

T2系列

機械安全防護裝置

應用領域

- 射出成型機
- 機械手生產線
- 危險性較低、中等級之自動化金屬成型與各類型製造線自動倉儲
- 包裝線
- 醫療設備
- 半導體設備
- 面板設備
- 食品機械
- 工具機產業設備
- 汽車產業設備

簡介

T2 系列安全光幕光學設計架構精簡又符合國際安全標準，光幕整體也符合國際安全標準 IEC61496-1 與 IEC61496-2 TYPE 2 之安全要求，並取得歐洲知名驗證機構之符合證書。

採用非同步線接線的方式免除額外的配線，特殊的光電通訊方式又可避免一般光電感應器之光學串擾問題，而達到以線同步通訊光電開關之穩定程度。

外型結構精小卻強固；適於搭配機械整體外形設計，大型光幕仍保有強固之結構，額外的中間固定方式方便裝設。



特性

- 型式與種類多樣，25mm、30mm、45mm、50mm 物體偵測解析能力供客戶各項需求。
- 偵測範圍 0.5m ~ 10m。
- 偵測區域 185mm ~ 1955mm。
- IP66 防水防塵等級。
- 具自我診斷與工作狀態指示。
- 安裝與校準容易，抗外亂光性能佳。
- 品質穩定，價格優惠。

一般規格

光軸數	4 ~ 48		8 ~ 64	
偵測解析能力	50mm	45mm	30mm	25mm
偵測區域	195mm ~ 1955mm	192mm ~ 1952mm	230mm ~ 1630mm	185mm ~ 1305mm
偵測範圍	4m ~ 10m	2m ~ 5.5m	0.5m ~ 2.5m	0.5m ~ 2.5m
反應時間	20msec (不包含繼電器開關時間)			
操作溫度	0°C 至 +50°C			
防水防塵等級	IP66 防護程度			
電源供應	24VDC ± 20% · 1.5A (MAX)			
消耗功率	發射端 200mA + 接收端 200mA + OSSD Output (500mA max.)			
光幕端接線接頭	M12端子型 (T型)			
外表塗裝	鋁擠型；黃色烤漆處理			
安全分類	IEC61496-1 & IEC61496-2 : TYPE 2 IEC62061 SIL1 & ISO13849-1 PLc			
輸出模式	2 組獨立安全輸出 (固態電晶體 PNP 開關；每組 500mA@24V DC)			

T2A S系列規格尺寸

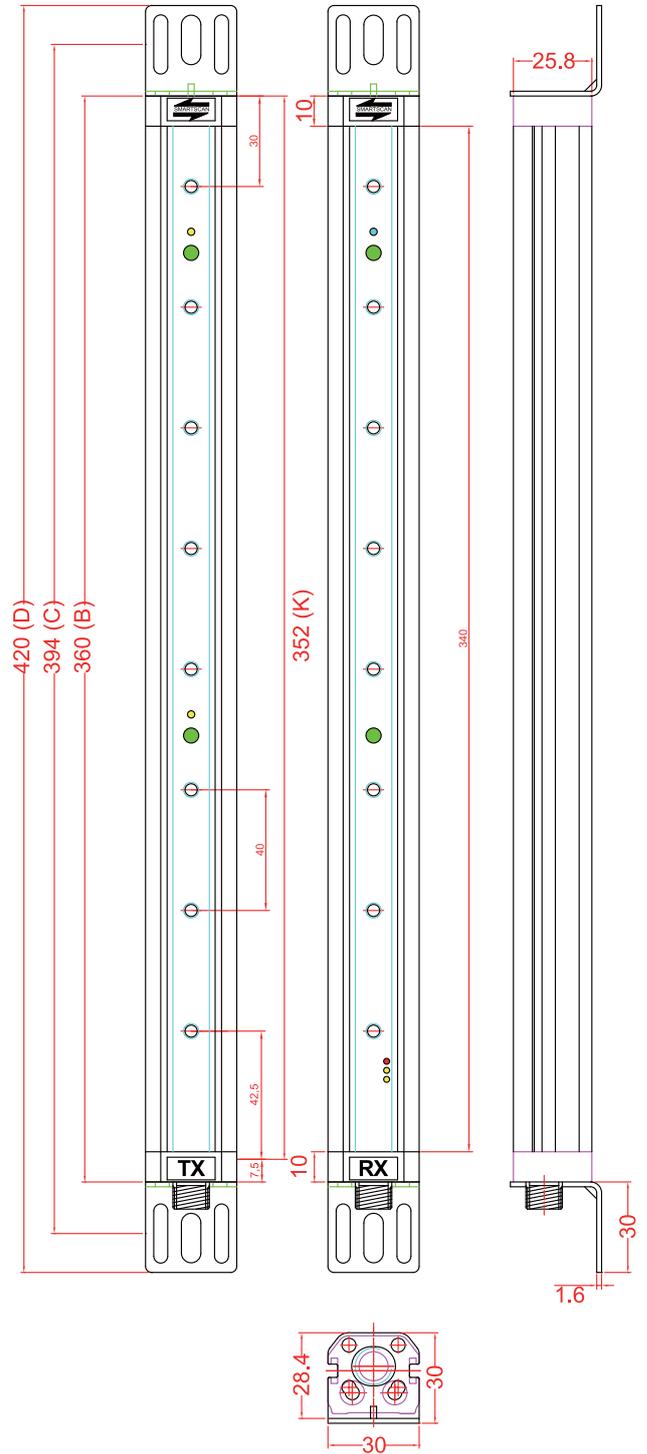
偵測解析能力 45mm			偵測範圍 0.5m 至 2.5m		
光軸數	型號	偵測區域 (K) (mm)	光幕總長 (B) (mm)	安裝長度 (C) (mm)	組合總長 (D) (mm)
4	T2A-4S	192	200	234	260
8	T2A-8S	352	360	394	420
12	T2A-12S	512	520	554	580
16	T2A-16S	672	680	714	740
20	T2A-20S	832	840	874	900
24	T2A-24S	992	1000	1034	1060
28	T2A-28S	1152	1160	1194	1220
32	T2A-32S	1312	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 系列規格尺寸

偵測解析能力 45mm			偵測範圍 2m 至 5.5m		
光軸數	型號	偵測區域 (K) (mm)	光幕總長 (B) (mm)	安裝長度 (C) (mm)	組合總長 (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

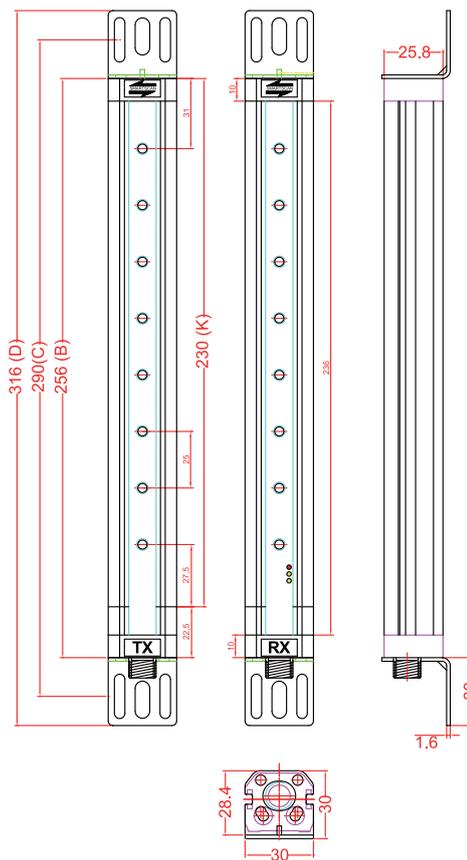
T2A L系列規格尺寸

偵測解析能力 50mm			偵測範圍 4m 至 10m		
光軸數	型號	偵測區域 (K) (mm)	光幕總長 (B) (mm)	安裝長度 (C) (mm)	組合總長 (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



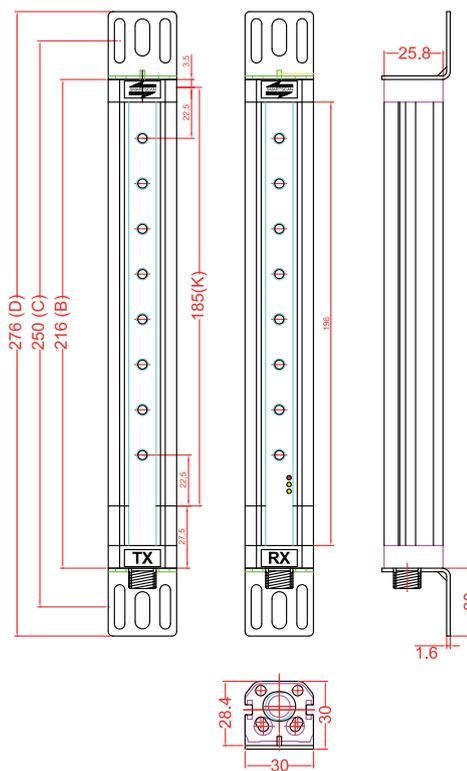
T2B S系列規格尺寸

偵測解析能力 30mm			偵測範圍 0.5m 至 2.5m		
光軸數	型號	偵測區域 (K) (mm)	光幕總長 (B) (mm)	安裝長度 (C) (mm)	組合總長 (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



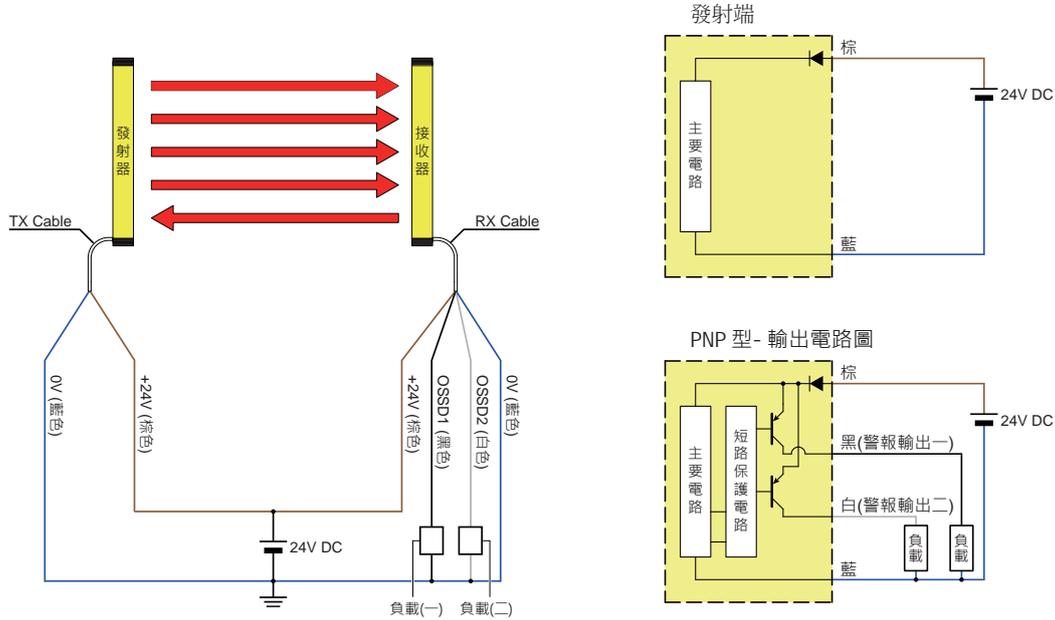
T2C S系列規格尺寸

偵測解析能力 25mm			偵測範圍 0.5m 至 2.5m		
光軸數	型號	偵測區域 (K) (mm)	光幕總長 (B) (mm)	安裝長度 (C) (mm)	組合總長 (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
28	T2C-28S	585	616	650	676
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



電氣連接

輸入輸出電路	
(1) 電源部分：	提供+24V DC 之額定動力予接發射與接收單元 (棕色接 +24V，藍色接 0V)，為了避免受到感應突波電源之干擾，建議使用獨立之電源模組，並建議機殼接地。
(2) 輸出部分：	T2 系列光幕有兩組獨立之電晶體 (PNP) 安全輸出 OSSD1 與 OSSD2 訊號；正常動作時輸出 DC +24V 之電壓訊號 (最大輸出電流各有 500mA)。

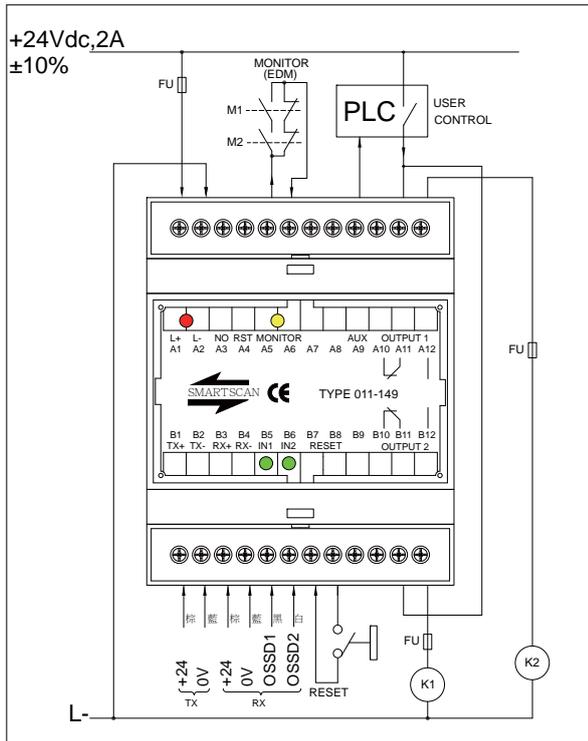


LED 指示燈號

正常狀態			
指示燈號	動作型式	意義	
發射端 (TX)	雙色 LED	綠色恆亮	光幕工作正常，此燈號綠色恆亮。
	雙色 LED	紅色恆亮	光幕遮蔽狀態下，此燈號紅色恆亮。
接收端 (RX)	雙色 LED	綠色恆亮	光幕工作正常，此燈號綠色恆亮，唯此狀態下系統兩個獨立之輸出送出 +24V 之工作電壓。
	雙色 LED	紅色恆亮	光幕遮蔽狀態下，此燈號紅色恆亮。
異常狀態			
指示燈號	動作型式	意義	
發射端 (TX)	雙色 LED	紅綠燈 閃爍	同步異常。
接收端 (RX) (出線端)	紅色 LED	固定頻率閃爍	系統檢測出有安全疑慮之狀態，系統立即閉鎖，除非將異常狀態排除並重置系統 (重新送電啟動) 外光幕並無法啟動。
黃色 LED	S1 恆亮	OSSD1 短路+24V 或 0V。	
	S2 恆亮	OSSD2 短路+24V 或 0V。	
	S1 & S2 恆亮	OSSD1 & OSSD2 短路。	

011-149 多功能安全控制模組 電氣連接

TYPE 2 安全認證



Safenet Limited
Denford Garage, Denford, Kettering, Northants, NN14 4EQ, U.K.
Tel: +44 1533 732174 Email: office@safenet.co.uk Website: www.safenet.co.uk
European Notified Body 1874

EC Type Examination Certificate
This is to certify that

Smartscan 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 2006/95/EC, as amended.

In respect of the **T2A-125, T2A-12 and T2A-12L**

Manufactured by:

Smartscan 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 tests have been conducted we confirm that
- The standards and harmonised standards have been applied correctly.
- The example representing series production of the item, complies with the essential health and safety requirements of the Directive 2006/95/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 61495-1:2012 TYPE 2 and EN 61495-2:2013 TYPE 2, and is suitable for registration regarding EN 62061:2005 S1, 1 and EN ISO 13849-1:2015 PL C.

Certificate Number: 7121051017b
Date: 12/03/2018

Signed for Safenet Limited

Peter McNicol
Peter McNicol
Technical Manager

This document covers the products of Safenet Ltd and will be returned to them if requested. The user is required to ensure it is used in accordance with the conditions of its use and to ensure it is kept safe in the event of an accident or safety issue.

Safenet Limited
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European Notified Body 1874

EC Type Examination Certificate
Annex Certificate 7121051017b

Models included:

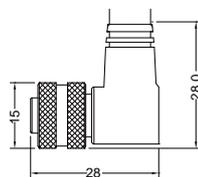
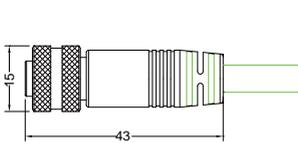
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配件規格與尺寸

連接器(1) : 180° (標準配備)

連接器(2) : 90° (選擇配備)



連接線標準配備

導線標準長度: 3m

導線選擇長度: 5m ; 10m

TX: 三芯 (灰色)

RX: 四芯 (黑色)

固定支架

