

T2F 系列

機械安全防護裝置

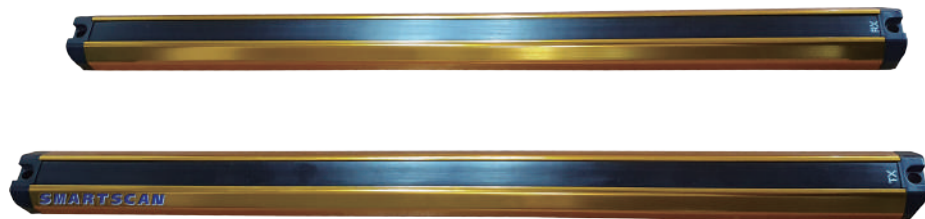
應用領域

- 電路板製程設備
- 半導體製程設備
- 面板製程設備
- 自動化設備

簡介

T2F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。

外型輕薄，適用於空間狹小之安裝位置，如半導體產業、電路板產業、面板產業等各式製程設備。



特性

- 型式與種類多樣，14mm、24mm
物體偵測解析能力供客戶各項需求。
- 偵測區域 154mm ~ 1264mm。
- 對照距離 0.4m ~ 2m。
- P62 防水防塵等級。
- 外型輕薄、安裝簡易。
- 金屬外殼、陽極處理。



TD0401BT

一般規格

光軸數	14 ~ 124	7 ~ 62
偵測解析能力	14mm	24mm
偵測區域	154mm ~ 1254mm	164mm ~ 1264mm
偵測範圍	0.4m ~ 2m	0.4m ~ 2m
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	IP62 防護程度	
電源供應	24VDC $\pm$ 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	直接出線式；分離端子式(M8)	
外表塗裝	鋁擠型；黃色陽極處理	
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)	

T2F 系列規格尺寸

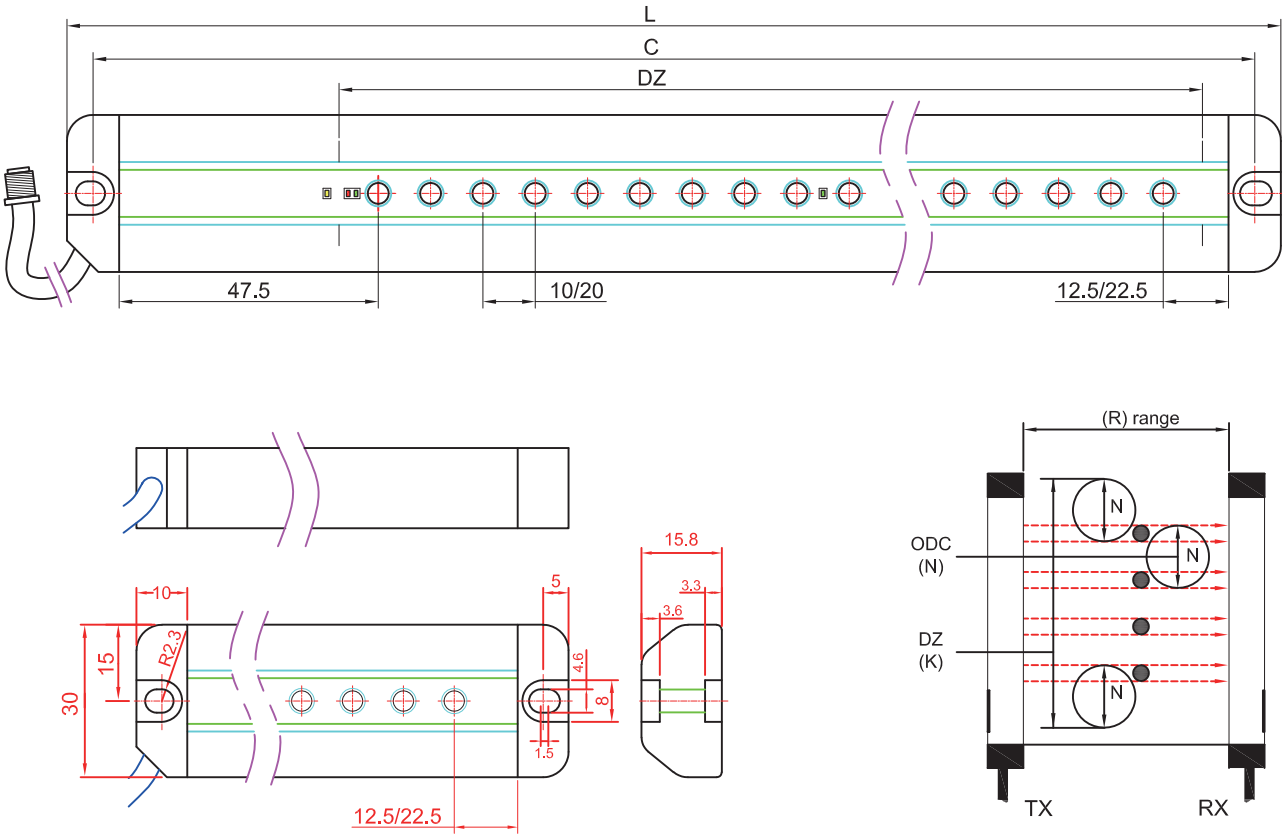
偵測解析能力 14mm		偵測範圍 0.4m 至 2m		
光軸數	型號	偵測區域 (DZ) (mm)	安裝長度 (C) (mm)	組合總長 (L) (mm)
14	T2F-1014	154	200	210
24	T2F-1024	254	300	310
34	T2F-1034	354	400	410
44	T2F-1044	454	500	510
54	T2F-1054	554	600	610
64	T2F-1064	654	700	710
74	T2F-1074	754	800	810
84	T2F-1084	854	900	910
94	T2F-1094	954	1000	1010
104	T2F-10104	1054	1100	1110
114	T2F-10114	1154	1200	1210
124	T2F-10124	1254	1300	1310

▶ 其他尺寸請洽斯邁德科技

T2F 系列規格尺寸

偵測解析能力 24mm		偵測範圍 0.4m 至 2m		
光軸數	型號	偵測區域 (DZ) (mm)	安裝長度 (C) (mm)	組合總長 (L) (mm)
7	T2F-2007	164	200	210
12	T2F-2012	264	300	310
17	T2F-2017	364	400	410
22	T2F-2022	464	500	510
27	T2F-2027	564	600	610
32	T2F-2032	664	700	710
37	T2F-2037	764	800	810
42	T2F-2042	864	900	910
47	T2F-2047	964	1000	1010
52	T2F-2052	1064	1100	1110
57	T2F-2057	1164	1200	1210
62	T2F-2062	1264	1300	1310

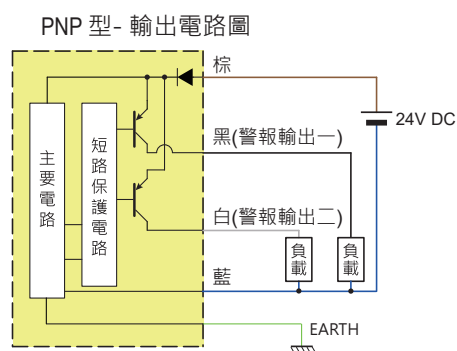
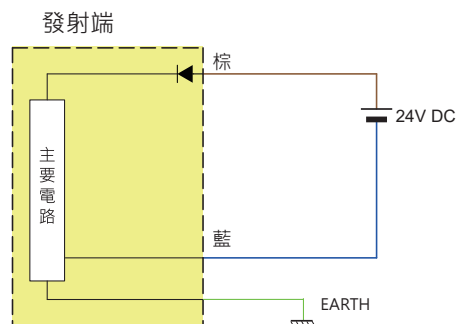
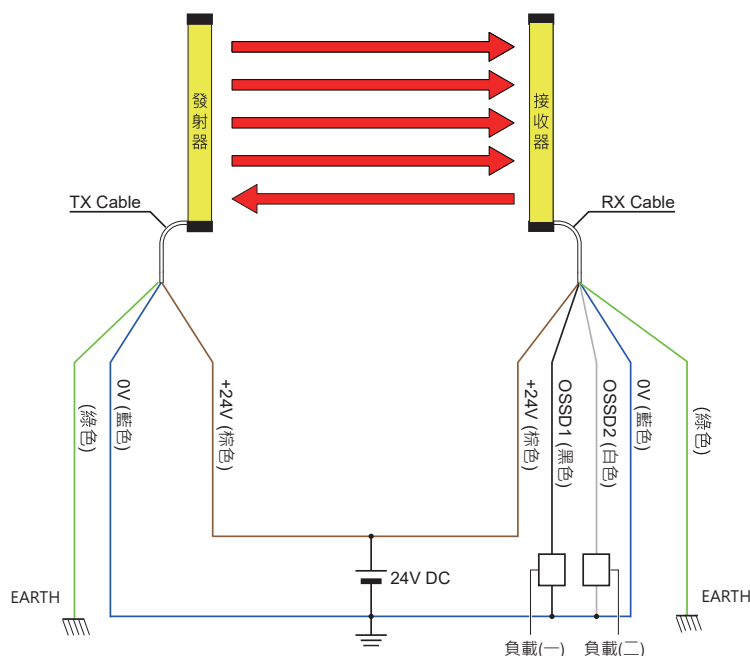
▶ 其他尺寸請洽斯邁德科技



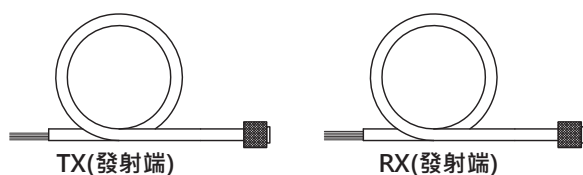
電氣連接

► 詳細安裝方式請參照操作手冊

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：	T2F 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)。

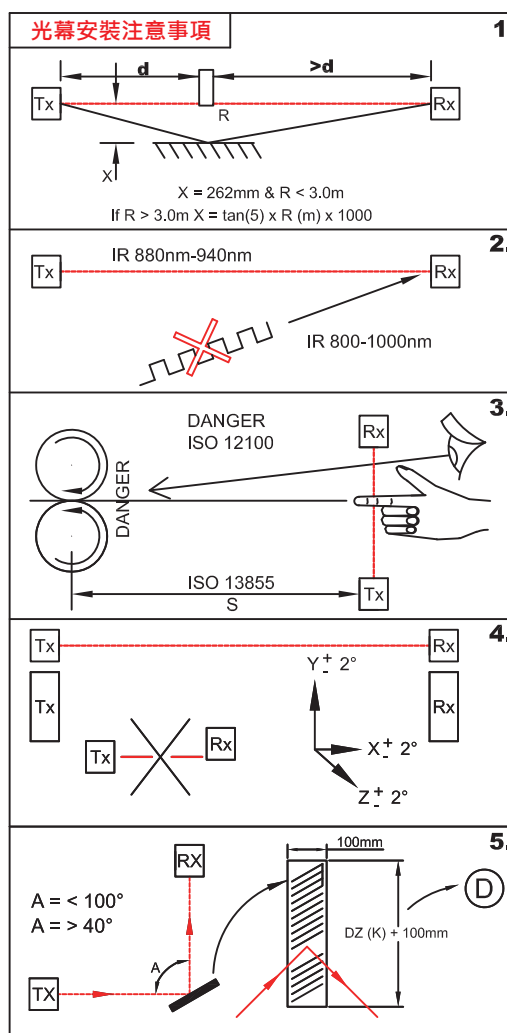


配件規格與尺寸



T2F Series - M8 端子連接線	
線材型號	M8 端子連接線內容
T2F-3M-180-RX	T2F series cable 3M (接收端)
T2F-5M-180-RX	T2F series cable 5M (接收端)
T2F-10M-180-RX	T2F series cable 10M (接收端)
T2F-15M-180-RX	T2F series cable 15M (接收端)
T2F-3M-180-TX	T2F series cable 3M (發射端)
T2F-5M-180-TX	T2F series cable 5M (發射端)
T2F-10M-180-TX	T2F series cable 10M (發射端)
T2F-15M-180-TX	T2F series cable 15M (發射端)

※ 若選擇直接出線方式則不需選擇連接端子線



TYPE 2 安全認證



Safenet Certification Services Ltd.

Ducart Suite, Castletroy Park Commercial Campus, Limerick, V94 Y6FD, Ireland

Tel: +353 61 50 2046 e-mail: office@safenets.ie Website: www.safenets.ie

European Notified Body 2805

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 2006/42/EC as amended.

In respect of the T2F-1014

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 information.
- Having verified that the appropriate tests have been conducted.
 - The standards and transposed standards have been applied correctly.
 - The example representing series production of the item, complies with the essential health and safety requirements of the Directive 2006/42/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 IEC 61496-1:2020 TYPE 2 and EN IEC 61496-2:2020 TYPE 2, and is suitable for applications regarding EN IEC 62061:2021 SIL 1 and EN ISO 13849-1:2015 PL C.

Certificate Number: 6028051121 version 2

Date: 04/03/2022 Expiry Date: 11/01/2027

Signed for Safenet Certification Services Ltd.

Peter McNicol
Technical Manager

This Document remains the property of Safenet Certification Services Ltd and will be returned to them if so requested. The client is required to request a review to ensure continued compliance of the machinery on a 5 yearly basis to check for changes in the state of the art and validity of the certificate.



Safenet Certification Services Ltd.

Ducart Suite, Castletroy Park Commercial Campus, Limerick, V94 Y6FD, Ireland

Tel: +353 61 50 2046 e-mail: office@safenets.ie Website: www.safenets.ie

European Notified Body 2805

EC Type Examination Certificate

Annex Certificate 6028051121 version 2

Models included:

T2A S series (45mm ODC):
T2A-4S, T2A-8S, T2A-12S, T2A-16S, T2A-20S, T2A-24S, T2A-28S, T2A-32S, T2A-36S, T2A-40S, T2A-44S, T2A-48ST2A series (45mm ODC):
T2A-4, T2A-8, T2A-12, T2A-16, T2A-20, T2A-24, T2A-28, T2A-32, T2A-36, T2A-40, T2A-44, T2A-48T2A L series (50mm ODC):
T2A-4L, T2A-8L, T2A-12L, T2A-16L, T2A-20L, T2A-24L, T2A-28L, T2A-32L, T2A-36L, T2A-40L, T2A-44L, T2A-48LT2A S Perimeter series:
T2A-8S-PRM, T2A-12S-PRM, T2A-16S-PRMT2A Perimeter series:
T2A-8-PRM, T2A-12-PRM, T2A-16-PRMT2A L Perimeter series:
T2A-8L-PRM, T2A-12L-PRM, T2A-16L-PRMT2B S series (30mm ODC):
T2B-8S, T2B-12S, T2B-16S, T2B-20S, T2B-24S, T2B-28S, T2B-32S, T2B-36S, T2B-40S, T2B-44S, T2B-48S, T2B-52S, T2B-56S, T2B-60S, T2B-64ST2C S series (25mm ODC):
T2C-8S, T2C-12S, T2C-16S, T2C-20S, T2C-24S, T2C-28S, T2C-32S, T2C-36S, T2C-40S, T2C-44S, T2C-48S, T2C-52S, T2C-56S, T2C-60S, T2C-64ST2F series (14mm ODC):
T2F-1014, T2F-1024, T2F-1034, T2F-1044, T2F-1054, T2F-1064, T2F-1074, T2F-1084, T2F-1094, T2F-10104, T2F-10114, T2F-10124T2F series (24mm ODC):
T2F-2007, T2F-2012, T2F-2017, T2F-2022, T2F-2027, T2F-2032, T2F-2037, T2F-2042, T2F-2047, T2F-2052, T2F-2057, T2F-2062

This Document remains the property of Safenet Certification Services Ltd and will be returned to them if so requested. The client is required to request a review to ensure continued compliance of the machinery on a 5 yearly basis to check for changes in the state of the art and validity of the certificate.

指示燈號

接收端(RX)燈號

No.	指示燈號	內容
F1	綠燈恆亮	光幕正常無遮蔽
	綠燈不亮	光幕被遮蔽
F3	紅燈恆亮	光幕安全訊號輸出關閉
	紅燈不亮	光幕安全訊號輸出啟動
	紅燈閃爍	光幕已鎖定

接收端(TX)燈號

No.	指示燈號	內容
F2	綠燈恆亮	光幕正常無遮蔽
	綠燈不亮	光幕被遮蔽
P1	紅燈恆亮	發射端(TX)電源啟動

光幕指示燈號循環: 5 msec

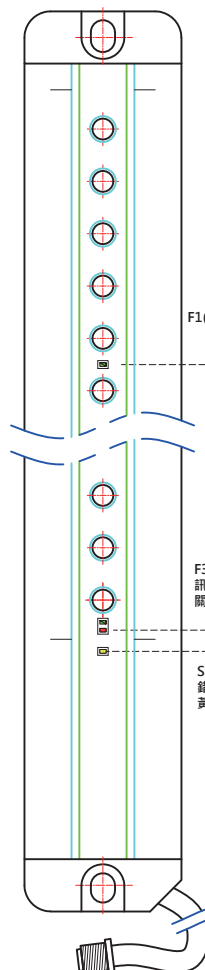
光幕異常代碼

No.	F3	S1	S1指示燈閃爍模式	異常內容
OK				光幕正常且持續工作
E0			持續重複	接收端(RX)內部異常錯誤 請聯絡斯邁德科技
E1			紅色LED恆亮	接收端(RX)內部異常錯誤 請聯絡斯邁德科技
E2			紅色LED恆亮	接收端(RX)內部異常錯誤 請聯絡斯邁德科技
E3			紅色LED恆亮	光幕訊號輸出對 0V 短路
E4			紅色LED恆亮	2組光幕訊號輸出不一致
E5			紅色LED恆亮	光幕訊號輸出對 +24V 短路



: LED ON = 200 msec
 : LED ON = 600 msec
 : LED OFF = 400 msec
 : LED OFF = 1400 msec, 重複循環閃爍

接收端



發射端

