±0.5
	3×10AWG+1×18AWG	3.0/1.2	3.51/22.4	32A	16.0±0.6
	2×8AWG+10AWG+18AWG	4.3/3.0	2.23/3.51/22.4	46A	21.0±0.6
	2×6AWG+8AWG+18AWG	5.4/4.3	1.40/2.23/22.4	63A	23.5±0.8
	2×4AWG+6AWG+18AWG	6.6/5.4	0.882/1.4/22.4	75A	27.3±0.8
	3×16AWG+2×18AWG	1.5/1.2	3.51/22.4	12A	12.5±0.5
	3×14AWG+2×18AWG	1.9/1.2	8.88/22.4	16A	14.4±0.5
	3×12AWG+2×18AWG	2.4/1.2	5.58/22.4	23A	15.5±0.6
	3×10AWG+2×18AWG	3.0/1.2	3.51/22.4	32A	16.0±0.6
	2×8AWG+10AWG+2×18AWG	4.3/3.0	2.23/3.51	46A	21.0±0.6
	2×6AWG+8AWG+2×18AWG	5.4/4.3	1.40/2.23	63A	23.4±0.8
	2×4AWG+6AWG+2×18AWG	6.6/5.4	0.882/1.4	75A	27.0±0.8
300V EVJE(TPE)	3×16AWG	1.5/1.2	3.51/22.4	12A	9.8±0.3
	3×14AWG	1.9/1.2	8.88/22.4	16A	10.5±0.5
	3×12AWG	2.4/1.2	5.58/22.4	23A	11.6±0.5
	3×16AWG+1×18AWG	1.5/1.2	3.51/22.4	12A	10.8±0.5
	3×14AWG+1×18AWG	1.9/1.2	8.88/22.4	16A	11.4±0.5
	3×12AWG+1×18AWG	2.4/1.2	5.58/22.4	23A	12.5±0.5
	3×16AWG+2×18AWG	1.5/1.2	3.51/22.4	12A	11.8±0.5
	3×14AWG+2×18AWG	1.9/1.2	8.88/22.4	16A	12.5±0.5
	3×12AWG+2×18AWG	2.4/1.2	5.58/22.4	23A	13.4±0.5

以上产品规格、尺寸、结构可能因为技术进步而有所改变，同类规格可根据客户使用需求进行设计制造。
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NEW ENERGY VEHICLES HIGH VOLTAGE CABLE

单芯低压汽车电线

● 单芯低压汽车电线主要作为加工线束的原线和蓄电池引出线。广泛用于车身线束、发动机线束和仪表台线束、车门线束等部位,用于车内供电系统、控制系统和传感器信号的采集。

Single-core low-voltage automotive wires are mainly used as the original wire of the processing wire harness and the lead-out wire of the battery. It is widely used in body wiring harness, engine wiring harness, instrument panel wiring harness, door wiring harness and other parts, and is used for the collection of power supply system, control system and sensor signal in the car.

● 单芯低压电线规格由导体标称截面确定，从最小0.13MMZ一直到120MM2。根据对柔韧性、圆整性的不同要求和需要，导体绞合形式可以分为A、B、C,3种绞合结构。

The specifications of single-core low-voltage wires are determined by the nominal cross-section of the conductor, from a minimum of 0.13mmz to 120mm2. According to different requirements and needs for flexibility and roundness, the conductor stranding form can be divided into three types of stranding structures: A, B, and C.

● 单芯低压电线的耐热从85” C到250°C,分为8个温度等级，以适应车内环境不同的需要。

The heat resistance of single-core low-voltage wires ranges from 85” C to 250°C, and is divided into 8 temperature levels to meet the needs of different environments in the car.

● 单芯低压电线的额定电压到DC60V。

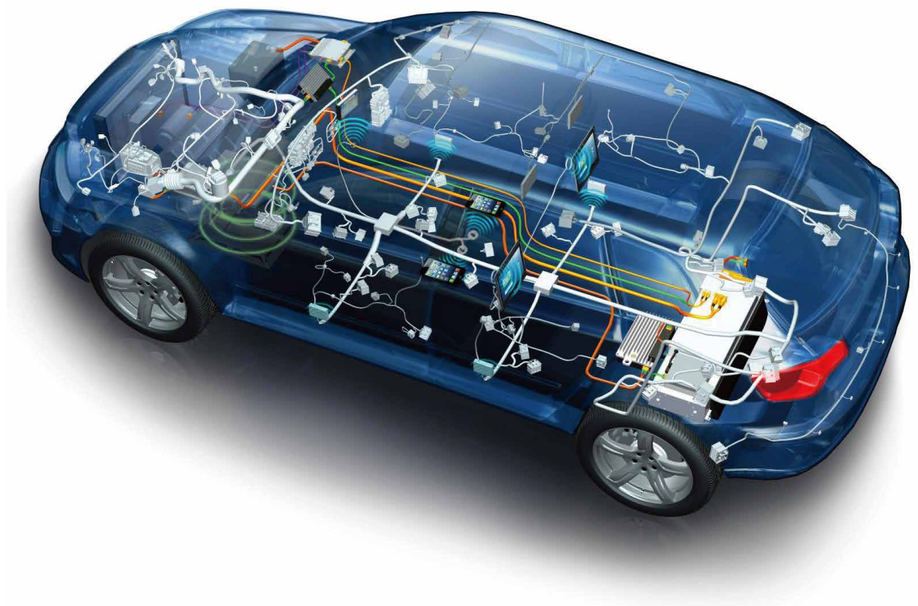
The rated voltage of the single-core low-voltage wire is up to DC60V.

● 单芯低压电线产品有多种颜色提供，有单色，也有双色。

Single-core low-voltage wire products are available in a variety of colors, including single-color and double-color.

● 目前单芯低压电线以薄壁电线为主，个别也需要厚壁电线和超薄壁电线。

At present, single-core low-voltage wires are mainly thin-walled wires, and some of them also need thick-walled wires and ultra-thin-walled wires.



NEW ENERGY VEHICLES HIGH VOLTAGE CABLE

单芯低压汽车电线

● **编码名称/encoding name**

1.线缆类型（德标）
1. Cable type (German standard)

FL=汽车线缆
FL=automotive cable

FLZ=汽车点火导线
FLZ=Car ignition wire

2.导体材料（不包括电解铜）
2. Conductor material (excluding electrolytic copper)

M=除 E-CU 或电阻合金以外的材料
M=Material other than E-CU or resistance alloy

W=电阻线
W= resistance wire

3.绝缘材料的特性
3. Characteristics of insulating materials

无缩写=正常厚度
No abbreviation = normal thickness

R=薄壁绝缘
R = thin wall insulation

U=超薄绝缘
U=Ultra Thin Insulation

S=增加绝缘
S = increased insulation

4.绝缘和护套材料
4. Insulation and sheath material

德标\German standard	美标\American Standard	日标\Japanese standard
Y=柔软的PVC(聚氯乙烯) Y=soft PVC (polyvinyl chloride)	TWP=壁薄，热塑绝缘蓄电池低压电缆 TWP=thin wall, thermoplastic insulated battery low voltage cable	A= 汽车低压电缆 A= Automotive Low Voltage Cable
YW=柔软的PVC,耐热性，耐高压 YW=soft PVC, heat resistance, high pressure resistance		V=聚氯乙烯绝缘 V=PVC insulation
4Y=PA(聚酰胺) 4Y=PA (polyamide)	GPT=热塑性绝缘低压电缆 GPT=thermoplastic insulated low voltage cable	S=薄壁绝缘 S = thin wall insulation
6Y=FEP(氟化乙烯丙烯共聚物) 6Y=FEP (fluorinated ethylene propylene copolymer)		
7Y=ETFE(聚氟乙烯) 7Y=ETFE (polyethylene fluoride)	TXL=壁薄低压汽车电缆 TXL=thin wall low voltage automotive cable	SS=超薄壁绝缘 SS=Super Thin Wall Insulation
11Y=TPE-U(热塑性聚氨酯弹性体) 11Y=TPE-U (thermoplastic polyurethane elastomer)		XX=交联绝缘 XX=cross-linked insulation
13Y=TPE-E(聚酯系弹性体) 13Y=TPE-E (polyester elastomer)	GXL=交联聚乙烯绝缘低压汽车电缆 GXL=XLPE insulated low voltage automotive cable	T=双绞线 T=twisted pair
2X=XLPE(交联聚乙烯) 2X=XLPE (cross-linked polyethylene)		
4G=EVA(乙烯/乙烯基醋酸盐) 4G=EVA (ethylene/vinyl acetate)	SXL=交联聚乙烯绝缘低压特殊用途的汽车电缆 SXL=XLPE insulated low voltage special purpose automotive cable	E=聚乙烯 E=polyethylene
2G=SIR(硅橡胶) 2G=SiR (silicone rubber)		

简称 Abbreviation	绝缘材料化学名称描述 Description of the chemical name of the insulating material	短符号符合 DIN76722标准 short notation Compliant with DIN76722 standard	分类符合 ISO 6722标准 Classification meets ISO 6722 standard	连续工作温度 (3000h) ℃ continuous working temperature (3000h) ℃	拉伸强度 M Pa Tensile strength MPa	断裂伸长率% Elongation at break%
---	聚氯乙烯 POLYVINYL CHLORIDE	Y(YW)	A/B	90/105	>10	>150
PVC	聚氯乙烯 POLYVINYL CHLORIDE	YK	B	105	>10	>150
PA	聚酰胺 POLYAMIDE	4Y	-	105	>40	>300
XLPE	交联聚乙烯 CROSS-LINKED POLYETHYLENE	12X	-	125	>10	>200
TPE-E	聚酯系弹性体 POLYESTER-BASED ELASTOMERS	13Y	C	125	>25	>300
TPE-S	热塑性弹性体 THERMOPLASTIC ELASTOMERS	31Y	C	125	>15	>200
TPE-O	链烯烃弹性体 CHAIN OLEFIN ELASTOMERS	91Y	C	125	>10	>300
TPE-U (PUR)	聚氨酯 POLYURETHANE	11Y	C	125	>30	>300
PVC-P	耐压耐热 PRESSURE AND HEAT RESISTANT	YW	-	125	>15	>150
SIR	硅橡胶 SILICONE RUBBER	2G	F	200	6-20	>150
EVA	乙烯/乙烯基醋酸盐 ETHYLENE/VINYL ACETATE	4G	C	130	>10	>200
PTFE	聚四氟乙烯 POLYTETRAFLUOROETHYLENE	5Y	H	260	>20	>200
ETFE	四氟乙烯 TEFLON	7Y	E	180	>30	>150
FEP	氟化乙烯丙烯 ETHYLENE FLUORIDE PROPYLENE	6Y	F	210	>15	>200
PP	聚丙烯 POLYPROPYLENE	9Y	-	105	>20	>150

● **举例\example**

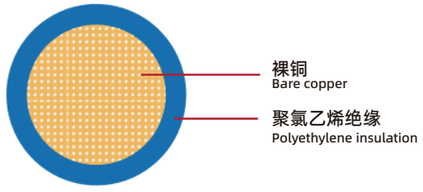
1.单芯电缆\1. Single core cable	2.多芯电缆\2. Multi-conductor cables
FLY 1X0.5	FLRYCY 9X0.08
FL 汽车电缆 Automotive cables	FL 汽车电缆 Automotive cables
Y PVC绝缘 PVC insulation	R 薄壁绝缘 Thin-walled insulation
1X0.5 标称截面积 0.5MM2 Nominal cross-sectional area	Y PVC绝缘 PVC insulation
	C 铜丝编织 Braided copper wire
	Y PVC（聚氯乙烯）护套 9X0.08 9 芯, 标称截面积0.08MM2 PVC (polyvinylchloride) sheathing 9 cores, nominal cross-sectional area 0.08mm2

THIN-WALLED PVC INSULATED AUTOMOTIVE WIRE
薄壁聚氯乙烯绝缘汽车电线

产品说明/Product description

额定温度/Rated temperature：-40℃ to 100℃
额定电压/Rated voltage：DC60V/AC30V
材料/Material：
·导体-采用正规绞(A)、非正规束绞(B) 或柔软绞合(C)的裸或镀锡(X)铜线；
·绝缘-包覆聚氯乙烯塑料。
·Conductor - bare or tinned (X) copper wire with regular strands (A), irregular bundle strands (B) or flexible strands (C);
·Insulation-coated with polyvinyl chloride plastic.

标准/规范\Standard/Specification：ISO 6722
结构图、structure diagram：



产品介绍/Product description

对称导体薄壁聚氯乙烯（PVC）绝缘线缆，用于汽车、摩托车和高温下的电气设备。
Symmetrical conductor thin wall polyvinyl chloride (PVC) insulated cable for use in automobiles, motorcycles and electrical equipment at high temperatures.

产品结构/Product structure

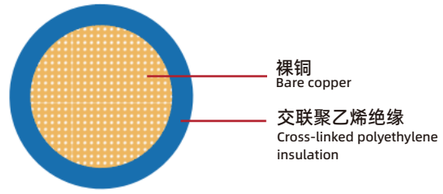
规格 Specification	导体 Conductors									绝缘 Insulation	电线外径 Wire O.D.	
标称截面 mm² Nominal cross-section mm²	根数 No. Number of roots No.			最大单丝直径 mm Max. monofilament diameter mm			导体最大外径 Conductor Max. Outer diameter	最大导体电阻(20℃) Maximum conductor resistance (20℃) mΩ/m		最小厚度 Minimum thickness	最小 Min	最大 Max
	A	B	C	A	B	C	mm	裸铜 Bare copper	镀锡 Tin platin	mm	mm	mm
0.22	7			0.21			0.70	84.8	86.5	0.20	1.10	1.20
0.35	7	12	19	0.27	0.21	0.16	0.90	54.4	55.5	0.20	1.20	1.30
0.5	19	16	26	0.19	0.21	0.16	1.00	37.1	38.2	0.22	1.40	1.60
0.75	19	24	38	0.24	0.21	0.16	1.20	24.7	25.4	0.24	1.70	1.90
1	19	32	54	0.27	0.21	0.16	1.35	18.5	19.1	0.24	1.90	2.10
1.5	19	30	76	0.33	0.26	0.16	1.70	12.7	13.0	0.24	2.20	2.40
2	19	28	105	0.38	0.31	0.16	2.00	9.42	9.69	0.28	2.50	2.80
2.5	37	50	140	0.28	0.26	0.16	2.20	7.60	7.82	0.28	2.70	3.00
3	37	44	160	0.34	0.31	0.16	2.40	6.15	6.36	0.32	3.10	3.40
4	37	56	224	0.38	0.31	0.16	2.80	4.71	4.85	0.32	3.40	3.70
6	37	84	320	0.45	0.31	0.16	3.30	3.14	4.02	0.32	4.00	4.30
8	98	50	240	0.33	0.46	0.21	4.30	2.38	3.23	0.32	4.60	5.00
10	63	80	320	0.46	0.41	0.21	4.50	1.82	2.52	0.48	5.30	6.00
16	105	126	512	0.46	0.41	0.21	5.80	1.16	1.85	0.52	6.40	7.20
25	154	196	196	0.46	0.41	0.21	7.20	0.743	1.18	0.52	7.90	8.70
35	551	276	1070	0.30	0.41	0.21	8.50	0.527	0.757	0.64	9.40	10.40

THIN WALL XLPE INSULATED AUTOMOTIVE WIRE
薄壁交联聚乙烯绝缘汽车电线

产品说明/Product description

额定温度/Rated temperature：-40℃ to 125℃
额定电压/Rated voltage：DC60V/AC30V
材料/Material：
·导体--采用正规绞(A)非正规束绞(B)或柔软合(C)的裸或锡(X)铜线；
·绝缘--包覆交联聚乙烯料照射固化。
·Conductor--bare or tin (X) copper wire with regular twist (A) irregular bundle twist (B) or soft twist (C)
·IInsulation - cured by irradiation with a cross-linked polyethylene cladding.

标准/规范\Standard/Specification：ISO 6722
结构图、structure diagram：



产品介绍/Product description

对称导体薄壁交联聚乙烯（XLPE）绝缘线缆，用于汽车、摩托车和高温下的电气设备。
Symmetrical conductor thin wall cross-linked polyethylene (XLPE) insulated cables for use in automobiles, motorcycles and electrical equipment at high temperatures.

产品结构/Product structure

规格 Specification	导体 Conductors									绝缘 Insulation	电线外径 Wire O.D.	
标称截面 mm² Nominal cross-section mm²	根数 No. Number of roots No.			最大单丝直径 mm Max. monofilament diameter mm			导体最大外径 Conductor Max. Outer diameter	最大导体电阻(20℃) Maximum conductor resistance (20℃) mΩ/m		最小厚度 Minimum thickness	最小 Min	最大 Max
	A	B	C	A	B	C	mm	裸铜 Bare copper	镀锡 Tin platin	mm	mm	mm
0.22	7			0.21			0.70	84.8	86.5	0.20	1.10	1.20
0.35	7	12	19	0.27	0.21	0.16	0.90	54.4	55.5	0.20	1.20	1.30
0.5	19	16	26	0.19	0.21	0.16	1.00	37.1	38.2	0.22	1.40	1.60
0.75	19	24	38	0.24	0.21	0.16	1.20	24.7	25.4	0.24	1.70	1.90
1	19	32	54	0.27	0.21	0.16	1.35	18.5	19.1	0.24	1.90	2.10
1.5	19	30	76	0.33	0.26	0.16	1.70	12.7	13.0	0.24	2.20	2.40
2	19	28	105	0.38	0.31	0.16	2.00	9.42	9.69	0.28	2.50	2.80
2.5	37	50	140	0.28	0.26	0.16	2.20	7.60	7.82	0.28	2.70	3.00
3	37	44	160	0.34	0.31	0.16	2.40	6.15	6.36	0.32	3.10	3.40
4	37	56	224	0.38	0.31	0.16	2.80	4.71	4.85	0.32	3.40	3.70
6	37	84	320	0.45	0.31	0.16	3.30	3.14	4.02	0.32	4.00	4.30
8	98	50	240	0.33	0.46	0.21	4.30	2.38	3.23	0.32	4.60	5.00
10	63	80	320	0.46	0.41	0.21	4.50	1.82	2.52	0.48	5.30	6.00
16	105	126	512	0.46	0.41	0.21	5.80	1.16	1.85	0.52	6.40	7.20
25	154	196	196	0.46	0.41	0.21	7.20	0.743	1.18	0.52	7.90	8.70

THIN-WALL STYRENE-BASED THERMOPLASTIC ELASTOMER INSULATED AUTOMOTIVE WIRE
薄壁苯乙烯基热塑性弹性体绝缘汽车电线

● 产品说明/Product description

额定温度/Rated temperature：-40℃ to 125℃

额定电压/Rated voltage：DC60V/AC30V

材料/Material：

·导体---采用正规绞(A)、非正规束绞(B)或柔软绞合(C)的裸或镀锡铜线。

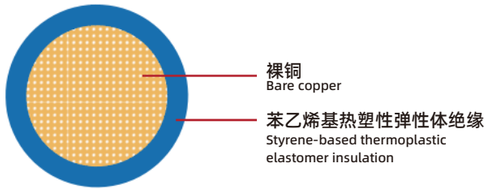
·绝缘---包覆苯乙烯基热塑性弹性体

• Conductor - bare or tinned copper wire with formal stranding (A), informal bunching (B) or flexible stranding (C)

• Insulation - Overmolded styrene-based thermoplastic elastomers

标准/规范\Standard/Specification：ISO 6722

结构图、structure diagram：



● 产品介绍/Product description

对称导体薄壁苯乙烯基热塑性弹性体绝缘（TPE-S）绝缘线缆，用于汽车、摩托车和高温下的电气设备

Thin-walled styrene-based thermoplastic elastomer insulated (TPE-S) cables with symmetrical conductors for use in automobiles, motorbikes and electrical equipment at high temperatures

● 产品结构/Product structure

规格 Specification	导体 Conductors									绝缘 Insulation	电线外径 Wire O.D.	
标称截面 mm² Nominal cross-section mm²	根数 No. Number of roots No.			最大单丝直径 mm Max. monofilament diameter mm			导体最大外径 Conductor Max. Outer diameter	最大导体电阻(20℃) Maximum conductor resistance (20℃) mΩ/m		最小厚度 Minimum thickness	最小 Min	最大 Max
	A	B	C	A	B	C	mm	裸铜 Bare copper	镀锡 Tin platin	mm	mm	mm
0.35	12	19	45	0.21	0.16	0.11	0.90	54.4	55.5	0.20	1.20	1.30
0.5	16	26	64	0.21	0.16	0.11	1.00	37.1	38,2	0.22	1.40	1.60
0.75	24	38	96	0.21	0.16	0.11	1.20	24.7	25.4	0.24	1.70	1.90
1	32	54	126	0.21	0.16	0.11	1.35	18.5	19.1	0.24	1,90	2.10
1.5	30	76	192	0.26	0.16	0.11	1.70	12.7	13.0	0.24	2.20	2.40
2	28	105	——	0.31	0.16	——	2.00	9.42	9.69	0.28	2.50	2,80
2.5	50	140	320	0.26	0.16	0.11	2.20	7.60	7.82	0.28	2.70	3.00
3	44	160	——	0.31	0.16	——	2.40	6.15	6.36	0.32	3.10	3.40
4	56	224	504	0.31	0.16	0.11	2.80	4.71	4.85	0.32	3.40	3.70
6	84	320	——	0.31	0.16	——	3.30	3.14	4.02	0.32	4.00	4,30
8	50	240	——	0.46	0.21	——	4.30	2.38	3.23	0.32	4.60	5.00
10	80	320	——	0.41	0.21	——	4.50	1.82	2.52	0.48	5.30	6.00
16	126	512	——	0.41	0.21	——	5.80	1.16	1.85	0.52	6.40	7.20
25	196	196	——	0.41	0.21	——	7.20	0.74	1.18	0.52	7.90	8.70

JAPANESE STANDARD VEHICLE FLOWER WIRE
日规车载花线

● 产品说明/Product description

额定温度/Rated temperature：-40℃ to 120℃

标准绝缘/standard insulation：PVC、XL-PVC、XL-PE

导体/conductor：

Cu-ETP1 裸铜或镀锡铜导体

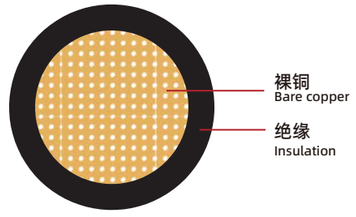
Cu-ETP1 Bare or tinned copper conductor

参考标准\Guideline：

JASO D611-2009,JASO D608/1992,JISC 3406/1993

标准型号Specifications：AV,AVS,AVSS,CAVS,AVX,AEX

结构图、structure diagram：



● 产品介绍/Product description

单芯薄壁线缆用于汽车，摩托车和高温下的电气设备。

Single-core thin-wall cables are used in automobiles, motorcycles and electrical equipment at high temperatures.

● 产品结构/Product structure

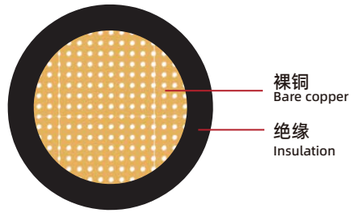
种类 Types	型号 Models	导体范围 Conductor range (mm²)	绝缘材料 Insulation Materials	温度等级 Temperature class	绝缘厚度 Insulation thickness(MM)	参考标准 Reference Standards
日规耐热XL-PE汽车花线 Japanese-specification heat-resistant XL-PE automotive flower wire	AEX	0.5~2.0F	XL-PE	-40℃~120℃	0.50~0.80	JAS0 D 611
日规耐热XL-PVC汽车花线 Japanese-specification heat-resistant XL-PVC automotive flower wire	AVX	0.5~1.25F	XL-PVC	-40℃~100℃	0.50~0.80	JAS C3102&JAS0 D 611
日规薄壁汽车花线 Japanese gauge thin-walled automotive flower wire	AVS	0.3~2.0F	PVC	-40*C~80'C	0.50~0.70	JAS C3102&JAS0 D 611
日规极薄壁汽车花线 Japanese-spec Extremely Thin Biscuit Automotive Flower Wire	AVSS	0.3~2.0F	PVC	-40℃~90℃	0.3~0.40	JAS0 D 611
日规压缩导体超薄壁汽车花线 Ultra-thin-walled automotive flower wire with Japanese compression conductor	CAVUS	0.13~1.25	PVC	-40℃~105℃	0.20	1S06722
日规一般汽车花线 Japanese-specification general car flower line	AV	0.5~1.25F	PVC	-40℃~80℃	0.6~1.40	JAS C3102&JAS C3406
日规极薄耐热XLPE汽车花线 Japanese-specification extremely thin heat-resistant XLPE automotive wire	AESSX	0.30~2.0F	XL-PE	-40℃~120℃	0.30~0.40	JAS C3102&JAS0 D 608
日规耐热XL-PVC汽车花线 Japanese-specification heat-resistant XL-PVC automotive flower wir	AVSSX	0.30~2.0F	XL-PVC	-40℃~105℃	0.24~0.40	JAS C3102&JAS0 D 608

AMERICAN STANDARD VEHICLE FLOWER WIRE
美规车载花线

● **产品说明/Product description**

额定温度/Rated temperature：-40℃ to 125℃
标准绝缘/standard insulation：PVC、XL-PVC、XL-PE
导体/conductor：
Cu-ETP1 裸铜或镀锡铜导体
Cu-ETP1 Bare or tinned copper conductor
参考标准\Guideline：
SAE J 1128/1995,SAE J1560/1992

标准型号Specifications：GXL,TWP,TXL,GPT,STS,SXL,TWE
结构图、structure diagram：



● **产品介绍/Product description**

单芯薄壁线缆用于汽车，摩托车和高温下的电气设备。
Single-core thin-wall cables are used in automobiles, motorcycles and electrical equipment at high temperatures.

● **产品结构/Product structure**

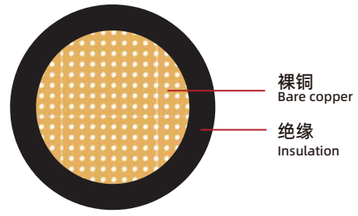
种类 Types	型号 Models	导体范围 Conductor range (mm²)	绝缘材料 Insulation Materials	温度等级 Temperature class	绝缘厚度 Insulation thickness(MM)	参考标准 Reference Standards
美规一般汽车花线 U.S.-spec general automotive splines	GPT	8AWG~20AWG	PVC	-40°C~85°C	0.48~0.94	ASTM B3&SAE J1128
美规厚壁汽车花线 U.S.A. thick biker car flower wire	HDT	8AWG~2OAWG	XL-PVC	-40°C~85°C	0.91~1.40	ASTMB3&SAE J1128
美规一般XLPE照射汽车花线 General US XLPE irradiated automotive flower wire	GXL	8AWG~20AWG	XL-PE	-40°C~125°C	0.58~0.94	ASTM B3&SAE J1128
美规薄壁XLPE照射汽车花线 American thin biscuit XLPE irradiated automotive flower wire	TXL	8AWG~24AWG	XL-PE	-40°C~125°C	0.40~0.55	ASTM B3&SAE J1128
美规薄壁汽车花线 US Gauge Thin Wall Automotive Flower Wire	TWP	8AWG~24AWG	PVC	-40°C~85°C	0.40~0.55	ASTM B3&SAE J1128
美规超薄壁汽车花线 US Gauge Ultra-Thin Wall Automotive Fleur-de-Lis	UTB	12AWG~24AWG	PVC	-40°C~105°C	0.20~0.25	ASTM B3&SAE J1678
美规厚壁XLPE照射汽车花线 American Thickbill XLPE irradiated automotive flower wire	SXL	8AWG~2OAWG	XL-PE	-40°C~125°C	0.74~0. 90	ASTM B3&SAE J1128
美规超薄壁XLPE照射汽车花线 Ultra-thin-walled XLPE irradiated automotive flower wire for US regulations	WXC	12AWG~24AWG	XL-PE	-40°C~125°C	0.25~0.30	ASTM B3&SAE J1678

EUROPEAN STANDARD VEHICLE FLOWER WIRE
欧规车载花线

● **产品说明/Product description**

额定温度/Rated temperature：-40°C to 150°C
标准绝缘/standard insulation：PVC、XL-PE
导体/conductor：
Cu-ETP1 裸铜或镀锡铜导体
Cu-ETP1 Bare or tinned copper conductor
参考标准\Guideline：DIN 72551

标准型号Specifications：FLRY,FLY,FLYW,FLYK,FLRYK,FLRYW, FLR6Y,FLR9Y
结构图、structure diagram：



● **产品介绍/Product description**

单芯薄壁线缆用于汽车，摩托车和高温下的电气设备。
Single-core thin-wall cables are used in automobiles, motorcycles and electrical equipment at high temperatures.

● **产品结构/Product structure**

种类 Types	型号 Models	导体范围 Conductor range (mm²)	绝缘材料 Insulation Materials	温度等级 Temperature class	绝缘厚度 Insulation thickness(MM)	参考标准 Reference Standards
欧规薄壁汽车花线 Euro gauge thin-walled automotive wire	FLRY-A	0.22~2.50	PVC	-40°C~105°C	0.25~0.35	IS06722
欧规薄壁汽车花线 Euro gauge thin wall automotive wire	FLRY-B	0.25~6.0	PVC	-40°C~105°C	0.25~0.65	IS06722
欧规超薄壁壁汽车花线 European standard ultra-thin wall automotive wire	FLUY-A	0.35~1.50	PVC	-40°C~105°C	0.20~0.20	IS06722
欧规厚壁XLPE照射汽车花线 European standard thick-walled XLPE irradiated automotive wire	FL2X-B	0.50~6.0	XL-PE	-40°C~125°C	0.60~O.8O	LS06722
欧规薄壁XLPE照射汽车花线 Euro gauge thin wall XLPE irradiated automotive wire	FLR2X-A	0.13~2.50	XL-PE	-40°C~125°C	0.25~0.35	IS06722
欧规薄壁XLPE照射汽车花线 European thin-walled XLPE irradiated automotive wire	FLR2X-B	0.35~6.0	XL-PE	-40°C~125°C	0.25~0.45	LS06722
欧规薄壁耐热照射汽车花线 European standard thin-walled heat resistant XLPE irradiated automotive wire	FLY13Y-A	0.35~10.0	XL-PE	-40°C~150°C	0.25~0.60	LS06722
欧规高耐耐热XLPE汽车花线 European standard high heat resistant XLPE automotive wire	FLY91X-A	0.22~2.50	XL-PE	-40°C~150°C	0.25~0.35	LS06722

04

SOLAR PHOTOVOLTAIC CABLES

太阳能光伏电缆

PHOTOVOLTAIC PV CABLE

双认证光伏电线

Dual certified photovoltaic cables

产品说明/Product description

产品名称\Product name：双认证光伏电线\Dual certified photovoltaic cables
温度等级\Temperature rating：-40℃~90℃
额定电压\Rated voltage：AC U0/U 1.0/1.0KV
参考标准\Reference standard：IEC62930、EN50618

产品介绍/Product description

适用于PV系统中DC侧，也可适用于PV系统中工频额定电压0.6/1 KV 交流电压系统中使用。在PV系统中将太阳能直接转化为电量。电缆能抗紫外线、耐温，并且可以作为与太阳能蓄电池的单独连接使用。

Suitable for use on the DC side of PV systems, as well as in AC voltage systems with a rated power frequency voltage of 0.6/1 kV in PV systems. Directly convert solar energy into electricity in a PV system. The cable is UV resistant, temperature resistant, and can be used as a separate connection to a solar battery.

产品结构/Product structure

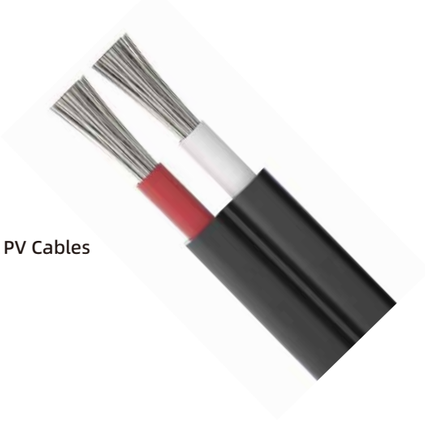
产品系列 Product range	规格 Specification	导体绞合外径 Conductor stranded OD mm	绝缘厚度 Insulation thickness mm	护套厚度 Sheath thickness mm	完成外径 Finish OD mm
H1Z2Z2-K	1×1.5mm2	1.58	0.70	0.80	5.40
	1×2.5mm2	2.04	0.70	0.80	5.90
	1×4mm2	2.60	0.70	0.80	6.60
	1×6mm2	3.18	0.70	0.80	7.40
	1×10mm2	4.07	0.70	0.80	8.80
	1×16mm2	5.23	0.70	0.90	10.10
	1×25mm2	6.50	0.90	1.0	12.50
	1×35mm2	7.70	0.90	1.10	14.0
	1×50mm2	9.0	1.0	1.20	16.30
	1×70mm2	10.8	1.10	1.20	18.70
	1×95mm2	12.6	1.10	1.30	20.80
	1×120mm2	14.2	1.20	1.30	22.80

注:以上产品规格、尺寸、结构可能因为技术进步而有所改变，同类规格可根据客户使用需求进行设计制造。
Note:The above product specifications, sizes and structures may change due to technological advances,
and similar specifications can be designed and manufactured according to customer usage requirements.

PHOTOVOLTAIC PV CABLE

双认证双并光伏电线

Dual Certified Dual Parallel PV Cables



产品说明/Product description

产品名称\Product name：双认证双并光伏电线\Dual Certified Dual Parallel PV Cables
温度等级\Temperature rating：-40℃~90℃
额定电压\Rated voltage：AC U0/U 1.0/1.0KV
参考标准\Reference standard：IEC62930、EN50618

产品介绍/Product description

适用于PV系统中DC侧，也可适用于PV系统中工频额定电压0.6/1 KV 交流电压系统中使用。在PV系统中将太阳能直接转化为电量。电缆能抗紫外线、耐温，并且可以作为与太阳能蓄电池的单独连接使用。

Suitable for use on the DC side of PV systems, as well as in AC voltage systems with a rated power frequency voltage of 0.6/1 kV in PV systems. Directly convert solar energy into electricity in a PV system. The cable is UV resistant, temperature resistant, and can be used as a separate connection to a solar battery.

产品结构/Product structure

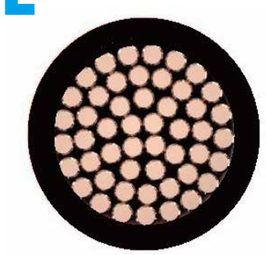
产品系列 Product range	规格 Specification	导体绞合外径 Conductor stranded OD mm	绝缘厚度 Insulation thickness mm	护套厚度 Sheath thickness mm	完成外径 Finish OD mm
H1Z2Z2-K	2×1.5mm2	1.58	0.70	0.80	5.4×11.2
	2×2.5mm2	2.04	0.70	0.80	5.9×12.4
	2×4mm2	2.60	0.70	0.80	6.6×13.8
	2×6mm2	3.18	0.70	0.80	7.4×15.4
	2×10mm2	4.07	0.70	0.80	8.8×18.5
	2×16mm2	5.23	0.70	0.90	10.1×21.1
	2×25mm2	6.50	0.90	1.0	12.5×26.0
	2×35mm2	7.70	0.90	1.10	14.0×29.2

注:以上产品规格、尺寸、结构可能因为技术进步而有所改变，同类规格可根据客户使用需求进行设计制造。
Note:The above product specifications, sizes and structures may change due to technological advances,
and similar specifications can be designed and manufactured according to customer usage requirements.

PHOTOVOLTAIC PV CABLE

UL4703单层绝缘光伏电线

UL4703 single layer insulated photovoltaic wire



产品说明/Product description

产品名称\Product name：UL4703单层绝缘光伏电线\UL4703 single layer insulated photovoltaic wire
温度等级\Temperature rating：-40℃~90℃
额定电压\Rated voltage：DC 600V、1.0~2.0KV
参考标准\Reference standard：UL4703

产品介绍/Product description

适用于PV系统中DC侧，也可适用于PV系统中工频额定电压0.6/1 KV 交流电压系统中使用。在PV系统中将太阳能直接转化为电量。电缆能抗紫外线、耐温，并且可以作为与太阳能蓄电池的单独连接使用。

Suitable for use on the DC side of PV systems, as well as in AC voltage systems with a rated power frequency voltage of 0.6/1 kV in PV systems. Directly convert solar energy into electricity in a PV system. The cable is UV resistant, temperature resistant, and can be used as a separate connection to a solar battery.

产品结构/Product structure

产品系列 Product range	规格 Specification	导体绞合外径 Conductor stranded OD mm	绝缘厚度 Insulation thickness mm	0.6KV完成外径 0.6KV finished OD mm	1.0~2.0KV完成外径 F1.0~2.0KV finished OD mm
PV	18AWG	1.18	1.90	5.0	5.20
	16AWG	1.49	1.90	5.50	6.20
	14AWG	1.88	1.90	5.90	6.60
	12AWG	2.04	1.90	6.40	7.10
	10AWG	3.0	1.90	7.20	7.90
	8AWG	3.80	2.41	9.0	9.50
	6AWG	4.78	2.41	10.1	10.60
	4AWG	5.95	2.41	11.5	12.0
	2AWG	7.56	2.41	13.3	13.80
	1AWG	8.50	2.79	15.5	15.90
	1/0AWG	9.48	2.79	16.6	17.20
	2/0AWG	10.80	2.79	17.9	18.50
	3/0AWG	12.0	2.79	19.5	20.0
	4/0AWG	14.08	2.79	21.2	21.80

注:以上产品规格、尺寸、结构可能因为技术进步而有所改变，同类规格可根据客户使用需求进行设计制造。
Note:The above product specifications, sizes and structures may change due to technological advances, and similar specifications can be designed and manufactured according to customer usage requirements.

PHOTOVOLTAIC PV CABLE

UL4703双层绝缘光伏电线

UL4703 double insulated photovoltaic wire

产品说明/Product description

产品名称\Product name：UL4703双层绝缘光伏电线\UL4703 double insulated photovoltaic wire
温度等级\Temperature rating：-40℃~90℃
额定电压\Rated voltage：DC 600V、1.0~2.0KV
参考标准\Reference standard：UL4703

产品介绍/Product description

适用于PV系统中DC侧，也可适用于PV系统中工频额定电压0.6/1 KV 交流电压系统中使用。在PV系统中将太阳能直接转化为电量。电缆能抗紫外线、耐温，并且可以作为与太阳能蓄电池的单独连接使用。

Suitable for use on the DC side of PV systems, as well as in AC voltage systems with a rated power frequency voltage of 0.6/1 kV in PV systems. Directly convert solar energy into electricity in a PV system. The cable is UV resistant, temperature resistant, and can be used as a separate connection to a solar battery.

产品结构/Product structure

产品系列 Product range	规格 Specification	导体绞合外径 Conductor stranded OD mm	绝缘厚度 Insulation thickness mm	护套厚度 Sheath thickness mm	完成外径 Finish OD mm
PV	18AWG	1.18	0.76	0.76	4.20
	16AWG	1.49	0.76	0.76	4.50
	14AWG	1.88	0.76	0.76	4.90
	12AWG	2.04	0.76	0.76	5.10
	10AWG	3.0	0.76	0.76	6.0
	8AWG	3.80	1.14	0.76	8.30
	6AWG	4.78	1.14	1.14	9.30
	4AWG	5.95	1.14	1.14	10.50
	2AWG	7.56	1.14	1.14	12.10
	1AWG	8.50	1.40	1.52	14.35
	1/0AWG	9.48	1.40	1.52	15.40
	2/0AWG	10.80	1.40	1.52	16.60
	3/0AWG	12.0	1.40	1.52	17.80
	4/0AWG	14.08	1.40	1.52	20.0

注:以上产品规格、尺寸、结构可能因为技术进步而有所改变，同类规格可根据客户使用需求进行设计制造。
Note:The above product specifications, sizes and structures may change due to technological advances, and similar specifications can be designed and manufactured according to customer usage requirements.

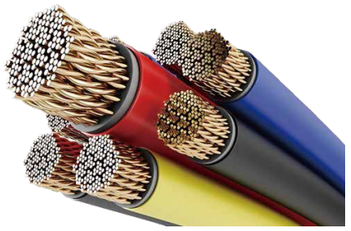
05

RAIL TRANSIT CABLES
轨道交通电缆

RAIL TRANSIT CABLES

铁路应用单芯牵引电缆

Single-core traction cable for railroad applications



产品说明/Product description

温度等级\Temperature rating：-40℃~120℃

参考标准\Reference standard：BS 6853 -1a、DIN 5510-1 1-4、NFF 16-101 F0

材料/Material：

·导体-BS EN 60228:2005 / BS6360标准5类圆形多股裸铜或镀锡铜导体;

·绝缘-电子束交联标准壁低烟无卤材料。

·Conductor - BS EN 60228:2005/BS6360 standard Class 5 circular stranded bare copper or tinned copper conductors;

·Insulation-Electron beam cross-linking standard wall low smoke and halogen-free materials.

机械和耐热性\Mechanical and heat resistance：

最小弯曲半径:3xOD（OD<12mm）；4xOD（OD>12mm）

Min bend radius:3xOD（OD<12mm）；4xOD（OD>12mm）

产品介绍/Product description

单芯电力及控制电缆，适合铁路车辆内外保护性，固定安装，用于连接固定或移动部件。

Single-core power and control cables, suitable for protective, fixed installations inside and outside railroad vehicles, for connecting fixed or moving parts.

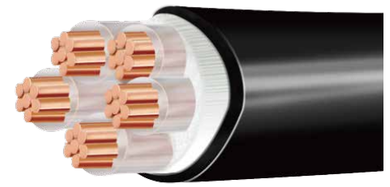
产品结构/Product structure

产品系列 Product range	产品型号/线芯数量X导体截面积 Product type/number of cores X conductor cross-sectional area	可选结构 Optional structures
0.45/0.75KV单芯标准壁牵引电缆 0.45/0.75KV single-core standard wall traction cable	1 x 1.0mm2~1 x 16mm2	护套; 屏蔽& 护套； 防火 &无护套 Sheathing; Shielding & Sheathing; Fireproof & Unsheathed
1.8/3KV 单芯标准壁牵引电缆 1.8/3KV single-core standard wall traction cable	1 x 1.5mm2~1 x 120mm2	屏蔽& 护套； 无护套 Shielded & Sheathed; Unsheathed
3.6/6KV 单芯标准壁牵引电缆 3.6/6KV single-core standard wall traction cable	1 x 2.5mm2~1 x 120mm2	屏蔽& 护套 Shielded & Sheathed
300/500V单芯薄壁防火牵引电缆 300/500V single-core thin-walled fireproof traction cable	1 x 0.5mm2~1 x 2.5mm2	无护套 Unsheathed
0.45/0.75KV单芯薄壁牵引电缆 0.45/0.75KV single-core thin-wall traction cable	1 x 20AWG~10AWG	无护套 Unsheathed
0.6/1KV 单芯薄壁牵引电缆 0.6/1KV single-core thin-wall traction cable	1 x 0.50mm2~1 x 4.0mm2	无护套 No Sheath
0.6/1KV 单芯双层壁牵引电缆 0.6/1KV single-core double-wall traction cable	1 x 0.60mm2~1 x 4.0mm2	屏蔽&护套; 无护套 Shielded & Sheathed; No Sheath
1.8/3KV单芯双层壁牵引电缆 1.8/3KV single-core double-wall traction cable	1 x 1.5mm2~1 x 120mm2	屏蔽&护套;无护套 Shield&Sheath;No Sheath
3.6/6KV单芯双层壁牵引电缆 3.6/6KV single-core double-wall traction cable	1 x 1.5mm2~1 x 120mm2	屏蔽&护套;无护套 Shield&Sheath;No Sheath

RAIL TRANSIT CABLES

铁路应用多芯牵引电缆

Multi-core traction cables for railroad applications



产品说明/Product description

温度等级\Temperature rating：-40℃~120℃

参考标准\Reference standard：BS 6853 -1a、DIN 5510-1 1-4、NFF 16-101 F0

材料/Material：

·导体-BS EN 60228:2005 / BS6360标准5类圆形多股裸铜或镀锡铜导体;

·绝缘-电子束交联标准壁低烟无卤材料。

·Conductor - BS EN 60228:2005/BS6360 standard Class 5 circular stranded bare copper or tinned copper conductors;

·Insulation-Electron beam cross-linking standard wall low smoke and halogen-free materials.

机械和耐热性\Mechanical and heat resistance：

最小弯曲半径:3xOD（OD<12mm）；4xOD（OD>12mm）

Min bend radius:3xOD（OD<12mm）；4xOD（OD>12mm）

产品介绍/Product description

芯非屏蔽和屏蔽电力及控制缆，适合保护性，固定安装，用于连接设备内部部件。

Core unshielded and shielded power and control cables, suitable for protective, fixed installations, for connecting internal components of equipment.

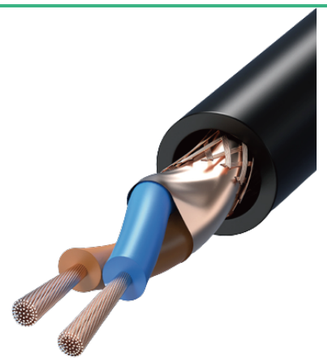
产品结构/Product structure

产品系列 Product range	产品型号/线芯数量X导体截面积 Product type/number of cores X conductor cross-sectional area	可选结构 Optional structures
0.45/0.75KV多芯标准壁牵引电缆 0.45/0.75KV multi-core standard wall traction cable	n x 1.5mm2; n x 2.5mm2	多芯屏蔽 Multi-core shielding
0.45/0.75KV多芯薄壁牵引电缆 0.45/0.75KV multi-core thin wall traction cable	n x 20AWG~16AWG	多芯屏蔽 Multi-core shielding
0.6/1KV 多芯薄壁牵引电缆 0.6/1KV multi-core thin wall traction cable	n x 0.5mm2~2.5mm2	多芯非屏蔽 Multi-core Unshielded
0.6/1KV 多芯双层壁牵引电缆 0.6/1KV multi-core double wall traction cable	n x 0.5mm2~2.5mm2	多芯双层壁非屏蔽 Multi-core double wall unshielded

RAIL TRANSIT CABLES

列车通信用总线控制用线

Bus control line for train communication



● 产品说明/Product description

温度等级\Temperature rating：-40℃~+100℃ (工作\Jobs); -20℃~+50℃ (环境\Environment)

参考标准\Reference standard：DIN 5510-2

材料/Material：

·导体-BS EN 60228:2005标准5类圆形多股裸铜或镀锡铜导体 ；

·绝缘-电子束交联标准壁低烟无卤材料。

·Conductor - BS EN 60228:2005 standard Class 5 circular stranded bare copper or tinned copper conductors;

·Insulation-Electron beam cross-linking standard wall low smoke and halogen-free material.

包带\Tape：塑料带\Plastic tape

屏蔽\Shield：镀锡铜编织屏蔽\Tinned copper braid shielding

护套\Jacket：交联防油低烟无卤外护套\Cross linked oil proof low smoke and halogen-free outer sheath

● 产品介绍/Product description

该电缆用于永久安装在机车车辆内连接固定部分。一个典型的应用是机车通信系统。该系统使用基于线路支持的总线系统，符合用于控制，检测仪表，诊断的TCN标准（列车通信网络标准）。该总线系统由铁路巴士WTB（绞线式列车总线）和公路巴士MVB（多功能车辆总线）组成，通过冗余网关连接。

The cable is used for permanent installation in the rolling stock to connect fixed sections. A typical application is a locomotive communication system. The system uses a bus system based on line support and complies with the TCN standard (Train Communication Network Standard) for control, detection instrumentation, and diagnostics. The bus system consists of a rail bus WTB (stranded train bus) and a road bus MVB (multifunctional vehicle bus), connected via redundant gateways.

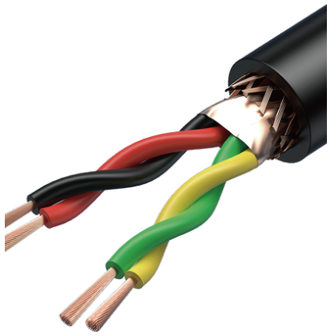
● 产品结构/Product structure

产品系列 Product range	MM2	2 x 0.75
最大导体电阻 Maximum conductor resistance	Ω/KM	26.7
阻抗@1.0-10MHZ 阻抗@1.0-10MHZ	Ω	120+/-15
最大衰减@1MHZ Maximum Attenuation @ 1MHZ	DB/KM	10
最大衰减@1.5MHZ 最大衰减@1.5MHZ	DB/KM	13
最大衰减@2MHZ Maximum Attenuation @ 2MHZ	DB/KM	14
最大衰减@3MHZ Maximum Attenuation @ 3MHZ	DB/KM	18
最大传输阻抗 Maximum Transmission Impedance	MΩ/M	30

RAIL TRANSIT CABLES

列车通信用总线控制用线

Bus control line for train communication



● 产品说明/Product description

温度等级\Temperature rating：-40℃~+100℃ (工作\Jobs); -20℃~+50℃ (环境\Environment)

参考标准\Reference standard：DIN 5510-1

材料/Material：

·导体-BS EN 60228:2005标准5类圆形多股裸铜或镀锡铜导体 ；

·绝缘-电子束交联标准壁低烟无卤材料。

·Conductor - BS EN 60228:2005 standard Class 5 circular stranded bare copper or tinned copper conductors;

·Insulation-Electron beam cross-linking standard wall low smoke and halogen-free material.

包带\Tape：塑料带\Plastic tape

屏蔽\Shield：镀锡铜编织屏蔽\Tinned copper braid shielding

护套\Jacket：交联防油低烟无卤外护套\Cross linked oil proof low smoke and halogen-free outer sheath

● 产品介绍/Product description

该电缆安装在机车车辆内连接固定部分用于传输波特率为10M的数字信号。该机车内通讯系统使用基于总线系统的电缆，符合用于控制，检测仪表，诊断的TCN标准（列车通信网络标准）。该总线系统由铁路巴士WTB（绞线式列车总线）和公路巴士MVB（多功能车辆总线）组成，通过冗余网关连接。

The cable is installed in the fixed part of the rolling stock connection for transmission of digital signals at a baud rate of 10M. This in-vehicle communication system uses a bus system-based cable that complies with the TCN standard (Train Communication Network Standard) for control, instrumentation, and diagnostics. The bus system consists of a rail bus WTB (stranded train bus) and a road bus MVB (multifunctional vehicle bus), connected via redundant gateways.

● 产品结构/Product structure

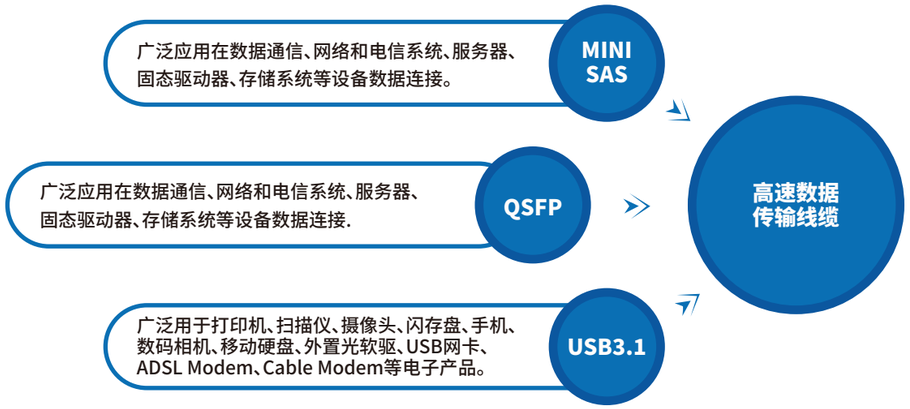
产品系列 Product range	MM2	2 x 0.5+1 x 0.5；2 x 2 x 0.5
最大导体电阻 Maximum conductor resistance	Ω/KM	41
阻抗@1.0-10MHZ 阻抗@1.0-10MHZ	Ω	120+/-15
最大衰减@1MHZ Maximum Attenuation @ 1MHZ	DB/KM	12.5
最大衰减@1.5MHZ 最大衰减@1.5MHZ	DB/KM	15
最大衰减@2MHZ Maximum Attenuation @ 2MHZ	DB/KM	18
最大衰减@3MHZ Maximum Attenuation @ 3MHZ	DB/KM	21
最大传输阻抗 Maximum Transmission Impedance	MΩ/M	20

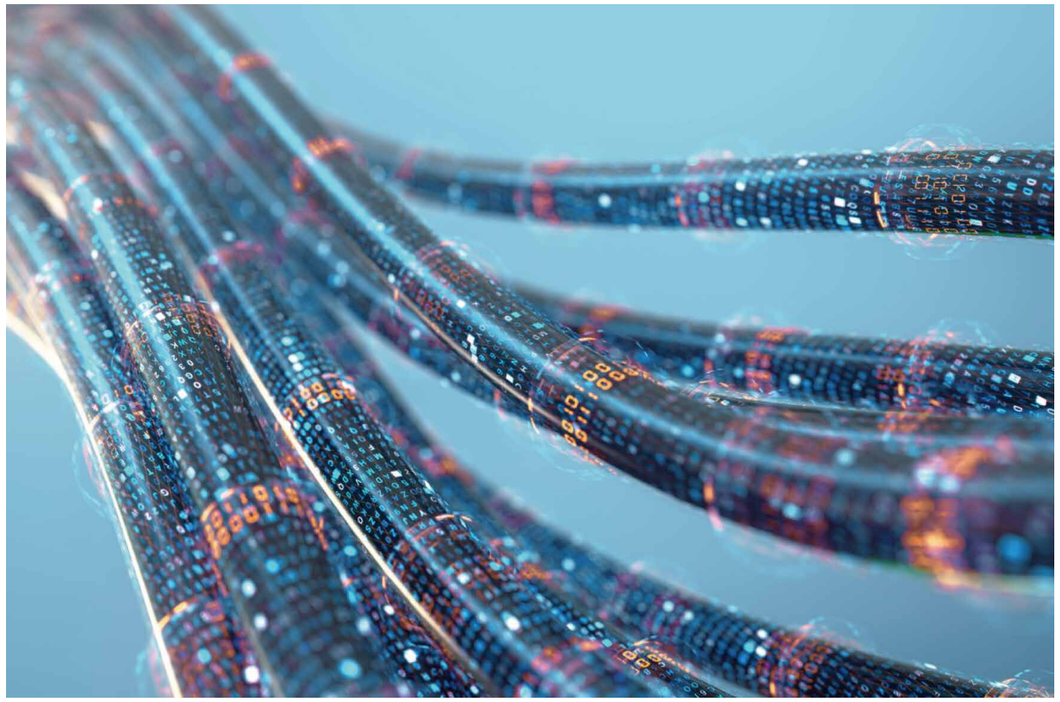
06

HIGH-SPEED STORAGE &TRANSMISSION

高速传输互联

HIGH-SPEED STORAGE &TRANSMISSION
高速传输互联



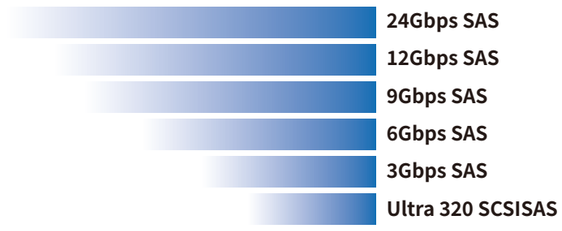


HIGH-SPEED STORAGE &TRANSMISSION
MINI SAS高速传输线缆
High-speed transmission cables

领亚档案号	E315618,E315619,E317442
安规型号	UL20744，UL22082,UL22258，UL21099
产品标准	符合美国UL协会UL758，UL1581标准；符合加拿大CSA协协会标准； 符合SFF-8680规范；通过ULVW-1，CSA FT4阻燃测试；符合RoHS 2.0、REACH绿色环保标准。
产品应用	广泛应用在数据通信、网络和电信系统、服务器、固态驱动器、存储系统等设备数据连接。
测试性能	Attenuation(衰减):10.81dB@32GHz Intra-Skew(延时差)：≤4ps/m

亿万次高速电脑MINI SAS

Develoment trends)
SAS Roadmap
-Leading edge of bar isb first plugfest
-End uer produts 12 to 18months After first plugtest



2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
领亚公司的MINI SAS产品最高速率已达到24Gbps

HIGH-SPEED STORAGE &TRANSMISSION

SAS贴膜高速传输线缆

MINI SAS high-speed transmission cable

领亚档案号	E315618,E315619,E317442
安规型号	UL20744，UL22082,UL22258，UL21099
产品标准	符合美国UL协会UL758，UL1581标准；符合加拿大CSA协协会标准； 符合SFF-8680规范；通过ULVW-1，CSA FT4阻燃测试；符合RoHS 2.0、REACH绿色环保标准。
产品应用	广泛应用在数据通信、网络和电信系统、服务器、固态驱动器、存储系统等设备数据连接。
测试性能	Attenuation(衰减):10.81dB@32GHz Intra-Skew(延时差)：≤4ps/m

亿万次高速电脑MINI SAS

Develoment trends)
SAS Roadmap
-Leading edge of bar isb first plugfest
-End uer produts 12 to 18months After first plugtest

24Gbps SAS
12Gbps SAS
9Gbps SAS
6Gbps SAS
3Gbps SAS
Ultra 320 SCSISAS

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2022
领亚公司的MINI SAS产品最高速率已达到64Gbps

HIGH-SPEED STORAGE &TRANSMISSION

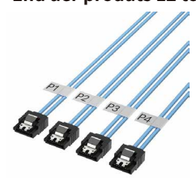
PCIE高速传输线缆

Pcie high-speed transmission cable

领亚档案号	E315618,E315619,E317442
安规型号	UL20744，UL22082,UL22258，UL21099
产品标准	符合美国UL协会UL758，UL1581标准；符合加拿大CSA协协会标准； 符合SFF-8680规范；通过ULVW-1，CSA FT4阻燃测试；符合RoHS 2.0、REACH绿色环保标准。
产品应用	广泛应用在数据通信、网络和电信系统、服务器、固态驱动器、存储系统等设备数据连接。
测试性能	Attenuation(衰减):30dB@32GHz Intra-Skew(延时差)：≤8ps/m

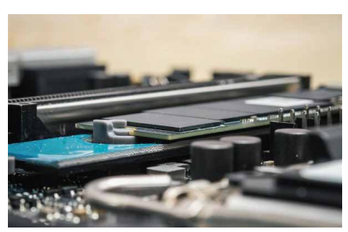
亿万次高速电脑MINI SAS

Develoment trends)
PCIE Roadmap
-Leading edge of bar isb first plugfest
-End uer produts 12 to 18months After first plugtest



Specifications	Lanes				
	x1	x2	x4	x8	x16
2.5 GT/s (PCIe 1.x +)	500 MB/S	1 GB/S	2 GB/S	4 GB/S	8 GB/S
5.0 GT/s (PCIe 2.x +)	1 GB/S	2 GB/S	4 GB/S	8 GB/S	16 GB/S
8.0 GT/s (PCIe 3.x +)	2 GB/S	4 GB/S	8 GB/S	16 GB/S	32 GB/S
16.0 GT/s (PCIe 4.x +)	4 GB/S	8 GB/S	16 GB/S	32 GB/S	64 GB/S
32.0 GT/s (PCIe 5.x +)	8 GB/S	16 GB/S	32 GB/S	64 GB/S	128 GB/S
64.0 GT/s (PCIe 6.x +)	16 GB/S	32 GB/S	64 GB/S	128 GB/S	256 GB/S

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2022
领亚公司的PCIE产品最高速率已达到128Gbps



HIGH-SPEED STORAGE &TRANSMISSION

QSFP,QSFP+高速传输线缆

QSFP,QSFP+ High Speed Transmission Cable

领亚档案号	E315618,E315619,E317442
安规型号	UL20744，UL21099
产品标准	符合美国UL协会UL758，UL1581标准；符合加拿大CSA协协会标准； 符合SFF-8680规范；通过ULVW-1，CSA FT4阻燃测试；符合RoHS 2.0、REACH绿色环保标准。
产品应用	广泛应用在数据通信、网络和电信系统、服务器、固态驱动器、存储系统等设备数据连接。
测试性能	Attenuation(衰减):29.3dB@25GHz Intra-Skew(延时差)：≤10ps/m

支持10-40G以太网
Support 10-40G Ethernet

最高速率高达100Gbps
Maximum rate up to 100Gbps