新达科技

全国服务热线

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新达 CYNDAR

专注高端品质

CE ISO9001:2015

科技，给见未来

Technology changes the future

COMPREHENSIVE
CATALOG OF SENSORS

传感器综合目录

安全光幕/安全激光雷达/安全地垫/安全触边/安全继电器

Safety light curtain/safety lidar/safety mat/safety edge/safety relay

2021版

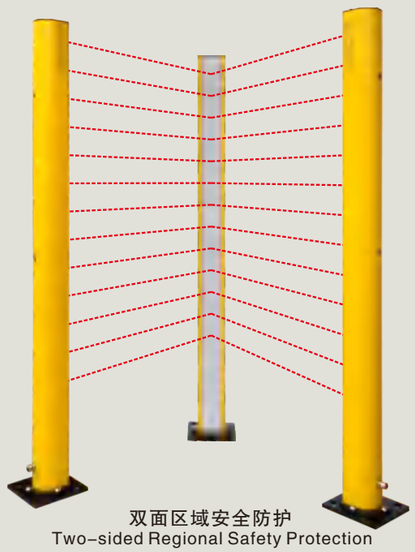
区域防护光栅-CSAT
Area protection safety grating

- 保护区域最大可达30米
- 超快响应速度（小于15ms）
- 能有效屏蔽99%干扰信号
- 极性、短路、过载保护、自检

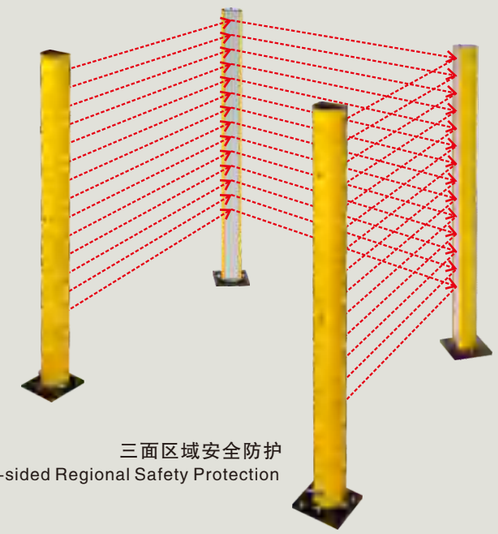
- Protected area up to 30 meters
- Ultra-fast response speed (less than 15ms)
- Can effectively shield 99% of interference signals
- Polarity, short circuit, overload protection, self-check

广泛适用于转塔冲床、装配站、包装设备、码堆机、机器人工作区域等其他区域性包围防护危险场合。

It is widely used in turret punch presses, assembly stations, packaging equipment, stackers, robot working areas and other regional surrounding and protection dangerous occasions.



双面区域安全防护
Two-sided Regional Safety Protection

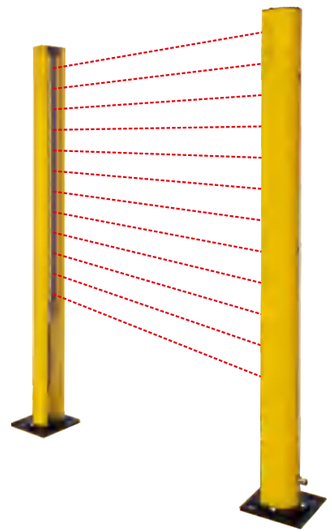


三面区域安全防护
Three-sided Regional Safety Protection

CSAT系列区域安全防护光幕
CSAT Series Area Safety Protection Light Curtain

内置控制器QSN
（可选配）
Built-in controller QSN (optional)

安全继电器模块Tner-A31
（可选配）
Safety relay module Tner-A31 (optional)



单面长距离安全防护
One-sided Long-distance Safety Protection

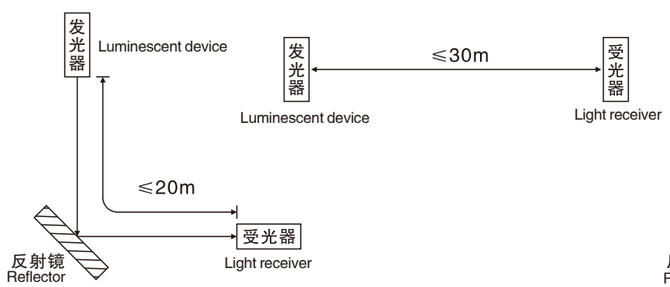
CSAT系列光电保护装置是利用反射镜，改变光线的传输方向，
形成2面或3面的保护区域
光幕形式：区域防护
光轴间距：40mm、80mm
保护距离：2面≤20000mm，3面≤15000mm
保护高度：120~1240mm为常规产品

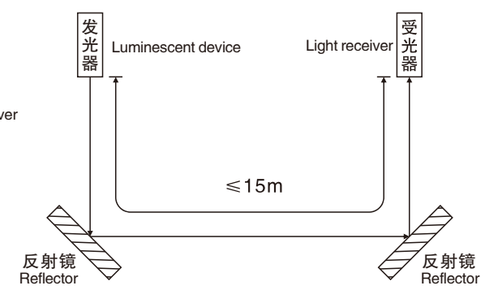
CSAT series optoelectronic protective devices use mirrors to change the direction of light transmission and form two or three-sided protected areas.
Light curtain form: regional protection
Optical Axis Spacing: 40mm, 80mm
Protective distance: 2 planes≤20000mm, 3 planes≤15000mm
Protective Height: 120-1240mm for Conventional Products

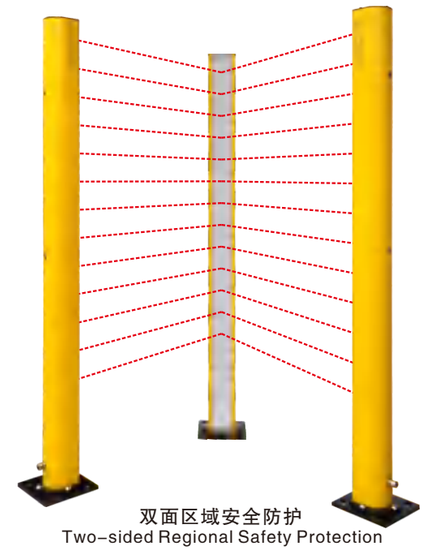
外置控制器QSW（可选配）
External Controller QSW

产品组成：
2面保护：发光器1支，反射镜1支，受光器1支，控制器1只，信号电缆2根，安装附件1套。
3面保护：发光器1支，反射镜2支，受光器1支，控制器1只，信号电缆2根，安装附件1套。

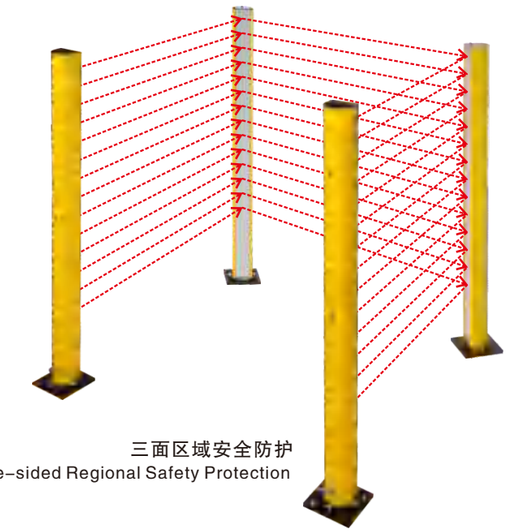
Product composition:
2-side protection: 1 light-emitting device, 1 reflector, 1 light-receiving device, 1 controller, 2 signal cables and 1 set of accessories.
3-sided protection: 1 light-emitting device, 2 mirrors, 1 light-receiving device, 1 controller, 2 signal cables and 1 set of accessories.







双面区域安全防护
Two-sided Regional Safety Protection



三面区域安全防护
Three-sided Regional Safety Protection

◆ 应用领域Application area

- 转塔冲床 Turret punch press
- 码堆机 Code stacking machine
- 装配站 Assembly station
- 自动生产设备 Automatic production equipment
- 物流处理区域 Logistics processing area
- 机器人工作区域 Robot working area
- 包装设备 Packaging equipment
- 其他危险区域周边防护 Peripheral protection of other dangerous areas

◆ 产品特点 Product characteristics

★ 自检功能完善：当安全传感器出现故障时，确保不向所控制的电器发送错误的信号；
★ 抗干扰能力强：系统对电磁信号，频闪灯光，焊接弧光及周围的光源具有良好的抗干扰能力；
★ 安装调试方便，配线简单，外形美观；
★ 采用表面贴装技术，防震性能优越；
★ 符合国际电工学会IEC61496-1/2标准安全等级，TUV的CE认证；
★ 响应时间短（≤15ms）,安全可靠性能高；
★ 结构简单，接线方便,安全传感器可以通过航空插座与电缆线(M12)链接；
★ 所有电子元器件均采用全球知名品牌配件。
★ 可提供双路NPN或PNP输出，此时用户应保证机械设备的后续控制电路安全可靠。

★ Perfect self-check function: When the safety screen protector fails, ensure that the wrong signal is not sent to the controlled electrical appliances.
★ Strong anti-interference ability: The system has good anti-interference ability to electromagnetic signal, stroboscopic light, welding arc and surrounding light source;
★ Easy installation and debugging, simple wiring, beautiful appearance;
★ Surface mounting technology is adopted, which has superior seismic performance.
★ It conforms to IEC61496-1/2 standard safety grade and TUV CE certification.
★ The corresponding time is short (≤15ms), and the safety and reliability performance is high.
★ The safety sensor can be connected to the cable line (M12) through an aviation socket, because of its simple structure and convenient wiring.
★ All electronic components adopt world-renowned brand accessories.
★ Double NPN or PNP output can be provided. At this time, users should ensure that the follow-up control circuit of mechanical equipment is safe and reliable.

◆ 规格表说明 Specification

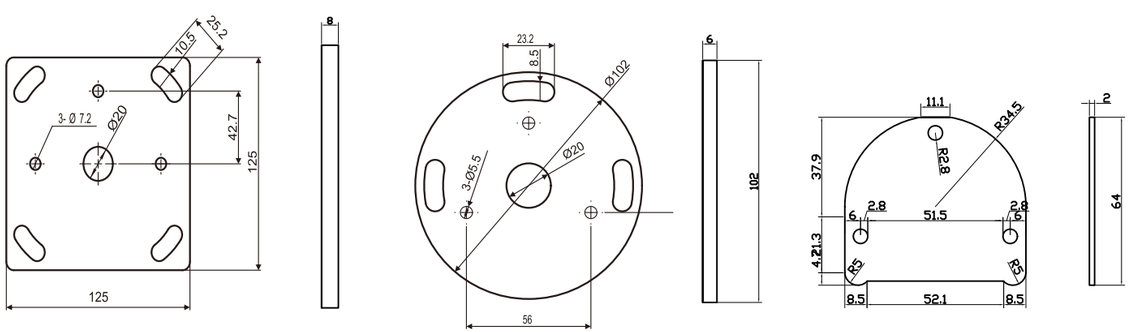
CSAT 0 8 / 4 0 — 280 W 2 □

- 落地支架高度0.3-3m Floor stand height 0.3-3m
- 2：2面保护 2:2 side protection
  3：3面保护 3:3 side protection
- 控制器型号：W：W型（外置式） Controller Model: W: W (External) A:NC B:NC
  N：N型（内置式） N:N (built-in) C:NO D:NO
- 保护高度280 Protection height
- 光轴间距：40mm，80mm Beam pitch
- 光束数：04、06、08、10……72 Beam number
- 型号：多面区域防护光幕 Model:Multidimensional Area Protection Light Curtain

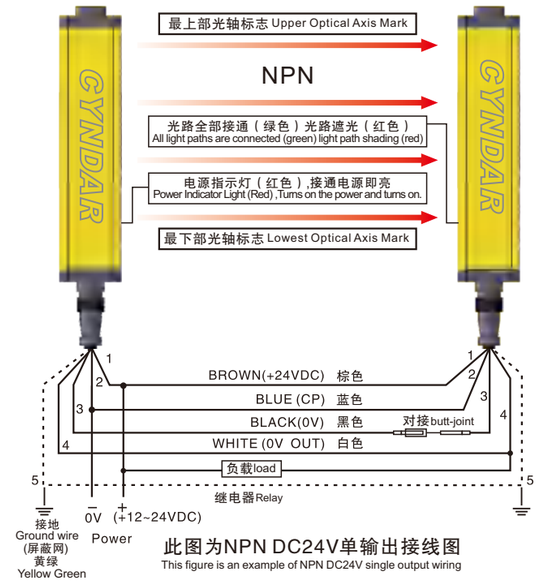
◆ 产品技术参数 Technical parameters of products

工作电源 Working power supply	AC220V/110V±% 50/60Hz 或DC24V
输出触点容量 Output Contact Capacity	AC250V5A
功耗Power waste	≤15W
适用温度Applicable temperature	-10℃~50℃
环境温度 Ambient temperature	20℃，RH≤85%
响应时间 Response Timee	<15ms（含控制器Containing controller）
绝缘电阻 Insulation Resistance	>100MΩ
介电强度 Dielectric strength	AC150V，60s
抗光干扰 Anti light interference	10000Lux(入射角Incidence angle≥5°)
继电器寿命 Relay life	≥100万次（可更换）1 million times (replaceable)
保护高度 Height of protection	H=光轴间距Beam pitch X (光束数Beam number-1)
光轴间距 Beam pitch	40mm,80mm
保护距离 Protection distance	2面sides≤20000mm，3面sides≤15000mm

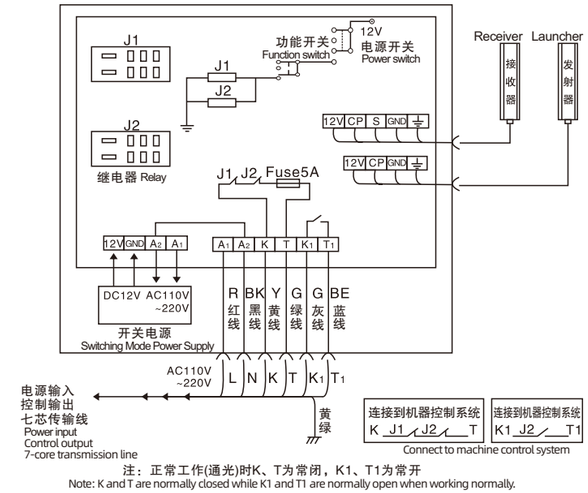
◆ 外型尺寸 Outline size



◆ 接线图 Wiring diagram



此图为NPN DC24V单输出接线图
This figure is an example of NPN DC24V single output wiring



注：正常工作(通光)时K、T为常闭，K1、T1为常开
Note: K and T are normally closed while K1 and T1 are normally open when working normally.

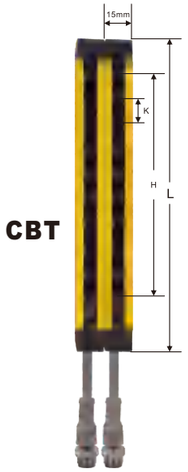
此图为W型外置控制器接线图
This is the wiring diagram of W-type external controller.

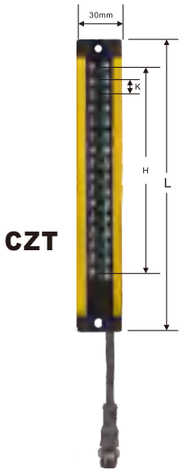
◆ 规格一览表 List of specifications

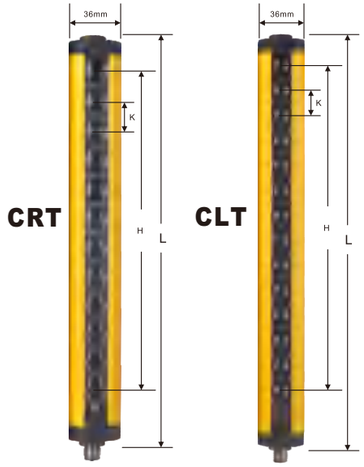
光轴间距 Beam pitch	光束数 Light beam	保护高度mm(H) Protection height	光幕高度mm(l) Screen height	产品型号 Product model	反射镜高度mm(J) Screen height
40mm (K)	4	120	201	CSAT04/40-120	351
	6	200	281	CSAT06/40-120	431
	8	280	361	CSAT08/40-120	511
	10	360	441	CSAT10/40-120	591
	12	440	521	CSAT12/40-120	671
	14	520	601	CSAT14/40-120	751
	16	600	681	CSAT16/40-120	831
	18	680	761	CSAT18/40-120	911
	20	760	841	CSAT20/40-120	991
	22	840	921	CSAT22/40-120	1071
	24	920	1001	CSAT24/40-120	1151
	26	1000	1081	CSAT26/40-120	1231
	28	1080	1161	CSAT28/40-120	1311
	30	1160	1241	CSAT30/40-120	1391
	32	1240	1321	CSAT32/40-120	1471
80mm (K)	4	240	341	CSAT04/80-240	491
	6	400	501	CSAT06/80-400	651
	8	560	661	CSAT08/80-560	811
	10	720	821	CSAT10/80-720	971
	12	880	981	CSAT12/80-880	1131
	14	1040	1141	CSAT14/80-1040	1291
	16	1200	1301	CSAT16/80-1200	1451
	18	1360	1461	CSAT18/80-1360	1611
	20	1520	1621	CSAT20/80-1520	1771
	22	1680	1781	CSAT22/80-1680	1931
	24	1840	1941	CSAT24/80-1840	2091
	26	2000	2101	CSAT26/80-2000	2251
	28	2160	2261	CSAT28/80-2160	2411
	30	2320	2421	CSAT30/40-2320	2571
	32	2480	2581	CSAT32/40-2480	2731

备注：需要其他规格配落地支架可以参照各系列规格表
Note: If other specifications are needed, the ground support can be referred to the specifications of each series.

◆外观尺寸图
Appearance size chart

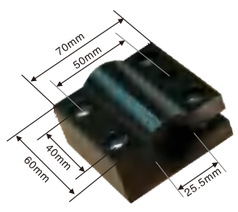


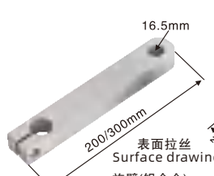




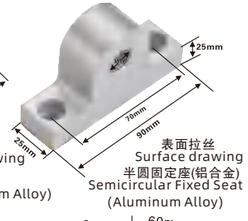
IP68Waterproof device

CAT/CST Mounting method at both ends

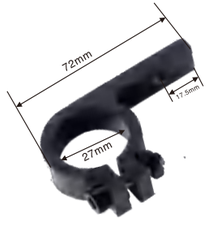




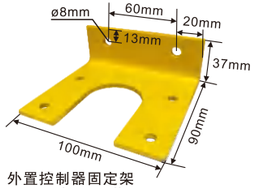
表面拉丝
Surface drawing
旋臂(铝合金)
Rotary Arm (Aluminum Alloy)



表面拉丝
Surface drawing
半圆固定座(铝合金)
Semicircular Fixed Seat
(Aluminum Alloy)

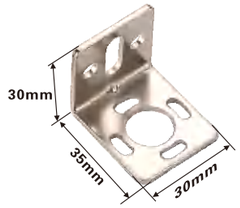


固定夹(铝合金)
Fixed Seat
(Aluminum Alloy)

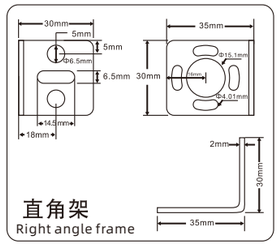


外置控制器固定架
External Controller
Fixed Clamp

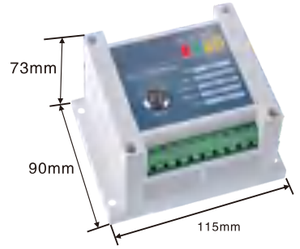
◆外观尺寸图
Appearance size chart



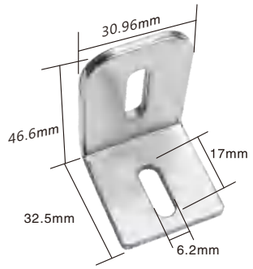
直角固定架
Right angle fixing frame



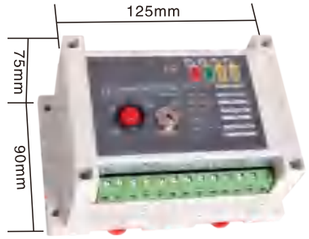
直角架
Right angle frame



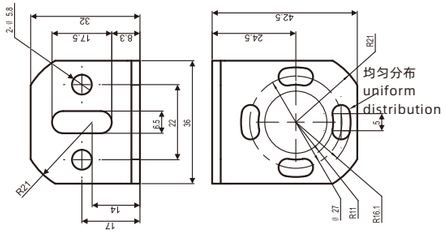
CCT\CAT内置控制器
CCT\CAT built-in controller

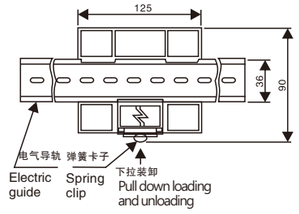


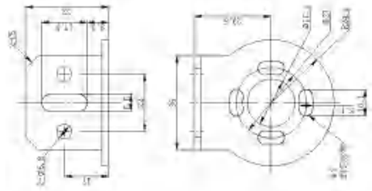
带防护套数据线
Data Line with
Protective Sheath

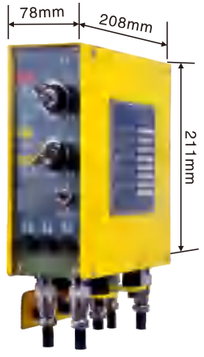


内置控制器QSN
QSN Built-in controller







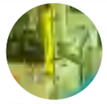


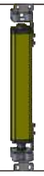
配件表 Accessory table

品名	形状 shape	型号 Model	描述 describe	备注 Remarks
内置式控制器	Built-in Controller	QCA	安装电控箱内与CCT、CAT安全光幕配套使用无源输出可直接接大功率负载 Installation of electronic control box with CCT, CAT safety light curtain and passive output can directly connect high-power load	选配件 Spare parts
内置式控制器	Built-in Controller	QET	安装电控箱内与CET、CTT安全光幕配套使用无源输出可直接接大功率负载 Installation of electronic control box with CET,CTT safety light curtain and passive output can directly connect high-power load	选配件 Spare parts
内置式控制器	Built-in Controller	QCA2	安装电控箱内与CCT、CAT安全光幕配套使用无源输出可直接接大功率负载 Installation of electronic control box with CCT,CAT safety light curtain and passive output can directly connect high-power load	选配件 Spare parts
内置式控制器	Built-in Controller	QSN	安装电控箱内与CST、CVT安全光幕配套使用无源输出可直接接大功率负载 Installation of electronic control box with CST, CVT safety light curtain and passive output can directly connect high-power load	选配件 Spare parts
内置式控制器	Built-in Controller	Tner-A31	安装电控箱内与CCT、CAT、CET、CTT双输出安全光幕配套使用无源输出可直接接大功率负载，提供4组无源开关信号 Installation of electronic control box and CCT, CAT, CET, CTT double output safety light curtain matching use of passive output can directly connect high-power load, provide four groups of passive switching signals	选配件 Spare parts
内置式控制器	Built-in Controller	LCS-SRA/B	安装电控箱内与CCT、CAT、CET、CTT双输出安全光幕配套使用无源输出可直接接大功率负载，提供4组无源开关信号 Installation of electronic control box and CCT, CAT, CET, CTT double output safety light curtain matching use of passive output can directly connect high-power load, provide four groups of passive switching signals	选配件 Spare parts
外置双面控制器	External Controller	QSWS	安装机器侧面QSW 双继电器无源输出 Install machine side QSW Dual relay passive output	选配件 Spare parts
外置单面控制器	External Controller	QSWS	安装机器侧面QSW 双继电器无源输出 Install machine side QSW Dual relay passive output	选配件 Spare parts
控制器固定架	Controller holder	QCA-06	用于CST外置控制器固定架 For CST external controller mounting bracket	标配件 Standard

五针五芯电缆	5-pin 5-core cable	QSN543 QA543	五针Φ16航空接头 带2.5x3.56m 屏蔽电缆 发射、接收单元 Five-pin Φ16 aviation joint with 2.5x3.56m shielded cable transmitting and receiving unit	标配 Standard
		QSN545 QA545	五针Φ16航空接头 带5m 屏蔽电缆 接收单元 Five-pin Φ16 aviation joint with 5m shielded cable	选配件 Spare parts
		QSN5410 QA5410	五针Φ16航空接头 带10m 屏蔽电缆 接收单元 Five-pin Φ16 aviation joint with 10m shielded cable	
五针五芯电缆	5-pin 5-core cable	QSW543	五针Φ16航空接头 带3m 屏蔽电缆 接收单元 Five-pin Φ16 aviation joint with 10m shielded cable	标配 Standard
		QSW545	五针Φ16航空接头 带5m 屏蔽电缆 接收单元 Five-pin Φ16 aviation joint with 10m shielded cable	选配件 Spare parts
		QSW5410	五针Φ16航空接头 带10m 屏蔽电缆 接收单元 Five-pin Φ16 aviation joint with 10m shielded cable	
七孔七芯数据线	7-hole 7-core data cable	QVW543	七孔Φ16航空接头 带3m 屏蔽电缆 接收单元 seven-hole Φ16 aviation joint with 3m shielded cable	标配 Standard
		QVW545	七孔Φ16航空接头 带5m 屏蔽电缆 接收单元 seven-hole Φ16 aviation joint with 3m shielded cable	选配件 Spare parts
		QVW5410	七孔Φ16航空接头 带10m 屏蔽电缆 接收单元 seven-hole Φ16 aviation joint with 3m shielded cable	
五针五芯电缆	5-pin 5-core cable	QC543	五针Φ12航空接头 带3m屏蔽电缆 接收单元 Five-pin Φ12 aviation joint with 3m shielded cable Receiver	标配 Standard
		QC545	五针Φ12航空接头 带5m屏蔽电缆 接收单元 Five-pin Φ12 aviation joint with 5m shielded cable Receiver	选配件 Spare parts
		QC5410	五针Φ12航空接头 带10m屏蔽电缆 接收单元 Five-pin Φ12 aviation joint with 10m shielded cable Receiver	
四孔四芯电缆	4-hole 4-core cable	QC433	四孔Φ12航空接头 带3m屏蔽电缆 接收单元 Four-hole Φ12 aviation joint with 3m shielded cable	标配 Standard
		QC435	四孔Φ12航空接头 带5m屏蔽电缆 接收单元 Four-hole Φ12 aviation joint with 5m shielded cable	选配件 Spare parts
		QC4310	四孔Φ12航空接头 带10m屏蔽电缆 接收单元 Four-hole Φ12 aviation joint with 10m shielded cable	
七针七芯数据线	7-pin 7-core data cable	QT702	七针Φ16航空接头 带2m 屏蔽电缆 外置控制器 seven-pin Φ16 aviation joint with 2m External controller	标配 Standard
		QT703	七针Φ16航空接头 带3m 屏蔽电缆 外置控制器 seven-pin Φ16 aviation joint with 3m External controller	选配件 Spare parts
		QT705	七针Φ16航空接头 带5m 屏蔽电缆 外置控制器 seven-pin Φ16 aviation joint with 5m External controller	
七针七芯数据线	7-pin 7-core data cable	QE702	七针Φ16航空接头 带2m 屏蔽电缆 外置控制器 seven-pin Φ16 aviation joint with 2m External controller	标配 Standard
		QE703	七针Φ16航空接头 带3m 屏蔽电缆 外置控制器 seven-pin Φ16 aviation joint with 3m External controller	选配件 Spare parts
		QE705	七针Φ16航空接头 带5m 屏蔽电缆 外置控制器 seven-pin Φ16 aviation joint with 5m External controller	

配件表 Accessory table

七孔七芯数据线	7-hole 7-core data cable	QSW702	七孔Φ16航空接头 带2m 屏蔽电缆 外置控制器 seven-hole Φ16 aviation joint with 2m data cable	标配 Standard
		QSW703	七孔Φ16航空接头 带3m 屏蔽电缆 外置控制器 seven-hole Φ16 aviation joint with 3m data cable	选配件 Spare parts
		QSW705	七孔Φ16航空接头 带5m 屏蔽电缆 外置控制器 seven-hole Φ16 aviation joint with 5m data cable	
五孔五芯数据线	7-hole 7-core data cable	QM/QR QZ/QB 503	五孔Φ12航空接头 带3m电缆数据线 five-holeΦ12 aviation joint with 3m data cable	标配 Standard
		QM/QR QZ/QB 505	五孔Φ12航空接头 带5m电缆数据线 five-hole Φ12 aviation joint with 5m data cable	选配件 Spare parts
		QM/QR QZ/QB 508	五孔Φ12航空接头 带8m电缆数据线 five-hole Φ12 aviation joint with 8m data cable	
七孔七芯数据线	7-hole 7-core data cable	QL/QM 503	七孔Φ12航空接头 带3m电缆数据线 seven-hole Φ12 aviation joint with 3m data cable	标配 Standard
		QL/QM 505	七孔Φ12航空接头 带5m电缆数据线 seven-hole Φ12 aviation joint with 5m data cable	选配件 Spare parts
		QL/QM 508	七孔Φ12航空接头 带8m电缆数据线 seven-hole Φ12 aviation joint with 8m data cable	
二孔四孔数据线	2-hole 4-hole data cable	QG2403	二孔、四孔Φ12航空接头 带3m电缆数据线 two-hole，four-hole Φ12 aviation joint with 8m data cable	标配 Standard
		QG2405	二孔、四孔Φ12航空接头 带3m电缆数据线 two-hole，four-hole Φ12 aviation joint with 8m data cable	选配件 Spare parts
		QG2408	二孔、四孔Φ12航空接头 带3m电缆数据线 two-hole，four-hole Φ12 aviation joint with 8m data cable	
不锈钢管支架	Stainless steel bracket	QCA-01	 用于CCT、CAT管状安装方式 For CCT, CAT tubular installation	
T形螺絲	T-screw	QCA-02	用于CCT、CAT侧面滑槽安装方式 For CCT, CAT side chute installation	标配件 Standard
凸形螺母	Male nut	QCA-03	用于CCT、CAT侧面滑槽安装方式 For CCT、CAT side chute installation	

直角架	Right angle frame	QCA-04	用于CCT、CAT两头安装方式 For CCT、CATside chute installation	标配件 Standard
侧面支角架	Side right angle frame	QCA-05	用于CCT/CAT/CST侧面固定 For CCT/CAT/CSTside fixing	标配件 Standard
直角架	Right angle frame	QLMR-06	用于CLT、CMT、CR两头安装方式 For CLT、CMT、CR two-head installation	标配件 Standard
直角架	Right angle frame	QRFT-07	用于CRFTwo两头安装方式 For CRFTtwo-head installation	标配件 Standard
高强度管状支架	High-strength tubular stent	QSA-07	用于CST、CAT管状安装方式 For CST、CATtubular installation	标配件 Spare parts
侧面直角架	Side right angle bracket	QSA-08	用于CST/CAT/CVT/CTT 侧面安装方式 For CST/CAT/CVT/CTT Side mounting method	标配件 Spare parts
正面直角架	 Frontal right angle bracket	QSA-09	用于CST/CAT/CVT/CTT 正面安装方式 For CST/CAT/CVT/CTT Frontal mounting method	标配件 Spare parts
反射装置	Reflector	QSA-10	用于CST/CAT/CVT/CTT 两面或三面反射器的配件 For CST/CAT/CVT/CTT Accessories for 2 or 3-sided reflectors	标配件 Spare parts

注：标配件...免费配送 选配件...需单独购买 标配件：QCA-02 QCA-03 QCA-04 任选一款，CST型：QCA-01为标配件。
Note: Standard accessories... Free distribution. Optional accessories... Need to be purchased separately. Standard accessories: QCA-02,QCA-03,QCA-04 Optional one,
QS type: QCA-01 is the standard accessory.