

SAFETY LIGHT CURTAIN SMARTSCAN

T2 Machine Safety Devices

1000+ Machine Safety Devices

C4 compact Machine Safety Devices

ST Machine Safety Devices

Multi-function safety control module



SMARTSCAN TW Ltd.
www.smartscan.com.tw



Certificate No : 79Q13722



2019



T2 series

Machine Safety Devices

Applications

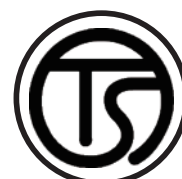
- Injection molding machine
- Robotic production line
- Low-risk, medium grade automation, metal forming and storage of all
- Packing Line Orientation Control
- Medical equipment
- Semiconductor equipment
- Panel equipment
- Food Machinery
- Machine tool industry
- Automobile industry

Introduction

The T2 series safety light curtain optical design architecture is compact and in line with international safety standards. The light curtain as a whole also meets the safety requirements of the international safety standards IEC61496-1 and IEC61496-2 TYPE 2, and has obtained the certificate of conformity of well-known European certification bodies.

The use of non-synchronous wire wiring eliminates extra wiring, and the special optoelectronic communication method can avoid the optical crosstalk problem of the general photoelectric sensor, and achieve the stability of the photoelectric switch with line synchronous communication.

The exterior structure is small but strong; it is suitable for the overall shape design of the machine. The large light curtain still retains a strong structure, and the additional intermediate fixing method is convenient to install.



TD0401BT

Property

- Various type, 30mm、40mm、45mm、50mm detection capability.
- The most long-range detection of up to 10m; the closest detect only 0.5m.
- Detection zone:185mm ~ 1955mm.
- Enclosure Rating IP-66.
- Self-diagnosis and work status indicator.
- Installation and calibration easy, good anti-disturbance light performance.
- Quality and stability, price concessions.

General Specifications

Beam axis pitch	4 ~ 48		8 ~ 64	
Detection capability	50mm	45mm	30mm	25mm
Detection zone	195mm ~ 1955mm	192mm ~ 1952mm	230mm ~ 1630mm	185mm ~ 1305mm
Operating distance	4m ~ 10m	2m ~ 5.5m	0.5m ~ 2.5m	0.5m ~ 2.5m
Reaction time	20msec (It does not include relay switch time)			
Ambient temperature	0°C to +50°C			
Enclosure rating	IP66			
Power supply	24VDC ± 20% · 1.5A (MAX)			
Power consumption	TX 200mA + RX 200mA + OSSD Output (500mA max.)			
Connector	M12connector(T type)			
Appearance	Aluminum ; yellow coating			
Classification	IEC61496-1 & IEC61496-2 : TYPE 2 IEC62061 SIL1 & ISO13849-1 PLc			
Output mode	2 independent safety output (type: solid state PNP transistor switches 500mA@24V DC)			

T2A S series

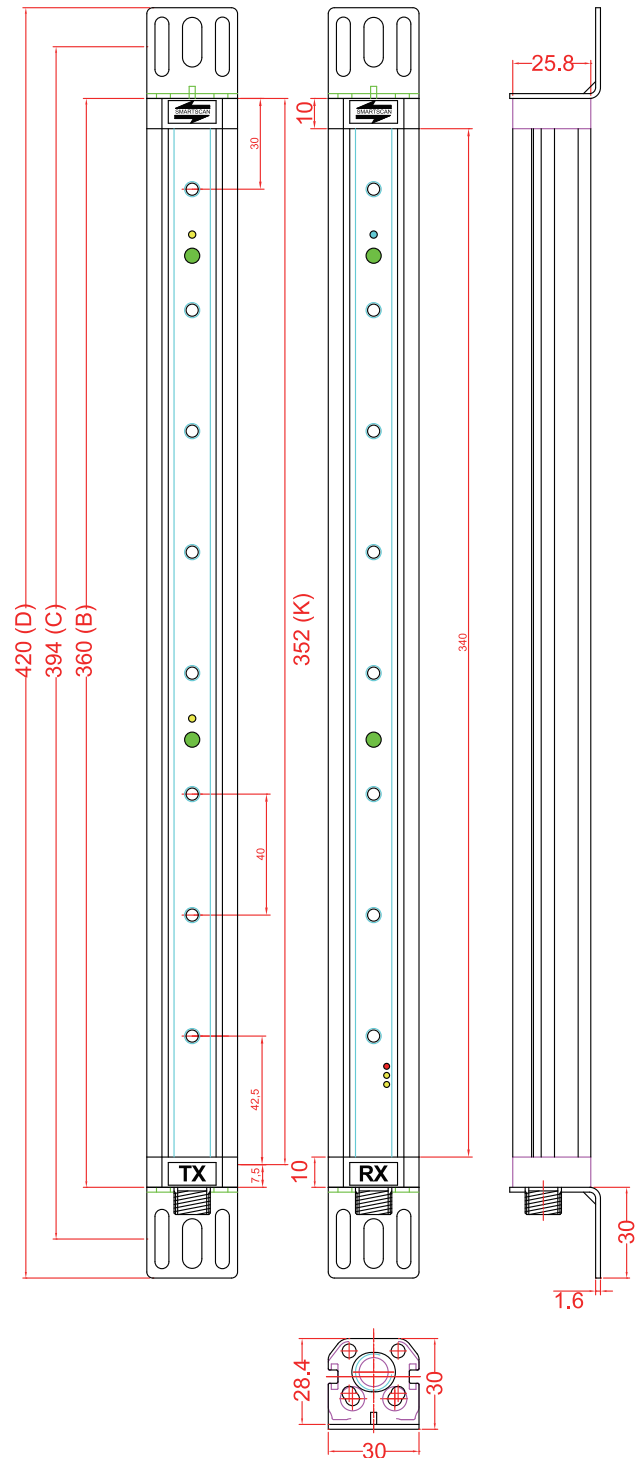
Detection Capacity 45mm		Operating distance 0.5m to 2.5m			
Beams	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
4	T2A-4S	192	200	234	260
8	T2A-8S	352	360	394	420
12	T2A-12S	512	520	554	580
16	T2A-16S	672	680	714	740
20	T2A-20S	832	840	874	900
24	T2A-24S	992	1000	1034	1060
28	T2A-28S	1152	1160	1194	1220
32	T2A-32S	1312	1320	1354	1380
36	T2A-36S	1472	1480	1514	1540
40	T2A-40S	1632	1640	1674	1700
44	T2A-44S	1792	1800	1834	1860
48	T2A-48S	1952	1960	1994	2020

T2A series

Detection Capacity 45mm		Operating distance 2m to 5.5m			
Beams	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
4	T2A-4	192	200	234	260
8	T2A-8	352	360	394	420
12	T2A-12	512	520	554	580
16	T2A-16	672	680	714	740
20	T2A-20	832	840	874	900
24	T2A-24	992	1000	1034	1060
28	T2A-28	1152	1160	1194	1220
32	T2A-32	1312	1320	1354	1380
36	T2A-36	1472	1480	1514	1540
40	T2A-40	1632	1640	1674	1700
44	T2A-44	1792	1800	1834	1860
48	T2A-48	1952	1960	1994	2020

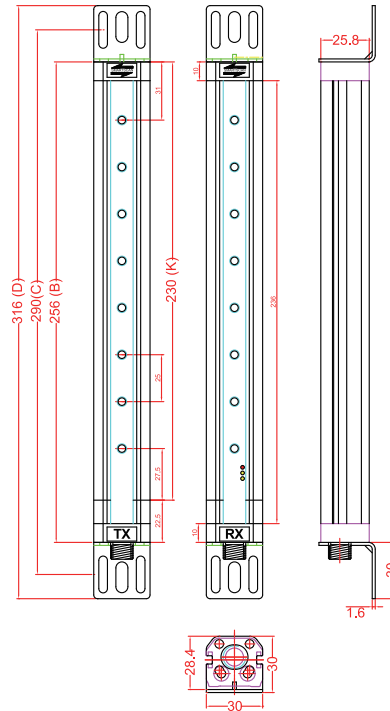
T2A L series

Detection Capacity 50mm		Operating distance 4m to 10m			
Beams	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
4	T2A-4L	195	200	234	260
8	T2A-8L	355	360	394	420
12	T2A-12L	515	520	554	580
16	T2A-16L	675	680	714	740
20	T2A-20L	835	840	874	900
24	T2A-24L	995	1000	1034	1060
28	T2A-28L	1155	1160	1194	1220
32	T2A-32L	1315	1320	1354	1380
36	T2A-36L	1475	1480	1514	1540
40	T2A-40L	1635	1640	1674	1700
44	T2A-44L	1795	1800	1834	1860
48	T2A-48L	1955	1960	1994	2020



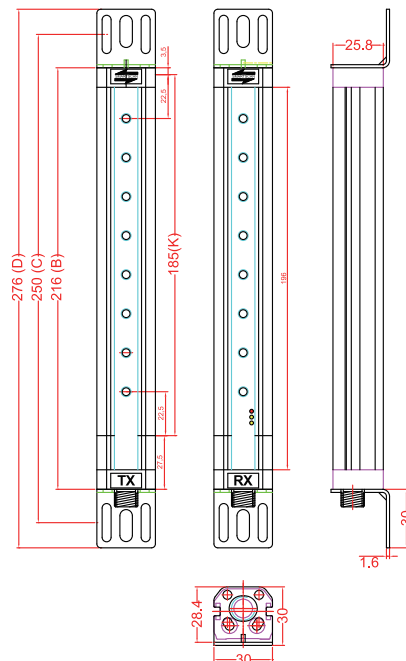
T2B S series

Detection Capability 30mm			Range 0.5m to 2.5m		
Beams	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
8	T2B-8S	230	256	290	316
12	T2B-12S	330	356	390	416
16	T2B-16S	430	456	490	516
20	T2B-20S	530	556	590	616
24	T2B-24S	630	656	690	716
28	T2B-28S	730	756	790	816
32	T2B-32S	830	856	890	916
36	T2B-36S	930	956	990	1016
40	T2B-40S	1030	1056	1090	1116
44	T2B-44S	1130	1156	1190	1216
48	T2B-48S	1230	1256	1290	1316
52	T2B-52S	1330	1356	1390	1416
56	T2B-56S	1430	1456	1490	1516
60	T2B-60S	1530	1556	1590	1616
64	T2B-64S	1630	1656	1690	1716



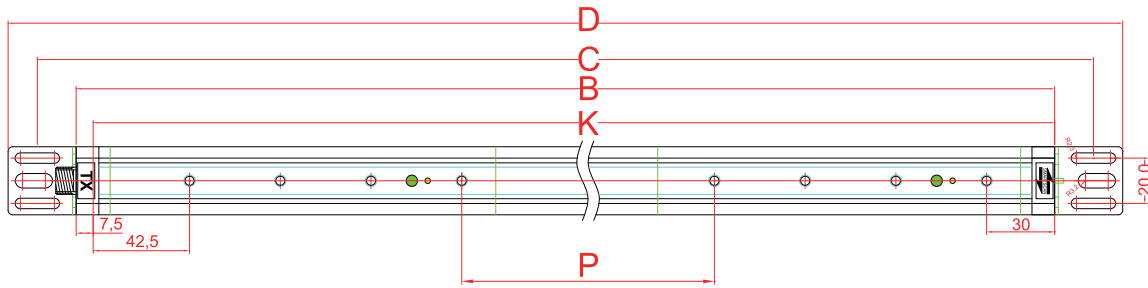
T2C S series

Detection Capability 25mm			Range 0.5m to 2.5m		
Beams	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
8	T2C-8S	185	216	250	276
12	T2C-12S	265	296	330	356
16	T2C-16S	345	376	410	436
20	T2C-20S	425	456	490	516
24	T2C-24S	505	536	570	596
32	T2C-32S	665	696	730	756
36	T2C-36S	745	776	810	836
40	T2C-40S	825	856	890	916
44	T2C-44S	905	936	970	996
48	T2C-48S	985	1016	1050	1076
52	T2C-52S	1065	1096	1130	1156
56	T2C-56S	1145	1176	1210	1236
60	T2C-60S	1225	1256	1290	1316
64	T2C-64S	1305	1336	1370	1396



Perimeter series

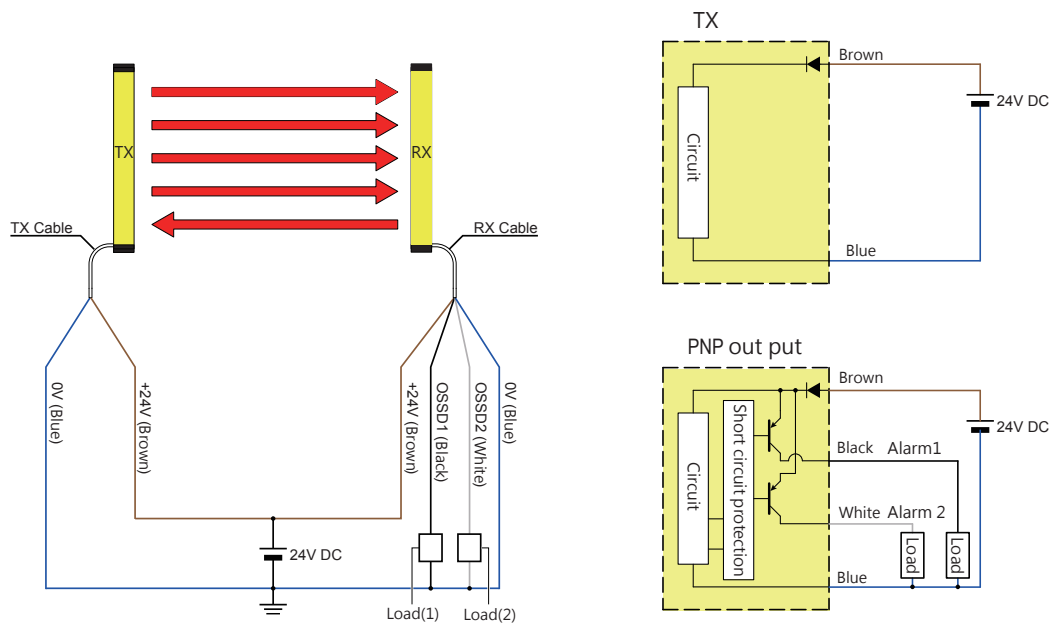
Beams	interval of Beams (P) (mm)	Range 0.5m to 2.5m		Range 2m to 5.5m		Range 4m to 10m		Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
		Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)			
8	480	T2A-8S-PRM	793	T2A-8-PRM	793	T2A-8L-PRM	793	800	834	860
12	380	T2A-12S-PRM	1193	T2A-12-PRM	1193	T2A-12L-PRM	1193	1200	1234	1260
16	280	T2A-16S-PRM	1393	T2A-16-PRM	1393	T2A-16L-PRM	1393	1400	1434	1460



Electric Connection

Input - Output circuit

- (1) Power : Vin +24V DC transmitter and receiver(Brown+24V · Blue 0V), we suggest using independently power module. It could avoid surging; Ferrite core installs in RX and case connects with Gnd ·
- (2) Output : Two groups of transistor(PNP) signal output OSSD1 and OSSD2 ; DC+24V during light curtain normal operation.



LED Indicator light

Normal status

Indicator light	Model	Mean
TX	Color LED	Constant green
	Color LED	Constant red
RX	Color LED	Constant green
	Color LED	Constant red

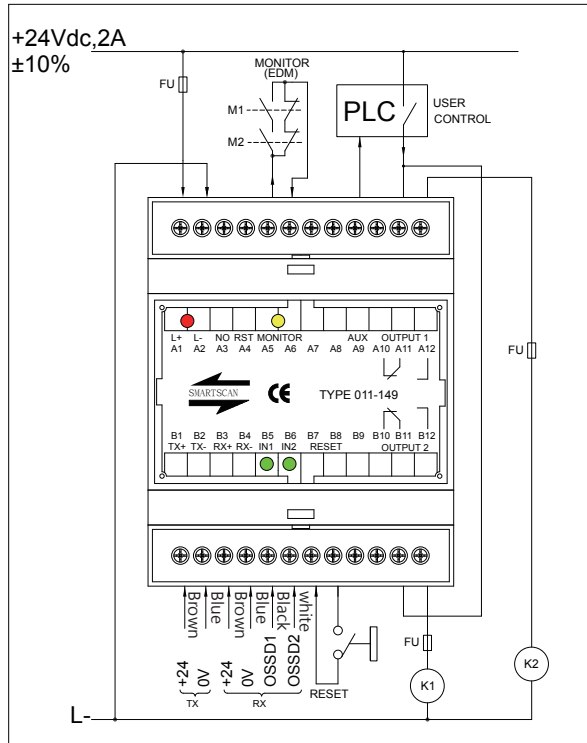
Normal working condition ; Only in this condition, 2 independent safety output are +24V

Abnormal status

Indicator light	Model	Mean
TX	Color LED	Red and green are twinkling
RX	Red LED	Twinkling in fixed frequency
Yellow LED	S1 Constant bright S2 Constant bright S1 & S2 Constant bright	OSSD1 Short +24V or 0V OSSD2 Short +24V or 0V OSSD1 & OSSD2 Short

The system detects a state of security concerns and the system immediately blocks unless the abnormal state is removed and the system is reset. **(re-power on start)**

011-149 Multi-module connection



TYPE 2 Certification

Safenet Limited
Denford Garage, Denford, Kettering, Northants., NN14 4EQ, U.K.
Tel: +44 (0)1532 732174 email: office@safenet.co.uk Website: www.safenet.co.uk
European Notified Body 1874

EC Type Examination Certificate
This is to certify that:

Smartsan Taiwan Co., Ltd.
2F, No. 5, 10th Road, Taichung Industrial Park, Taichung, Taiwan, R.O.C.
Has had a range of T2 Light Curtains examined with regards to the Directive 2006/42/EC, as amended

In respect of the **T2A-12S, T2A-12 and T2A-12L**

Manufactured by:
Smartsan Taiwan Co., Ltd.
2F, No. 5, 10th Road, Taichung Industrial Park, Taichung, Taiwan, R.O.C.

- The technical file contains all the relevant documents and information.
- Having verified that the appropriate data have been conducted we confirm that:
 - The standards and harmonised standards have been applied correctly.
 - The examples representing series production of the item, comply with the essential health and safety requirements of the Directive 2006/42/EC, as amended.
- The technical file contains all the information required to include the models listed in the attached annex to this certificate.
- The technical file also contains evidence of compliance with EN 61499-1:2013 TYPE 2 and EN 61499-2:2013 TYPE 2, and is suitable for applications regarding EN ISO61499-1:2013 SL 1 and EN ISO 15069-1:2016 PL 2.

Certificate Number: 7121051017b version 3
Date: 12/03/2018
Signed for Safenet Limited
Peter McNicol
Technical Manager

CE Marking
Number 1874

This document remains the property of Safenet Ltd and will be returned to them, if requested.
This device is intended to be used in a manner to ensure continued compliance of the manufacturer and if poorly fitted or used for purposes in the area of fire and safety of the certificate.

Safenet Limited
Denford Garage, Denford, Kettering, Northants., NN14 4EQ, U.K.
Tel: +44 (0)1532 732174 email: office@safenet.co.uk Website: www.safenet.co.uk
European Notified Body 1874

Annex Certificate 7121051017b version 3

Models included:

T2A-4S, T2A-8S, T2A-12S, T2A-16S, T2A-20S, T2A-24S, T2A-28S, T2A-32S, T2A-36S, T2A-40S, T2A-44S, T2A-48S, T2A-52S, T2A-56S, T2A-60S, T2A-64S, T2A-68S, T2A-72S, T2A-76S, T2A-80S, T2A-84S, T2A-88S, T2A-92S, T2A-96S, T2A-100S, T2A-104S, T2A-108S, T2A-112S, T2A-116S, T2A-120S, T2A-124S, T2A-128S, T2A-132S, T2A-136S, T2A-140S, T2A-144S, T2A-148S, T2A-152S, T2A-156S, T2A-160S, T2A-164S, T2A-168S, T2A-172S, T2A-176S, T2A-180S, T2A-184S, T2A-188S, T2A-192S, T2A-196S, T2A-200S, T2A-204S, T2A-208S, T2A-212S, T2A-216S, T2A-220S, T2A-224S, T2A-228S, T2A-232S, T2A-236S, T2A-240S, T2A-244S, T2A-248S, T2A-252S, T2A-256S, T2A-260S, T2A-264S, T2A-268S, T2A-272S, T2A-276S, T2A-280S, T2A-284S, T2A-288S, T2A-292S, T2A-296S, T2A-300S, T2A-304S, T2A-308S, T2A-312S, T2A-316S, T2A-320S, T2A-324S, T2A-328S, T2A-332S, T2A-336S, T2A-340S, T2A-344S, T2A-348S, T2A-352S, T2A-356S, T2A-360S, T2A-364S, T2A-368S, T2A-372S, T2A-376S, T2A-380S, T2A-384S, T2A-388S, T2A-392S, T2A-396S, T2A-400S, T2A-404S, T2A-408S, T2A-412S, T2A-416S, T2A-420S, T2A-424S, T2A-428S, T2A-432S, T2A-436S, T2A-440S, T2A-444S, T2A-448S, T2A-452S, T2A-456S, T2A-460S, T2A-464S, T2A-468S, T2A-472S, T2A-476S, T2A-480S, T2A-484S, T2A-488S, T2A-492S, T2A-496S, T2A-500S, T2A-504S, T2A-508S, T2A-512S, T2A-516S, T2A-520S, T2A-524S, T2A-528S, T2A-532S, T2A-536S, T2A-540S, T2A-544S, T2A-548S, T2A-552S, T2A-556S, T2A-560S, T2A-564S, T2A-568S, T2A-572S, T2A-576S, T2A-580S, T2A-584S, T2A-588S, T2A-592S, T2A-596S, T2A-600S, T2A-604S, T2A-608S, T2A-612S, T2A-616S, T2A-620S, T2A-624S, T2A-628S, T2A-632S, T2A-636S, T2A-640S, T2A-644S, T2A-648S, T2A-652S, T2A-656S, T2A-660S, T2A-664S, T2A-668S, T2A-672S, T2A-676S, T2A-680S, T2A-684S, T2A-688S, T2A-692S, T2A-696S, T2A-700S, T2A-704S, T2A-708S, T2A-712S, T2A-716S, T2A-720S, T2A-724S, T2A-728S, T2A-732S, T2A-736S, T2A-740S, T2A-744S, T2A-748S, T2A-752S, T2A-756S, T2A-760S, T2A-764S, T2A-768S, T2A-772S, T2A-776S, T2A-780S, T2A-784S, T2A-788S, T2A-792S, T2A-796S, T2A-800S, T2A-804S, T2A-808S, T2A-812S, T2A-816S, T2A-820S, T2A-824S, T2A-828S, T2A-832S, T2A-836S, T2A-840S, T2A-844S, T2A-848S, T2A-852S, T2A-856S, T2A-860S, T2A-864S, T2A-868S, T2A-872S, T2A-876S, T2A-880S, T2A-884S, T2A-888S, T2A-892S, T2A-896S, T2A-900S, T2A-904S, T2A-908S, T2A-912S, T2A-916S, T2A-920S, T2A-924S, T2A-928S, T2A-932S, T2A-936S, T2A-940S, T2A-944S, T2A-948S, T2A-952S, T2A-956S, T2A-960S, T2A-964S, T2A-968S, T2A-972S, T2A-976S, T2A-980S, T2A-984S, T2A-988S, T2A-992S, T2A-996S, T2A-1000S.

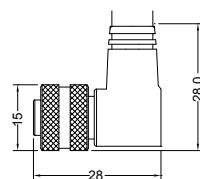
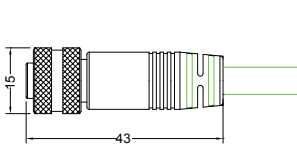
CE Marking
Number 1874

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Accessories

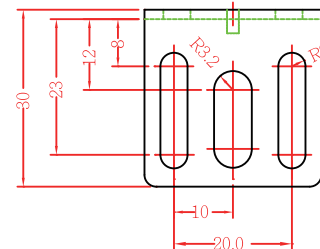
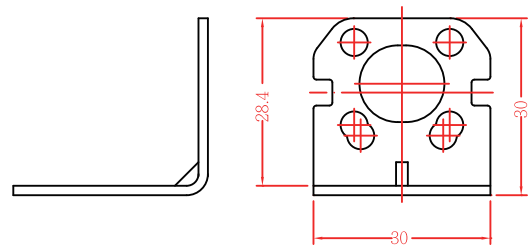
Connector(1) : 180° (standard)

Connector(2) : 90° (select)



- Standard equipment
- Connector(standard) : 3m
- Connector(select): 5m ; 10m
- TX : Three core (gray)
- RX : Four core (black)

Bracket



1000+series

Machine Safety Devices

Applications

- Injection molding machine
- Robotic production line
- Low-risk, medium grade automation, metal forming and storage of all
- Packing Line Orientation Control
- Some type of pressing machine

Introduction

1000 Plus light curtains comply with European and International Safety Standards BS EN 61496-1 and BS IEC 61496-2 Type 2. They are normally used where the risk assessment for the safety related parts of the control system, as indicated in EN 62061, EN13849, (EN954-1), determines a requirement up to and including SIL2, PL d, (Category 3) control equipment.



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Property

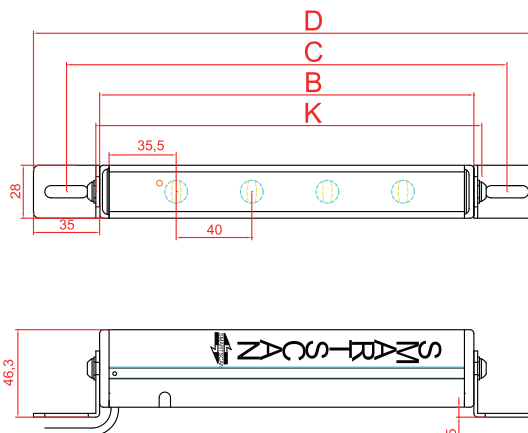
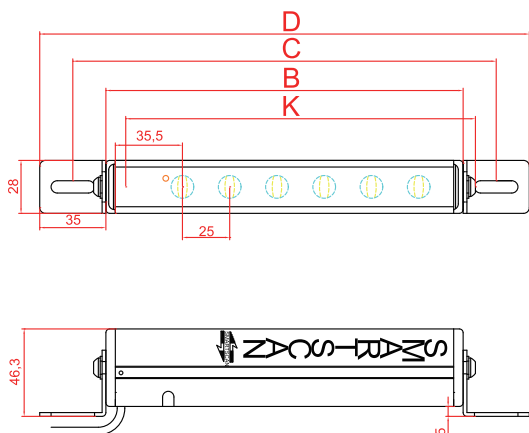
- IEC61496-1/-2 TYPE2
Various type, 30mm · 40mm · 45mm · 50mm detection capability.
- The most long-range detection of up to 10m; the closest detect only 0.2m.
- Detection zone:180mm ~ 1840mm.
- Enclosure rating IP-65 ·
- Self-diagnosis and work status indication.
- Installation and calibration easy, good anti-disturbance light performance.
- Quality and stability, price concessions.
- Inside and outside all application processing apparatus curtains special high seismic technology, the most suitable for the red, cutting class equipment (press, cut class device special type).

General Specifications

Beam axis pitch	6 ~ 72		4 ~ 44	
Detection capability	30mm	40mm	45mm	50mm
Detection zone	180mm ~ 1830mm	190mm ~ 1840mm	205mm ~ 1805mm	210mm ~ 1810mm
Operating distance	0.2m ~ 5m	4m ~ 10m	0.2m ~ 5m	4m ~ 10m
Reaction time	20msec (It does not include relay switch time)			
Ambient temperature	0°C to +50°C			
Enclosure rating	IP65			
Power supply	24VDC ± 20% · 1.5A (MAX)			
Power consumption	TX 200mA + RX 200mA + OSSD Output (500mA max.)			
Connector	Direct output(standard type)		M12 connector(T type)	
Appearance	Aluminum, yellow coating			
Classification	IEC61496-1 & IEC61496-2 : TYPE 2 IEC62061 SIL1 & ISO13849-1 PLc			
Output mode	2 independent safety output (type: solid state PNP transistor switches 500mA@24V DC)			

Standard type Pitch 25mm series

Detection Capability 30mm			Detection Capability 30mm			Detection Capability 30mm			Detection Capability 40mm		
Operating distance 0.3m to 1m			Operating distance 0.5m to 2m			Operating distance 0.5m to 5m			Operating distance 4m to 10m		
Beams	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
12	012-100SS	330	012-100S	330	012-100	330	012-101	340	339	374	409
18	012-102SS	480	012-102S	480	012-102	480	012-103	490	489	524	559
24	012-104SS	630	012-104S	630	012-104	630	012-105	640	639	674	709
30	012-106SS	780	012-106S	780	012-106	780	012-107	790	789	824	859
36	012-108SS	930	012-108S	930	012-108	930	012-109	940	939	974	1009
42	012-110SS	1080	012-110S	1080	012-110	1080	012-111	1090	1089	1124	1159
48					012-112	1230	012-113	1240	1239	1274	1309
54					012-114	1380	012-115	1390	1389	1424	1459
60					012-116	1530	012-117	1540	1439	1574	1609
66					012-118	1680	012-119	1690	1689	1724	1759
72					012-120	1830	012-121	1840	1839	1874	1909

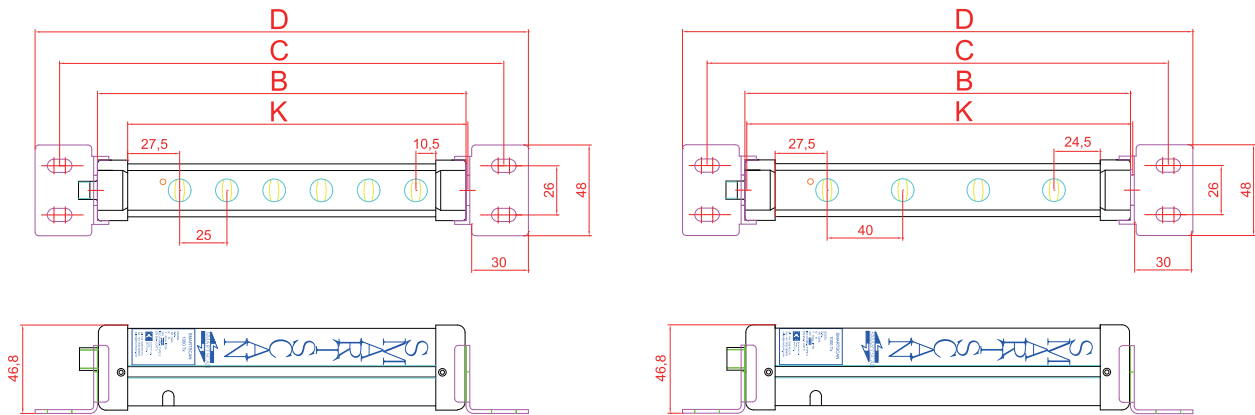


Standard type Pitch 40mm series

Detection Capability 45mm			Detection Capability 45mm			Detection Capability 45mm			Detection Capability 50mm		
Operating distance 0.3m to 1m			Operating distance 0.5m to 2m			Operating distance 0.5m to 5m			Operating distance 4m to 10m		
Beams	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
6	012-406SS	285	012-406S	285	012-406	285	012-506	290	278	314	348
8	012-408SS	365	012-408S	365	012-408	365	012-508	370	358	394	428
10	012-410SS	445	012-410S	445	012-410	445	012-510	450	438	474	508
12	012-412SS	525	012-412S	525	012-412	525	012-512	530	518	554	588
14	012-414SS	605	012-414S	605	012-414	605	012-514	610	598	634	668
16	012-416SS	685	012-416S	685	012-416	685	012-516	690	678	714	748
20	012-420SS	845	012-420S	845	012-420	845	012-520	850	838	874	908
24	012-424SS	1005	012-424S	1005	012-424	1005	012-524	1010	998	1034	1068
28					012-428	1165	012-528	1170	1158	1194	1228
32					012-432	1325	012-532	1330	1318	1354	1388
36					012-436	1485	012-536	1490	1478	1514	1548
40					012-440	1645	012-540	1650	1638	1674	1708
44					012-444	1805	012-544	1810	1798	1834	1868

T type Pitch 25mm series

Detection Capability 30mm			Detection Capability 30mm			Detection Capability 30mm			Detection Capability 40mm			T type(M12 connector)		
Operating distance 0.3m to 1m			Operating distance 0.5m to 2m			Operating distance 0.5m to 5m			Operating distance 4m to 10m					
Beams	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)			
6	012-098SST	180	012-098ST	180	012-098T	180	012-099T	190	195	235	261			
12	012-100SST	330	012-100ST	330	012-100T	330	012-101T	340	345	385	411			
18	012-102SST	480	012-102ST	480	012-102T	480	012-103T	490	495	535	561			
24	012-104SST	630	012-104ST	630	012-104T	630	012-105T	640	645	685	711			
30	012-106SST	780	012-106ST	780	012-106T	780	012-107T	790	795	835	861			
36	012-108SST	930	012-108ST	930	012-108T	930	012-109T	940	945	985	1011			
42	012-110SST	1080	012-110ST	1080	012-110T	1080	012-111T	1090	1095	1135	1161			
48					012-112T	1230	012-113T	1240	1245	1285	1311			
54					012-114T	1380	012-115T	1390	1395	1435	1461			
60					012-116T	1530	012-117T	1540	1445	1585	1611			
66					012-118T	1680	012-119T	1690	1695	1735	1761			
72					012-120T	1830	012-121T	1840	1845	1885	1911			

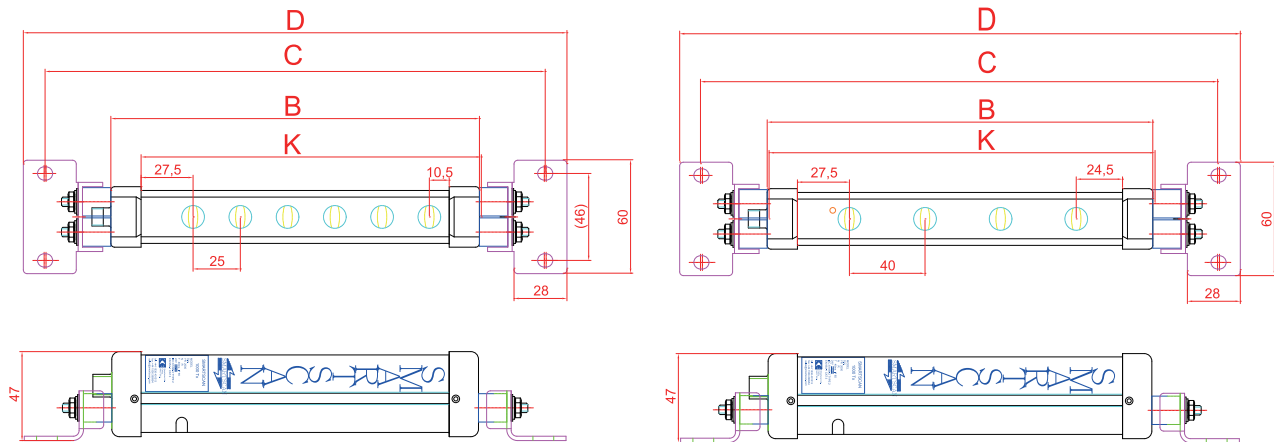


T type Pitch 40mm series

Detection Capability 45mm			Detection Capability 45mm			Detection Capability 45mm			Detection Capability 50mm			T type(M12 connector)		
Operating distance 0.3m to 1m			Operating distance 0.5m to 2m			Operating distance 0.5m to 5m			Operating distance 4m to 10m					
Beams	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)			
4	012-404SST	205	012-404ST	205	012-404T	205	012-504T	210	204	244	270			
6	012-406SST	285	012-406ST	285	012-406T	285	012-506T	290	284	324	350			
8	012-408SST	365	012-408ST	365	012-408T	365	012-508T	370	364	404	430			
10	012-410SST	445	012-410ST	445	012-410T	445	012-510T	450	444	484	510			
12	012-412SST	525	012-412ST	525	012-412T	525	012-512T	530	524	564	590			
14	012-414SST	605	012-414ST	605	012-414T	605	012-514T	610	604	644	670			
16	012-416SST	685	012-416ST	685	012-416T	685	012-516T	690	684	724	750			
20	012-420SST	845	012-420ST	845	012-420T	845	012-520T	850	844	884	910			
24	012-424SST	1005	012-424ST	1005	012-424T	1005	012-524T	1010	1004	1044	1070			
28					012-428T	1165	012-528T	1170	1164	1204	1230			
32					012-432T	1325	012-532T	1330	1324	1364	1390			
36					012-436T	1485	012-536T	1490	1484	1524	1550			
40					012-440T	1645	012-540T	1650	1644	1684	1710			
44					012-444T	1805	012-544T	1810	1804	1844	1870			

Press, cut class device special type Pitch 25mm series

Detection Capability 30mm		Detection Capability 30mm		Detection Capability 30mm		Detection Capability 40mm		press, cut class device special type (M12 connector)			
Operating distance 0.3m to 1m		Operating distance 0.5m to 2m		Operating distance 0.5m to 5m		Operating distance 4m to 10m					
Beams	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
6	012-098SST	180	012-098ST	180	012-098T	180	012-099T	190	195	265	288
12	012-100SST	330	012-100ST	330	012-100T	330	012-101T	340	345	415	438
18	012-102SST	480	012-102ST	480	012-102T	480	012-103T	490	495	565	588
24	012-104SST	630	012-104ST	630	012-104T	630	012-105T	640	645	715	738
30	012-106SST	780	012-106ST	780	012-106T	780	012-107T	790	795	865	888
36	012-108SST	930	012-108ST	930	012-108T	930	012-109T	940	945	1015	1038
42	012-110SST	1080	012-110ST	1080	012-110T	1080	012-111T	1090	1095	1165	1188
48					012-112T	1230	012-113T	1240	1245	1315	1338
54					012-114T	1380	012-115T	1390	1395	1465	1488
60					012-116T	1530	012-117T	1540	1445	1615	1638
66					012-118T	1680	012-119T	1690	1695	1765	1788
72					012-120T	1830	012-121T	1840	1845	1915	1938

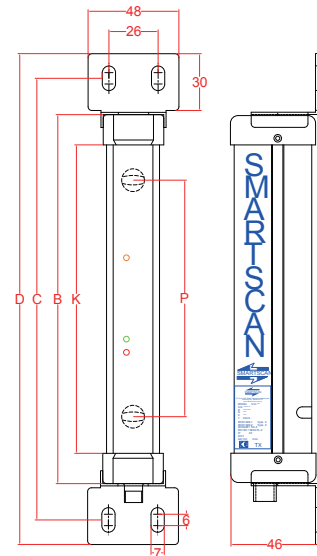


Press, cut class device special type Pitch 40mm series

Detection Capability 45mm		Detection Capability 45mm		Detection Capability 45mm		Detection Capability 50mm		press, cut class device special type (M12 connector)			
Operating distance 0.3m to 1m		Operating distance 0.5m to 2m		Operating distance 0.5m to 5m		Operating distance 4m to 10m					
Beams	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
4	012-404SST	205	012-404ST	205	012-404T	205	012-504T	210	204	274	297
6	012-406SST	285	012-406ST	285	012-406T	285	012-506T	290	284	354	377
8	012-408SST	365	012-408ST	365	012-408T	365	012-508T	370	364	434	457
10	012-410SST	445	012-410ST	445	012-410T	445	012-510T	450	444	514	537
12	012-412SST	525	012-412ST	525	012-412T	525	012-512T	530	524	594	617
14	012-414SST	605	012-414ST	605	012-414T	605	012-514T	610	604	674	697
16	012-416SST	685	012-416ST	685	012-416T	685	012-516T	690	684	754	777
20	012-420SST	845	012-420ST	845	012-420T	845	012-520T	850	844	914	937
24	012-424SST	1005	012-424ST	1005	012-424T	1005	012-524T	1010	1004	1074	1097
28					012-428T	1165	012-528T	1170	1164	1234	1257
32					012-432T	1325	012-532T	1330	1324	1394	1417
36					012-436T	1485	012-536T	1490	1484	1554	1577
40					012-440T	1645	012-540T	1650	1644	1714	1737
44					012-444T	1805	012-544T	1810	1804	1874	1897

Perimeter series

Beams	Beam axis pitch (P)(mm)	Operating distance 0.5m to 5m		Operating distance 4m to 10m		T type(M12 connector)		
		Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
2	550	012-125T	640	012-122T	640	645	684	709
3	450	012-126T	990	012-123T	990	995	1034	1059
4	400	012-127T	1290	012-124T	1290	1295	1334	1359

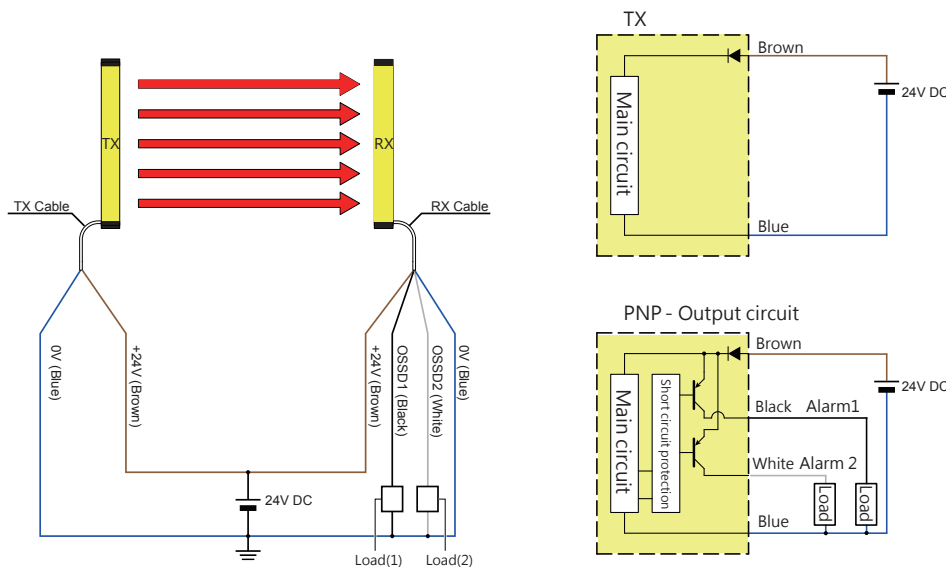


Electric Connection

Input - Output circuit

(1)Power : Vin +24V DC transmitter and receiver(Brown+24V · Blue 0V), we suggest using independently power module. It could avoid surging; Ferrite core installs in RX and case connects with Gnd.

(2)Output : Two groups of transistor(PNP) signal output OSSD1 and OSSD2 ; DC+24V during light curtain normal operation(MAX 500mA).



LED Indicator light

Normal status

Indicator light	Model	Mean
TX	Yellow LED Flash	The system has power , check and adjust the projected completionend system, the fixed frequency of flashing lights thatprojected launch of infrared wave side.
	Yellow LED Flash	Starts off, receiver system to be checked and adjusted with the projected completion of each end of a fixed frequency of blinking, projection side to establish normal communication with transmitter
RX	Green LED Light	Receiver end of the indicator lights working, the most important matter under the system of two independent +24 V output of the voltage sent.
	Red LED Light	The system has power, system checks the receiver and tune;adjustment is completed in normal working condition when the screens are not covered after the light does not shine.

Abnormal status

Indicator light	Model	Mean
RX	Green LED Flash	OSSD1 and OSSD2 Short OSSD1 connection error 24V or 0V OSSD2 connection error 24V or 0V
	Red LED Flash	The system detects a state of security concerns and the system immediately blocks unless the abnormal state is removed and the system is reset. (re-power on start)

TYPE 2 Certification

Safenet Limited
 Denford Garage, Denford, Kettering, Northants, NN14 4EQ, U.K.
 Tel: +44 (0)1533 751715 Fax: +44 (0)1533 751716 Email: info@safenet.co.uk
 European Notified Body N114

EC Type Examination Certificate

This is to certify that

Smartsacan Taiwan Co., Ltd.
 2F, No. 5, 10th Road, Tachung Industrial Park, Tachung, Taiwan, R.O.C.

Has had a range of 1000+ Light Curtains examined with regards to the Directive 2006/95/EC, as amended.

In respect of the **0124120**

Manufactured by:


Smartsacan Taiwan Co., Ltd.
 2F, No. 5, 10th Road, Tachung Industrial Park, Tachung, Taiwan, R.O.C.

1. The technical file consists of the relevant documents and information.
 2. The design and the manufacturing process have been controlled and certified.
 3. The technical file is available for examination by the competent authority.
 4. The technical file is available for examination by the competent authority.
 5. The technical file is available for examination by the competent authority.
 6. The technical file is available for examination by the competent authority.
 7. The technical file is available for examination by the competent authority.
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 13. The technical file is available for examination by the competent authority.
 14. The technical file is available for examination by the competent authority.
 15. The technical file is available for examination by the competent authority.
 16. The technical file is available for examination by the competent authority.
 17. The technical file is available for examination by the competent authority.
 18. The technical file is available for examination by the competent authority.
 19. The technical file is available for examination by the competent authority.
 20. The technical file is available for examination by the competent authority.

Certificate Number: 9929220616
 Date: 10/10/2016

Signed for Safenet Limited

Peter Moritz
 Technical Manager



Safenet Limited
 Denford Garage, Denford, Kettering, Northants, NN14 4EQ, U.K.
 Tel: +44 (0)1533 751715 Fax: +44 (0)1533 751716 Email: info@safenet.co.uk
 European Notified Body N114

EC Type Examination Certificate

Annex Certificate 9929220616

Model: LK-6000

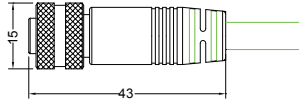
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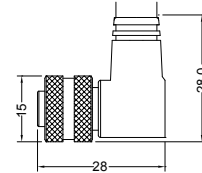
Accessories

- Standard equipment
- Connector(standard) : 3m
- Connector(select): 5m ; 10m
- TX : Three core (gray)
- RX : Four core (black)

Connector(1) : 180° (standard)

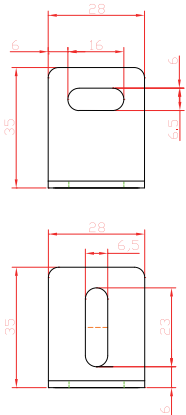


Connector(2) : 90° (select)

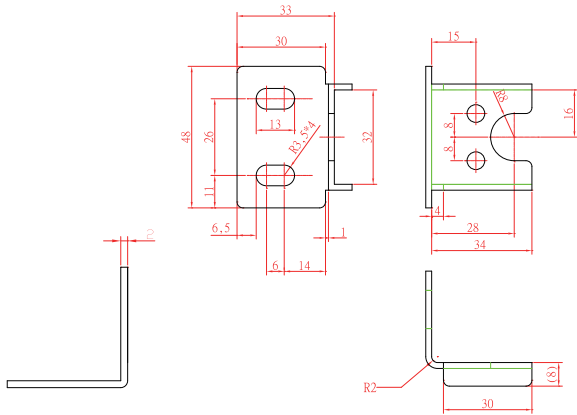


Bracket

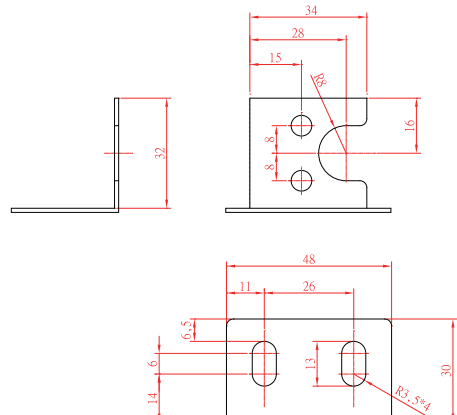
Standard type bracket



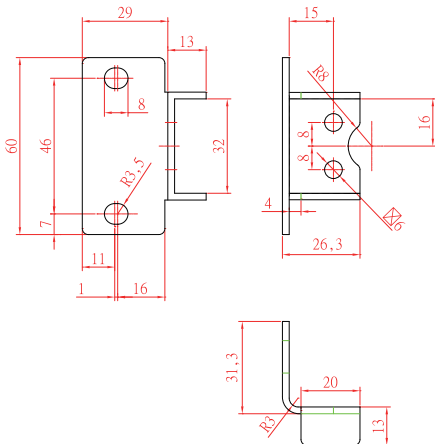
T type bracket



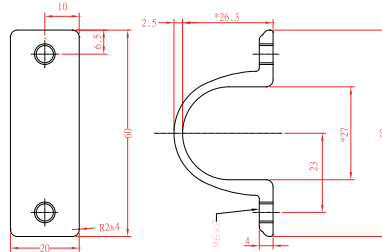
Side bracket



Press, cut class device special type
Cylindrical Bracket



Press, cut class device special type
Cylindrical Bracket Bundle



C4 compact

Machine Safety Devices

Applications

- Stamping press
- Die Cutting Machine
- Injection molding machine
- Compression molding machine
- High-risk machine that causes serious injury or death
- Safety device in danger zone
- Robotic production line

Introduction

The C4 compact series of safety light curtains meet the highest requirements of the latest international safety standards such as ISO 13849-1 PL e and ISO 62061 safety level SIL3, as well as the international light curtain standard IEC 61496-1, IEC 61496-2.

All requirements of the highest level TYPE 4, and passed the test and verification of many third-party verification units in Europe, and obtained the certificate of qualification.

Its safety performance and grade can be applied to all kinds of dangerous machinery such as punching, shearing, folding machines and other working machines, and meet various safety regulations.

The C4 compact series of safety light curtains use the latest electronic and mechanical manufacturing technology, and the exterior structure is small and strong, and the detection dead zone occupied by the upper and lower end caps of the light curtain is reduced. Durable and priced at a lower price than comparable products, it is available in a wide range of models and sizes to meet the safety needs of the operator's palm, arm and body.



TD0401BT

Property

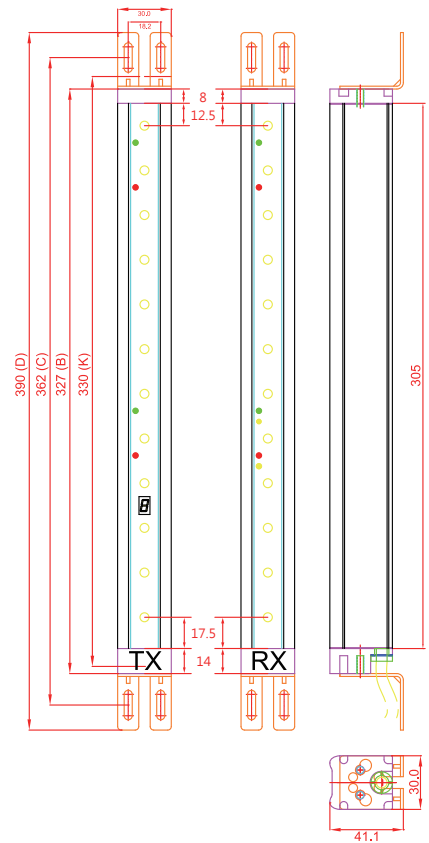
- Small size, suitable for mechanical compact size design, Strong mechanical rigidity without additional mechanism.
- Excellent safety performance, in line with various international safety standards and specifications, using the latest process technology, the quality of light curtain is stable.
- Comply with international safety protection product series. Various type, 30mm、40mm、45mm、50mm detection capability. Both are available in a two-section (ME) light curtain form (cascade) to meet customer requirements.
- Built-in self-diagnosis function and work status indicator. A seven-segment display with light screen receiving signal strength indication. (can be installed in the vertical direction of the light curtain to customize the font orientation).
- High performance, price concessions.
- Easy installation alignment and regulation.

General Specifications

Beam axis pitch	6 ~ 96		4 ~ 48	
Detection capability	30mm	40mm	45mm	50mm
Detection zone	180mm ~ 2430mm	190mm ~ 2440mm	205mm ~ 1965mm	210mm ~ 1970mm
Operating distance	0.5m ~ 5m	3m ~ 10m	0.5m ~ 5m	3m ~ 10m
Reaction time	20msec (It does not include relay switch time)			
Ambient temperature	0°C to +50°C			
Enclosure rating	IP65			
Status indicator	TX - Status indicator RX - OSSD ON (Green LED), OSSD OFF (Red LED), RX receiving status (Yellow LED)			
Power supply	24 VDC ± 10% and 1.5A regulated			
Power consumption	500mA + (OSSD current consumption)			
Connector	Direct output(standard type)		M12connector(T type)	
Appearance	Aluminum, yellow coating			
Classification	IEC 62061 SIL3 · ISO 13849-1 PL e · IEC 61496-1 TYPE4 / IEC 61496-2 TYPE4			
Input mode	EDM, RESET, Synchronization input, 24VDC / 0V (GND)			
Output mode	OSSD1 & OSSD2 (24 VDC / 500mA Solid-state Electronic), Synchronization output			

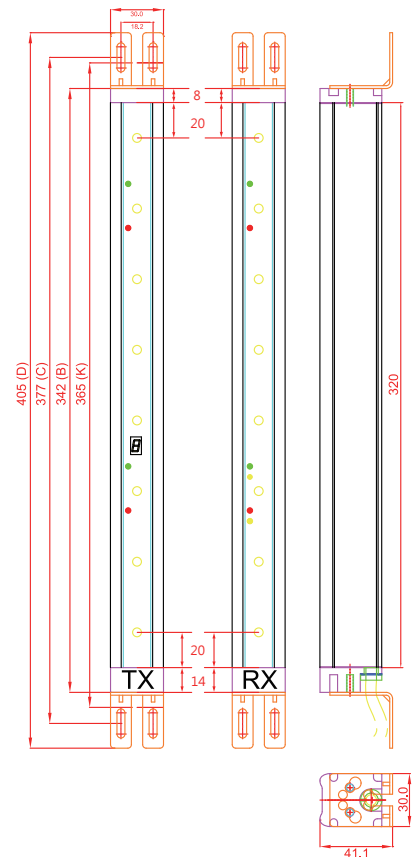
C4B series

		Detection Capability 30mm		Detection Capability 40mm			
		Operating distance 0.5m to 5m		Operating distance 3m to 10m			
Beams	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
6	C4B-6	180	C4B-6L	190	177	212	240
12	C4B-12	330	C4B-12L	340	327	362	390
18	C4B-18	480	C4B-18L	490	477	512	540
24	C4B-24	630	C4B-24L	640	627	662	690
30	C4B-30	780	C4B-30L	790	777	812	840
36	C4B-36	930	C4B-36L	940	927	962	990
42	C4B-42	1080	C4B-42L	1090	1077	1112	1140
48	C4B-48	1230	C4B-48L	1240	1227	1262	1290
54	C4B-54	1380	C4B-54L	1390	1377	1412	1440
60	C4B-60	1530	C4B-60L	1540	1527	1562	1590
66	C4B-66	1680	C4B-66L	1690	1677	1712	1740
72	C4B-72	1830	C4B-72L	1840	1827	1862	1890
78	C4B-78	1980	C4B-78L	1990	1977	2012	2040
84	C4B-84	2130	C4B-84L	2140	2127	2162	2190
90	C4B-90	2280	C4B-90L	2290	2277	2312	2340
96	C4B-96	2430	C4B-96L	2440	2427	2462	2490



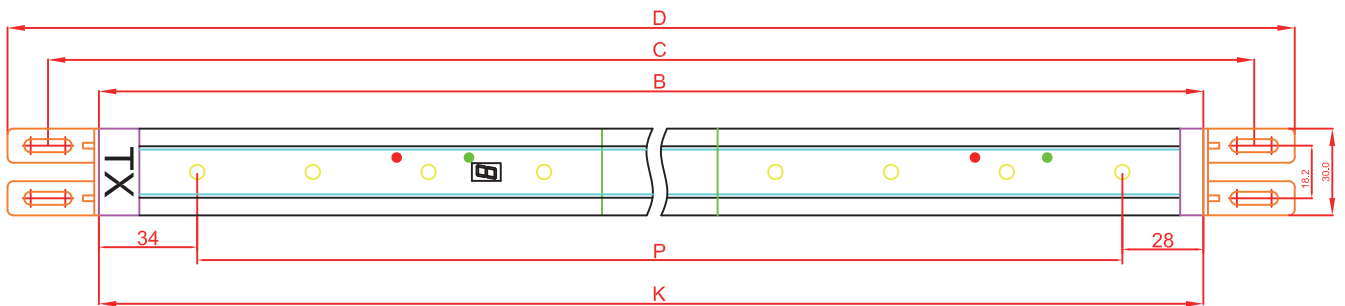
C4A series

		Detection Capability 45mm		Detection Capability 50mm			
		Operating distance 0.5m to 5m		Operating distance 3m to 10m			
Beams	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
4	C4A-4	205	C4A-4L	210	182	217	245
8	C4A-8	365	C4A-8L	370	342	377	405
12	C4A-12	525	C4A-12L	530	502	537	565
16	C4A-16	685	C4A-16L	690	662	697	725
20	C4A-20	845	C4A-20L	850	822	857	885
24	C4A-24	1005	C4A-24L	1010	982	1017	1045
28	C4A-28	1165	C4A-28L	1170	1142	1177	1205
32	C4A-32	1325	C4A-32L	1330	1302	1337	1365
36	C4A-36	1485	C4A-36L	1490	1462	1497	1525
40	C4A-40	1645	C4A-40L	1650	1622	1657	1685
44	C4A-44	1805	C4A-44L	1810	1782	1817	1845
48	C4A-48	1965	C4A-48L	1970	1942	1977	2005



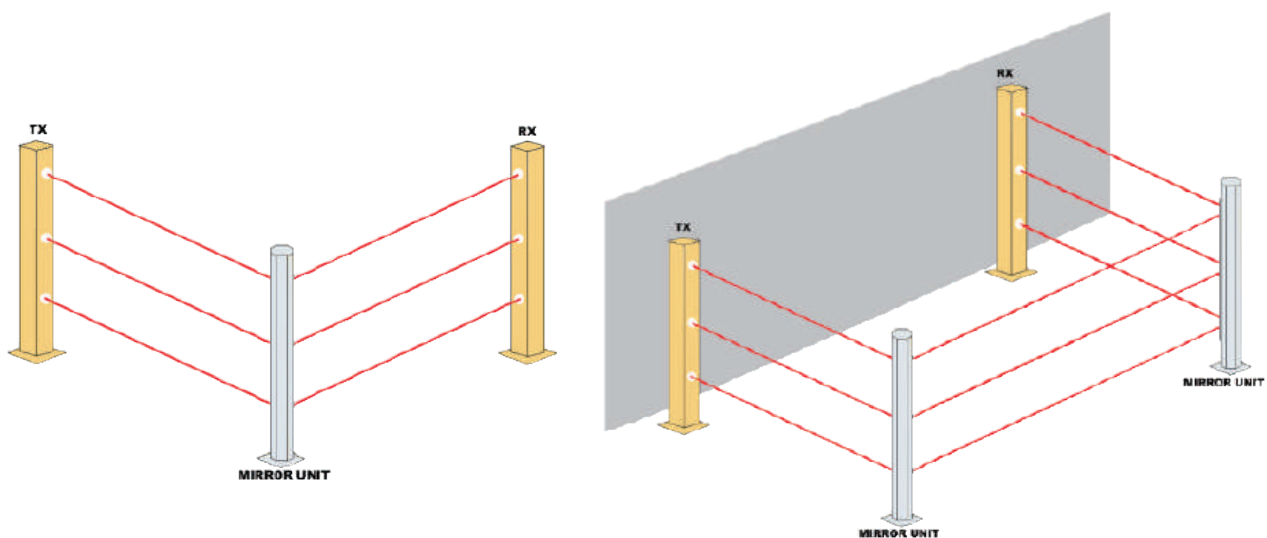
Perimeter series

Beams	Operating distance 0.5m to 5m			Operating distance 3m to 10m		Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
	Beam axis pitch (P)(mm)	Model	Detection Zone (K)(mm)	Model	Detection Zone (K)(mm)			
8	500	C4A-125	562	C4A-122	562	562	597	625
8	600	C4A-128	662	C4A-129	662	662	697	725
12	430	C4A-126	962	C4A-123	962	962	997	1025
16	373	C4A-127	1261	C4A-124	1261	1261	1296	1324



Mirror series (050-450 ~ 050-1950 series)

Use the reflection of the mirror to establish a protected area

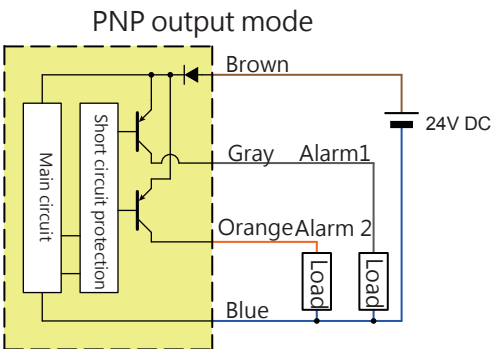
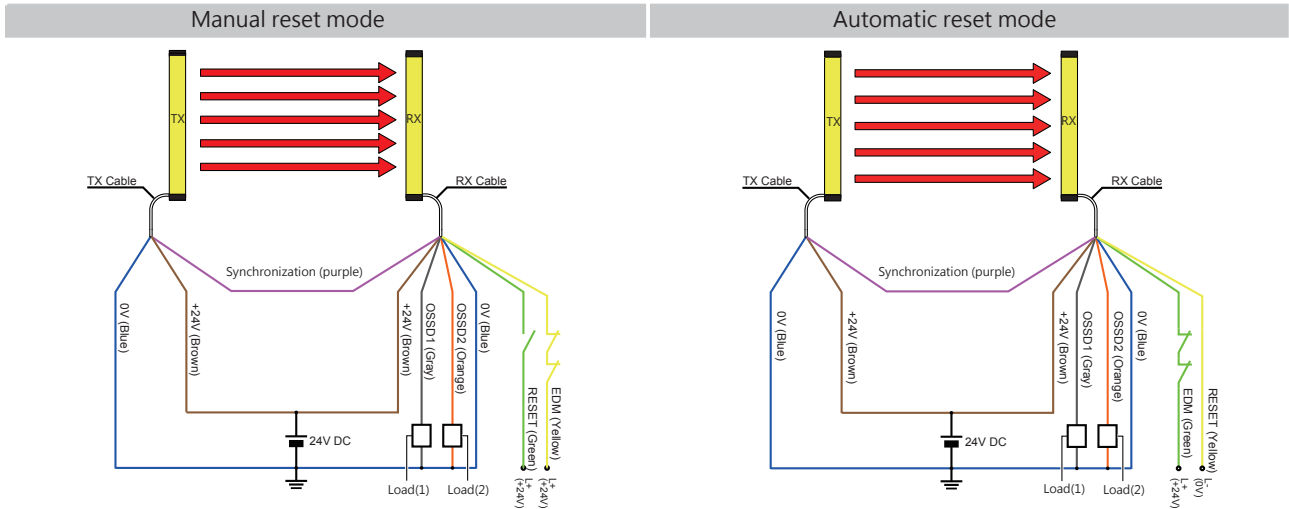


Use mirror reflection with light curtain (Perimeter series) to set up a protective area. There are also cascable light curtains.

For details, please contact SMARTSCAN sales or SMARTSCAN official website.

Electric Connection

Input · Output circuit	
(1)Power :	Vin +24V DC transmitter and receiver(Brown+ 24V · Blue 0V), we suggest using independently power module. It could avoid surging; Ferrite core installs in RX and case connects with Gnd.
(2)Output :	Two groups of transistor(PNP) signal output OSSD1 and OSSD2 ; DC+24V during light curtain normal operation(MAX 500mA).



TYPE 4 safety certification



Status indicators

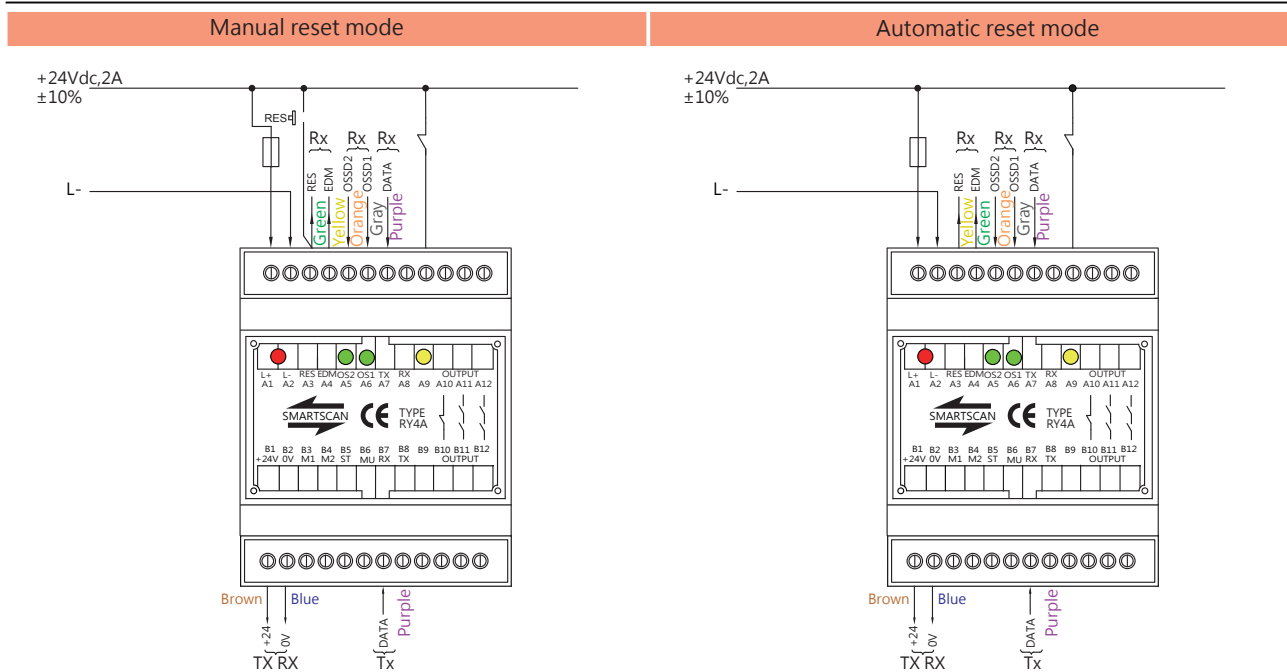
TX			RX				
Status indicators	Description	Status indicators	Description	Status indicators	Description		
	Real-time displays provide instant infrared signal receiving intensity light curtain receiver end,When the light curtain can be installed as an auxiliary installed positioning reference. Character display 0 ~ 9, F, 0 represents the minimum reception signal, F represents the maximum the received signal.		CLEAR	Under normal working conditions, the green light will be on. The green light will go out when the light curtain is blocked.		ON	Under normal working conditions, the green light will be on ; the OSSD1 and OSSD2 outputs will be ON.
	Display the current operating state of the light curtain,A total of six groups of light curtain status code action to assist technicians installed correctly curtains. Detailed code content and significance, see the product brochures and other technical manuals file.			BLOCK	Under normal operating conditions, the red light will go out. When the light curtain is blocked, the red light will be on.		EDM
						OFF	The light is on to indicate: 1. The external power supply is normal; 2. The light curtain is blocked, and the OSSD1 and OSSD2 outputs are in the OFF state. When the light is off, the light curtain is unobstructed and normally sensed.
						ALIGNED	When the yellow light is on, it means that the light curtain is correctly aligned. When the yellow light is off, it means that the light curtain is installed in alignment.

RA4Y Multi-module



SPECIFICATIONS	
Light curtain	Compatible C4 · ST · T4 series
Power supply	24VDC±10%
Power consumption	120mA
Safety RELAY output	250V AC 7A
Reaction time	Less than 10ms
Enclosure rating	IP40
Approved standards	GATEGORY 4 SIL 3
Electrical life-span	10 ⁶ cycles

RY4A Multi-module connection



Accessories

Connector	bracket												
<table border="1"> <thead> <tr> <th colspan="2">Cable connection type</th> </tr> <tr> <th>Direct output (standard type)</th> <th>M12 connector type</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Cable connection type		Direct output (standard type)	M12 connector type									
Cable connection type													
Direct output (standard type)	M12 connector type												
<table border="1"> <thead> <tr> <th colspan="2">Cable information</th> </tr> </thead> <tbody> <tr> <td colspan="2">Cable(standard) : 3m</td> </tr> <tr> <td colspan="2">Cable(select): 5m</td> </tr> <tr> <td colspan="2">Cable(select): 10m</td> </tr> <tr> <td colspan="2">TX: 4 core (signal line × 3 core, shielded × 1 core)</td> </tr> <tr> <td colspan="2">RX: 8 core (signal line × 7 core, shielded × 1 core)</td> </tr> </tbody> </table>	Cable information		Cable(standard) : 3m		Cable(select): 5m		Cable(select): 10m		TX: 4 core (signal line × 3 core, shielded × 1 core)		RX: 8 core (signal line × 7 core, shielded × 1 core)		
Cable information													
Cable(standard) : 3m													
Cable(select): 5m													
Cable(select): 10m													
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RX: 8 core (signal line × 7 core, shielded × 1 core)													

ST series

Machine Safety Devices

Applications

- Stamping press
- Die Cutting Machine
- Injection molding machine
- Compression molding machine
- High-risk machine that causes serious injury or death
- Safety device in danger zone
- Robotic production line

Introduction

The ST series conform the highest requirements of the latest international safety standards such as ISO13849-1 PL e and IEC62061 safety class SIL3.

It also conform all the requirements of the international light curtain standard IEC61496-1, IEC61496-2 highest level TYPE 4, and has passed the test and verification of the European third party verification unit to obtain the certificate of qualification.

Its safety performance and grade can be applied to all kinds of dangerous machinery such as punching and shearing work machines, and it meets various safety regulations.



TD0401BT

Property

- Various type, 14mm · 24mm · 34mm · 44mm detection capability.
- Available in a two-section (ME) light curtain form (cascade) to meet customer needs
- Detection zone:134mm ~ 1964mm.
- Compact size adapted to the needs of mechanical design, the mechanical rigidity can support without additional mechanism, seismic resistance.
- Excellent safety performance, in line with various international safety standards and norms, using the latest process technology.
- Built-in auto-reset and manual reset function. With the received signal strength indicator light curtain seven segment display (can be used with light curtain in the vertical direction Installation location, set the font direction).
- Optionally with multifunction security control module STR4, do silent with fixed, floating shelter and other kinds of security features Capable of setting.
- Correction Indicator Number: alignment with seven segment display and indicator light,easy to overcome Type 4 light curtain Masayuki asked Title to properties for optimum light curtain being installed.

General Specifications

Beam axis pitch	12 ~ 192	6 ~ 96	4 ~ 64	3 ~ 48
Detection capability	14mm	24mm	34mm	44mm
Detection zone	134 mm ~ 1934 mm	144 mm ~ 1944 mm	154 mm ~ 1954 mm	164 mm ~ 1964 mm
Operating distance	0.3m ~ 6m			
Reaction time	Depending on the model; up to 28 msec (It does not include relay switch time)			
Ambient temperature	0°C to +50°C			
Enclosure rating	IP66			
Status Indicator	TX - Seven-segment display indicates signal strength and light curtain status RX - OSSD ON (Green LED),OSSD OFF (Red LED),RX Receiving status(Yellow LED)			
Power supply	24VDC ± 20%			
Power consumption	TX (Max. 500mA) RX (Max. 500mA + OSSD current consumption)			
Connector	Direct output(standard type)		M12connector(T type)	
Appearance	Aluminum ; Orange anodized			
Classification	IEC62061(SIL3) · ISO13849-1(PLe) · IEC61496-1 TYPE 4 · IEC61496-2 TYPE 4			
Input mode	EDM, RESET, Synchronization input, 24VDC / 0V (GND)			
Output mode	OSSD1 & OSSD2 (24 VDC / 500mA Solid-state Electronic), Synchronization output			

ST series

Detection Capability 14mm			Operating distance 0.3m to 6m			Detection Capability 24mm			Operating distance 0.3m to 6m		
Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)	Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
ST-101	12	134	189	238	275	ST-201	6	144	189	238	275
ST-102	24	254	309	358	395	ST-202	12	264	309	358	395
ST-103	36	374	429	478	515	ST-203	18	384	429	478	515
ST-104	48	494	549	598	635	ST-204	24	504	549	598	635
ST-105	60	614	669	718	755	ST-205	30	624	669	718	755
ST-106	72	734	789	838	875	ST-206	36	744	789	838	875
ST-107	84	854	909	958	995	ST-207	42	864	909	958	995
ST-108	96	974	1029	1078	1115	ST-208	48	984	1029	1078	1115
ST-109	108	1094	1149	1198	1235	ST-209	54	1104	1149	1198	1235
ST-110	120	1214	1269	1318	1355	ST-210	60	1224	1269	1318	1355
ST-111	132	1334	1389	1438	1475	ST-211	66	1344	1389	1438	1475
ST-112	144	1454	1509	1558	1595	ST-212	72	1464	1509	1558	1595
ST-113	156	1574	1629	1678	1715	ST-213	78	1584	1629	1678	1715
ST-114	168	1694	1749	1798	1835	ST-214	84	1704	1749	1798	1835
ST-115	180	1814	1869	1918	1955	ST-215	90	1824	1869	1918	1955
ST-116	192	1934	1989	2038	2075	ST-216	96	1944	1989	2038	2075

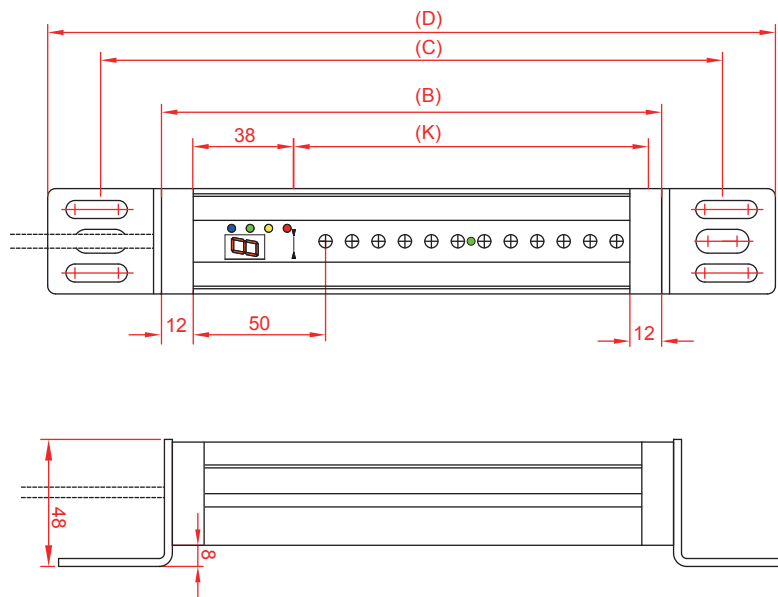
ST series

Detection Capability 34mm			Operating distance 0.3m to 6m			Detection Capability 44mm			Operating distance 0.3m to 6m		
Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)	Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (D)(mm)
ST-301	4	154	189	238	275	ST-401	3	164	189	238	275
ST-302	8	274	309	358	395	ST-402	6	284	309	358	395
ST-303	12	394	429	478	515	ST-403	9	404	429	478	515
ST-304	16	514	549	598	635	ST-404	12	524	549	598	635
ST-305	20	634	669	718	755	ST-405	15	644	669	718	755
ST-306	24	754	789	838	875	ST-406	18	764	789	838	875
ST-307	28	874	909	958	995	ST-407	21	884	909	958	995
ST-308	32	994	1029	1078	1115	ST-408	24	1004	1029	1078	1115
ST-309	36	1114	1149	1198	1235	ST-409	27	1124	1149	1198	1235
ST-310	40	1234	1269	1318	1355	ST-410	30	1244	1269	1318	1355
ST-311	44	1354	1389	1438	1475	ST-411	33	1364	1389	1438	1475
ST-312	48	1474	1509	1558	1595	ST-412	36	1484	1509	1558	1595
ST-313	52	1594	1629	1678	1715	ST-413	39	1604	1629	1678	1715
ST-314	56	1714	1749	1798	1835	ST-414	42	1724	1749	1798	1835
ST-315	60	1834	1869	1918	1955	ST-415	45	1844	1869	1918	1955
ST-316	64	1954	1989	2038	2075	ST-416	48	1964	1989	2038	2075

There are also cascable light curtains.

For details, please contact SMARTSCAN sales or SMARTSCAN official website.

ST series



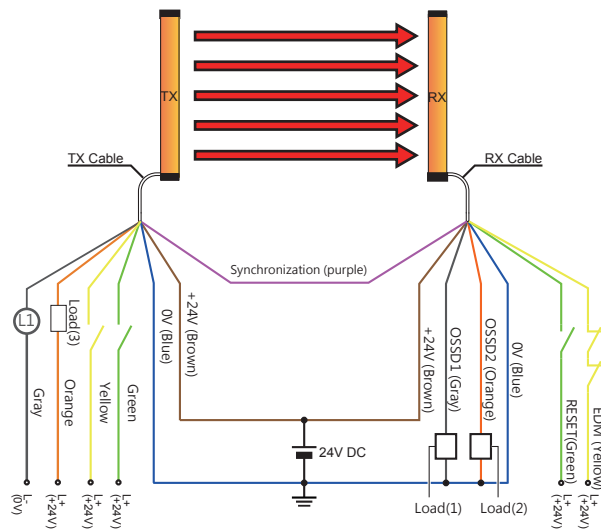
Electric Connection

Input · Output circuit

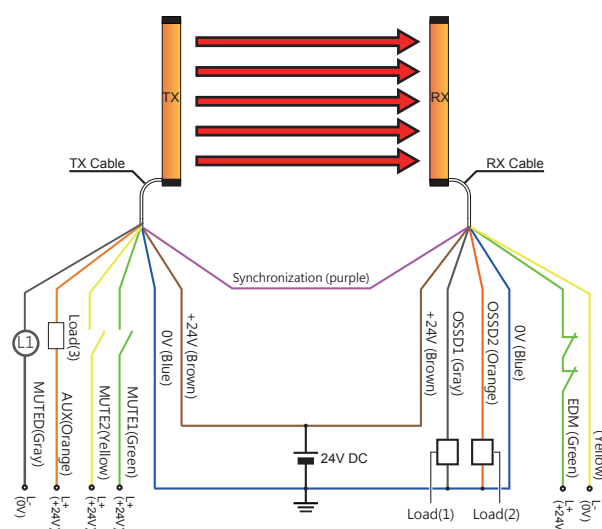
(1)Power :	Vin +24V DC transmitter and receiver(Brown+24V · Blue 0V), we suggest using independently power module. It could avoid surging; Ferrite core installs in RX and case connects with Gnd.
(2)Output :	Two groups of transistor(PNP) signal output OSSD1 and OSSD2 ; DC+24V during light curtain normal operation(MAX 500mA).

Manual reset mode

Automatic reset mode

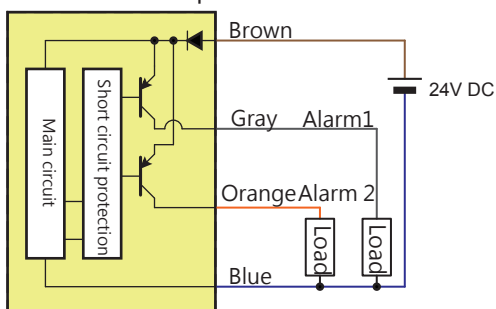


AUX(Orange) is NPN output
Green/Yellow/Orange/Gray are (Optional)



AUX(Orange) is NPN output
Green/Yellow/Orange/Gray are (Optional)

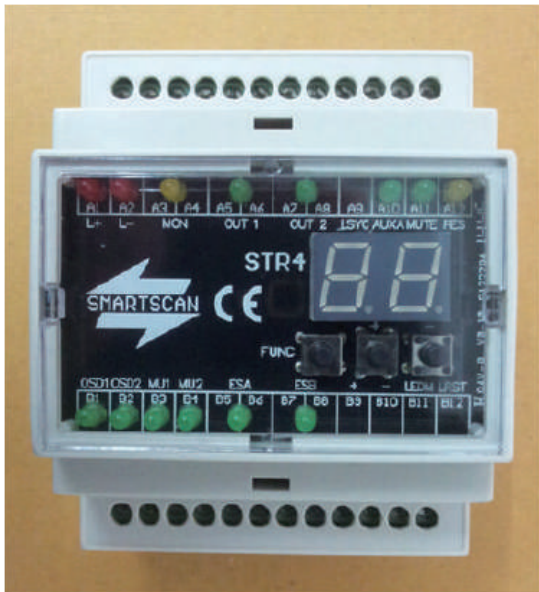
PNP output mode



Status indicators

RX			
7 segment display	Description	Status indicators	Description
 7 segment display (1)	Provided the light caution receiver Real-time infrared signal received strength display. Can be used as the auxiliary location reference during light curtain installation. Character display 0 ~ 9, F, 0 represents the most Small reception signal, F represents the maximum access The received signal.	OSSD	OSSD indicator was red LED. Under normal operation conditions,all the light beams are clear, OSSD LED will off,OSSD1 and OSSD2 outputs On status. The OSSD LED will on if there is beam was been blocked.
	Display the current operating stateof the light curtain.A total of nine of light curtain operating state code assist technicians installed light curtain correctly. Detailed code content and significance please refer to the product brochures and other technical manual.	RESET	RESET indicator was yellow LED. RESET LED is lit when the automatic reset mode enable. Manual reset mode, the light curtain RESET LED off when blocked,RESET LED goes out,pressing RESET switch the LED is lit, and the light curtain returns to normal.
 7 segment display (2)		EDM	EDM indicator was green LED. EDM monitoring input status when EDM ON, EDM LED will be lit. EDM monitoring input status when EDM OFF, EDM LED will extinguish.
		MUTED	MUTE indicator was blue LED. When MUTED LED is lit,the light curtain was MUTE state. Curtains suspend the objects detection function.

STR4 Multi-module

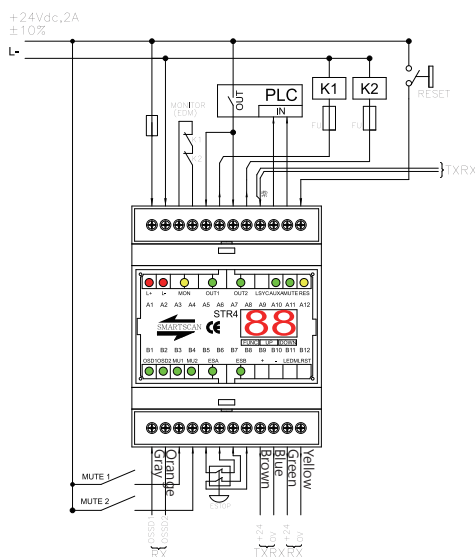


SPECIFICATIONS

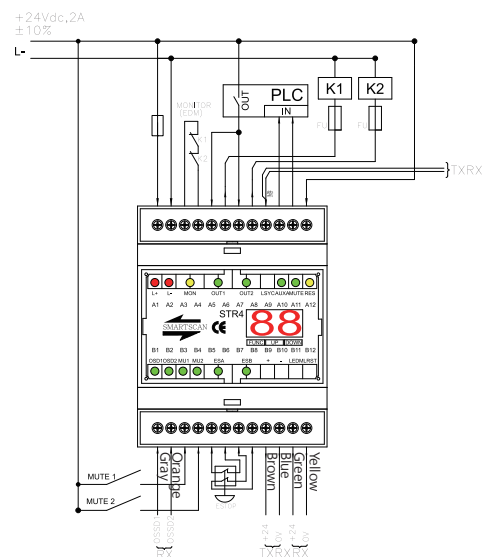
Function	AUTO RESET mode/Manual RESET mode
	Floating beam blanking Setting
	Fixed beam blanking Setting
	Mute timeout period Setting
Power supply	24VDC ± 10%
Power consumption	DC 300mA
Reaction time	30ms
External monitoring	Circuit contacts
Emergency stop	ESA/ESB
MUTE input	MUTE 1/MUTE 2 input 24V DC
Auxiliary output	Light curtain clear 24V DC output
RELAY output	RELAY contacts NC * 2
MUTE output	MUTE status output 24VDC 500mA
Operating Temperature	0°C to +50°C
Enclosure rating	IP40
Appearance	70mm*58mm*90mm

STR4 Multi-module connection

Manual reset mode



Automatic reset mode

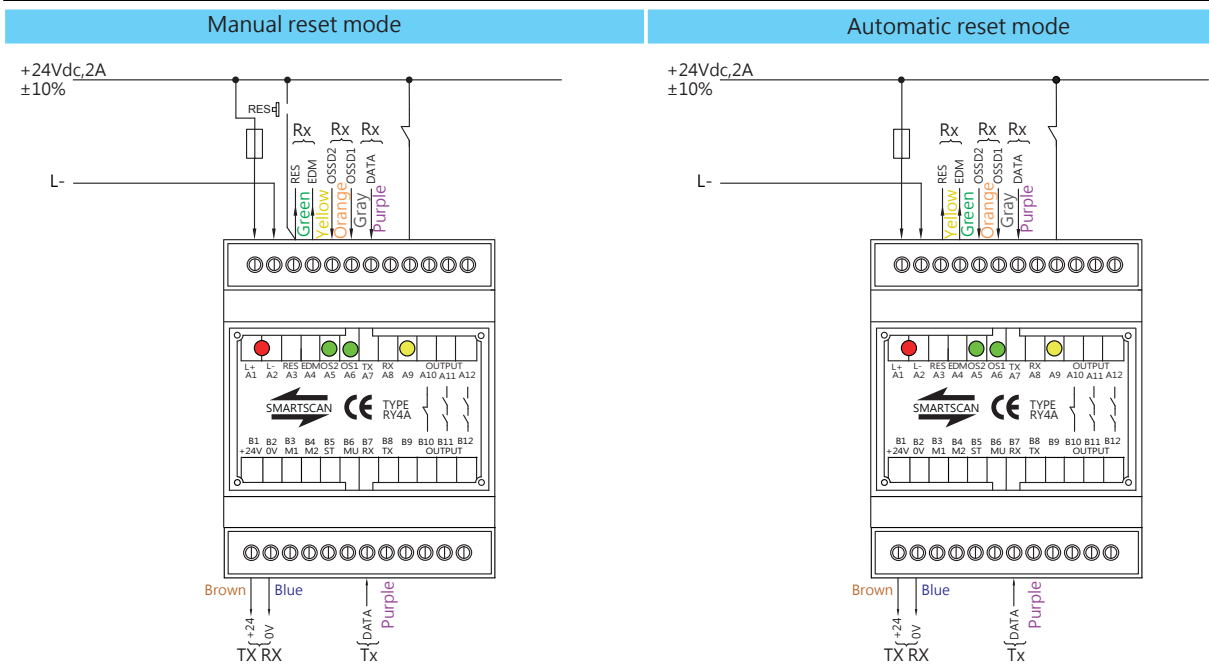


RA4Y Multi-module



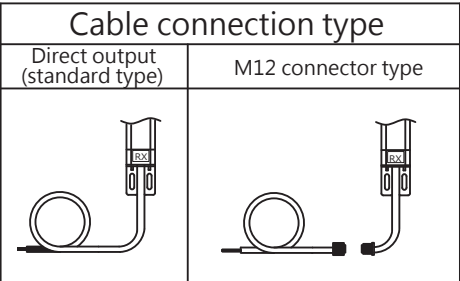
SPECIFICATIONS	
Light curtain	Compatible C4 · ST · T4 series
Power supply	24VDC±10%
Power consumption	120mA
Safty RELAY output	250V AC 7A
Reaction time	Less than 10ms
Enclosure rating	IP40
Approved standards	GATEGORY 4 SIL 3
Electrical life-span	10 ⁶ cycles

RY4A Multi-module connection

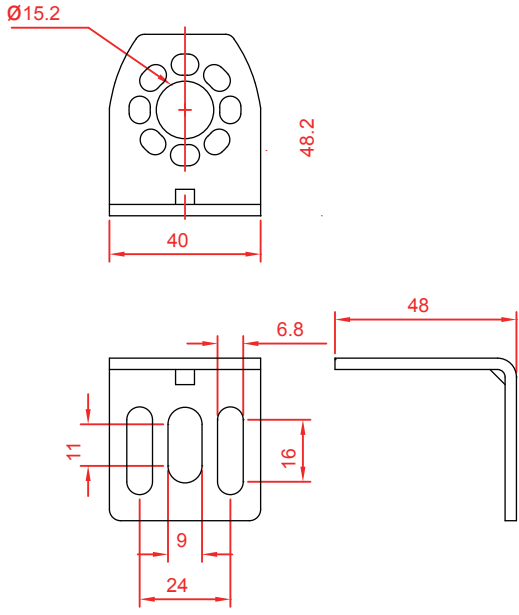


Accessories

Connector	bracket
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Cable information
Cable(standard) : 3m
Cable(select): 5m
Cable(select): 10m
TX: 9 core (signal line × 8 core, shielded × 1 core)
RX: 9 core (signal line × 8 core, shielded × 1 core)



Multi-module

Multi-function safety control module

Introduction

The Multi-function safety control module is ideal for flexibility and economy. SMARTSCAN offers a variety of solutions : MUTE, A contact (NO), B contact (NC), warning output, double safety emergency stop, external monitoring, manual reset / automatic reset, to meet customer needs.

GCM Multi-module

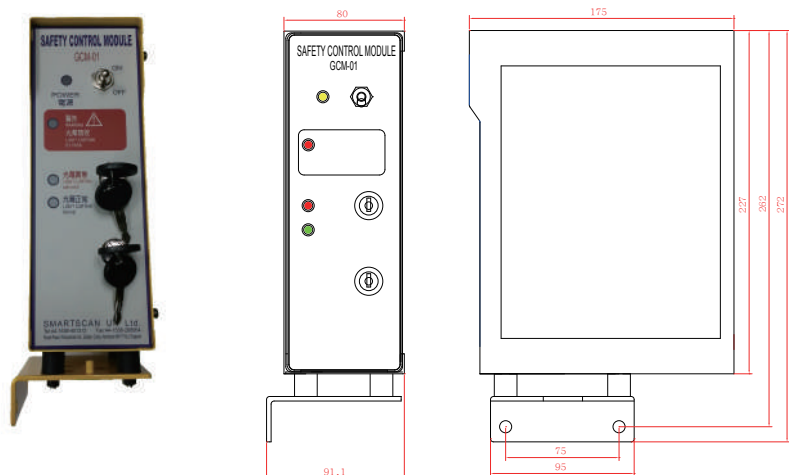
- AC 110V/AC220V power supply
- Use the key to turn on the MUTE mode, and let the light curtain to bypass.
- Warning output.
- Up to 4 sets of A contact (NO) or B contact (NC) output.
- Control up to 2 sets of light curtains.
- metal shell.

General Specifications

Module	GCM-01	GCM-02	GCM-02D
Control the number of light curtains	1 set of light curtains	2 set of light curtains	
Power supply	AC 110V /AC 220V		
Power consumption	AC 600mA		
Output voltage	DC 24V		
Input signal	PNP Output signal *2	2 sets of PNP output signals *2	
Output signal	RELAY dry contact , 2A/2B/1A1B	RELAY dry contact , 4A/4B/2A2B	
Reaction time	20 ms		
Warning output	B contact (NC)		
MUTE	Use 2 keys control the light curtain to bypass	2 keys to control the light curtain separately	
Ambient temperature	0°C to +50°C		
Enclosure rating	IP40		
Appearance	175mm*80mm*272mm, Yellow coating, metal shell		

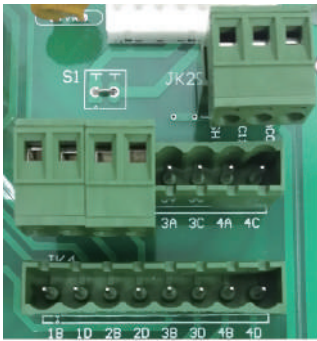
※PNP signal (Normal +24V ,Abnormal 0V)

GCM Multi-module appearance

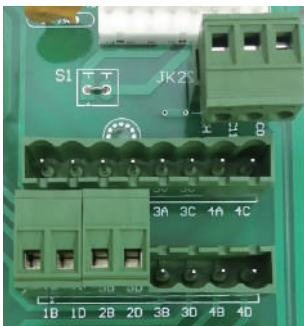


GCM Multi-module Electric Connection

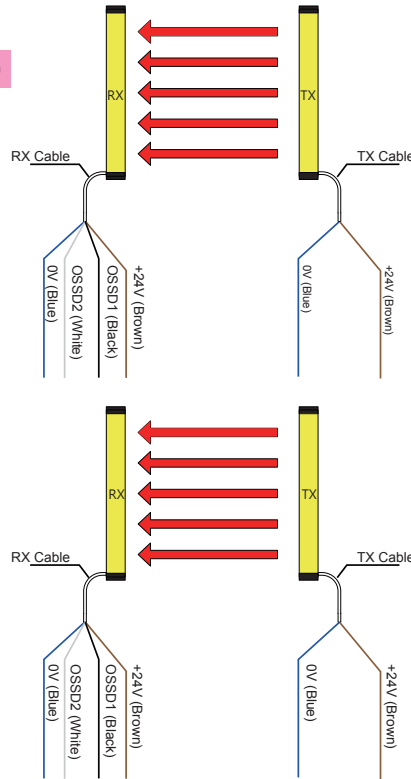
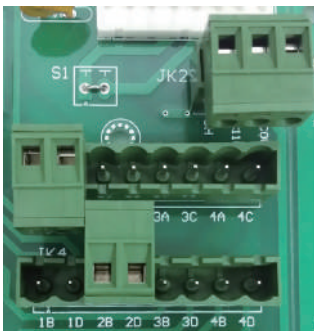
Controller output contact 2A contact (NO)



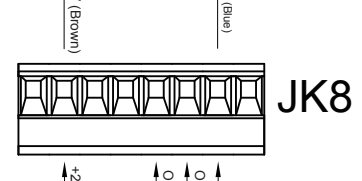
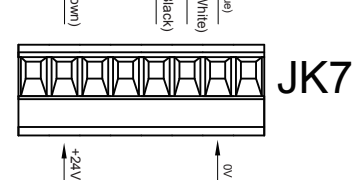
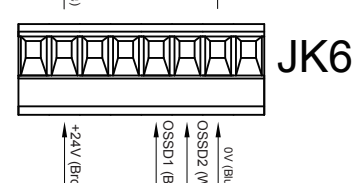
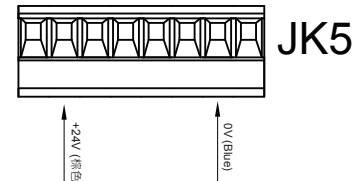
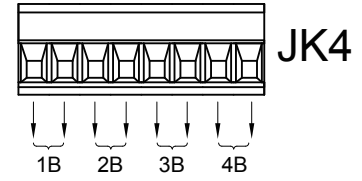
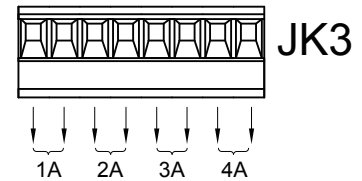
Controller output contact 2B contact (NC)



Controller output contact 1A1B contact (NO NC)



※Take SMARTSCAN 1000+ as an example;
please contact Smender with C4, ST series or other brand light curtains.



JK5 · JK6 · JK7 · JK8 : PIN2 are +24V contact (Brown)
JK5 · JK6 · JK7 · JK8 : PIN7 are 0V contact (Blue)
JK6 · JK8 : PIN5 Output contact for light curtain 1 (Black)
JK6 · JK8 : PIN6 Output contact for light curtain 2 (White)

GCM Multi-module Electric Connection Introduction

- JK1 : DC Power conversion (Factory completed)
- JK2 : AC Input contact (FG - Ground, AC110V - Optional AC110V or AC220V, AC0V - 0V)
- JK3 : Controller output contact A contact (NO)
(Light curtain 1 control 1A1C, 2A2C. Light curtain 2 control 3A3C, 4A4C)
- JK4 : Controller output contact B contact (NC)
(Light curtain 1 control 1B1D, 2B2D. Light curtain 2 control 3B3D, 4B4D)
(JK3 and JK4 can only choose one use, not both JK3 and JK4)
- JK5 : Light curtain 1 TX input (Sync line 1, +24V, sync line 2, empty pin, TEST, empty pin, 0V, GROUND)
- JK6 : Light curtain 1 RX input (Sync line 1, +24V, sync line 2, EDM, OSSD 1, OSSD 2, 0V, GROUND)
- JK7 : Light curtain 2 TX input
(Sync line 1, +24V, sync line 2, empty pin, TEST, empty pin, 0V, GROUND)(GCM-02, GCM-02D)
- JK8 : Light curtain 2 RX input
(Sync line 1, +24V, sync line 2, EDM, OSSD 1, OSSD 2, 0V, GROUND)(GCM-02, GCM-02D)
- JK10 : Inching mode, Warning output B contact (NC)(One of the key switches ON)
- JK11 : Inching mode, Warning output A contact (NO)(One of the key switches ON)

011 · TW Multi-module

- DC 24V power supply
- Double safety emergency stop
- External Monitoring (EDM).
- Manual reset/automatic reset.
- Up to 2 sets of A contact (NO) or B contact (NC) output.
- MUTE Function.
- Use the key to turn on the MUTE mode, and let the light curtain to bypass.
- Plastic shell.

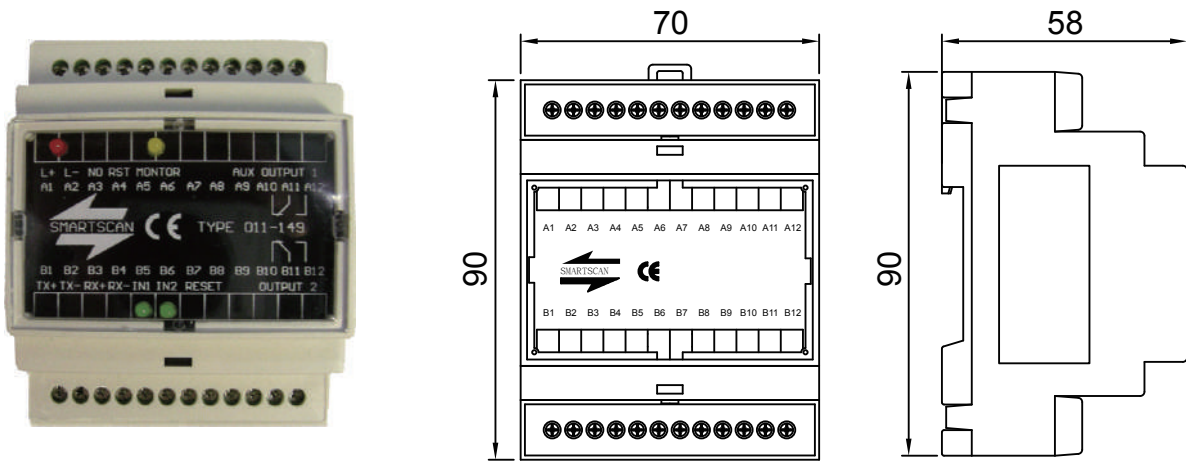
011 Multi-module General Specifications

Module	011-149	011-151	011-160
Control the number of light curtains	1		2
Power supply	DC 24V		
Reaction time	20ms		
Double safety emergency stop	X	ESA/ESB	
External Monitoring (EDM)	Loop contact		
RESET	Manual reset/automatic reset		
Power consumption	DC 100mA		DC 150mA
Input signal	PNP signal * 2		
RELAY	2A (NO*2) 、 2B (NC*2)	2A (NO*2)	
MUTE input	X	+24V DC	X
MUTE output	X	+24V DC 500mA	X
MUTE ON/OFF	X		
Ambient temperature	0°C to +50°C		
Enclosure rating	IP40		
Appearance	70mm*58mm*90mm Plastic shell		

TW Multi-module General Specifications

Module	TW-100	TW-101	TW-102
Control the number of light curtains	1	2	
Power supply	DC 24V		
Reaction time	20ms		
Double safety emergency stop	ESA/E-STOP		
External Monitoring (EDM)	X		
RESET	Manual reset/automatic reset		
Power consumption	DC 100mA	DC 150mA	
Input signal	PNP signal*2		
RELAY	2A (NO*2) 、 2B (NC*2)	2A (NO*2)	
MUTE input	+24V DC		
MUTE output	+24V DC 500mA		
MUTE ON/OFF	Use key switch ON/OFF		X
Ambient temperature	0°C to +50°C		
Enclosure rating	IP40		
Appearance	70mm*58mm*90mm Plastic shell		

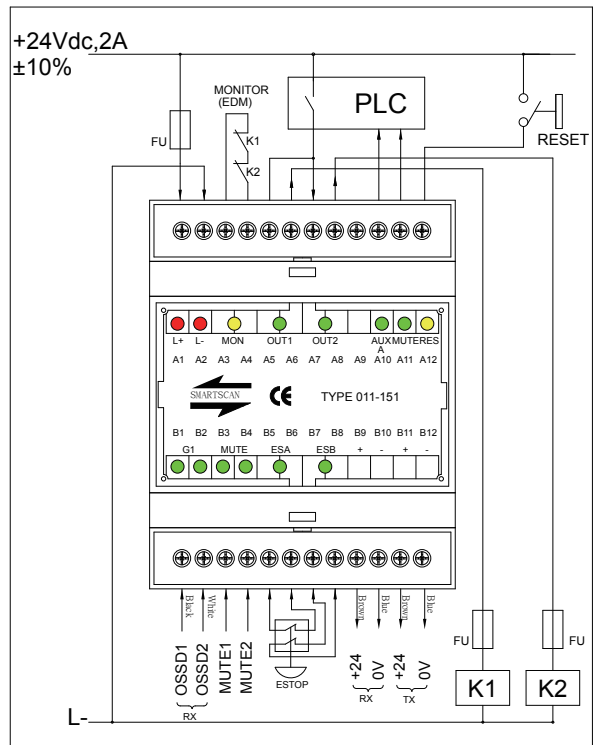
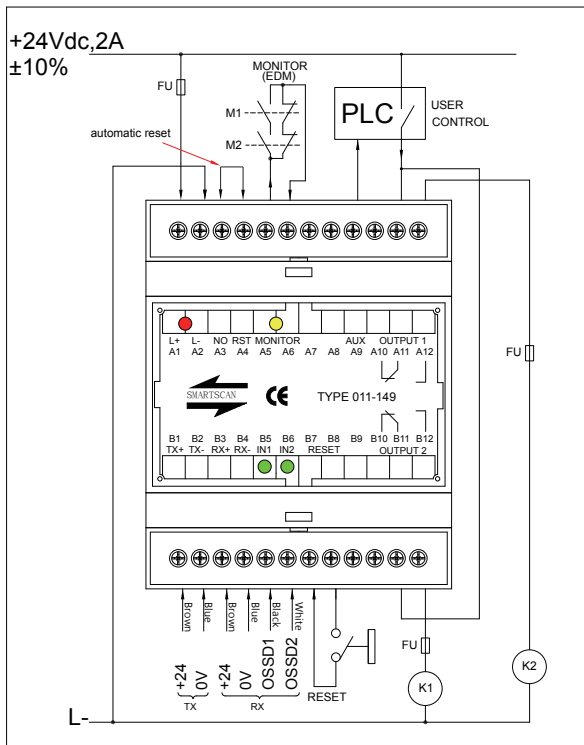
011 · TW Multi-module appearance



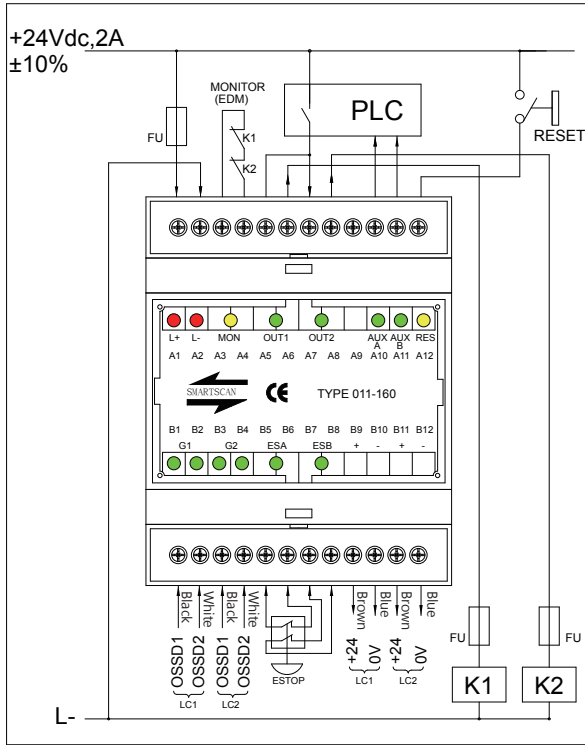
011 · TW Multi-module Electric Connection

011-149

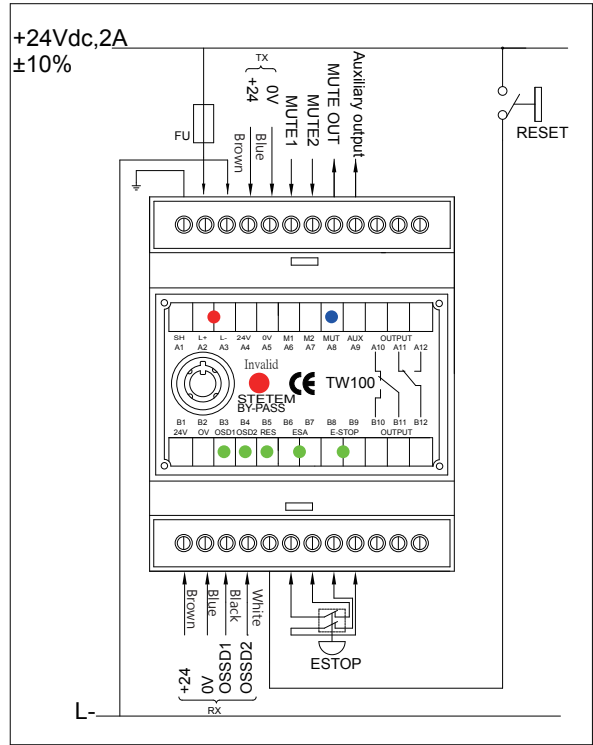
011-151



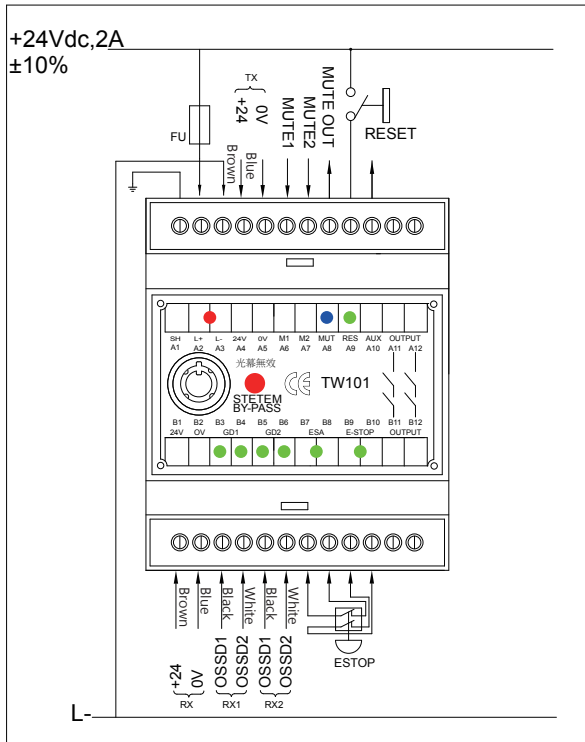
011-160



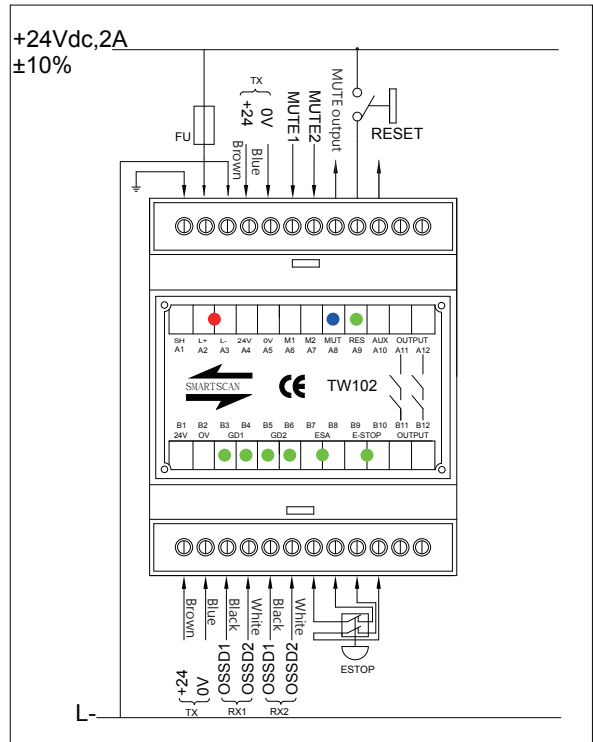
TW100



TW101



TW102



SAFETY LIGHT CURTAIN



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