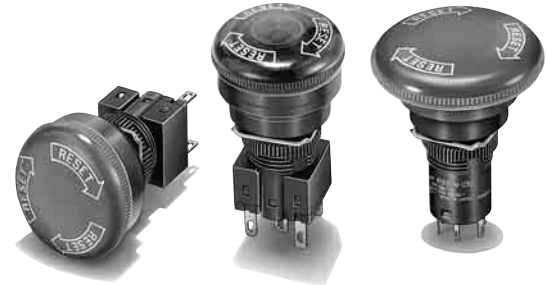


# 緊急停止用按壓開關(φ 16)

# A165E

## 分離模組型 (深度為世界最小等級)

- 使用直接開路動作機構，可在接點溶著等異常時遮斷回路。
- 符合EN418。
- 附有防止錯誤操作的安全鎖定機構。
- 兼具提高配線效率的開關模組之分離構造以及使用專用工具拆除之整體感構造的雙重優點。
- 另有3接點一體組型的產品可供選擇。(A165E-U型)



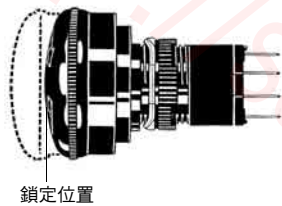
⚠ 關於按壓開關的共通注意事項。  
請參閱第402頁的「正確使用須知」。

### 特長

#### 使用安全鎖定機構以防止錯誤操作

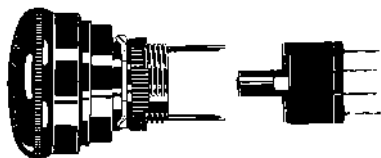
可藉由刻意的以及確實的操作方式緊急停止裝置的運轉。

即使因失誤造成物件或人體碰觸到按壓開關，只要尚未到達鎖定位置，接點就不會開離。

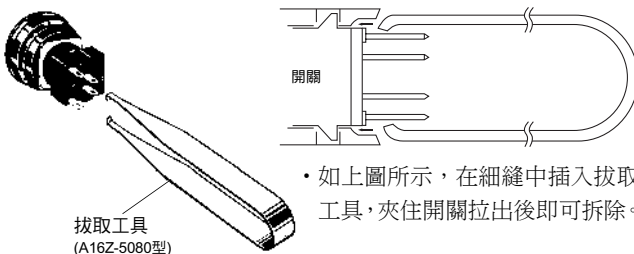


#### 兼具提高配線效率的開關模組之分離構造以及使用專用工具拆除之整體感構造的雙重優點。

- 安裝時毋須使用工具，只要一個步驟即可完成。可確實地包覆固定住開關部分。

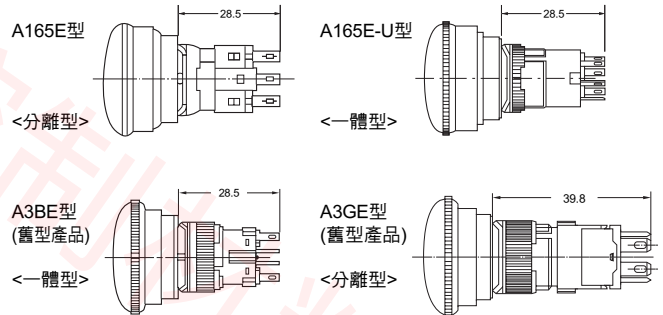


- 拆除時只要使用專用工具即可簡單地分離。

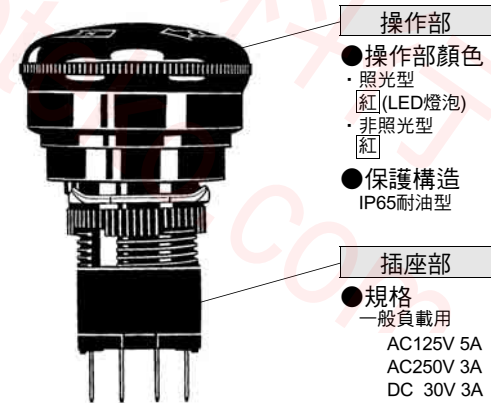


- 如上圖所示，在細縫中插入拔取工具，夾住開關拉出後即可拆除。

#### 28.5mm的分離型開關，世界最小等級的商品



#### 構造(分離型)



- 操作部**
- 操作部顏色
    - 照光型
    - 紅(LED燈泡)
    - 非照光型
    - 紅
  - 保護構造
    - IP65耐油型

- 插座部**
- 規格
    - 一般負載用
    - AC125V 5A
    - AC250V 3A
    - DC 30V 3A

緊急停止用  
按壓開關

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## 型式構成

### 機種一覽表

操作部直徑	形狀
φ 30型 φ 40型	旋轉復歸  (分離型的範例)

### 型式標準(整組搭配的訂購型式)……操作部・LED本體部整組出貨。

A 1 6 5 E - <sup>①</sup>LS - <sup>②</sup>24 D - <sup>③</sup>02 型

IP65 (耐油型)

#### ①操作部形狀・功能

記號	機能	操作部直徑
S	非照光	φ 30
LS	照光	
M	非照光	φ 40
LM	照光	

#### ②光源

記號	種類	使用電壓	額定電壓
無	非照光	—	—
24D	LED照光	DC24V	DC24V

註. 分離型(1b接點、2b接點)僅有一般負載。  
一體型(3b接點)為一般負載與微小負載共用。

#### ③接點構成

記號	機能
01	1b
02	2b
3U	3b*

\* 3b接點為接點單元一體型，一體型只有非照光型。

緊急停止用  
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**種類** (有◎記號者為標準機種，無記號者(訂購生產機種)之交貨日期請向經銷商洽詢。)

**■ 模組搭配的訂購型式**

照光方式	額定電壓	操作部顏色	操作部直徑	端子種類	接點種類	型式
LED照光	DC24V	紅色	φ 30	焊接端子	1b	◎A165E-LS-24D-01型
非照光	—				2b	◎A165E-LS-24D-02型
					1b	◎A165E-S-01型
LED照光	DC24V				2b	◎A165E-S-02型
			φ 40		1b	◎A165E-LM-24D-01型
2b	◎A165E-LM-24D-02型					
1b	◎A165E-M-01型					
2b	◎A165E-M-02型					
非照光	—	φ 30	3b	A165E-S-03U型		
		φ 40		A165E-M-03U型		

**■ 單品的訂購型式(適用於分離型)**

● 操作部

形狀	照光方式	型式
φ 30 	非照光	◎A165E-S型
	照光	◎A165E-LS型
φ 40 	非照光	◎A165E-M型
	照光	◎A165E-LM型

● 插座部

形狀	照光方式	接點構成	型式
	非照光	1b	◎A165E-01型
		2b	◎A165E-02型
	照光	1b	A165E-01L型
		2b	A165E-02L型

● 燈泡部

形狀	發光顏色	額定電壓	型式
	標準	DC5V	◎A16-5DR型
		DC12V	◎A16-12DR型
		DC24V	◎A16-24DR型
	高亮度	DC5V	◎A16-5DSR型
		DC12V	◎A16-12DSR型
		DC24V	◎A16-24DSR型

● 插座部模組

形狀	照光方式	接點構成	型式
	照光	1b	◎A165E-R-24D-01型
		2b	◎A165E-R-24D-02型

**■ 配件**

種類	形狀	分類	型式	使用時注意事項
黃色面板		黃色 φ 45	◎A16Z-5070型	請做為緊急停止用之銘板使用。
面板插頭		長方形	◎A16ZJ-3003型	可用來補足因預先增設而裁剪的面板孔。 保護構造：IP40、顏色：黑色
		正方形	A16ZA-3003型	
		圓型	◎A16ZT-3003型	
旋轉鎖緊用工具		—	◎A16Z-3004型	便於連續鎖緊時使用，請注意勿過分鎖緊。
開關部、燈泡拔取工具			◎A16Z-5080型	便於拔取開關部、燈泡時使用。

緊急停止用  
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## 額定/性能

### 安全規格認定額定

#### ●UL508、CSA C22.2 No.14、CCC (GB14048.5) (分離型)

額定電壓(V)	阻抗負載(A)
AC 125	5
250	3
DC 30	3

#### (一體型)

額定電壓(V)	阻抗負載(A)
AC 125	1
250	0.5
DC 30	1

#### ●TÜV (EN60947-5-1) (分離型)


額定電壓(V)	阻抗負載(A)
AC 250	3
DC 30	3

#### (一體型)

額定電壓(V)	阻抗負載(A)
AC 250	0.5
DC 30	1

### 認定規格

認定機關	規格	檔案編號
UL *	UL508、CSA C22.2 No.14	E41515
TÜV產品服務	EN60947-5-1、EN60947-5-5	請直接洽詢。
CQC(CCC)	GB14048.5	2003010303070678

\* 通過UL CSA C22.2 No.14規格認證，以  記號表示。

### 開關額定(分離型)

額定電壓(V)	阻抗負載(A)
AC 125	5
250	3
DC 30	3

最小適用負載DC5V 150mA

#### (一體型)

額定電壓(V)	阻抗負載(A)
AC 125	1
250	0.5
DC 30	1

最小適用負載DC5V 1mA

### LED額定(只有照光型)

額定電壓	額定電流	使用電壓
DC24	10mA	DC24V±5%

緊急停止用  
按壓開關

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### 性能

種類		緊急停止用按壓開關		
		非照光型 A165E-S型/A165E-M型	照光型 A165E-LS型/A165E-LM型	非照光型一體型 A165E-U型
容許操作頻率	機械性	最大20次/分		
	電氣性	最大10次/分		
絕緣阻抗		100MΩ以上(使用DC500V兆)		
耐電壓	同極端子間	AC1,000V 50/60Hz 1min		
	異極端子間	AC2,000V 50/60Hz 1min		
	各端子與接地線間	AC2,000V 50/60Hz 1min		
	燈泡端子間	AC1,000V 50/60Hz 1min *1	—	
振動	誤動作	10~55Hz重複振幅1.5mm (誤動作1ms以內)		
	耐久	500m/s <sup>2</sup>		
衝擊	誤動作	最大300m/s <sup>2</sup> (誤動作1ms以內)	最大150m/s <sup>2</sup> (誤動作1ms以內)	
	機械性	10萬次以上		
耐久性	電氣性	10萬次以上		
	保護構造	IP65耐油型 *2	IP65 *2	IP65耐油型 *2
觸電保護等級		Class II		
PTI (軌跡特性)		175		
污染度		3(EN60947-5-1)		
重量		16g (使用2b接點時)		
使用環境溫度		-10~+55°C (但是非結冰、結露)		
使用環境濕度		35~85%RH		
保存環境溫度		-25~+65°C (但是非結冰、結露)		

\*1. LED為非安裝狀態下的規格。  
(請於未安裝LED的狀態下進行測試。)

\*2. 面板前方的保護構造。

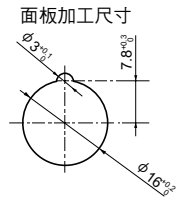
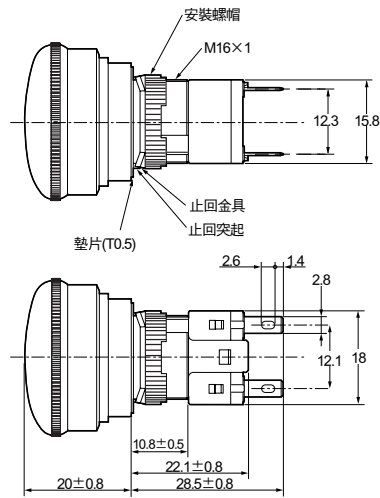
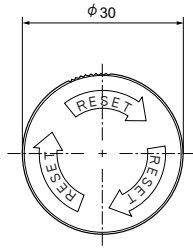
### 動作特性

項目	種類	規格值(分離型)	規格值(一體型)
動作所需的力	OF 最大	14.7N	14.7N
復歸所需的力	RF 最大	0.1N·m	0.1N·m
鎖定前移動	PT	3.5±0.5mm	3±0.5mm

外觀尺寸

(單位:mm)

A165E-S型/非照光型  
φ30



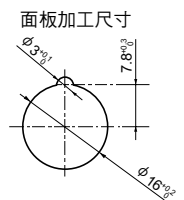
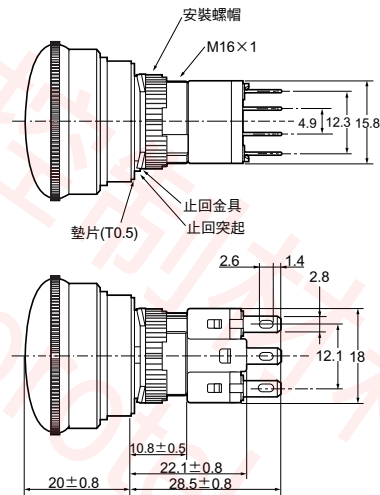
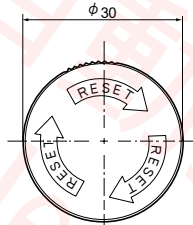
- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸時應為進行外觀處理後之尺寸。
- 安裝面板的厚度應為0.5-3.2mm。

緊急停止用  
按壓開關

A165E-LS型/照光型  
φ30

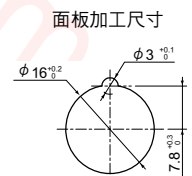
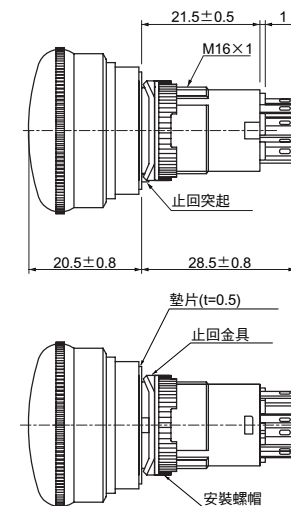
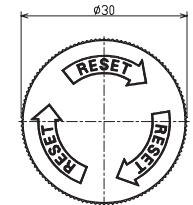
A165E

A22E



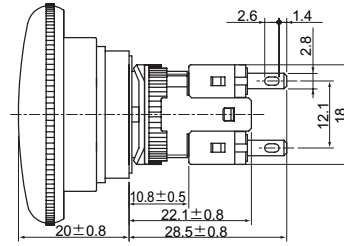
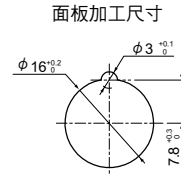
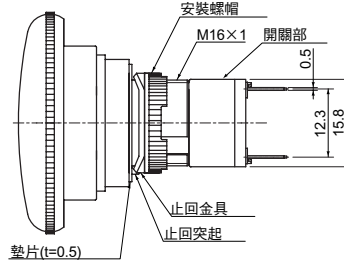
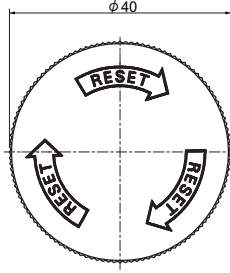
- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸時應為進行外觀處理後之尺寸。
- 安裝面板的厚度應為0.5-3.2mm。

A165E-S-03U型/非照光型、一體型緊急停止  
φ30



- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸時應為進行外觀處理後之尺寸。
- 安裝面板的厚度應為0.5-3.2mm。

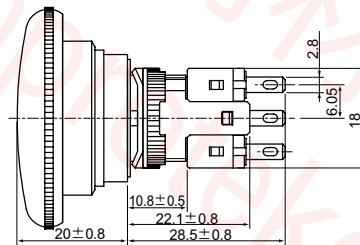
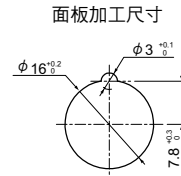
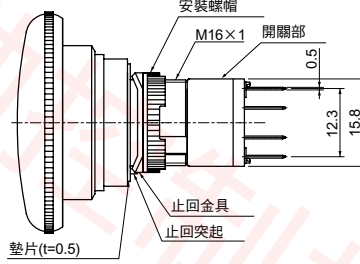
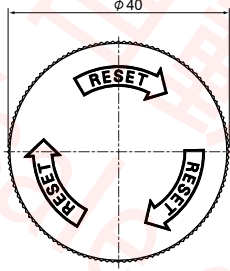
A165E-M型/非照光型  
φ 40



- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸時應為進行外觀處理後之尺寸。
- 安裝面板的厚度應為0.5~3.2mm。

緊急停止用  
按壓開關

A165E-LM型/照光型  
φ 40

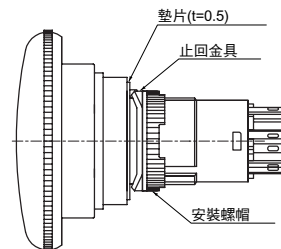
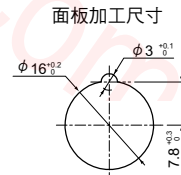
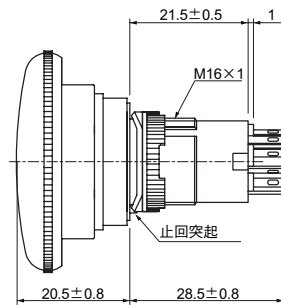
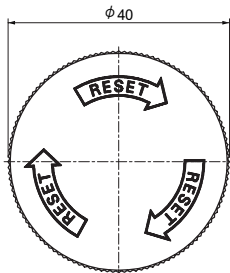


- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸時應為進行外觀處理後之尺寸。
- 安裝面板的厚度應為0.5~3.2mm。

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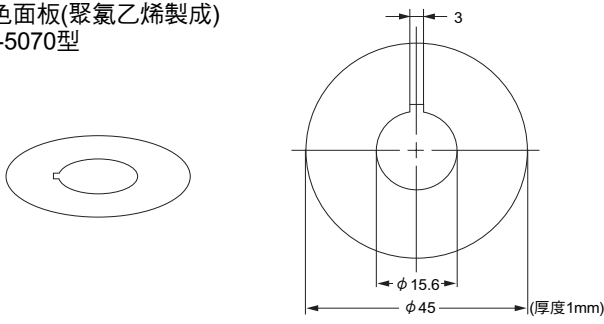
A165E-M-03U型/一體型緊急停止  
φ 40



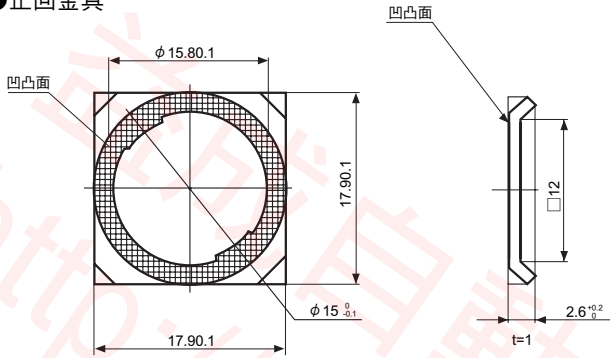
- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸時應為進行外觀處理後之尺寸。
- 安裝面板的厚度應為0.5~3.2mm。

■配件

●黃色面板(聚氯乙烯製成)  
A16Z-5070型



●止回金具

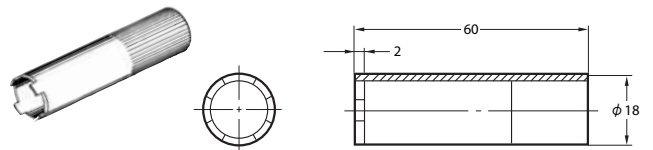


●面板插頭

●選擇合於面板的設計，再從面板前面安裝，面板的裁剪尺寸與開關相同。

長方形	正方形	圓型

●旋轉鎖緊用工具  
A16Z-3004型

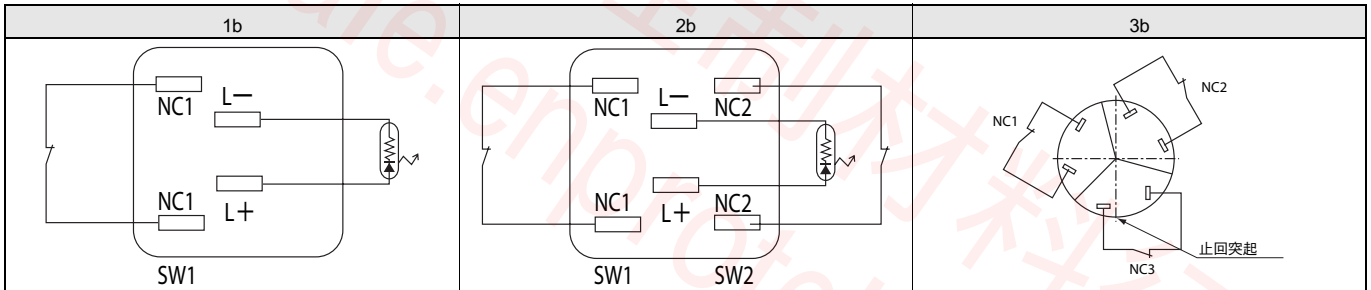


緊急停止用  
按壓開關

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■端子配置



註. 非照光型未內建L+、L-端子。

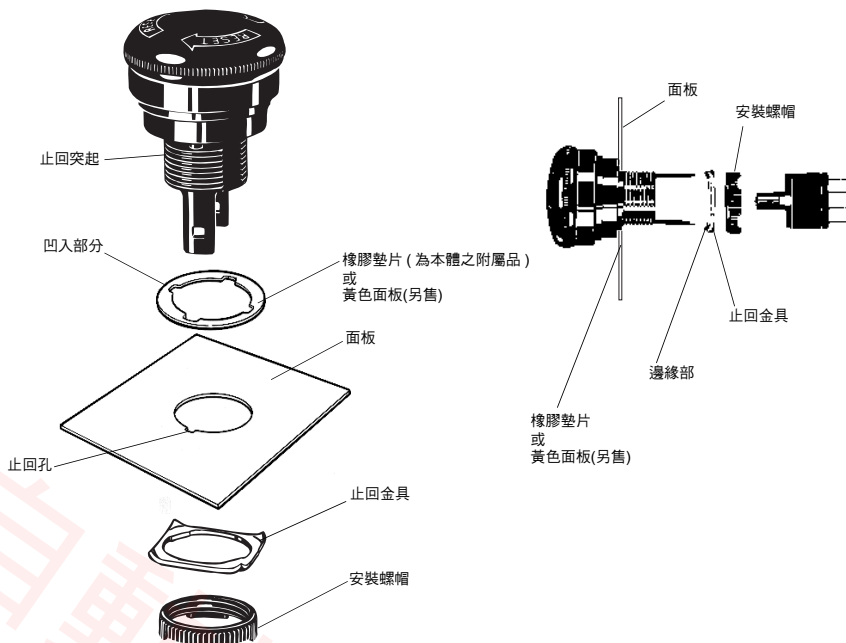
## 使用時注意事項

### ●關於面板的安裝(分離型的範例)

安裝本體模組後，從面板背面以單一步驟安裝插座部。

#### ①本體模組的面板安裝方法

- 在本體模組上，從端子位置安裝橡膠墊片或是黃色面板之後，從面板前插入本體模組，再從端子位置插入止回金具、安裝螺帽加以鎖緊。
- 橡膠墊片或是黃色面板的安裝應配合凹入部份與外殼的止回突起的形狀。
- 使用黃色面板時，不需使用橡膠墊片。
- 安裝螺帽的旋轉鎖緊扭力請使用 $0.29 \sim 0.49\text{N} \cdot \text{m}$ 。
- 插入外殼時，請對準止回突起與加工孔的止回孔。
- 止回金具應對準外殼溝槽，插入時邊緣部應與面板邊緣對齊。



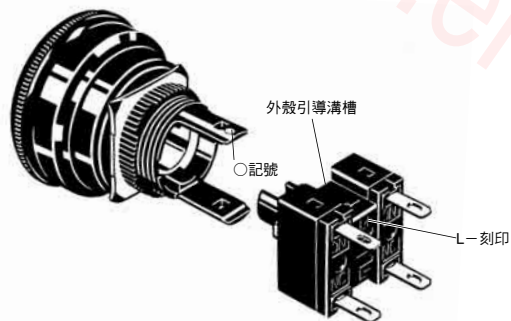
緊急停止用  
按壓開關

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A22E

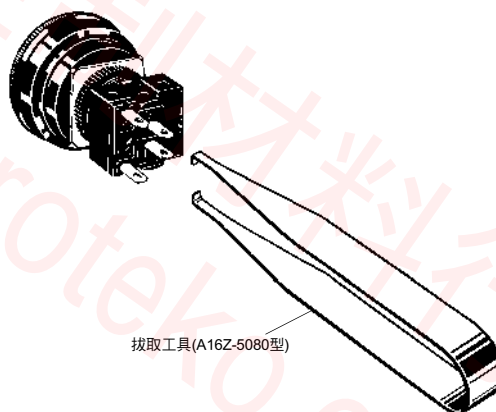
#### ②插座部的安裝方法

- 以單一步驟安裝於本體模組上。
- 與本體模組組合時具有方向性。
- 將下圖中○記號的一側與開關部、L-刻印位置的外殼引導溝槽對齊後，繼續按壓直到發出「卡嗒」聲為止。同時請注意不可有浮動的情形。



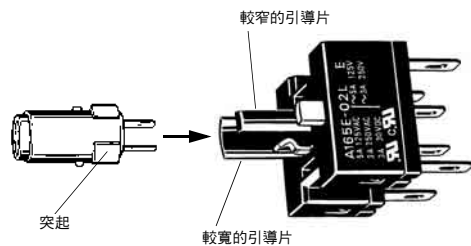
#### ③開關部的拆除方法

- 在外殼部的開關固定座部分與開關部之間插入拔取工具(A16Z-5080型)，用手指抓住後筆直拉出。



#### ④LED燈泡的安裝方法

- 依照圖面所示的固定方向，將燈泡部的突起與外殼部之較窄的引導片對準後才可插入。





正確使用須知

使用注意事項

●關於安裝

- 請務必於關閉電源後再進行開關的安裝、拆除、配線以及維修作業，否則可能有造成觸電及導致火災的危險。
- 安裝環的旋轉鎖緊扭力請使用0.29~0.49N·m。

●關於配線

- 配線時請使用符合印加電壓、通電電流之電線尺寸。以焊料接合時務必依照下列條件確實。在不完全的接合狀態下使用可能會有引起異常發熱及火災的危險。

- ①手動焊接時：30W 5秒以內
- ②自動焊接時：240°C 3秒以內

另外，在接合後的一分鐘內不可施加任何外力。

- 助熔劑請使用非腐蝕性的松香水。
- 配線時，電線的包覆部分不可接觸到模組部分。若採用電線包覆部分接觸到模組部分的配線方式，請使用耐熱溫度高於100°C以上的電線。
- 完成開關的配線作業後，請保持適當的絕緣距離。

●關於使用環境

- IP65型設有防滴水保護構造，因此面板前側的所有方向不會因受到直接水氣噴流而造成有害影響。

●關於微小負載狀態下的使用方法

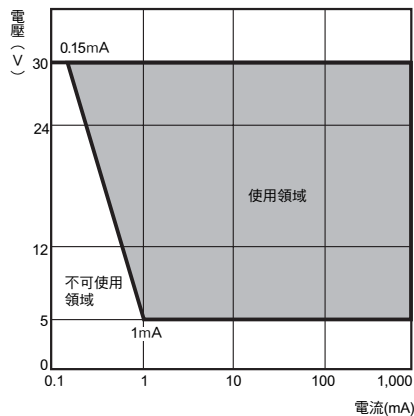
- 開閉時發生突入電流等負載時，接點會產生劇烈的耗損造成壽命上的減損，因此請視需要插入接點保護迴路。

- 一體型的一般負載(125V 1A、250V 0.5A)雖與微小負載為共用方式，加壓於一般負載後，即無法使用微小負載。接點表面亦變粗糙，損及微小負載的開閉的接觸信賴性。

- 最小適用負載以N水準為參考值，表示信賴水準為60% ( $\lambda_{60}$ )時的故障水準程度。

(JIS C5003)

$\lambda_{60} = 0.5 \times 10^{-6}$ 次表示，在信賴水準為60%時，推定  $\frac{1}{2,000,000}$  次以下的故障。



●關於LED

- 內建LED電流限制用阻抗，因此不需要外加阻抗。

額定電壓	內建限制阻抗
DC24V	2,000Ω

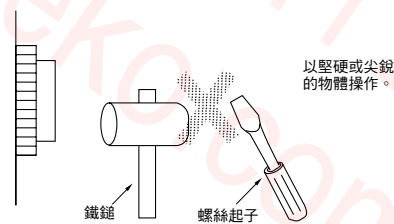
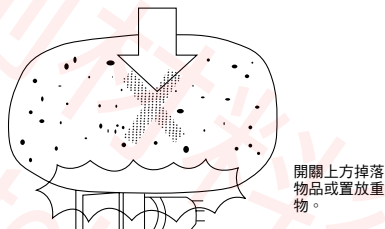
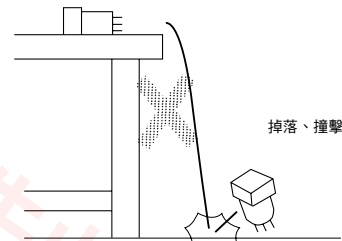
●關於操作扭力

- 操作扭力的旋轉方向請使用0.49N·m以內之數值。
- 請勿從操作按鈕的橫向方向施加過大的重量或拉扯。可能會造成損壞。

●其他

- IP65耐油型使用的橡膠材質為NBR。雖然評估標準為一般所使用的切削油、冷油，但也有不可使用特殊油類的情形，請另行洽詢。
- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸應為進行外觀處理後之尺寸。
- 開關構造上可能會有由於劇烈振動或衝擊而發生動作不良或損壞的情形。

此外，開關大多為樹脂產品，因此在碰觸到尖銳的物體時可能造成刮傷，特別是操作部的刮傷會對外觀上或動作上造成影響。使用開關時請注意不可隨意丟放或向下掉落。



緊急停止用  
按壓開關

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# 緊急停止用按壓開關(φ22/φ25)

## A22E

### φ22與φ25通用

- 附有接點溶著時遮斷回路的直接開路動作機構 ⊖
- 附有防止錯誤操作的安全鎖定結構
- 使用手柄即可簡單地將模組拆除
- 開關部採取3列橫向安裝方式提昇配線效率
- 標準配備內含附手指保護型的開關部
- 可任選開型(叉型)、閉型(圓型)來安裝壓著端子
- IP65耐油型(非照光型)/IP65(照光型)

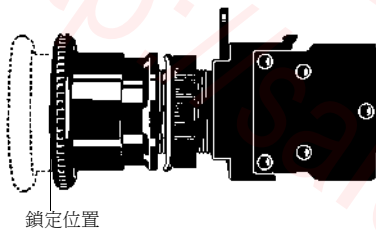
⚠ 關於按壓開關的共通事項，請參照「BEST OMRON第17版(型錄編號:SA00-005)」或本書418頁的「正確使用須知」。



緊急停止用  
按壓開關

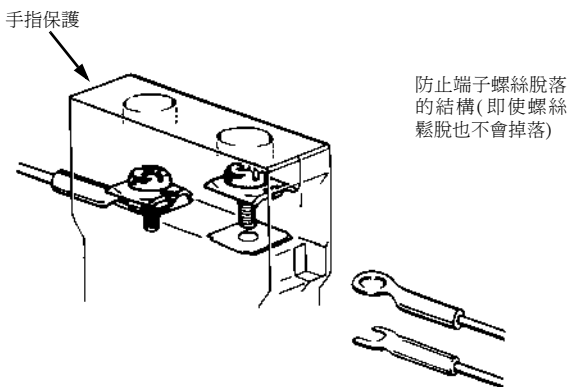
### 特長

使用安全鎖定機構以防止錯誤操作

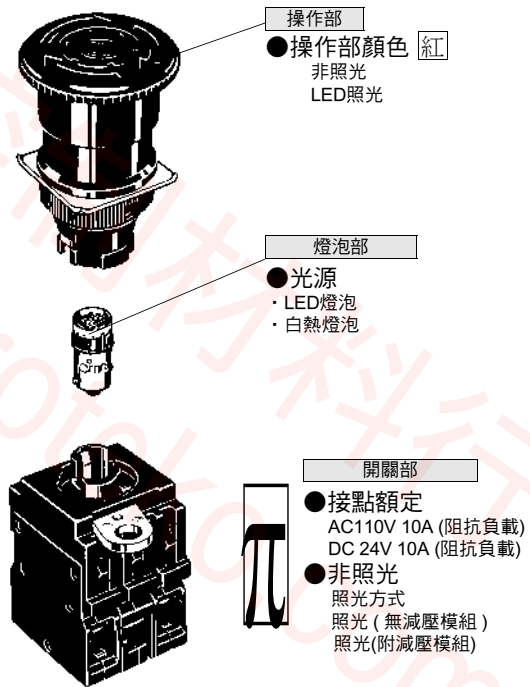


可藉由刻意的以及確實的操作方式緊急停止裝置的運轉。即使因失誤造成物件或人體碰觸到按壓開關，只要尚未到達鎖定位置，接點就不會開離。

採用預防觸電的手指保護結構，再加上防止端子螺絲脫落的結構，無論是開型/閉型的壓著端子均可進行連接



### 構成



(上圖的範例為照光型。)

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## 型式構成

■型式標準(整組訂購方式)……操作部、燈泡部(僅限照光型)、開關部整套交貨。

A 2 2 E <sup>①</sup>L - <sup>②</sup>M - <sup>③</sup>24 A - <sup>④</sup>0 1 <sup>⑤</sup>

### ①照光/非照光

記號	種類
無	非照光
L	照光 *

\* 僅限中型旋轉復歸(操作部記號: M)

### ②操作部

記號	尺寸	機能
MP	中型 φ40	按壓拉出式
LP	大型 φ60	
S	小型 φ30	
M	中型 φ40	旋轉復歸
L	大型 φ60	鑰匙復歸
SK	小型 φ30	
MK	中型 φ40	

### ④接點構成

記號	構成
01	1b
11	1a1b
02	2b

### ⑤

記號	構成
無	開關單體
B	內建控制盒

### ⑤光源

#### 無減壓模組

記號	種類	使用電壓
無	非照光	—
6D	LED	DC6V
6A		AC6V
12A		AC/DC12V
24A		AC/DC24V

#### 附減壓模組

記號	種類	使用電壓
T1	LED	AC100V
T2		AC200V

附AC/DC24V之LED

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**種類** (有◎記號者為標準機種,無記號者(訂購生產機種)之交貨日期請向經銷商洽詢。)

■ 模組搭配的訂購型式

● 非照光型

形狀	動作機能		組合型式	操作部顏色
	輸出數			
中型按壓拉出式 φ 40 (A22E-MP型)		1b	◎A22E-MP-01型	紅色
		1a1b	◎A22E-MP-11型	
		2b	◎A22E-MP-02型	
大型按壓拉出式 φ 60 (A22E-LP型)		1b	◎A22E-LP-01型	
		1a1b	◎A22E-LP-11型	
		2b	◎A22E-LP-02型	
小型旋轉復歸 φ 30 (A22E-S型)		1b	◎A22E-S-01型	
		1a1b	◎A22E-S-11型	
		2b	◎A22E-S-02型	
		2b + 1a	A22E-S-12型	
		3b	A22E-S-03型	
中型旋轉復歸 φ 40 (A22E-M型)		1b	◎A22E-M-01型	
		1a1b	◎A22E-M-11型	
		2b	◎A22E-M-02型	
		2b + 1a	A22E-M-12型	
		3b	A22E-M-03型	
大型鑰匙組旋轉復歸 φ 60 (A22E-L型)		1b	◎A22E-L-01型	
		1a1b	◎A22E-L-11型	
		2b	◎A22E-L-02型	
小型鑰匙復歸 φ 30 (A22E-SK型)		1b	◎A22E-SK-01型	
		1a1b	◎A22E-SK-11型	
		2b	◎A22E-SK-02型	
中型鑰匙復歸 φ 40 (A22E-MK型)		1b	◎A22E-MK-01型	
		1a1b	◎A22E-MK-11型	
		2b	◎A22E-MK-02型	

緊急停止用  
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● 照光型

形狀	動作機能		使用電壓	按壓鎖定旋轉復歸型 組合型式	操作部顏色
	輸出數				
緊急停止用草傘型 φ 40 (A22E型) 無減壓模組	1b	LED	DC6V	◎A22EL-M-6D-01型	紅色
			AC6V	◎A22EL-M-6A-01型	
			AC/DC12V	◎A22EL-M-12A-01型	
			AC/DC24V	◎A22EL-M-24A-01型	
	1a1b	LED	DC6V	◎A22EL-M-6D-11型	
			AC6V	◎A22EL-M-6A-11型	
			AC/DC12V	◎A22EL-M-12A-11型	
			AC/DC24V	◎A22EL-M-24A-11型	
	2b	LED	DC6V	◎A22EL-M-6D-02型	
			AC6V	◎A22EL-M-6A-02型	
			AC/DC12V	◎A22EL-M-12A-02型	
			AC/DC24V	◎A22EL-M-24A-02型	
緊急停止用草傘型 φ 40 (A22E型) 無減壓模組	1b	LED	AC100V	◎A22EL-M-T1-01型	
			AC200V	◎A22EL-M-T2-01型	
	1a1b	LED	AC100V	◎A22EL-M-T1-11型	
			AC200V	◎A22EL-M-T2-11型	
	2b	LED	AC100V	◎A22EL-M-T1-02型	
			AC200V	◎A22EL-M-T2-02型	

■ 內建控制盒組合型式

形狀	接點構成	型式
	1b	A22E-M-01B型
	1a1b	A22E-M-11B型
	2b	A22E-M-02B型

■單品訂購型式……可個別訂購操作部、燈泡部、開關部。若採用整組訂購方式而無法備齊所有的機種時，可使用本訂購型式；亦可用來做為維修零件時庫存管理的訂購方式。

●非照光型



●照光型(無減壓模組)



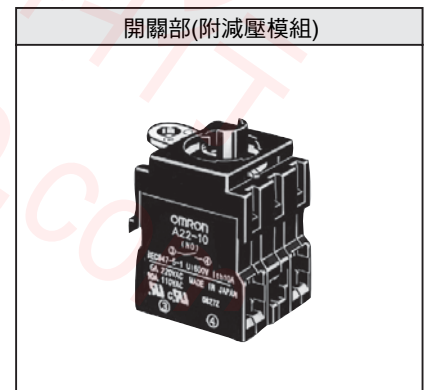
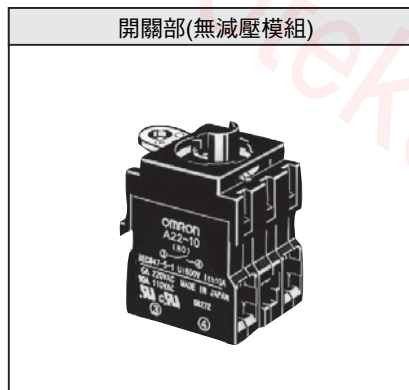
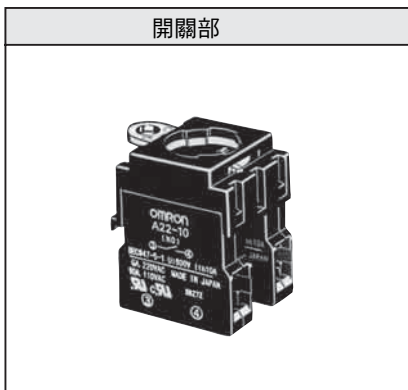
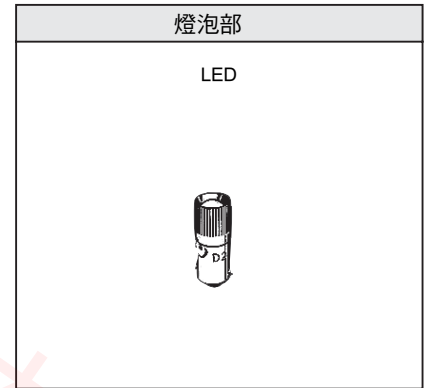
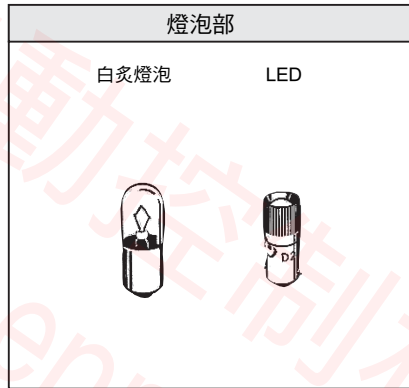
●照光型(附減壓模組)



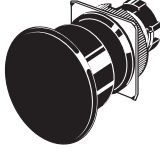




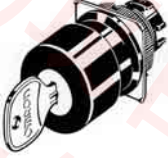

緊急停止用  
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●操作部  
非照光型

機能	密封性 形狀	IP65防油型		
		小型(φ 30)	中型(φ 40)	大型(φ 60)
按壓拉出式		—	◎A22E-MP型 	◎A22E-LP型 
旋轉復歸	◎A22E-S型 	◎A22E-M型 	◎A22E-L型 	
鑰匙復歸 (旋轉復歸)	◎A22E-SK型 	◎A22E-MK型 		—

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機能	密封性 形狀	IP65
		中型(φ 40)
旋轉復歸		◎A22EL-M型 

●燈泡部

LED

形狀	發光顏色	額定電壓	型式	
	紅色	標準	DC6V	◎A22-6DR型
			AC6V	◎A22-6AR型
			AC/DC12V	◎A22-12AR型
			AC/DC24V	◎A22-24AR型
	高亮度	AC/DC24V	◎A22-24ASR型	

註. 作為減壓照明使用時，請使用A22-24AR型。  
\* 高亮度LED之交貨期等相關事宜，請另行洽詢。

●白熾燈泡



形狀	額定電壓	型式
	DC6V	◎A22-5型
	AC14V	◎A22-12型
	AC28V	◎A22-24型
	AC130V	◎A22-H1型

●開關部(一般負載)

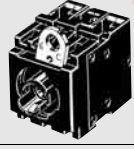
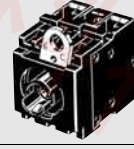
無減壓模組

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分類	非照明用		照明用	
	形狀		形狀	
動作機能	瞬間		瞬間	
	型式		型式	
一般負載用	1a	◎A22-10M型	1a	◎A22L-10M型
	1b	◎A22-01M型	1b	◎A22L-01M型
	1a1b	◎A22-11M型	1a1b	◎A22L-11M型
	2a	◎A22-20M型	2a	◎A22L-20M型
	2b	◎A22-02M型	2b	◎A22L-02M型

附減壓模組

分類	照光用AC110V		照光用AC220V	
	形狀		形狀	
動作機能	瞬間		瞬間	
	型式		型式	
一般負載用	1a	◎A22L-10M-T1型	1a	◎A22L-10M-T2型
	1b	◎A22L-01M-T1型	1b	◎A22L-01M-T2型
	1a1b	◎A22L-11M-T1型	1a1b	◎A22L-11M-T2型
	2a	◎A22L-20M-T1型	2a	◎A22L-20M-T2型
	2b	◎A22L-02M-T1型	2b	◎A22L-02M-T2型

註. 圖面表示的以2a接點為代表。  
附減壓模組請使用A22-24AR型。

■ 配件

種類	形狀	分類	型式	備註	
開關模組		1a接點	◎A22-10型	一般均附於配備中，可於追加或替換時使用。	
		1b接點	◎A22-01型		
		2a一體成型接點	◎A22-20型		
		2b一體成型接點	◎A22-02型		
照光模組		直射照光	◎A22-TN型	於變更照光方式時使用。	
		減壓照光	◎A22-T1型 ◎A22-T2型		
安裝台			◎A22-3200型	一般均附於配備中。單獨購買開關模組或照光模組等零件，於安裝時使用。	
緊急停止用雕刻板		黃底黑字 φ 60	◎A22Z-3466-1型	做為緊急停止開關的銘板使用。	
		黃底黑字 φ 90	◎A22Z-3476-1型		
		黃底黑字 φ 60	A22Z-3466-2型	做為緊急停止開關的銘板使用。	
面板插頭		圓型	◎A22Z-3530型	可用來補足因預先增設而裁剪的面板孔。顏色為黑色。	
接頭		控制盒用 電纜線直徑	φ 7~9用	A22Z-3500-1型	從塑膠材質的開關箱中拉出纜線時使用。
			φ 9~11用	A22Z-3500-2型	
φ 25用環			A22Z-R25型	安裝至口徑 φ 25的面板上時使用。(請參照第415頁)	
φ 30用樹脂附件			◎A22Z-A30型	安裝至口徑 φ 30的面板上時使用。請參照第415頁)	
固定板			◎A22Z-3380型	固定開關部的手柄時使用。	
控制盒		1孔黃色方形盒(非常停止用)	A22Z-B101Y型	樹脂材質。	
操作用鑰匙			A22K-K型	附有2支鑰匙。	
止回環			A22Z-3360型	本體配備有止回金具，本零件可在需要加強止回時使用。(請參照第415頁)	
燈泡交換工具			◎A22Z-3901型	橡膠材質，燈泡的裝卸更容易進行。	
旋轉鎖緊用工具			◎A22Z-3905型	可用來鎖緊面板背面的安裝螺帽以及拆除照光型的外蓋。	
防護環模組			◎A22Z-EG1型	配合SEMI-S2的防護環與EMERGENCY OFF銘板為一組。	
防護環			A22Z-EG2型	配合SEMI-S2/SEMATECHAPPLICATION GUIDE FORSEMI S2。請與A22E型緊急停止按壓開關一起使用。	

緊急停止用  
按壓開關

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A22E



## 額定/性能


### ■安全規格認定額定


- UL、cUL(File No.E41515) 6A 220VAC、10A 110VAC
- TÜV (EN60947-5-1) (低電壓指令) 3A 220VAC
- CCC(GB14048.5) 3A 240VAC、1.5A 24VDC

### ■認定規格

認定機關	規格	檔案編號
UL *1	UL508	E41515
TÜV產品服務	EN60947-5-1、EN60947-5-5 (直接開路動作認定)	請直接洽詢。
CQC (CCC)	GB14048.5	2003010303070635
KOSHA *2	EN60947-5-1	2004-220

註. 僅NC接點處具有直接開路動作功能。

\*1. 通過UL CSA C22.2 No.14, 具  標記。

註2. 一部分的型式已經獲得認可, 詳情請參照NO. SCHG-021A 「韓國S-mark認證的Safety component」。

### ■額定

#### ●接點(一般負載用)

額定通電電流 (A)	額定電壓 (V)	額定電流(A)			
		AC15 (誘導負載)	AC12 阻抗負載	DC13 (誘導負載)	DC12 阻抗負載
10	AC24	10	10	—	—
	110	5	10		
	220	3	6		
	380	2	3		
	440	1	2		
	DC24	—	—		
	110	—	—	0.5	2
	220	—	—	0.2	0.6
	380	—	—	0.1	0.2

註1. 額定電流值由NECA C4520的實驗條件判斷。

上述額定係依以下條件所進行的實驗決定。

環境溫度: 20±2°C

環境濕度: 65±5%RH

操作頻率: 20次/min

2. 最小適用負載DC5V 10mA

#### ●LED燈泡

額定電壓	額定電流	使用電壓
DC6V	60mA	DC6V ±5%
AC6V	60mA	AC6V ±5%
AC/DC12V	30mA	AC/DC12V ±5%
AC/DC24V	15mA	AC/DC24V ±5%

### ■性能

項目		種類	緊急停止用按壓開關	
			非照光型 A22E型	非照光型 A22EL型
容許操作 頻率	機械性		30次/min *3	
	電氣性		30次/min *3	
絕緣阻抗			100MΩ以上(使用DC500V Mega)	
耐電壓	同極端子間		AC2,500V 50/60Hz 1min.	
	各端子與接地線間		AC2,500V 50/60Hz 1min.	
振動 誤動作 *2			10~55 Hz 複振幅1.5mm (1ms以內)	
衝擊	耐久		1000m/s <sup>2</sup>	
	誤動作 *2		最大250m/s	
耐久性	機械性		30萬次以上 *3	
	電氣性		30萬次以上 *3	
使用環境溫度 *1			-20~+70°C	-20~+55°C
使用環境濕度			35~85%RH	
保存環境溫度			-40~+70°C	
保護構造			IP65 (耐油型) *4	IP65 *4
觸電保護等級			Class II	
PTI (軌跡)			175	
污染度			3 (EN60947-5-1)	

\*1. 非結冰、結露

註2. 錯誤動作作為1ms以內

註3. 設定、復歸為1次。

註4. 面板前方的保護構造。

緊急停止用  
按壓開關

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A22E

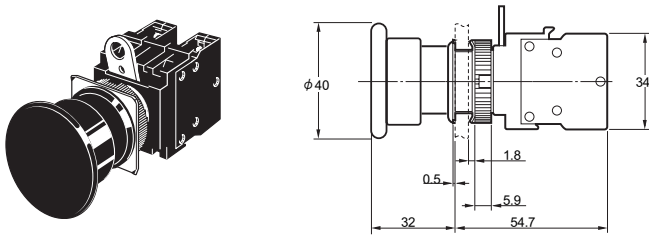
外觀尺寸

CAD資料 附有此標記之產品另備有平面之CAD圖示與立體之CAD模型。  
可自(<http://www.fa.omron.co.jp>)下載

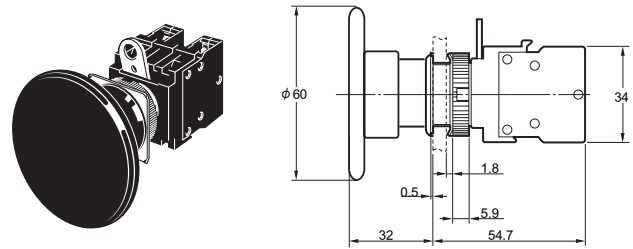
(單位：mm)

■非照光型

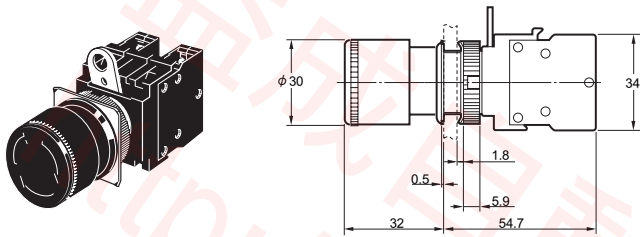
中型按壓拉出式(φ40)/A22E-MP型



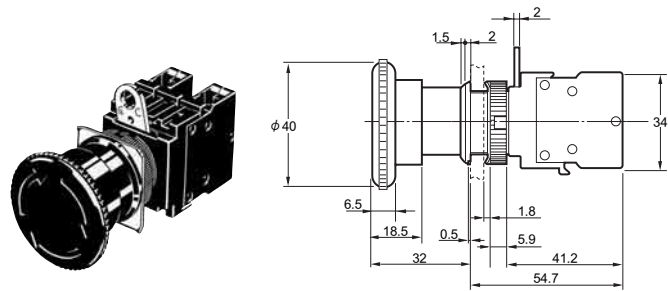
大型按壓拉出式(φ60)/A22E-LP型



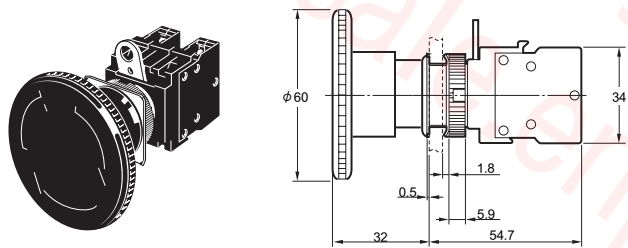
小型旋轉復歸(φ30)/A22E-S型



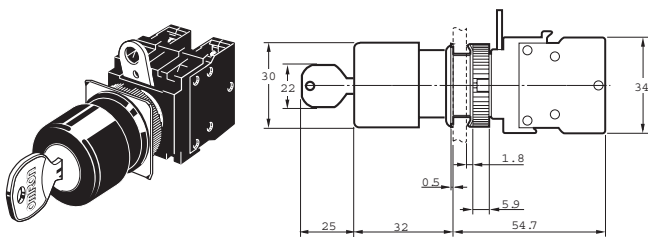
中型旋轉復歸(φ40)/A22E-M型



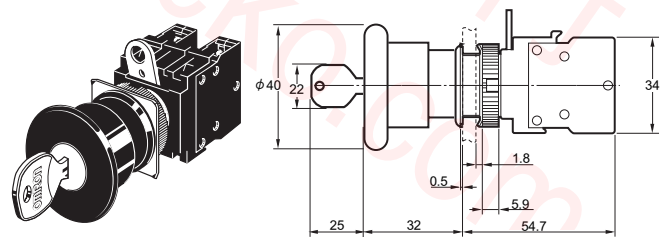
大型鑰匙組按壓鎖定旋轉復歸(φ60)/A22E-L型



小型鑰匙復歸、旋轉復歸(φ30)/A22E-SK型

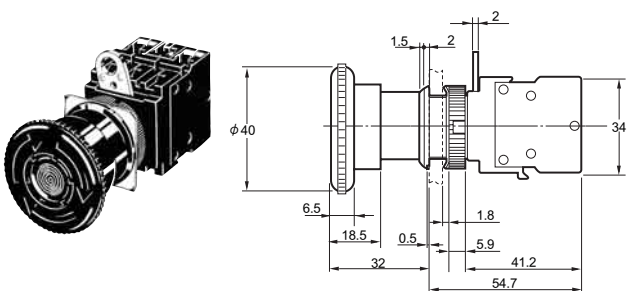


中型鑰匙復歸、旋轉復歸(φ40)/A22E-MK型



■照光型

中型旋轉復歸(φ40)/A22EL-M型



緊急停止用  
按壓開關

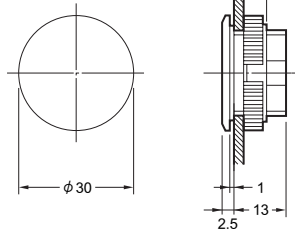
A165E

A22E

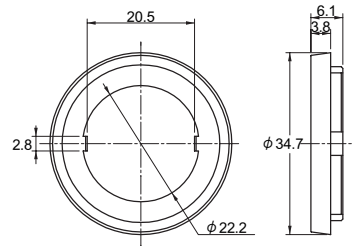
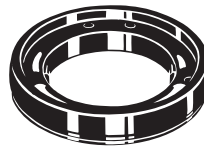
■ 配件

面板插頭

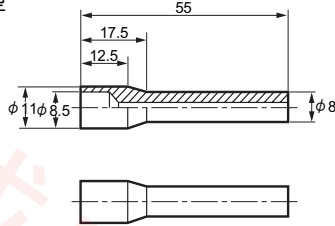
· 圓型 A22Z-3530型



φ 30用樹脂附件 A22Z-A30型

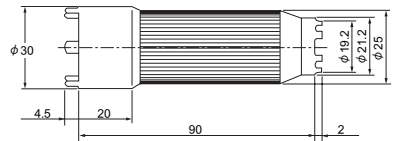
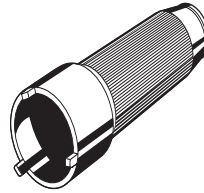


燈泡交換工具 A22Z-3901型



材質：氯丁二烯橡膠

旋轉鎖緊工具 A22Z-3905型



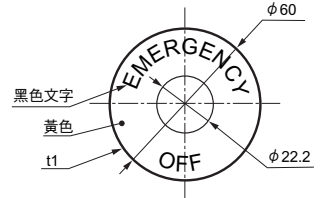
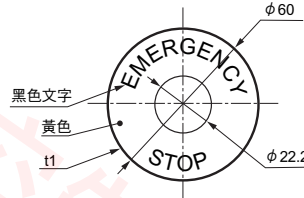
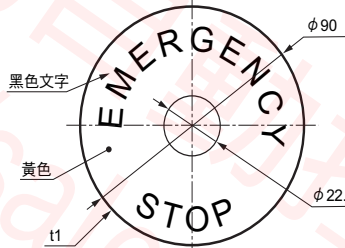
緊急停止用  
按壓開關

彫刻板

A22Z-3476-1型(φ 90)

A22Z-3466-1型(φ 60)

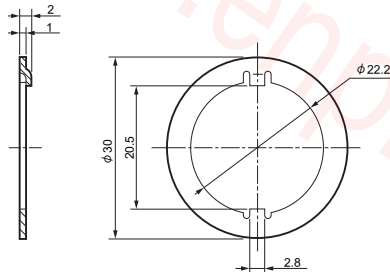
A22Z-3466-2型(φ 60)



A165E

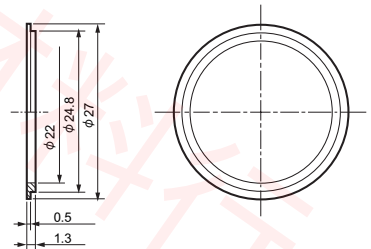
A22E

止回環 A22Z-3360型



材質：鍍鋅鐵

φ 25用環 A22Z-R25型

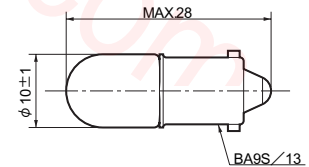
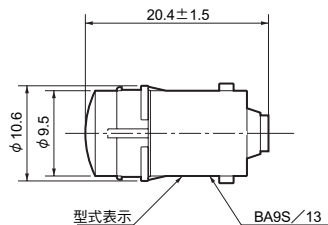


材質：NBR (黑)

燈泡

· LED A22-6□、12□、24□型

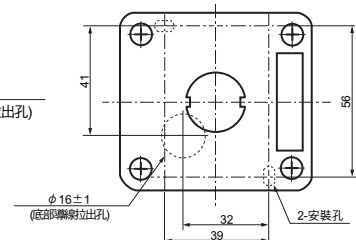
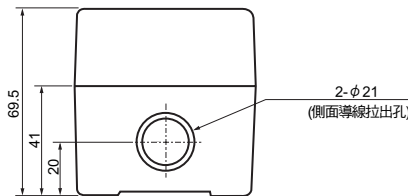
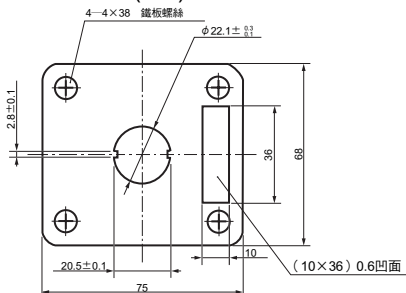
· 白熾燈泡 A22-5、12、24、H1型



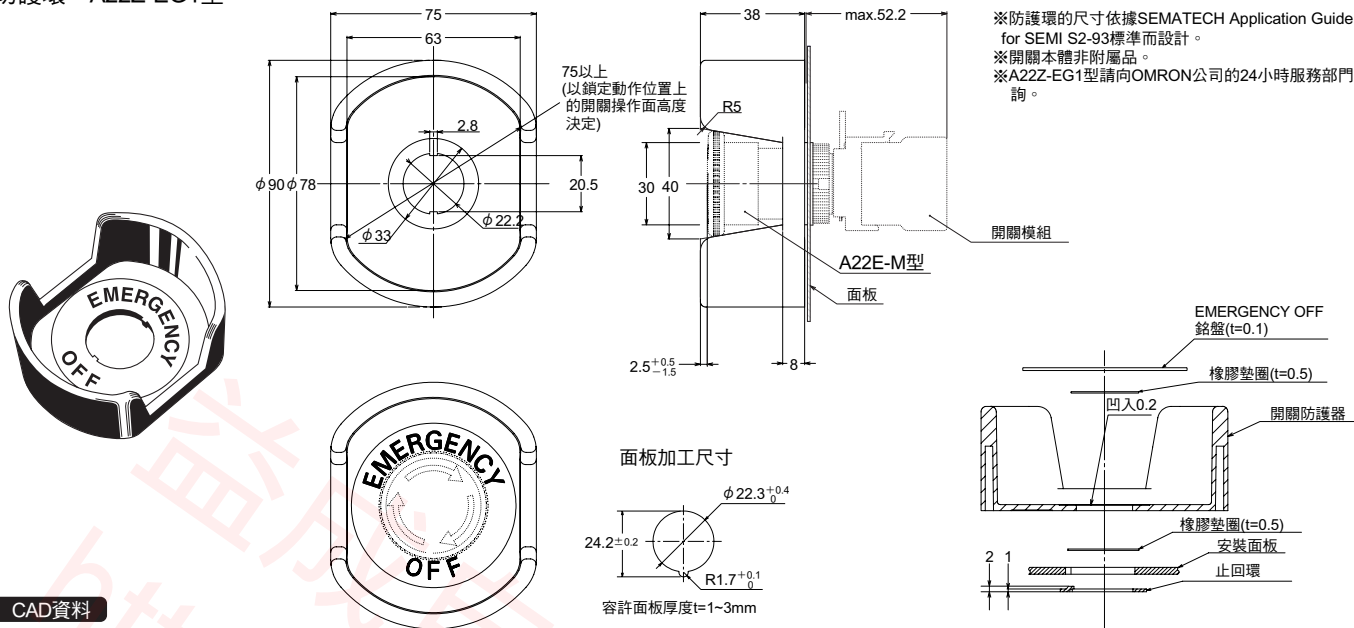
控制盒

A22Z-B101Y型(1孔)

電纜線拉出孔(TOP VIEW)



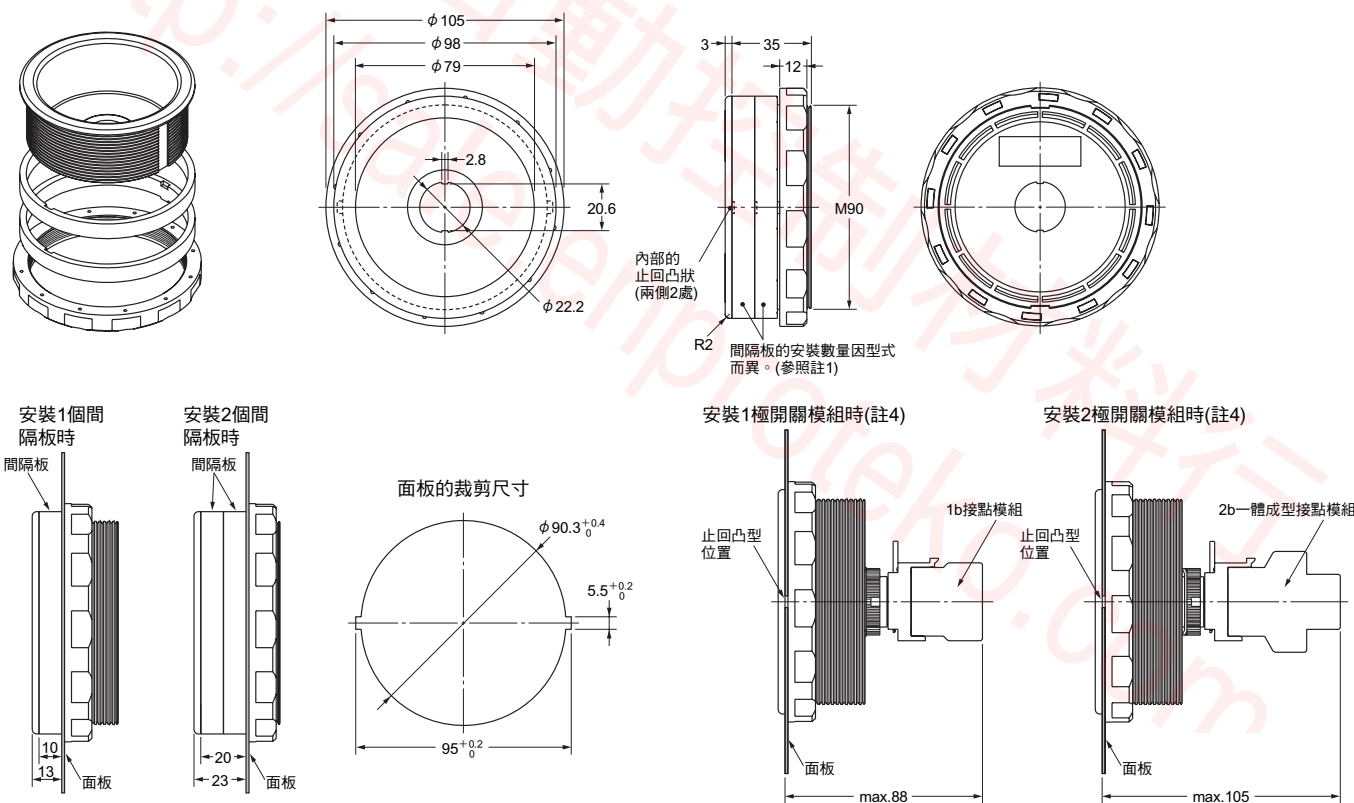
防護環 A22Z-EG1型



CAD資料

緊急停止用  
按壓開關

防護環 A22Z-EG2型 A22Z-EG21型 A22Z-EG22



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註1. 間隔板的安裝數量因型式而異。

型式	間隔板數量
A22Z-EG2型	0
A22Z-EG21型	1
A22Z-EG22型	2

註2. 鎖緊時請使用 1.96~2.94N·m 的旋轉鎖緊扭力。

註3. 容許面板的厚度如下。

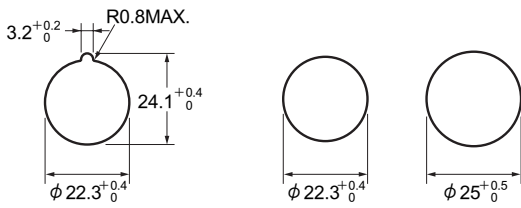
無間隔板時 : t=1.3~22.5mm

安裝1個間隔板時 : t=1.3~12.5mm

安裝2個間隔板時 : t=1.3~2.5mm

註4. 安裝有開關模組時的面板前方尺寸。

■ 面板加工尺寸



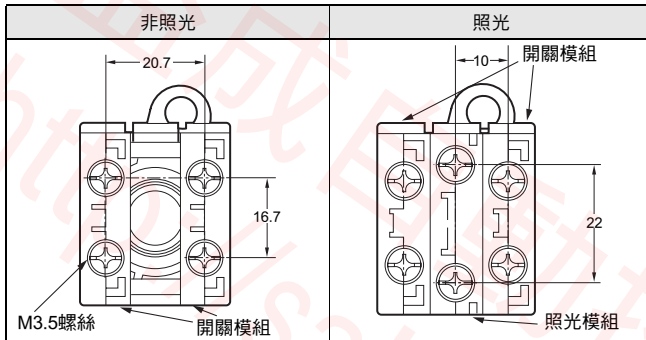
使用止回環時

不使用止回環時

止回金具為標準配備。

- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸應為進行外觀處理後之尺寸。
- 孔徑為 $\phi 25$ 時，請使用A22Z-R25型。

■ 端子配置圖/BOTTOM VIEW



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A22E

■ 端子配置圖

種類	端子配置圖(BOTTOM VIEW)	
	1a1b	2b
非照光型		
照光型無減壓模組		
照光型附減壓模組		

註. 端子連接圖以1a1b、2b為代表。

## 使用時注意事項

### ●關於面板的安裝

#### ①面板加工尺寸

- 面板加工尺寸如下所示。
- 面板厚度應為1-5mm。

使用止回環時                      不使用止回環時

- 孔徑為 $\phi 25$ 時，請務必使用 $\phi 25$ 用環。  
(由於裁剪的尺寸較大，若不使用此尺寸則無法滿足IP65之保護構造。)
- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸時應為進行外觀處理後之尺寸。

#### ③在面板上安裝操作部的方法

- 從面板前面插入操作部，再從端子位置插入止回金具、安裝螺帽後旋轉鎖緊。此時，請務必確認操作部與面板之間有附屬的橡膠墊圈存在。
- 使用銘板時，銘板與面板之間，操作部與銘板之間的兩處，均應放置橡膠墊圈。(購買銘板時，已經附有1個橡膠墊圈。)
- 止回金具應對準外殼溝槽，插入時邊緣部應與面板邊緣對齊。
- 安裝螺帽的旋轉鎖緊扭力請使用 $0.98\sim 1.96\text{N}\cdot\text{m}$ 。
- 使用止回環時，請與附屬的止回金具交換，並將突起插入面板的止回凹部，再鎖緊安裝螺帽。

#### ④在操作部安裝開關的方法

- 將操作部上刻有箭號的方向對準開關部附有手柄的方向，再依照下圖的方向移動插入的手柄。

#### ⑤拆除方法

- 依照下圖方向移動手柄，拉出操作部或開關部。另外，由於手柄的內孔徑為6.5mm，因此可插入螺絲起子等工具後依照下圖方向移動手柄後即可拆除。

#### ②矩陣式安裝

(1) 安裝開關單體、以及一般型銘板      (2) 安裝大型銘板模組時的加工尺寸。  
 模組、止回環時的加工尺寸。  
 • 將壓著端子配線於開關模組時。  
 • 直接將導線連接於開關模組的端子時。

安裝孔中心之間的間距「A」以及「B」如下所示。

對照表(1)

開關模組型式	A尺寸
A22-10型、A22-10S型 A22-01型、A22-01S型	45mm以上
A22-20型、A22-20S型、A22-02S型 A22-02S型、A22-11型、A22-11S型	55mm以上

對照表(2)

壓著端子的種類	開關模組型式	B尺寸
未包覆的 壓著端子	A22-10型、A22-10S型 A22-01型、A22-01S型	51mm以上
	A22-20型、A22-20S型、A22-02S型 A22-02S型、A22-11型、A22-11S型	61mm以上
	A22-10型、A22-10S型 A22-01型、A22-01S型	60mm以上
絕緣包覆的 壓著端子	A22-20型、A22-20S型、A22-02S型 A22-02S型、A22-11型、A22-11S型	70mm以上

註1. 上記尺寸為使用第418頁中適用的配線材料時的最小尺寸。使用其他物件時的配線並不相同，請事先進行確認後再行設定。  
 2. 使用外型超過30mm以上的按壓開關時，請配合其外形尺寸來設定間距。(以矩陣方式安裝A22-M□型時，上圖30mm的部分將會變更為40mm。)

緊急停止用  
按壓開關

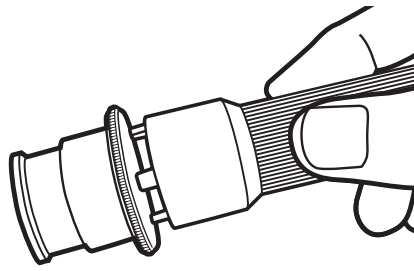
A165E

A22E

●關於外蓋的拆除

照光緊急停止開關的範例

- 壓住外蓋凹部上的鎖緊工具(A22Z-3905型)後旋轉。

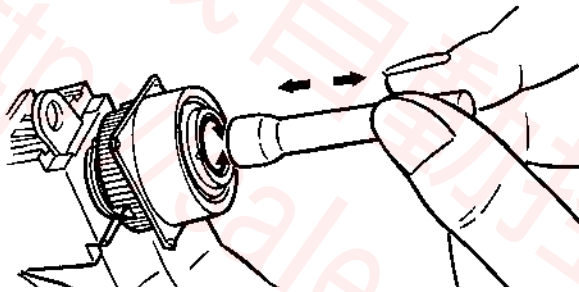


緊急停止用  
按壓開關

●燈泡的安裝與更換

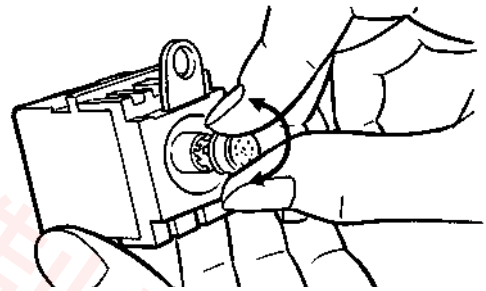
①從面板表面進行時

- 將燈泡更換工具(A22Z-3901型)插入燈泡後再壓住旋轉。



②從開關部安裝(更換)時

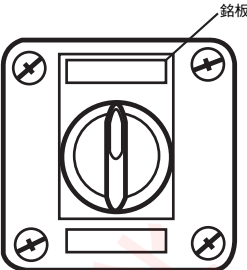
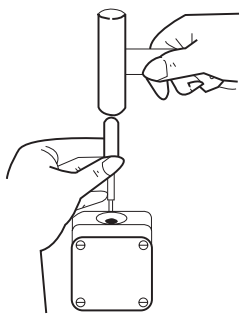
- 用手指抓住燈泡，壓入開關部後旋轉。



A165E

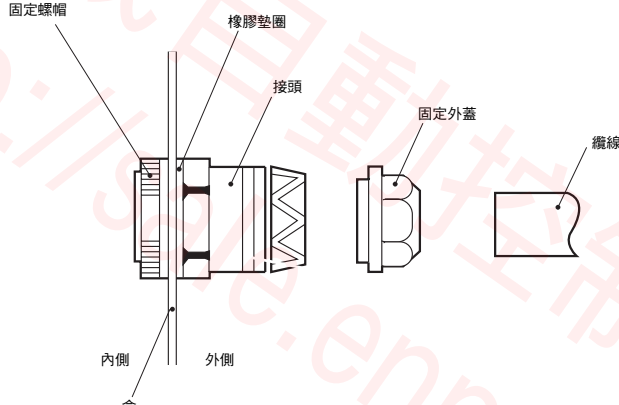
A22E

●關於控制盒

<p style="text-align: center;"><b>①開關的安裝方法</b></p> <p>可安裝一般型銘板模組。 請依照下圖方向安裝。 開關的安裝方法與一般的面板安裝方法相同。</p> 	<p style="text-align: center;"><b>②拉出孔的穿孔方法</b></p> <p>進行電纜線的拉出口穿孔作業時，請在已安裝外蓋的狀態下，在拉出口底部使用螺絲起子的前端強力敲擊開孔。 若從反方向敲擊的話，控制盒可能會損壞。</p> 
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**③接頭纜線的安裝方法**

將接頭插入控制盒的拉出口，從控制盒內側鎖上固定鎖帽。  
穿過橡膠墊環厚度較薄的部分並開孔。  
將電纜線穿過外蓋，將纜線插入接頭，鎖緊六角螺帽，固定電纜線。



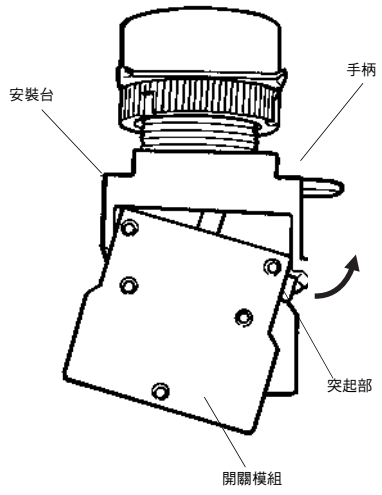
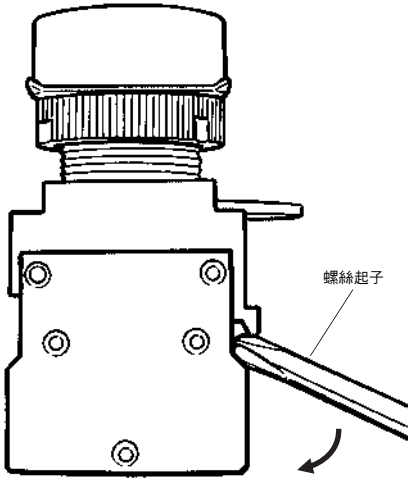
纜線直徑(mm)	使用接頭
φ 7~9	A22Z-3500-1型
φ 9~11	A22Z-3500-2型

緊急停止用  
按壓開關

A165E

A22E

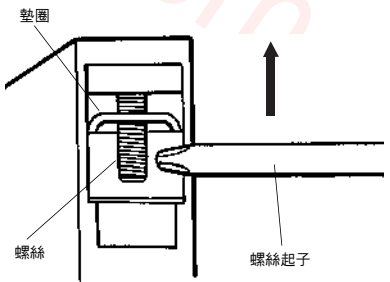
●關於開關模組

<p style="text-align: center;"><b>①關於開關的安裝方法</b></p> <p>將開關模組的小型突起部掛在安裝台的反面手柄處的溝槽上，依照下圖的箭號方向將開關模組往上推。</p> 	<p style="text-align: center;"><b>②關於開關的拆除方法</b></p> <p>在安裝台與開關模組的縫隙中插入螺絲起子，依照下圖的箭號方向往下壓。</p> <p>請使用下圖指示之螺絲起子。</p> <ul style="list-style-type: none"> <li>○螺絲起子 3~6mm</li> <li>⊕螺絲起子 φ3~6mm</li> </ul> 
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●關於配線作業

**圓型壓著端子的配線方法**

將開關模組的端子螺絲鬆開，在螺絲完全脫離溝槽後，依照下圖指示插入螺絲起子，朝箭號方向將墊圈往上壓後暫時固定。此時已成為可供插入圓型端子的狀態，插入端子後，請鎖緊螺絲進行配線。





## 正確使用須知

### ⚠ 注意

請勿在白熱燈泡的端子間增加額定以上之電壓。  
否則會有白熱燈泡損壞或操作部彈出的危險性。



### 使用上的注意事項

#### ●關於安裝

- 請勿在開關通電的狀態下進行配線，也請勿在通電時碰觸端子的充電部分。否則可能會有導致觸電的危險。
- 設置安裝環時，請勿使用尖嘴鉗或過度的扭力鎖緊，否則會造成安裝環損壞。(請使用0.98~1.96N·m的鎖緊扭力。)
- 面板厚度應為1~5mm。

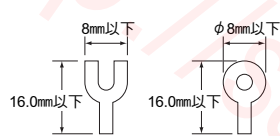
#### ●關於配線

- 使用直流專門LED時，應將X1端子配線為⊕。
- 端子螺絲為M3.5一字或十字的方型墊片組裝螺絲。
- 端子螺絲請之旋轉鎖緊扭力請使用1.08~1.27N·m。
- 單線、絞線、壓著端子皆可使用於配線。
- 適合配線材料

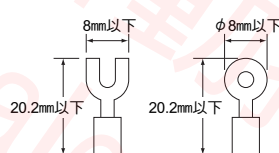
絞線：最大2mm<sup>2</sup>以下

單線：最大φ 1.6mm以下

未包覆的壓著端子



絕緣包覆的壓著端子



- 完成對開關的配線作業後，請保持適當的絕緣距離。

#### ●關於使用環境

- 本產品為IP65型。本型設有防滴水保護構造，因此面板前側的所有方向不會因受到直接水氣噴流而造成有害影響。

#### ●關於LED燈泡

- LED燈泡已內建電流限制阻抗，因此不需外加阻抗。
- 使用一般市售商品時，請選用全長最大26mm、2.6W以下的BA9S/13鈎子。

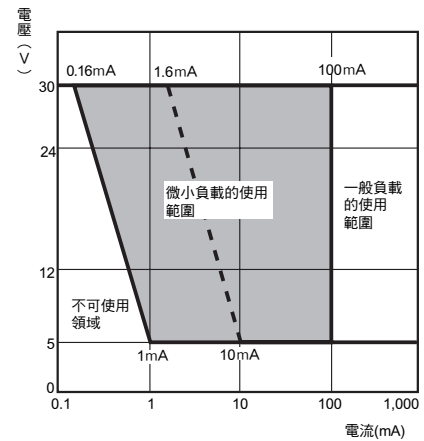
#### ●關於微小負載狀態下的使用方法

- 在微小負載回路開閉時，若使用一般負載開關的話，將會引起接觸不良。因此請參考右圖並於使用範圍內使用開關。此外，即使在右上圖的範圍內使用了微小負載型，當開閉時發生突入電流等負載時，接點會產生劇烈的耗損造成壽命上的減損，因此請視需要插入接點保護迴路。

最小適用負載以N水準為參考值，表示信賴水準為60% (λ<sub>60</sub>)時的故障水準程度。

(JIS C5003)

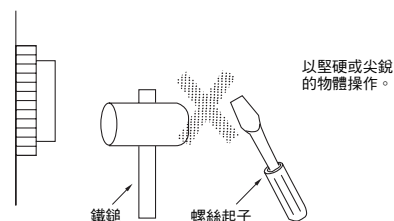
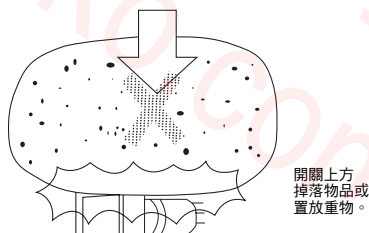
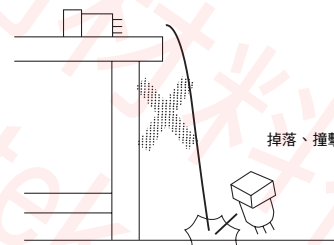
λ<sub>60</sub> = 0.5 × 10<sup>-6</sup>/次表示，在信賴水準為60%時，預測  $\frac{1}{2,000,000}$  次以下的故障。



#### ●其他

- 在面板上實施噴漆等外觀處理時，所指定的面板加工尺寸應為進行外觀處理後之尺寸。
- 開關構造上可能會有由於劇烈振動或衝擊而發生動作不良或損壞的情形。

此外，開關大多為樹脂產品，因此在碰觸到尖銳的物體時可能造成刮傷，特別是操作部的刮傷會對外觀上或動作上造成影響。使用開關時請注意不可隨意丟放或向下掉落。



緊急停止用  
按壓開關

A165E

A22E



Conforms to EN418, EN60204-1



G

safety interlock switches

# EB Series

## Emergency-Stop Switch

- Enclosed and panel-mounted models, all available with key-operated reset, satisfy most application requirements
- Conforms with latest revisions of EN418 and EN60204-1
- NEMA 6 enclosures enable the EB Series to withstand water washdown cleaning
- Long life—the EB Series is designed for a minimum of three million actuations

Compliance with the European Machinery Directive and the corresponding standards EN418 and EN60204-1 may be summarized as follows:

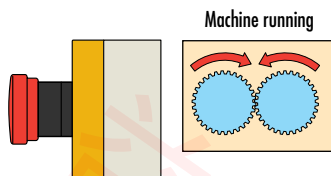
Once active operation of the emergency stop control has ceased following a stop command, that command must be sustained by engagement of the emergency stop device until that engagement is specifically overridden; it must not be possible to disengage the device without

triggering the stop command; it must be possible to disengage the device only by an appropriate operation, and disengaging the device must not restart the machinery, but only permit restarting.

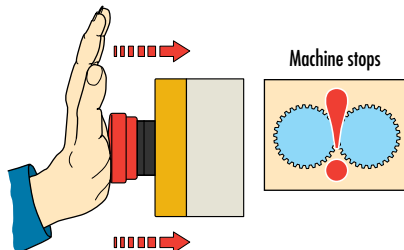
**A** Go to the Engineering Guide  
For in-depth information on safety standards and use.

■ Operation

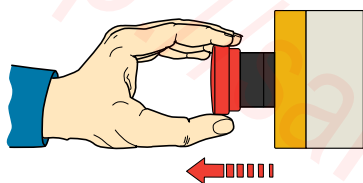
**Stage 1** Push button is out and contacts closed



**Stage 2** Push button depressed and contacts open

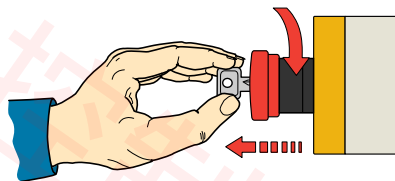


**Stage 3a** To reset the switch —  
 • Pull to reset - pull until button clicks. Contacts closed.  
 • Twist to reset - rotate clockwise 45° and button moves out. Contacts closed.



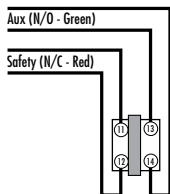
NOTE: Resetting switch must not restart machine

**Stage 3b** Reset a key switch by inserting key in push button and rotate the key clockwise 45° to unlock. Contacts closed

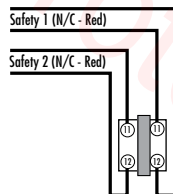


NOTE: Resetting switch must not restart machine

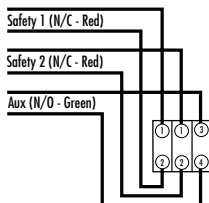
**Enclosed versions**  
 2 pole wiring details 1N/C+1N/O



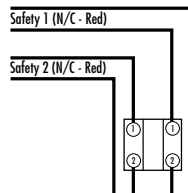
**Enclosed versions**  
 2 pole wiring details 2N/C



**Enclosed & panel mounted versions**  
 3 pole wiring details



**Panel mounted versions**  
 2 pole wiring details



G

safety interlock switches

# EB Series

## ■ Applications

Typical applications are on all types of machinery requiring emergency stopping capability.



## ■ Specifications

Electrical	Small Enclosure	Large Enclosure	All Models	Panel Mount
<b>Contact Configurations:</b>	2 N/C 1 N/C + 1 N/O	2 N/C + 1 N/O		2 N/C, 1 N/C + 1 N/O, 2 N/C + 1 N/C
<b>Safety Contacts:</b>	2 N/C or 1 N/O	2 N/C		2 N/C or 1 N/C
<b>Switching Ability</b>				
<b>AC:</b>			230 V–6 A	
<b>DC:</b>			220 V–0.2 A, 24 V–1.5 A	
<b>Safety Contact Gap:</b>			≥ 3 mm (0.12 in.)	
<b>Auxiliary Contacts:</b>	1 N/O	1 N/O		1 N/O
<b>Electrical Life:</b>			1 x 10 <sup>6</sup> minimum	
<b>Mechanical</b>				
<b>Mounting:</b>			Any position	
<b>Mounting Hardware:</b>			4 x M4 screws	
<b>Case Material:</b>			ABS plastic	
<b>Actuator Material:</b>			Polycarbonate	
<b>Wiring Entry:</b>	2 x M21 knockout	2 x M22 conduit		
<b>Weight:</b>	195 g (6.9 oz.)	227 g (8 oz.)		156 g (5.5 oz.)
<b>Color:</b>	Yellow box, Red button	Yellow box, Red button		Red button
<b>Mechanical Life:</b>			3 x 10 <sup>6</sup>	
<b>Environmental</b>				
<b>Protection:</b>	IP65 (NEMA 6)	IP65 (NEMA 6)		
<b>Operating Temperature:</b>			-20 to 60°C (-4 to 140°F)	
<b>Cleaning:</b>			Water washdown	
<b>Compliance</b>				
<b>Standards:</b>			EN418, EN60204-1	
<b>Approvals/Listings:</b>			CE marked for all applicable directives	

Specifications are subject to change without notice.

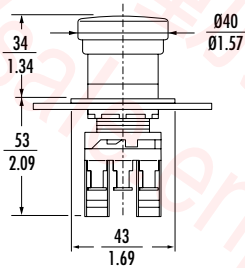
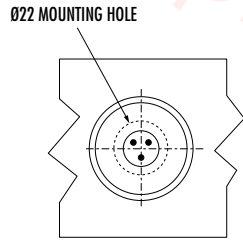
Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

G safety interlock switches

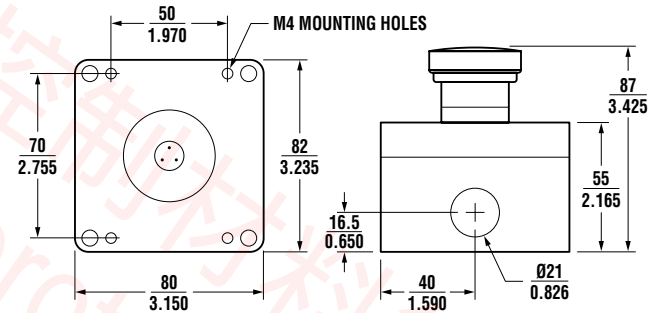
**A** **Go to the Engineering Guide**  
For in-depth information on safety standards and use.

## ■ Dimensions — mm/in.

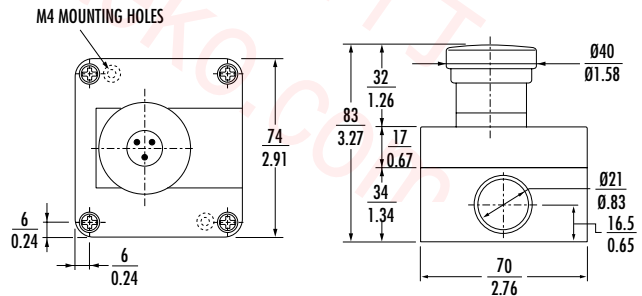
Panel Mount



Enclosed (Large)



Enclosed (Small)



## ■ Ordering



Conforms to IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304  
UL and C-UL listed



G

safety interlock switches

# ER5018

## Compact Rope Pull Emergency Stop Switch

- Compact size allows this switch to be used on smaller machines with a mounting width of 40 mm (1.57 in.) and covering rope spans up to 40 m (131 ft.)
- Heavy-duty housing—the die-cast housing and stainless steel eye nut makes the ER5018 suitable for demanding industrial applications
- Long life—the ER5018 switch is designed for a minimum of one million actuations
- Tension indicator—the tension indicator makes the system easy to set up and to maintain the proper rope tension
- Integral E-Stop—the optional E-stop provides emergency stopping at the extreme end of the installation
- Vibration tolerant—the snap-acting switch contacts protect against nuisance tripping due to vibration
- Contact arrangements of 2 N/C + 1 N/O or 3 N/C
- Reset button—the blue reset button must be pushed in order to return to “machine run” condition following switch actuation by a pulled or slacked rope
- IP67 (NEMA 6) enclosure enables the ER5018 switch to withstand water washdown cleaning

**A** Go to the Engineering Guide  
For in-depth information on safety standards and use.

■ Operation



**Blue Reset Knob**

A blue reset button is provided to easily return the unit back to its machine-run position after actuation.



**Emergency Push Button**

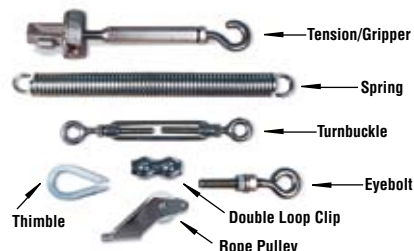
The emergency push button may be installed or repositioned in the field. The ER5018 has two possible mounting positions for the emergency stop button.

Installation Hardware Available



**RK Rope Tension Kit**

The RK Rope Tension Kit comes with all of the required hardware for most installations. A spring is required as shown in the installation example below.



**Installation Hardware**

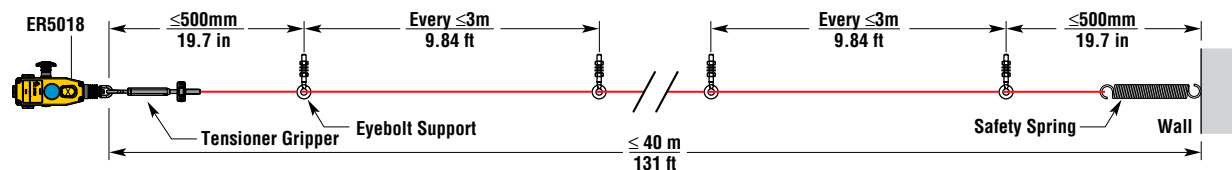
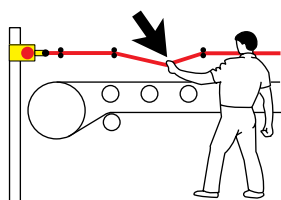
Individual hardware items may be purchased for specific installation requirements.

Contact Arrangements

	0 mm 0 in	3.5 0.14	14.5 0.57	17.0 0.67
<b>2NC + 1NO Versions</b>	<b>Rope Slack</b>	<b>Tension Range</b>	<b>Rope Pulled</b>	
11/12				
21/22				
33/34				
<b>3NC Versions</b>	<b>Rope Slack</b>	<b>Tension Range</b>	<b>Rope Pulled</b>	
11/12				
21/22				
31/32				

Contact Open     Contact Closed

Mounting Specification



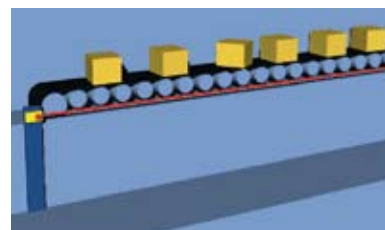
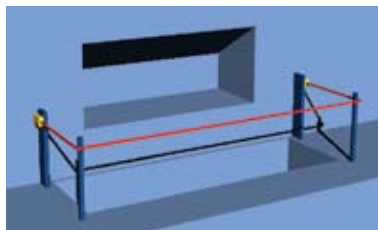
Note: Some installations may require a ER5018 on each end.

For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

G  
safety interlock switches

## ■ Applications

Typical applications are on conveyor systems and across rotating machinery, and around hazardous areas.



## ■ Specifications

Electrical	All Models
<b>Contact Configurations:</b>	2 N/C + 1 N/O, 3 N/C
<b>Safety Contacts:</b>	2 N/C, 3 N/C
<b>Switching Ability</b>	
<b>AC:</b>	120 V–6 A, 240 V–3 A, Inductive
<b>DC:</b>	24 V–2.5 A, Inductive
<b>Auxiliary Contacts:</b>	1 N/O
<b>Max Switching Current/Volt/Amp:</b>	240 V/720 VA
<b>Minimum Current:</b>	5 V 5 mA DC
<b>Electrical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Mechanical</b>	
<b>Mounting:</b>	Any position
<b>Mounting Hardware:</b>	2 x M5 screws
<b>Actuator Travel for Positive Opening:</b>	See diagrams on previous page
<b>Max Rope Span:</b>	40 m (131 ft.)
<b>Operation Force:</b>	< 125 N (28 lb.)
<b>Tensioning Force to Run Position:</b>	130 N (23 lb.) typical
<b>Case Material:</b>	Die-cast aluminum alloy
<b>Eye Nut Material:</b>	Stainless steel
<b>Wiring Entry:</b>	3 x M20 or 3 x 0.5 in. NPT
<b>Weight:</b>	675 g (23.8 oz.)
<b>Color:</b>	Yellow
<b>Mechanical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Environmental</b>	
<b>Protection:</b>	IP67 (NEMA 6)
<b>Operating Temperature:</b>	-25 to 80°C (-13 to 176°F)
<b>Cleaning:</b>	Water washdown
<b>Compliance</b>	
<b>Standards:</b>	IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304
<b>Approvals/Listings:</b>	CE marked for all applicable directives, UL and C-UL

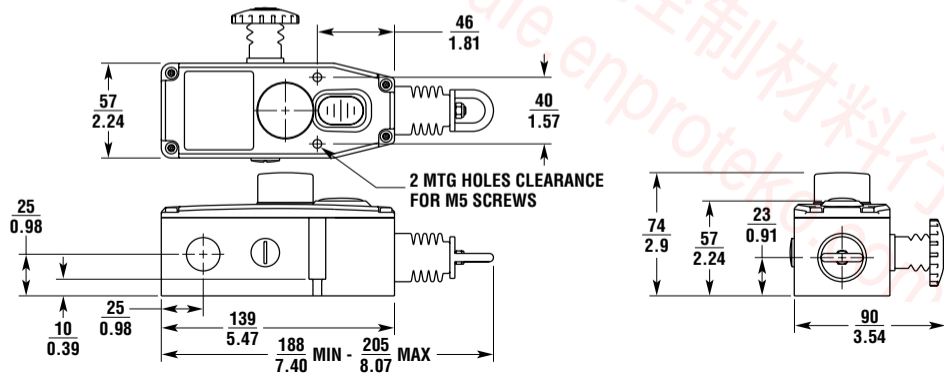
Specifications are subject to change without notice.

Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the rope properly tensioned and the machine able to be started.

**A** **Go to the Engineering Guide**  
For in-depth information on safety standards and use.



■ **Dimensions — mm/in.**





Conforms to IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304  
UL and C-UL listed



G

safety interlock switches

# ER6022

## Rope Pull Emergency Stop Switch

- Long rope spans up to 80 m (262 ft.) means fewer number of switches required per application
- Tension indicator—the tension indicator makes the system easy to set up and to maintain the proper rope tension
- Contact arrangements of 2 N/C + 1 N/O or 3 N/C
- IP67 (NEMA 6) enclosure enables the ER6022 switch to withstand water washdown cleaning
- Heavy-duty housing—the die-cast housing and stainless steel eye nut makes the ER6022 suitable for demanding industrial applications
- Reset button—the blue reset button must be pushed in order to return to “machine run” condition following switch actuation by a pulled or slacked rope
- Long life—the ER6022 switch is designed for a minimum of one million actuations
- Vibration tolerant—the snap-acting switch contacts protect against nuisance tripping due to vibration
- Indicator beacon—the optional dual indicator beacon, available in 24 VDC, can be wired to flash red to indicate a tripped switch or glow a constant green to indicate a properly reset switch
- E-stop button—the ER6022 has two mounting positions where the optional E-stop button may be installed; the E-stop button may be added or replaced in the field

**A** Go to the Engineering Guide  
For in-depth information on safety standards and use.

■ Operation



**Blue Reset Knob**

A blue reset button is provided to easily return the unit back to its machine-run position after actuation.



**Emergency Push Button**

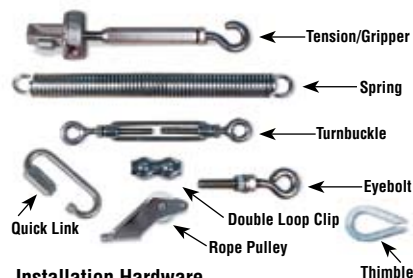
The emergency push button may be installed or repositioned in the field. The ER6022 has two possible mounting positions for the emergency stop button.

Installation Hardware Available



**RK Rope Tension Kit**

The RK Rope Tension Kit comes with all of the required hardware for most installations. A spring is required as shown in the installation example below.



**Installation Hardware**

Individual hardware items may be purchased for specific installation requirements.

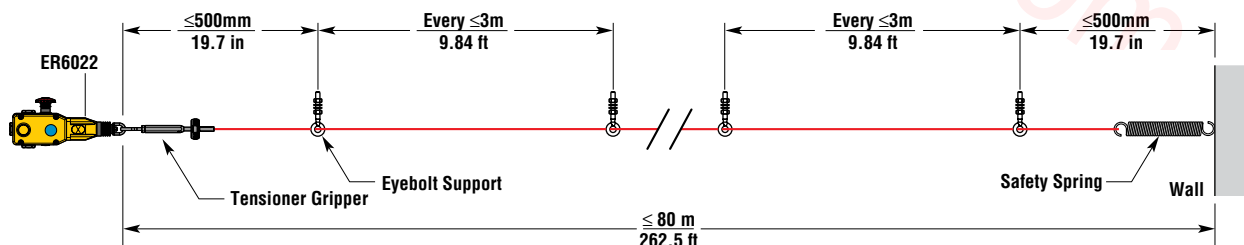
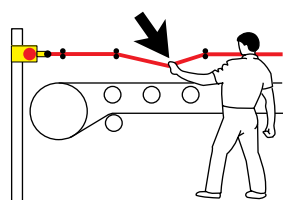
Contact Arrangements



	0 mm 0 in	3.5 0.14	14.5 0.57	17.0 0.67
<b>2NC + 1NO Versions</b>	Rope Slack	Tension Range		Rope Pulled
11/12				
21/22				
33/34				
<b>3NC Versions</b>	Rope Slack	Tension Range		Rope Pulled
11/12				
21/22				
31/32				

□ Contact Open    ■ Contact Closed

Mounting Specification



Note: Some installations may require a ER6022 on each end.

For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

G  
safety interlock switches

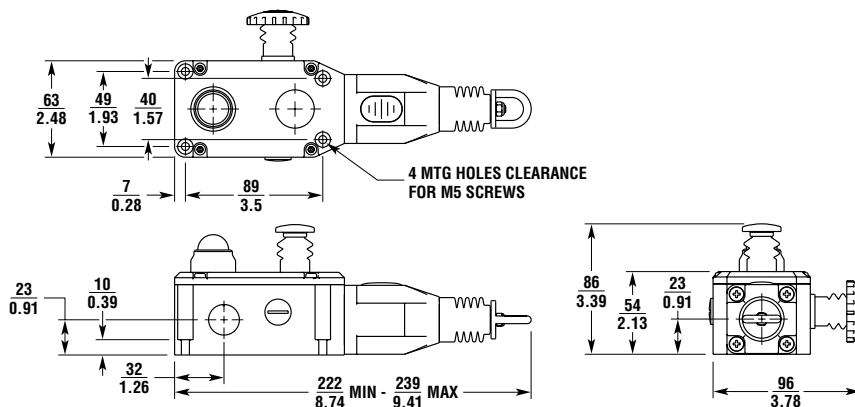
■ Specifications

Electrical	All Models
Contact Configurations:	2 N/C + 1 N/O, 3 N/C
Safety Contacts:	2 N/C, 3 N/C
Switching Ability	AC: 240 V-3 A, 120 V-6 A, Inductive, DC:24 V-2.5 A, Inductive
Auxiliary Contacts:	1 N/O
Max Switching Current/Volt/Amp:	240 V/720 VA
Minimum Current:	5 V 5 mA DC
Electrical Life:	1 x 10 <sup>6</sup> minimum
LED Indicator Beacon:	24 VDC
Mechanical	
Mounting:	Any position
Mounting Hardware:	4 x M5 screws
Actuator Travel for Positive Opening:	See diagrams on previous page
Max Rope Span:	80 m (262 ft.)
Operation Force:	< 125 N (28 lb.)
Tensioning Force to Run Position:	130 N (23 lb.) typical
Case Material:	Die-cast aluminum alloy
Eye Nut Material:	Stainless steel
Wiring Entry:	3 x M20 or 3 x 0.5 in. NPT
Weight:	880 g (31 oz.)
Color:	Yellow
Mechanical Life:	1 x 10 <sup>6</sup> minimum
Environmental	
Protection:	IP67 (NEMA 6)
Operating Temperature:	-25 to 80°C (-13 to 176°F)
Cleaning:	Water washdown
Compliance	
Standards:	IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304
Approvals/Listings:	CE marked for all applicable directives, UL and C-UL

Specifications are subject to change without notice.

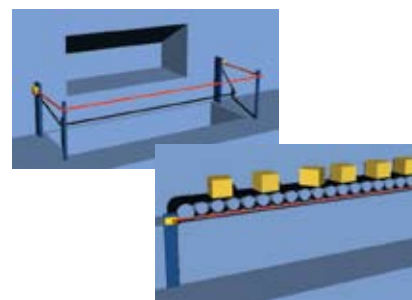
Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the rope properly tensioned and the machine able to be started.

■ Dimensions — mm/in.



■ Applications

Typical applications are on conveyor systems and across rotating machinery, and around hazardous areas.





Conforms to IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304  
UL and C-UL listed



G

safety interlock switches

# ER1022

## Rope Pull Emergency Stop Switch

- Long rope spans up to 125 m (410 ft.) makes this switch ideal for applications where long rope spans are required
- Heavy-duty housing—the die-cast housing and stainless steel eye nut make the ER1022 suitable for demanding industrial applications
- IP67 (NEMA 6) enclosure enables the ER1022 switch to withstand water washdown cleaning
- Integral E-stop—the E-stop button provides emergency stopping capability at the extreme end of the installation and is field serviceable
- Tension indicator—the tension indicator makes the system easy to set up and to maintain the proper rope tension
- 4 N/C safety contacts and 2 N/O auxiliary contacts satisfy the most demanding applications
- Vibration tolerant—the snap-acting switch contacts protect against nuisance tripping due to vibration
- Long life—the ER1022 switch is designed for a minimum of one million actuations
- Indicator beacon—the indicator beacon, available in 24 VDC or 120 VAC, can be wired to flash red to indicate a tripped switch or glow a constant green to indicate a properly reset switch

**A** Go to the Engineering Guide  
For in-depth information on safety standards and use.



■ Operation



**Blue Reset Knob**

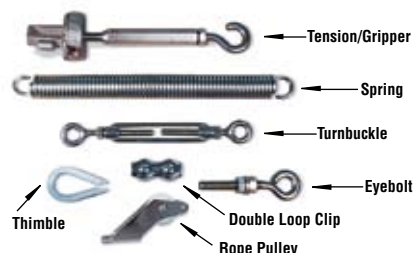
A blue reset button is provided to easily return the unit back to its machine-run position after actuation.

Installation Hardware Available



**RK Rope Tension Kit**

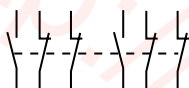
The RK Rope Tension Kit comes with all of the required hardware for most installations. A spring is required as shown in the installation example below.



**Installation Hardware**

Individual hardware items may be purchased for specific installation requirements.

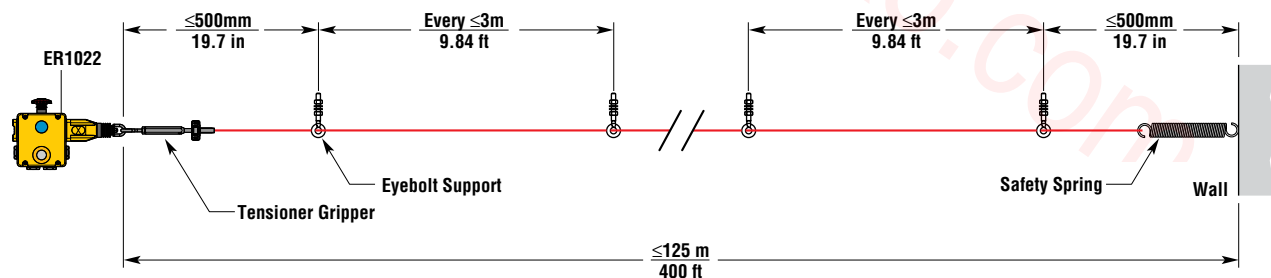
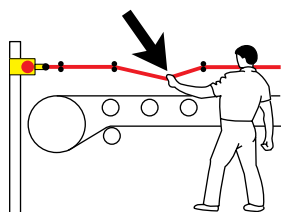
Contact Arrangements



	0 mm 0 in	4.0 0.16	15.0 0.59	17.0 0.67
4NC + 2NO	Rope Slack	Tension Range	Rope Pulled	
11/12				
21/22				
33/34				
41/42				
51/52				
63/64				

Contact Open     Contact Closed

Mounting Specification

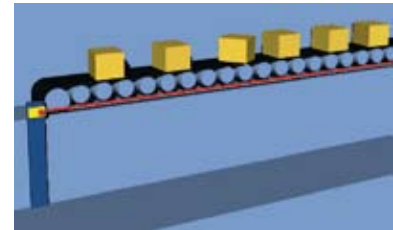
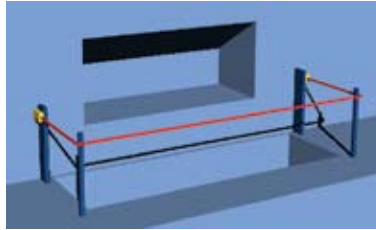


Note: Some installations may require a ER1022 on each end.

For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

## ■ Applications

Typical applications are on conveyor systems and across rotating machinery, and around hazardous areas.



## ■ Specifications

Electrical	All Models
<b>Contact Configurations:</b>	4 N/C + 2 N/O
<b>Safety Contacts:</b>	4 N/C
<b>Switching Ability</b>	
<b>AC:</b>	240 V–3 A, 120 V–6 A, Inductive
<b>DC:</b>	24 V–2.5 A, Inductive
<b>Auxiliary Contacts:</b>	2 N/O
<b>Max Switching Current/Volt/Amp:</b>	240 V/720 VA
<b>Minimum Current:</b>	5 V 5 mA DC
<b>Electrical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>LED Indicator Beacon:</b>	24 VDC or 120 VAC
<b>Mechanical</b>	
<b>Mounting:</b>	Any position
<b>Mounting Hardware:</b>	4 x M5 screws
<b>Actuator Travel for Positive Opening:</b>	See diagrams on previous page
<b>Max Rope Span:</b>	125 m (410 ft.)
<b>Operation Force:</b>	< 125 N (28 lb.)
<b>Tensioning Force to Run Position:</b>	130 N (23 lb.) typical
<b>Case Material:</b>	Die-cast aluminum alloy
<b>Eye Nut Material:</b>	Stainless steel
<b>Wiring Entry:</b>	4 x M20 or 3 x 0.5 in. NPT
<b>Weight:</b>	1100 g (39 oz.)
<b>Color:</b>	Yellow
<b>Mechanical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Environmental</b>	
<b>Protection:</b>	IP67 (NEMA 6)
<b>Operating Temperature:</b>	-25 to 80°C (-13 to 176°F)
<b>Cleaning:</b>	Water washdown
<b>Compliance</b>	
<b>Standards:</b>	IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304
<b>Approvals/Listings:</b>	CE marked for all applicable directives, UL and C-UL

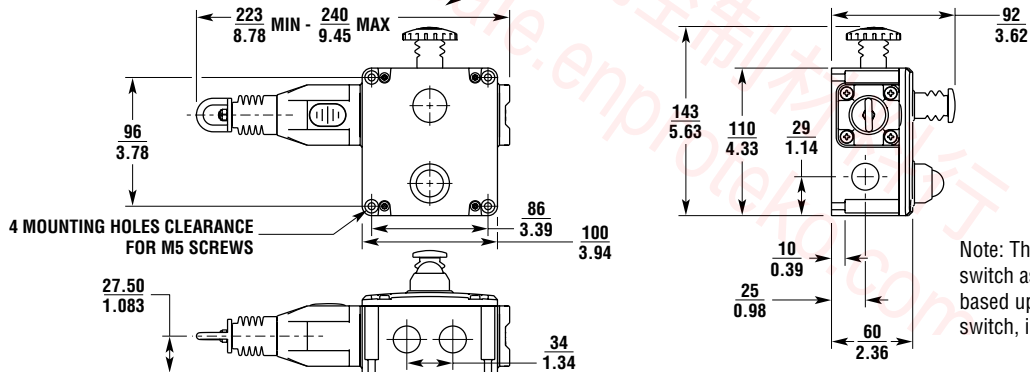
Specifications are subject to change without notice.

Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—  
i.e., with the rope properly tensioned and the machine able to be started.

**A** **Go to the Engineering Guide**  
For in-depth information on  
safety standards and use.

## ■ Dimensions — mm/in.

ILLUSTRATION OF RIGHT-SIDED MODELS:  
ER1022-042MELR AND ER1022-042NELR



Note: The designation of the ER1022 switch as left-sided or right-sided is based upon the mounted position of the switch, in the installation.





Conforms to IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304  
UL and C-UL listed



G

safety interlock switches

# ER1032

## Rope Pull Emergency Stop Switch

- Long rope spans up to 200 m (656 ft.) makes this switch ideal for applications where long rope spans are required
- Heavy-duty housing—the die-cast housing and stainless steel eye nut make the ER1032 suitable for demanding industrial applications
- IP67 (NEMA 6) enclosure enables the ER1032 switch to withstand water washdown cleaning
- Integral E-stop—the E-stop button provides emergency stopping capability at the extreme end of the installation and is field serviceable
- Tension indicator—the tension indicator makes the system easy to set up and to maintain the proper rope tension
- 4 N/C safety contacts and 2 N/O auxiliary contacts satisfy the most demanding applications
- Vibration tolerant—the snap-acting switch contacts protect against nuisance tripping due to vibration
- Long life—the ER1032 switch is designed for a minimum of one million actuations
- Indicator beacon—the indicator beacon, available in 24 VDC or 120 VAC can be wired to flash red to indicate a tripped switch or glow a constant green to indicate a properly reset switch



**Go to the Engineering Guide**  
For in-depth information on safety standards and use.



■ Operation



**Blue Reset Knob**

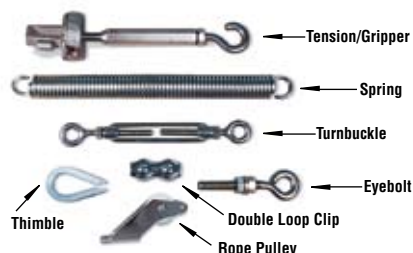
A blue reset button is provided to easily return the unit back to its machine-run position after actuation.

Installation Hardware Available



**RK Rope Tension Kit**

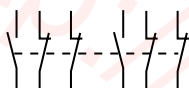
The RK Rope Tension Kit comes with all of the required hardware for most installations. A spring is required as shown in the installation example below.



**Installation Hardware**

Individual hardware items may be purchased for specific installation requirements.

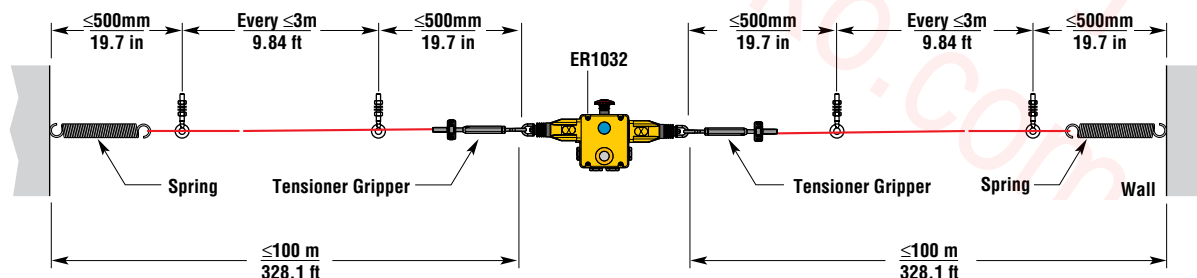
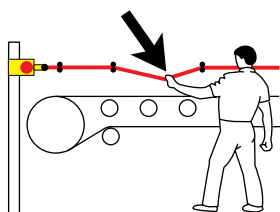
Contact Arrangements



	0 mm 0 in	4.0 0.16	15.0 0.59	17.0 0.67
4NC + 2NO	Rope Slack	Tension Range	Rope Pulled	
11/12				
21/22				
33/34				
41/42				
51/52				
63/64				

☐ Contact Open    ■ Contact Closed

Mounting Specification



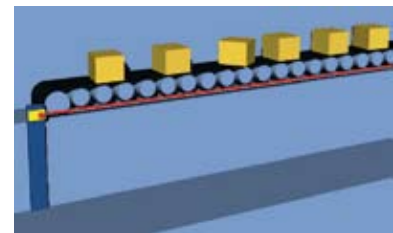
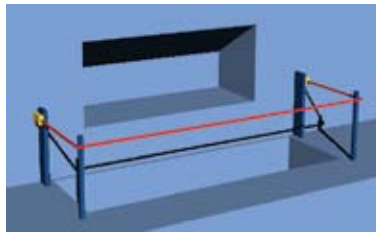
Note: Some installations may require a ER1022 on each end.

For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

G  
safety interlock switches

## ■ Applications

Typical applications are on conveyor systems and across rotating machinery, and around hazardous areas.



## ■ Specifications

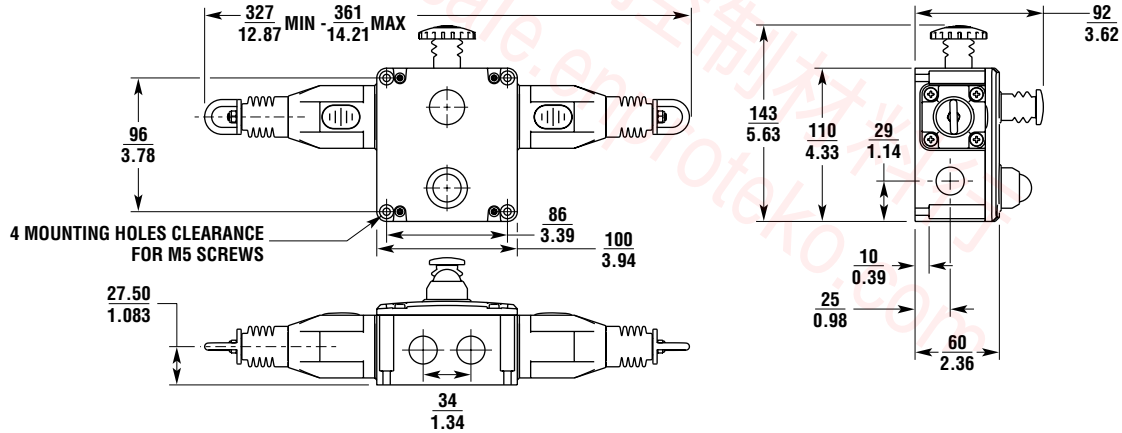
Electrical	All Models
<b>Contact Configurations:</b>	4 N/C + 2 N/O
<b>Safety Contacts:</b>	4 N/C
<b>Switching Ability</b>	
<b>AC:</b>	240 V–3 A, 120 V–6 A, Inductive
<b>DC:</b>	24 V–2.5 A, Inductive
<b>Auxiliary Contacts:</b>	2 N/O
<b>Max Switching Current/Volt/Amp:</b>	240 V/720 VA
<b>Minimum Current:</b>	5 V 5 mA DC
<b>Electrical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>LED Indicator Beacon</b>	24 VDC or 120 VAC
<b>Mechanical</b>	
<b>Mounting:</b>	Any position
<b>Mounting Hardware:</b>	4 x M5 screws
<b>Actuator Travel for Positive Opening:</b>	See diagrams on previous page
<b>Max Rope Span:</b>	125 m (410 ft.)
<b>Operation Force:</b>	< 125 N (28 lb.)
<b>Tensioning Force to Run Position:</b>	130 N (23 lb.) typical
<b>Case Material:</b>	Die-cast aluminum alloy
<b>Eye Nut Material:</b>	Stainless steel
<b>Wiring Entry:</b>	4 x M20 or 4 x 0.5 in. NPT
<b>Weight:</b>	1320 g (42 oz.)
<b>Color:</b>	Yellow
<b>Mechanical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Environmental</b>	
<b>Protection:</b>	IP67 (NEMA 6)
<b>Operating Temperature:</b>	-25 to 80°C (-13 to 176°F)
<b>Cleaning:</b>	Water washdown
<b>Compliance</b>	
<b>Standards:</b>	IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304
<b>Approvals/Listings:</b>	CE marked for all applicable directives, UL and C-UL

Specifications are subject to change without notice.

Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the rope properly tensioned and the machine able to be started.

**A** **Go to the Engineering Guide**  
For in-depth information on safety standards and use.

■ Dimensions — mm/in.



## ER6022-SS and XER6022-SS

Rev. 10.07



Conforms to IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304



G

safety interlock switches

# ER6022-SS and XER6022-SS

## Stainless Steel Rope Pull Emergency Stop Switch

- Long rope spans up to 100 m (328 ft.) means fewer number of switches required per application
- Tension indicator—the tension indicator makes the system easy to set up and to maintain the proper rope tension
- Contact arrangements of 3 N/C + 1 N/O or 2 N/C + 2 N/O available for ER6022-SS models; Contact arrangement of 1 N/C + 1 N/O or 2 N/C available for XER6022-SS models
- IP67 (NEMA 6) enclosure enables these switches to withstand water washdown cleaning
- Heavy-duty housing—the 316 stainless steel cast housing and stainless steel hardware make the ER6022-SS and XER6022-SS suitable for demanding industrial applications
- Reset button—the blue reset button must be pushed in order to return to “machine run” condition following switch actuation by a pulled or slacked rope
- Long life—the ER6022-SS and XER6022-SS switches are designed for a minimum of one million actuations
- Vibration tolerant—the snap-acting switch contacts protect against nuisance tripping due to vibration
- Indicator beacon—the dual indicator beacon is optional on the ER6022-SS; the indicator beacon can be wired to flash red to indicate a tripped switch or glow a constant green to indicate a properly reset switch
- E-stop button—the ER6022-SS and XER6022-SS have two mounting positions where the optional E-stop button may be installed; the E-stop button may be added or replaced in the field



## ■ Operation



### Blue Reset Knob

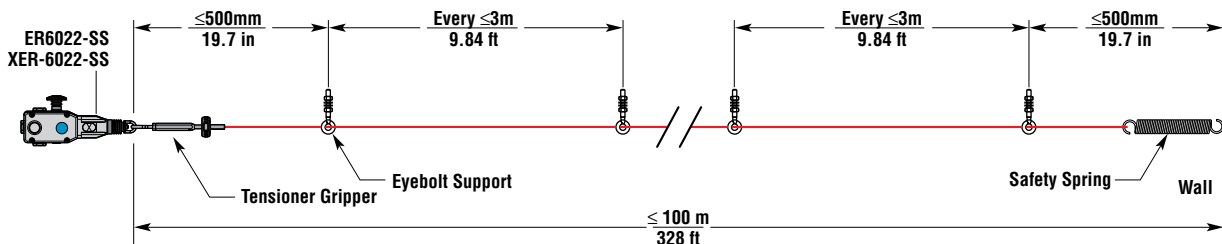
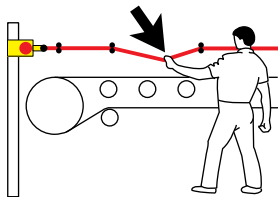
A blue reset button is provided to easily return the unit back to its machine-run position after actuation.



### Emergency Push Button

The emergency push button may be installed or repositioned in the field. The ER6022-SS and XER6022-SS have two possible mounting positions for the emergency stop button. To assure compliance with all applicable European and Canadian standards, the supplied yellow background label must be applied.

## Mounting Specification



Note: Some installations may require a ER6022-SS/XER6022-SS on each end.

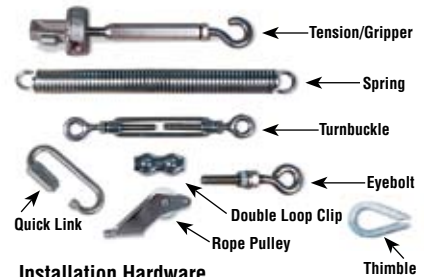
For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

## Installation Hardware Available



### RK Rope Tension Kit

The RK Rope Tension Kit comes with all of the required hardware for most installations. A spring is required as shown in the installation example below.



### Installation Hardware

Individual hardware items may be purchased for specific installation requirements.

## Contact Arrangements



ER6022-SS	0 mm 0 in	3.5 0.14	14.5 0.57	17.0 0.67
3NC + 1NO Versions	Rope Slack	Tension Range	Rope Pulled	
11/12				
21/22				
33/34				
43/44				
2NC + 2NO Versions	Rope Slack	Tension Range	Rope Pulled	
11/12				
21/22				
33/34				
43/44				
XER6022-SS	0 mm 0 in	3.5 0.14	14.5 0.57	17.0 0.67
2NC Versions	Rope Slack	Tension Range	Rope Pulled	
Brown/Blue				
Black/Black				
1NC + 1 NO Versions	Rope Slack	Tension Range	Rope Pulled	
Brown/Blue				
Black/Black				

Contact Open  Contact Closed

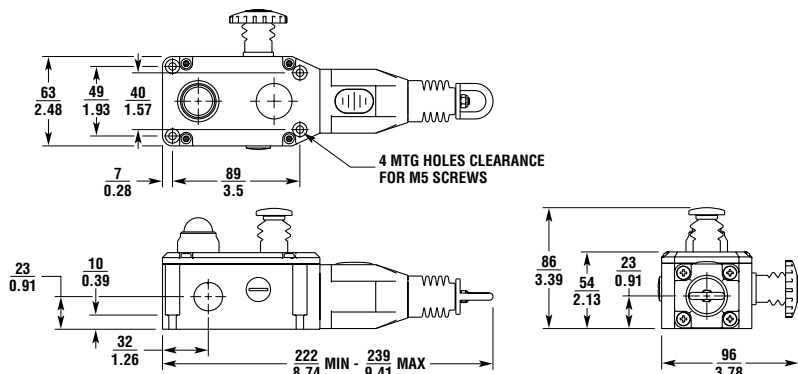
# ER6022-SS and XER6022-SS

## Specifications

Electrical	ER6022-SS	XER6022-SS
<b>Ex Classification:</b>		II 2 G EEx d II C T6
<b>Certification:</b>		PTB 00 ATEX 1093X IBExU 01 ATEX 1007X
<b>Contact Configurations:</b>	3 N/C + 1 N/O, 2 N/C + 2 N/O	1 N/C + 1 N/O, 2 N/C
<b>Safety Contacts:</b>	2 N/C, 3 N/C	1 N/C, 2 N/C
<b>Switching Ability</b>	<b>AC:</b> 240 V—3 A, 120 V—6 A, Inductive <b>DC:</b> 24 V—2.5 A, Inductive	250 V—3 A, 125 V—3A, Inductive 30 V—5 A, Inductive
<b>Auxiliary Contacts:</b>	1 N/O, 2 N/O	1 N/O
<b>Max Switching Current/Volt/Amp:</b>	240 V/720 VA	240 V/720 VA
<b>Minimum Current:</b>	5 V 5 mA DC	5 V 5 mA DC
<b>Electrical Life:</b>	1 x 10 <sup>6</sup> minimum	1 x 10 <sup>6</sup> minimum
<b>LED Indicator Beacon:</b>	24 VDC	N/A
<b>Mechanical</b>		
<b>Mounting:</b>	Any position	Any position
<b>Mounting Hardware:</b>	4 x M5 screws	4 x M5 screws
<b>Actuator Travel for Positive Opening:</b>	See diagrams on previous page	See diagrams on previous page
<b>Max Rope Span:</b>	100 m (328 ft.)	100 m (328 ft.)
<b>Operation Force:</b>	< 125 N (28 lb.)	< 125 N (28 lb.)
<b>Tensioning Force to Run Position:</b>	130 N (23 lb.) typical	130 N (23 lb.) typical
<b>Case Material:</b>	Die-cast aluminum alloy	316 stainless steel casting
<b>Eye Nut Material:</b>	Stainless steel	Stainless steel
<b>Wiring Entry:</b>	3 x M20 or 3 x 0.5 in. NPT	3 m cable
<b>Weight:</b>	880 g (31 oz.)	1750 g (62 oz.)
<b>Color:</b>	Natural	Natural
<b>Mechanical Life:</b>	1 x 10 <sup>6</sup> minimum	1 x 10 <sup>6</sup> minimum
<b>Environmental</b>		
<b>Protection:</b>	IP67 (NEMA 6)	IP67 (NEMA 6)
<b>Operating Temperature:</b>	-25 to 80°C (-13 to 176°F)	-25 to 80°C (-13 to 176°F)
<b>Cleaning:</b>	Water washdown	Water washdown
<b>Compliance</b>		
<b>Standards:</b>	IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304	
<b>Approvals/Listings:</b>	CE marked for all applicable directives (UL and C-UL pending, TUV pending)	

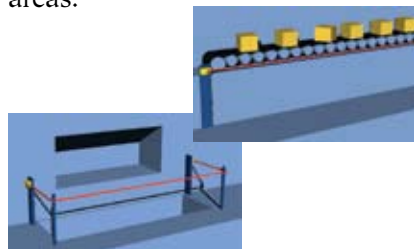
Specifications are subject to change without notice. Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the rope properly tensioned and the machine able to be started.

## Dimensions — mm/in.



## Applications

Typical applications are on conveyor systems and across rotating machinery, and around hazardous areas.





Conforms to EN418, EN292, EN60947-5-1, EN50041,  
BS5304, ISO13850  
UL and C-UL listed



G

safety interlock switches

# ER4020

## Compact Rope-Activated Emergency Stop Switch

- Compact size allows this switch to be used on smaller machines with a mounting width of 40 mm (1.57 in.) and covering rope spans up to 30 m (98 ft.)
- Status indicator—the status indicator makes the system easy to set up and to maintain the proper rope tension
- Variety of contacts—three or four sets of contacts to satisfy the most demanding applications
- DIN mounting pattern for a globally recognized mounting configuration
- NEMA 6 enclosure enables the ER4020 switch to withstand water washdown cleaning
- Heavy-duty housing—the die-cast housing and stainless steel eye nut makes the ER4020 suitable for demanding industrial applications
- Reset button—the blue reset knob must be turned in order to return to “machine run” condition following switch actuation by a pulled or slacked rope
- Long life—the ER4020 switch is designed for a minimum of one million actuations.



**Go to the Engineering Guide**  
For in-depth information on safety standards and use.





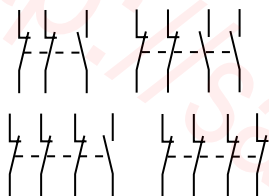
■ Operation



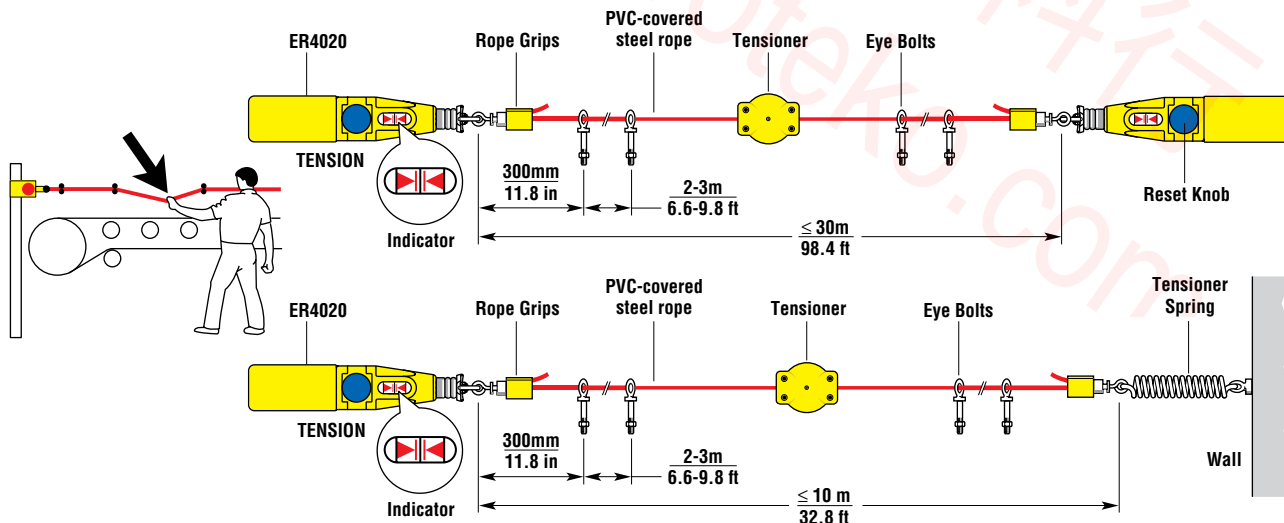
**Blue Reset Knob**

A blue reset knob is provided to easily return the unit back to its machine-run position after actuation.

**Contact Arrangements**



**Mounting Specification**



Note: If installation is less than 10 m (32.8 ft), the use of a tensioner spring at one end may be considered. However this must be carefully considered against the hazard the machine represents to the operator.

Note: Some installations may require a ER4020 on each end.

For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

**Installation Hardware Available**



**Rope Tension Kits**

The RTK Rope Tension Kits provide a revolutionary tensioning system that substantially reduces set-up time and provides all the necessary components in a single package.



**Installation Hardware**

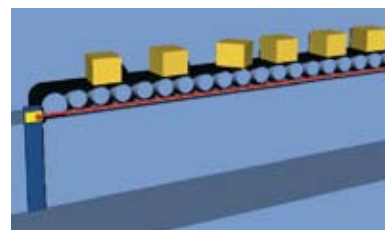
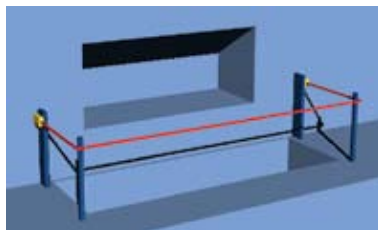
All conventional hardware items are available and may be ordered as separate items.

G safety interlock switches



## ■ Applications

Typical applications are on conveyor systems and across rotating machinery, and around hazardous areas.



## ■ Specifications

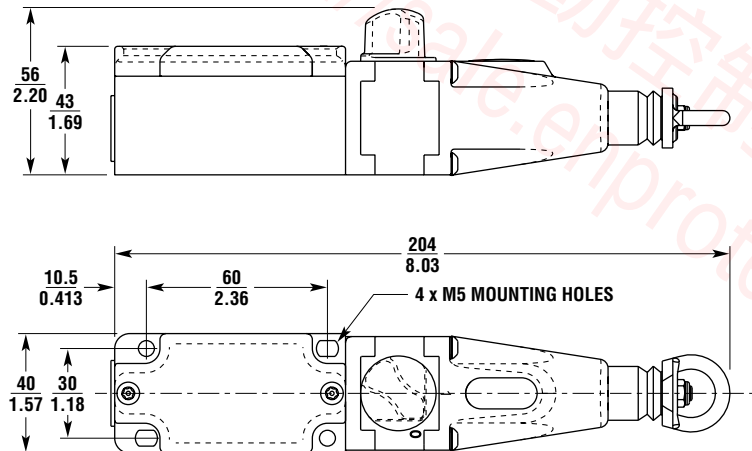
Electrical	All Models
<b>Contact Configurations:</b>	2 N/C + 1 N/O, 2 N/C + 2 N/O, 3 N/C + 1 N/O, 4 N/C
<b>Safety Contacts:</b>	2 N/C, 3 N/C, 4 N/C positive break
<b>Switching Ability</b>	
<b>AC:</b>	500 V–1 A, 250 V–2 A, 100 V–5 A
<b>DC:</b>	250 V–0.5 A, 24 V–2 A
<b>Safety Contact Gap:</b>	2 x 2 mm or 3 x 2 mm or 4 x 2 mm
<b>Auxiliary Contacts:</b>	1 N/O or 1 N/C or 2 N/O
<b>Max Switching Current/Volt/Amp:</b>	500 V/500 VA
<b>Minimum Current:</b>	5 V 5 mA DC
<b>Electrical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Mechanical</b>	
<b>Mounting:</b>	Any position
<b>Mounting Hardware:</b>	4 x M5 screws
<b>Actuator Travel for Positive Opening:</b>	See diagrams on previous page
<b>Max Rope Span:</b>	30 m (98 ft.)
<b>Operation Force:</b>	< 125 N (28 lb.)
<b>Tensioning Force to Run Position:</b>	130 N (23 lb.) typical
<b>Tensioning Force to Lockout:</b>	188 N (42 lb.) typical
<b>Max Actuation Frequency:</b>	1 cycle per sec
<b>Case Material:</b>	Die-cast aluminum alloy
<b>Eye Nut Material:</b>	Stainless steel
<b>Wiring Entry:</b>	1 x 0.5 in. NPT conduit
<b>Weight:</b>	610 g (21 oz.)
<b>Color:</b>	Yellow
<b>Mechanical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Environmental</b>	
<b>Protection:</b>	IP66 (NEMA 6)
<b>Operating Temperature:</b>	-25 to 80°C (-13 to 176°F)
<b>Cleaning:</b>	Water washdown
<b>Compliance</b>	
<b>Standards:</b>	EN418, EN292, 3N60947-5, EN50041, BS5304, ISO13850
<b>Approvals/Listings:</b>	CE marked for all applicable directives, UL and C-UL

Specifications are subject to change without notice.

Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

**A** **Go to the Engineering Guide**  
For in-depth information on safety standards and use.

## ■ Dimensions — mm/in.





Conforms to EN418, EN292, ISO/IEC13850, EN60947-5-1  
UL and C-UL listed



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safety interlock switches

# ER6019

## Combination Rope and Push-Button Actuated Emergency Stop Switch

- Long rope spans of up to 75 m (246 ft.) for standard model and up to 125 m (410 ft.) for extended model means fewer number of switches required per application
- Heavy-duty housing—the die-cast housing and stainless steel eye nut make the ER6019 suitable for demanding industrial applications
- NEMA 6 enclosure enables the ER6019 switch to withstand water washdown cleaning
- Integral E-stop—the lid-mounted E-stop button provides emergency stopping capability at the extreme end of the installation
- Status indicator—the lid-mounted status indicator makes the system easy to set up and to maintain the proper rope tension
- Variety of contacts—three or four sets of contacts to satisfy the most demanding applications
- Vibration tolerant—the snap-acting switch contacts protect against nuisance tripping due to vibration
- Long life—the ER6019 switch is designed for a minimum of one million actuations
- Conduit beacons are available to provide visual status indication (order separately from accessories section)

**A** Go to the Engineering Guide  
For in-depth information on safety standards and use.

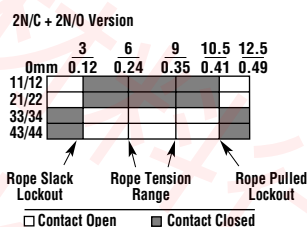
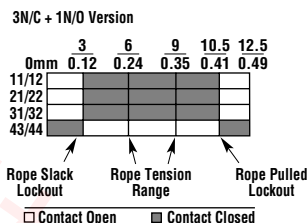
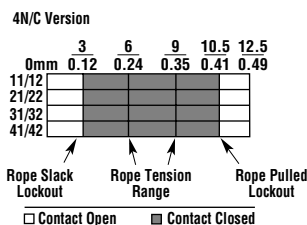
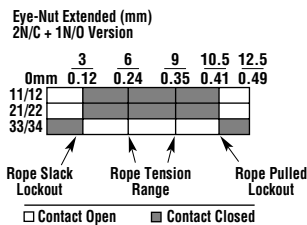
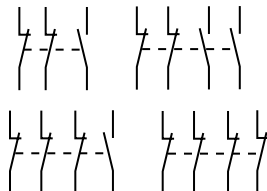
■ Operation

Rope-Status Indicator on Lid



The rope status indicator makes the system easy to set up and maintain for spans up to 410 ft.

Contact Arrangements



Installation Hardware Available



Rope Tension Kits

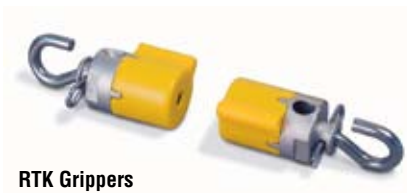
The RTK Rope Tension Kits provide a revolutionary tensioning system that substantially reduces set-up time and provides all the necessary components in a single package.

Installation Hardware

All conventional hardware items are available and may be ordered as separate items.



RTK Tensioner



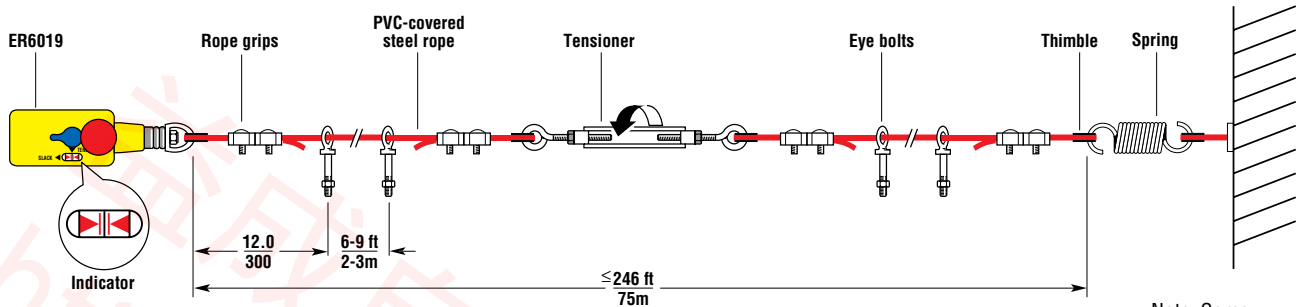
RTK Grippers

G safety interlock switches

■ Operation (continued)

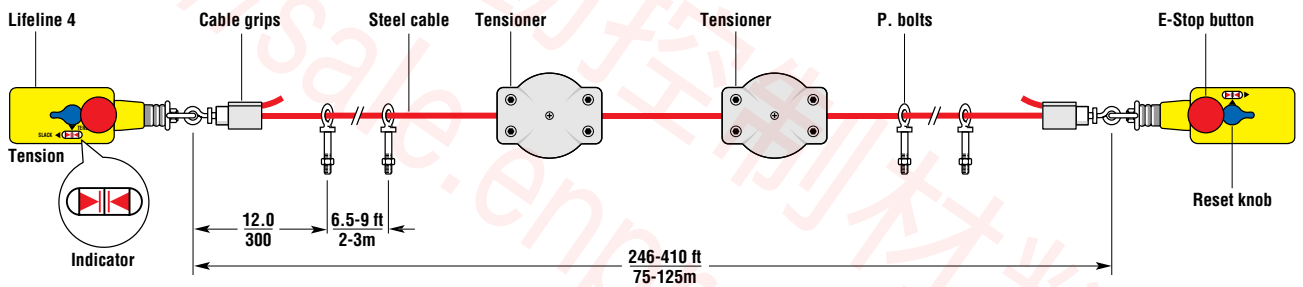
Mounting Specifications

Standard Model



Note: Some installations may require a ER6019 on both ends.

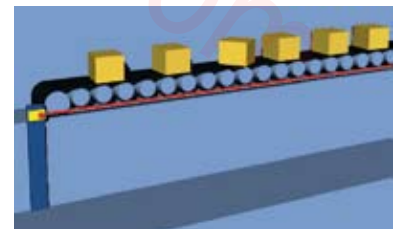
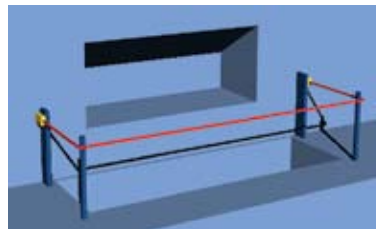
Extended Model



For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

■ Applications

Typical applications are on conveyor systems, across rotating machinery, and around hazardous areas.



**A** Go to the Engineering Guide  
For in-depth information on safety standards and use.

## ■ Specifications

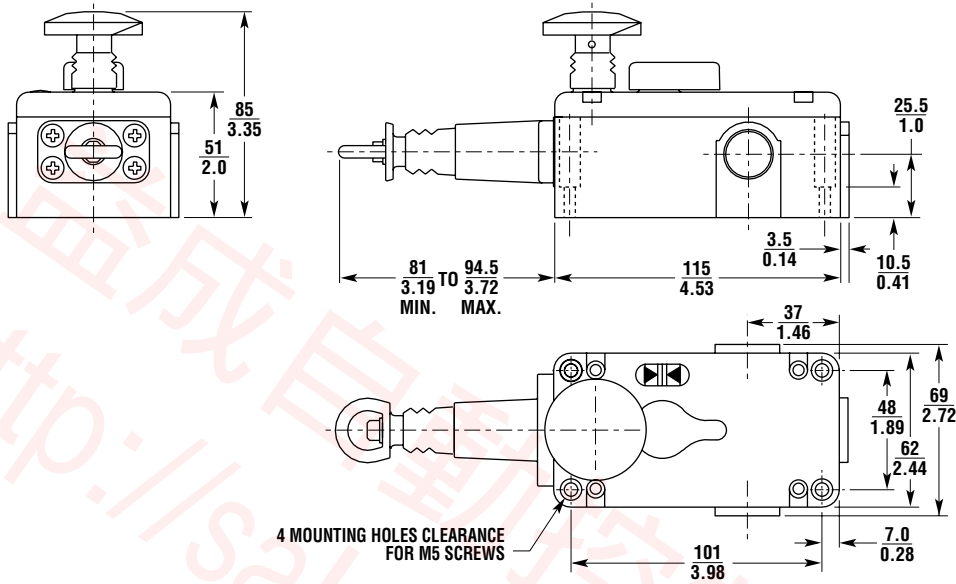
Electrical	All Models
<b>Contact Configurations:</b>	2 N/C + 1 N/O , 2 N/C + 2 N/O, 3 N/C + 1 N/O, 4 N/C
<b>Safety Contacts:</b>	2 N/C, 3 N/C, 4 N/C positive break
<b>Switching Ability</b>	
<b>AC:</b>	500 V–1 A, 250 V–2 A, 100 V–5 A
<b>DC:</b>	250 V–0.5 A, 125 V–1 A, 24 V–2 A
<b>Safety Contact Gap:</b>	2 x 2 mm or 3 x 2 mm or 4 x 2 mm
<b>Auxiliary Contacts:</b>	1 N/O or 1 N/C or 2 N/O
<b>Max Switching Current/Volt/Amp:</b>	500 V/500 VA
<b>Minimum Current:</b>	5 V 5 mA DC
<b>Electrical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Mechanical</b>	
<b>Mounting:</b>	Any position
<b>Mounting Hardware:</b>	4 x M5 screws
<b>Actuator Travel for Positive Opening:</b>	See diagram on previous page
<b>Max Rope Span:</b>	75 m (246 ft.) for standard model 75 to 125 m (246 to 410 ft.) for extended model
<b>Break Contact Min Force:</b>	< 125 N (28 lb.)
<b>Max Actuation Speed:</b>	N/A
<b>Max Actuation Frequency:</b>	1 cycle per sec
<b>Case Material:</b>	Die-cast alloy
<b>Eye Nut Material:</b>	Stainless steel
<b>Wiring Entry:</b>	3 x 0.5 in. NPT conduit
<b>Weight:</b>	630 g (22.2 oz.)
<b>Color:</b>	Yellow body, Red E-stop button
<b>Mechanical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Environmental</b>	
<b>Protection:</b>	IP66 (NEMA 6)
<b>Operating Temperature:</b>	-25 to 80°C (-13 to 176°F)
<b>Cleaning:</b>	Water washdown
<b>Compliance</b>	
<b>Standards:</b>	EN418, EN292, ISO/IEC13850, EN60947-5-1
<b>Approvals/Listings:</b>	CE marked for all applicable directives, UL and C-UL

Specifications are subject to change without notice.

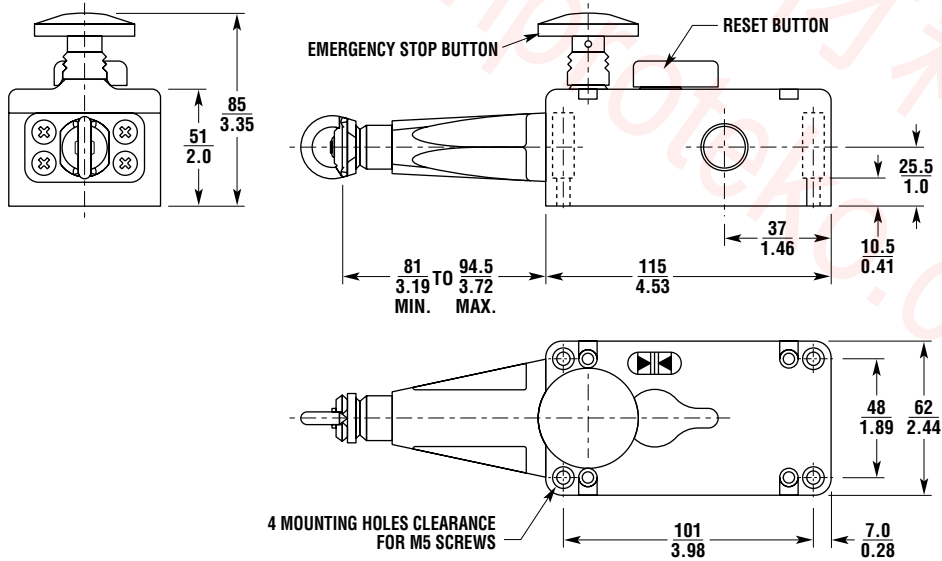
Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

■ Dimensions — mm/in.

Standard Model



Extended Model



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safety interlock switches

**A** Go to the Engineering Guide  
For in-depth information on  
safety standards and use.