



賀電
NHD

CONTROL UNITS



MIRDC
ISO 9001

3A6Y013



EC Declaration
of Conformity



TÜV



A004239



E239743

16mm / 22mm
PUSH BUTTON
SELECTOR SWITCH
LED PILOT LAMP
CONTROL STATION
LED TOWER LAMP
JOYSTICK SWITCH



22Φ CONTROL UNITS FEATURES AND CHARACTERISTICS 特性表

接觸阻抗 Contact Resistance	50 mΩ以下 less than 50 mΩ
絕緣阻抗 Insulation Resistance	500V DC電壓下,100MΩ以上 Over 100MΩ at 500V DC
耐電壓 Dielectric Strength	AC 2500V之測試電壓1分鐘,無短路,破壞,燒毀等異常現象 Test with AC 2500V for one min. without short circuit, breaks, burns or anything unusual.
耐衝擊 Shock Resistance	500 m/s ²
耐振動 Vibration Resistance	10~55Hz 複振幅0.1mm Total Amplitude 0.1mm, 10~55Hz.
動作頻率 Operation Frequency	1800次/小時 1800 times/ hour
機械壽命 Mechanical Durability	100萬次以上 Over one million times
電氣壽命 Electrical Durability	10萬次以上 Over one hundred thousand times
螺絲扭力 Screw Torque	0.8 N-m保持5秒鐘不得破損 0.8 N-m for five seconds without any fracture.
牙圈扭力 Tightening Torque	2.5 N-m保持1分鐘不得破損 2.5 N-m for one min. without any fracture.
保存溫度 Storage Temperature	-20~80°C (-4~176°F)
使用溫度 Operating Temperature	-20~70°C (-4~158°F)
相對溼度 Relative Humidity	45~85% RH
額定絕緣電壓 / 額定電流 Rated Insulation Voltage / Thermal Current	Ui : 600V / Ith : 10A
耐濕性 Humidity- Resistance	在溫度40±2°C (104±35°F),相對溼度90~100%狀態下,放置48小時後,擦乾水滴於5分鐘內測試絕緣體電阻3MΩ以上,接觸電阻5mΩ以下,耐電壓亦符合規定,且無機械故障。 Leave one unit in ambient temprature of 40±2°C (104±35°F) with relative humidity of 90~100% for 48 hours, then dry and test it in 5 minutes. The results have to be: *Insulation Resistance: over 3MΩ *Contact Resistance: less than 5mΩ *Dielectric Strength: fit with its testing standard *No Mechanical failure

CSA Certified 2718965
Applicable Requirements



CSA Standard C22.2 No. 0-10 - General Requirements - Canadian Electrical Code, Part II
CSA Standard C22.2 No. 14-13 - Industrial Control Equipment

UL File NO. E239743



USR - Indicates evaluation to UL 508, Seventeenth Edition, the Standard for Industrial Control Equipment.
CNR indicates investigation to CAN/CSA C22.2 No. 14-05, the Standard for Industrial Control Equipment.
USR, CNR - Pushbutton Switches and Pilot Lights for Industrial Use,
Series NPB22, NLB22, NSS22, NLS22, NPL22 or NLD22, followed by additional characters.

TÜV Rheinland Group



License No. R50202326
EN 60947-1 : 2007
EN 60947-5-1 : 2004+A1
License No. R50204143
EN 60947-1 : 2007
EN 60947-5-1 : 2004+A1
EN 60947-5-5 : 1997+A1

PUSH BUTTON SWITCHES / 按鈕開關 22Φ / 25Φ

(NON-ILLUMINATED & LED ILLUMINATED) / 無照光按鈕與照光按鈕

Model Designation :

型號說明

NPB22-F11GA

1 2 3 4 5

1. Series (系列)

NPB22	Non-Illuminated 無照光按鈕
NLB22	Led Illuminated 照光按鈕

3. Contact Blocks (接點)

10	1a	21	2a1b
01	1b	12	1a2b
11	1a1b	22	2a2b
20	2a	02	2b

4. Color (顏色)

NPB22		NLB22	
R	Red 紅色	R	Red 紅色
G	Green 綠色	G	Green 綠色
Y	Yellow 黃色	Y	Yellow 黃色
S	Blue 藍色	S	Blue 藍色
B	Black 黑色	W	White 白色
W	White 白色		

2. Type (型式)

NPB22		NLB22	
F	Flush Head 平頭	T	Twist To Release Head (40Ø) 大頭連鎖式(40Ø)
E	Elevation Head 凸頭	R	Twist To Release Head (40Ø) 大頭連鎖式(40Ø)
M	Mushroom Head (40Ø) 大頭(40Ø)	S	Pull To Release Mushroom Head 35Ø 復歸拉卡連鎖式(35Ø)
K	Mushroom Head (40Ø) (With key) 大頭附鎖 (40Ø)	D	Double Push Button 兩點式按鈕
L	Flush Head Maintained 平頭停置	G	Mushroom Head Maintained (40Ø) 大頭停置(40Ø)
P	Elevation Head Maintained 凸頭停置	H	Pull To Release Mushroom Head (40Ø) 復歸拉卡連鎖式(40Ø)
J	Twist To Release Mushroom Head (40Ø) 大頭連鎖式(40Ø)	I	Twist To Release Mushroom Head (40Ø) 大頭連鎖式(40Ø)
		DM	Double Push Button with Metal Frame 金屬框兩點式按鈕
		M6	Mushroom Head 60Ø 大頭(60Ø)
		T6	Twist To Release Mushroom Head (60Ø) 大頭連鎖式(60Ø)
		DM	Double Push Button with Metal Frame 金屬框兩點式按鈕
		R	Twist To Release Head (40Ø) 大頭連鎖式(40Ø)
		T	Twist To Release Head (40Ø) 大頭連鎖式(40Ø)
		DM	Double Push Button with Metal Frame 金屬框兩點式按鈕

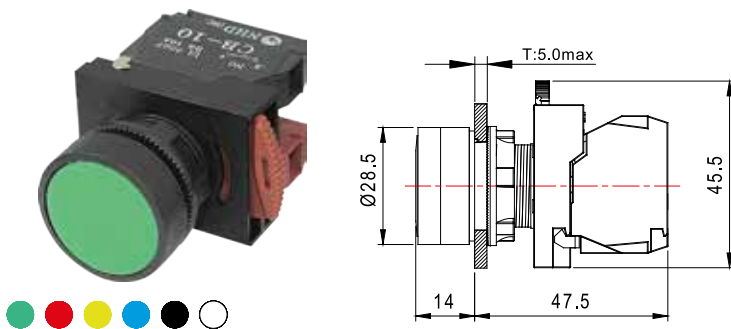
5. Voltage Rating (電壓)

	NLB22
A	AC.DC 24V
E	AC.DC 100~120V
I	AC.DC 220~240V
M	AC 380~440V
Y	AC.DC 12V

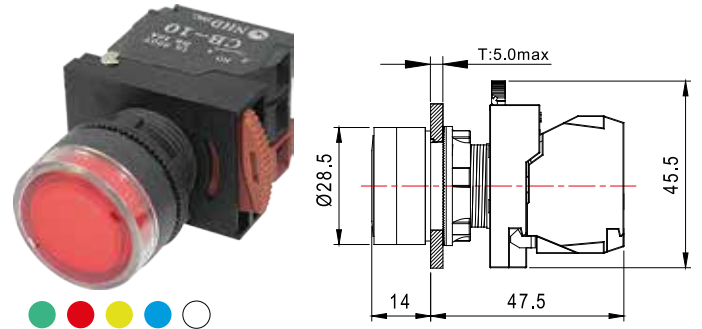
SPECIFICATION

Unit (單位) : mm

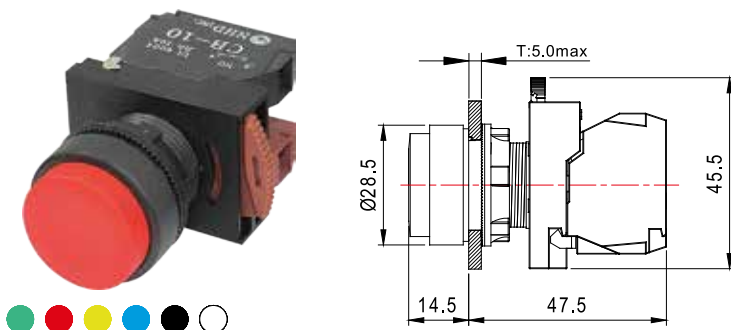
NPB22-F



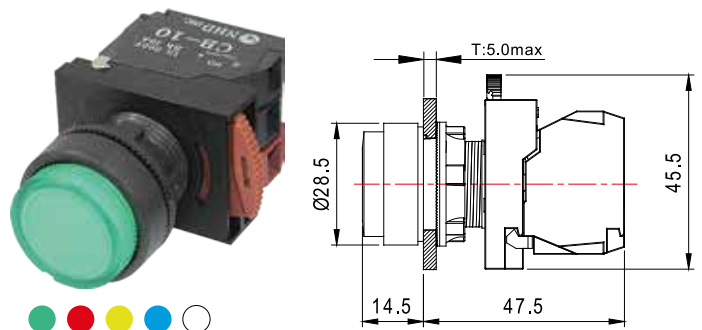
NLB22-F



NPB22-E

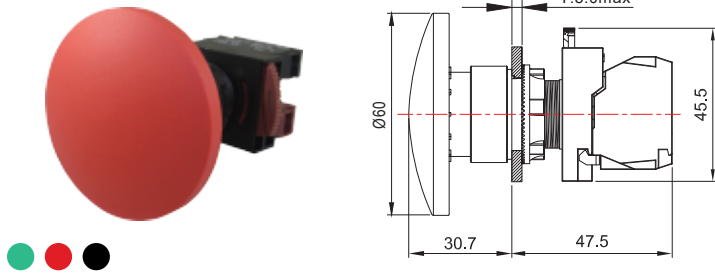


NLB22-E

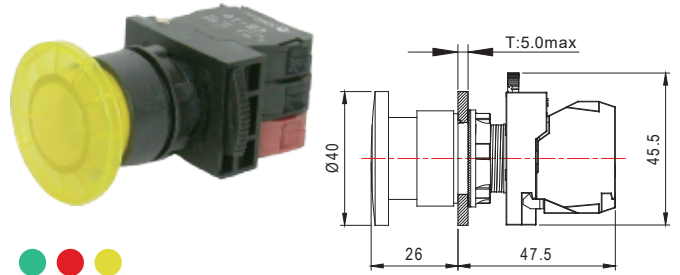


(NON-ILLUMINATED & LED ILLUMINATED) / 無照光按鈕與照光按鈕

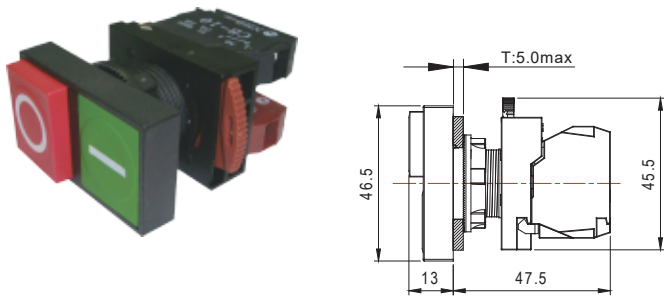
NPB22-M6



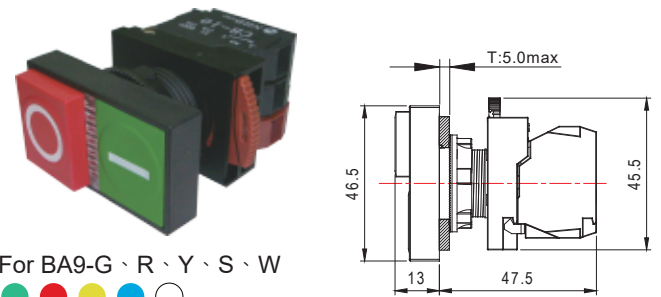
NLB22-M



NPB22-D



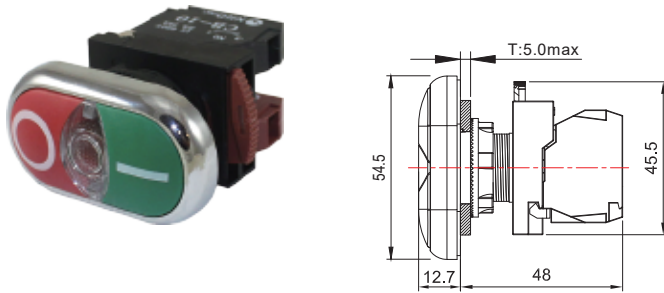
NLB22-D



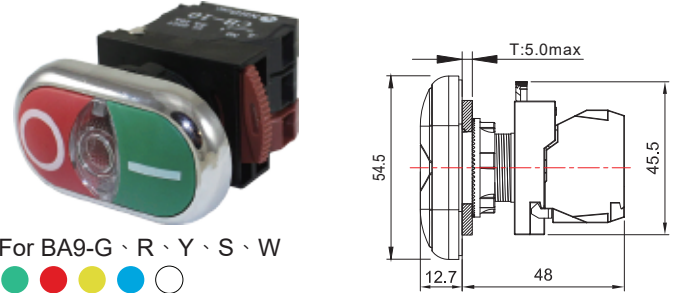
For BA9-G · R · Y · S · W



NPB22-DM



NLB22-DM

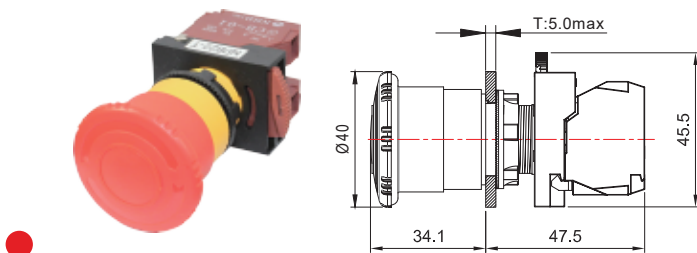


For BA9-G · R · Y · S · W

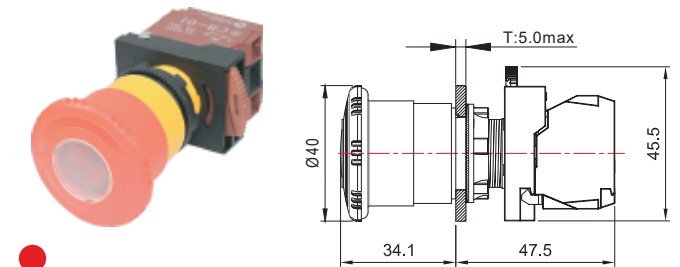


Emergency Stop / 緊急停止按鈕系列

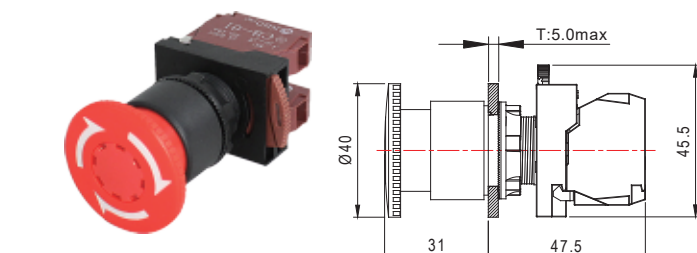
NPB22-T



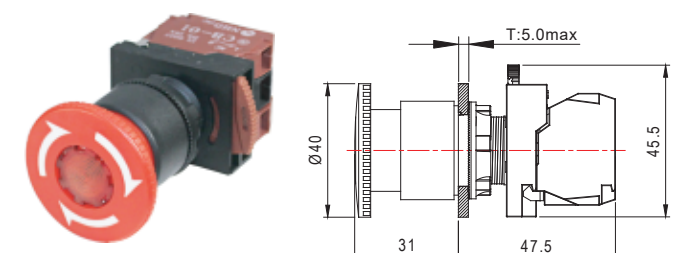
NLB22-T



NPB22-R



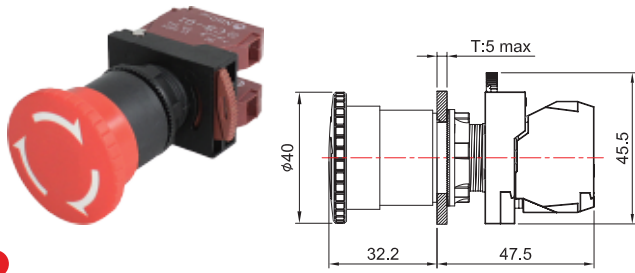
NLB22-R



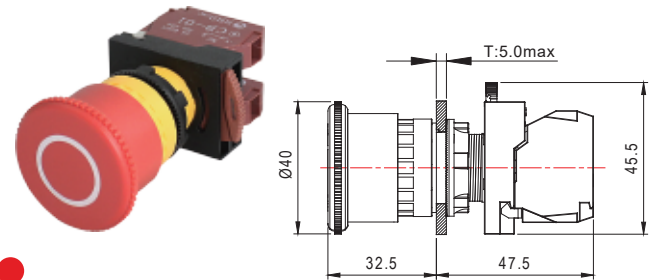
(NON-ILLUMINATED & LED ILLUMINATED) / 無照光按鈕與照光按鈕

Emergency Stop / 緊急停止按鈕系列

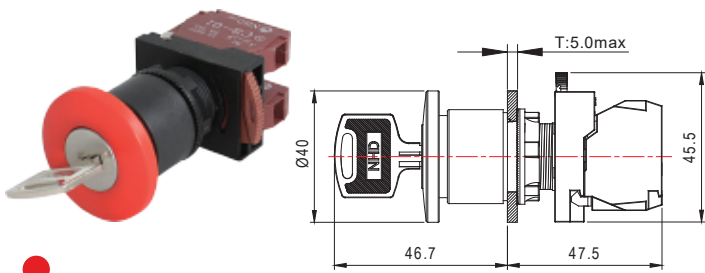
NPB22-J



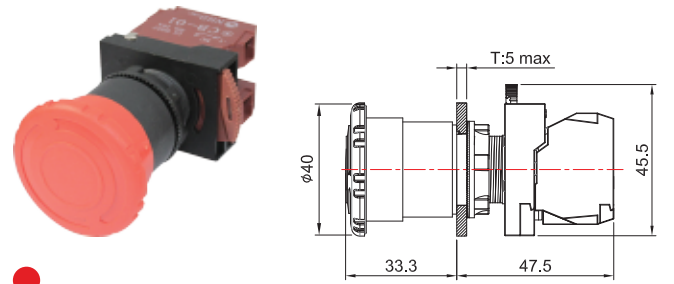
NPB22-H



NPB22-K



NPB22-I



LED PILOT LAMP 22Φ / 25Φ
指示燈

Model Designation :
型號說明

NPL22-GA

1 2 3

1. Series (系列)

NPL22	Round Head 凸頭圓形
NLD22	Flush Head 平頭圓形

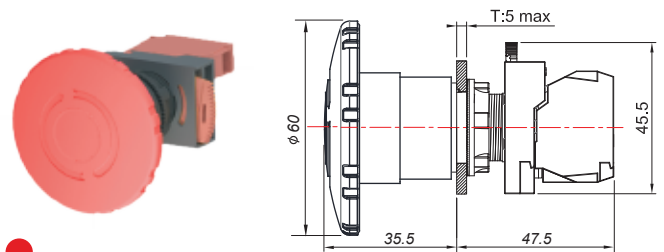
2. Color (顏色)

R	Red 紅色	Y	Yellow 黃色
G	Green 綠色	S	Blue 藍色
W	White 白色	O	Orange 橘色

3. Voltage Rating (電壓)

NPL22		NLD22	
A	AC.DC 24V	A	AC.DC 24V
E	AC.DC 100~120V	E	AC 100~120V
I	AC.DC 220~240V	I	AC 220~240V
M	AC 380~440V	M	AC 380~440V
Y	AC.DC 12V		

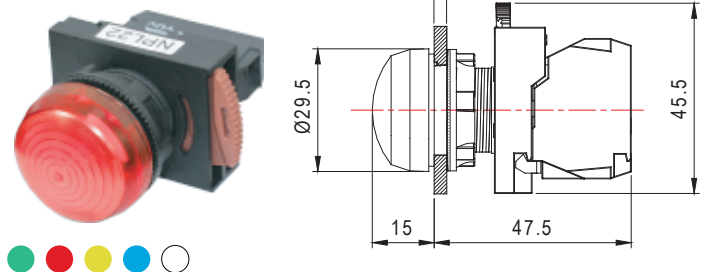
NPB22-T6



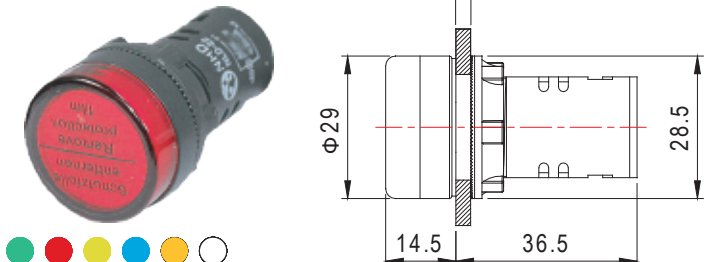
SPECIFICATION

Unit (單位) : mm

NPL22-R



NLD22-R



(NON-ILLUMINATED & LED ILLUMINATED) / 無照光選擇與照光選擇

Model Designation :

型號說明

NSS22-S211GA2

1 2 3 4 5 6 7

1. Series (系列)

NSS22	Non-Illuminated 無照光選擇
NLS22	Led Illuminated 照光選擇

2. Type (型式)

NSS22		NLS22	
S	Normal Shaft 短柄	S	Normal Shaft 短柄
L	Long Shaft 長柄	L	Long Shaft 長柄
K	Key 鑰匙		

3. Position (方位)

2	2 Position 90° 2段選擇90°	1 2
1	2 Position 90° (Spring Return) 2段選擇復歸型90°	1 2
3	3 Position 45° 3段選擇45°	1 0 2
0	3 Position 45° (Spring Return) 3段選擇復歸型45°	1 0 2
4	3 Position 45° (Spring Return From Left) 3段選擇 左邊復歸型45°	1 0 2
5	3 Position 45° (Spring Return From Right) 3段選擇 右邊復歸型45°	1 0 2
6	2 Position 90° (Signal continuous) 2段開關 訊號連續型90°	

4. Contact Blocks (接點)

10	1a	21	2a1b
01	1b	12	1a2b
11	1a1b	22	2a2b
20	2a	02	2b

5. Color (顏色)

NSS22		NLS22	
R	Red 紅色	R	Red 紅色
G	Green 綠色	G	Green 綠色
Y	Yellow 黃色	Y	Yellow 黃色
B	Black 黑色	W	White 白色

6. Voltage Rating (電壓)

NLS22	
A	AC/DC 24V
E	AC/DC 100~120V
I	AC/DC 220~240V
M	AC 380~440V
Y	AC/DC 12V

7. NSS22-K positions of key removal (鑰匙抽出方向)

V: Remove key(抽出鑰匙)

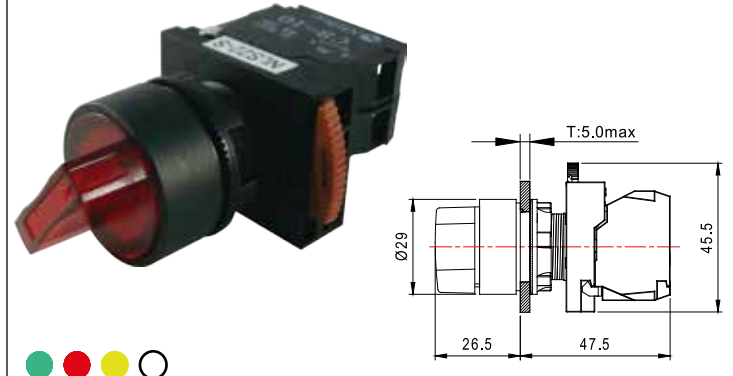
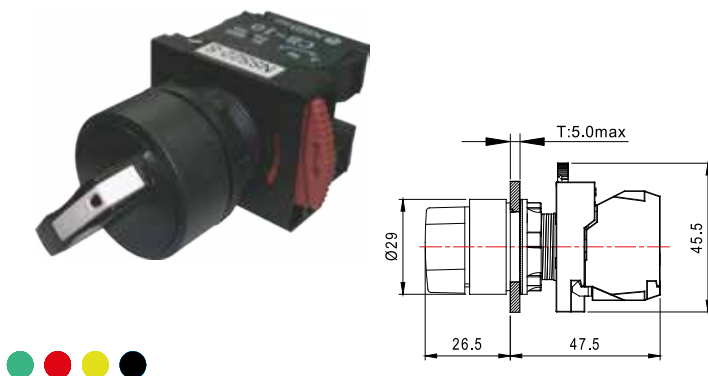
code 代碼	3 position 3段選擇			2 position 2段選擇	
	left 左	center 中	right 右	left 左	right 右
0		V			
1	V	V			
2		V	V		
3	V	V	V		
4	V			V	
5			V		V
6	V		V	V	V

SPECIFICATION

Unit (單位) : mm

NSS22-S2 / S3

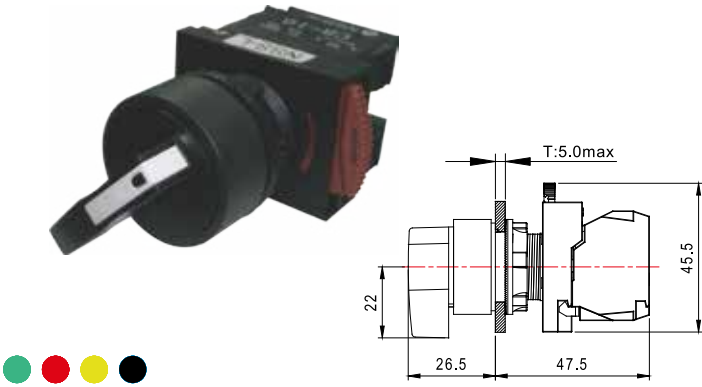
NLS22-S2 / S3



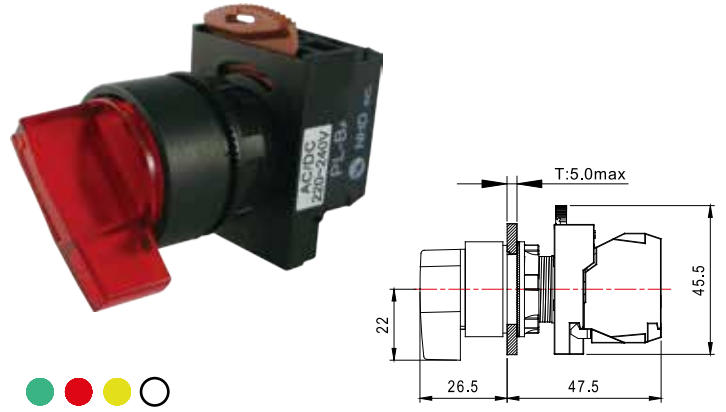
SELECTOR SWITCHES / 選擇開關 22Φ / 25Φ

(NON-ILLUMINATED & LED ILLUMINATED) / 無照光選擇與照光選擇

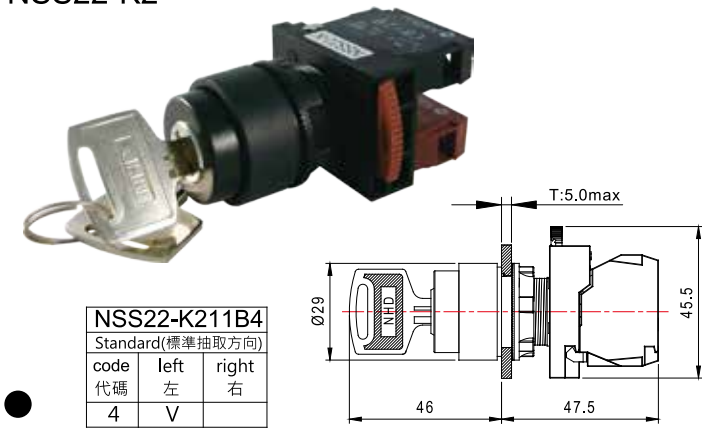
NSS22-L2 / L3



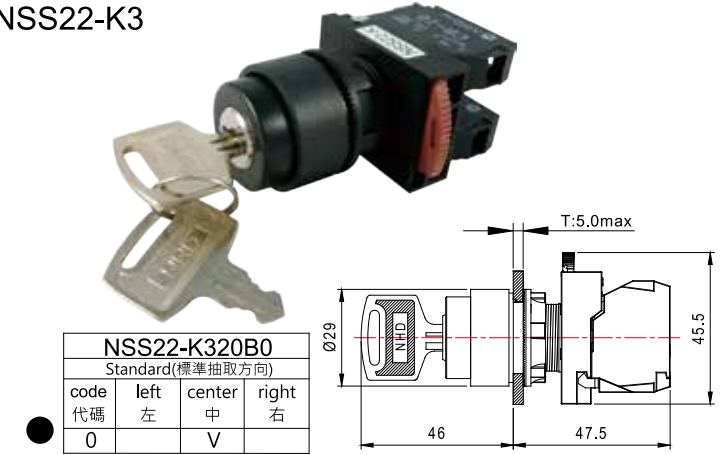
NLS22-L2 / L3



NSS22-K2



NSS22-K3



FOOT AND PALM SWITCHES / 腳踏開關

Model Designation :

型號說明

NFP-B11R

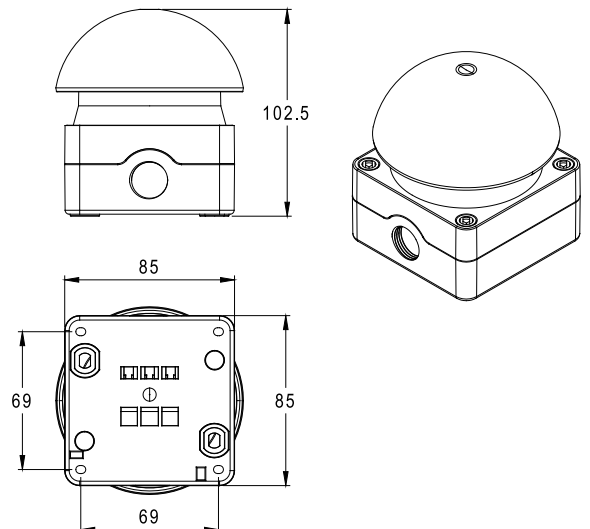
1 2

1.Contact Blocks (接點)

10	1a	30	3a
01	1b	03	3b
11	1a1b	21	2a1b
20	2a	12	1a2b
02	2b	00	none

2.Color (顏色)

R Red 紅色	B Black 黑色
G Green 綠色	Y Yellow 黃色



(Joystick Switches) / 十字開關

Model Designation :

型號說明

NJS22N-M22A

1 2 3 4

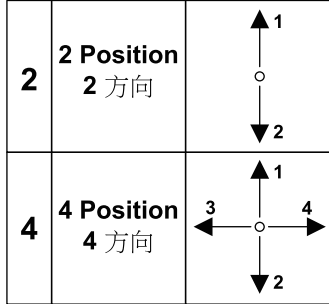
1.Series(系列)

NJS22N	Normal 標準型
NJS22K	With interlock 附安全按鈕型

2.Movement(動作)

M	Maintained 停置
R	Return 復歸

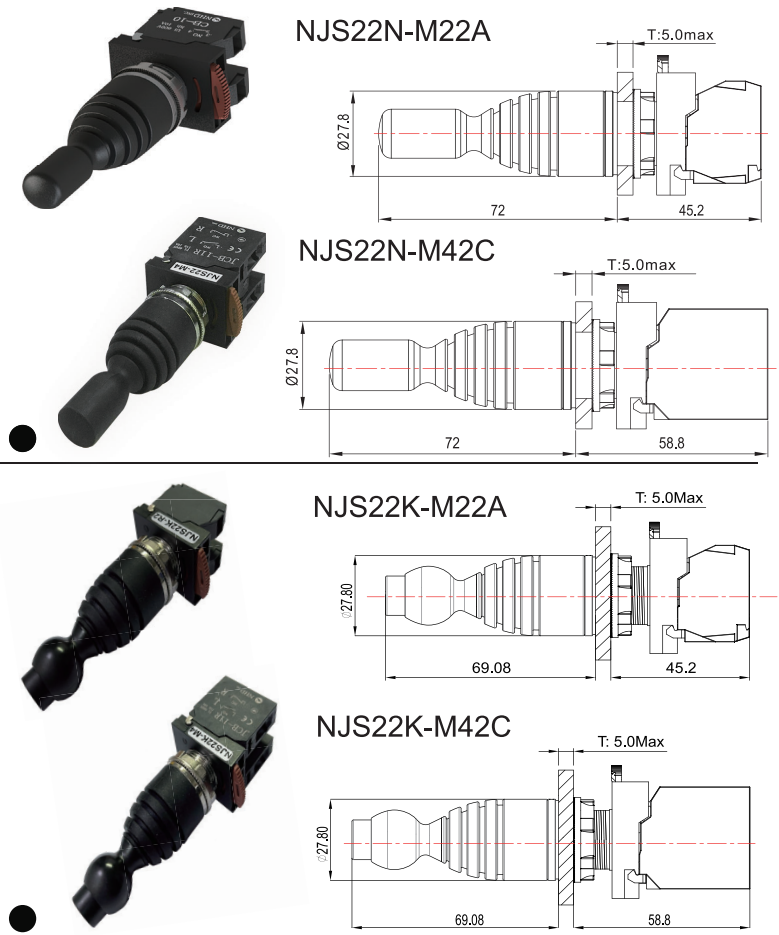
3.Position(方位)



4.Contact Blocks(接點)

2 Position 2 方向					
Stage 1 單層			Stage 2 雙層		
2A	1a+1a	1C	1a1b	4A	2a+2a
4 Position 4 方向					
	2C	1a1b+1a1b			

1C : 1a1b上下各1a
2C : 1a1b+1a1b
 上下左右各1a
2A : 1a+1a上下各1a
4A : 2a+2a上下各2a



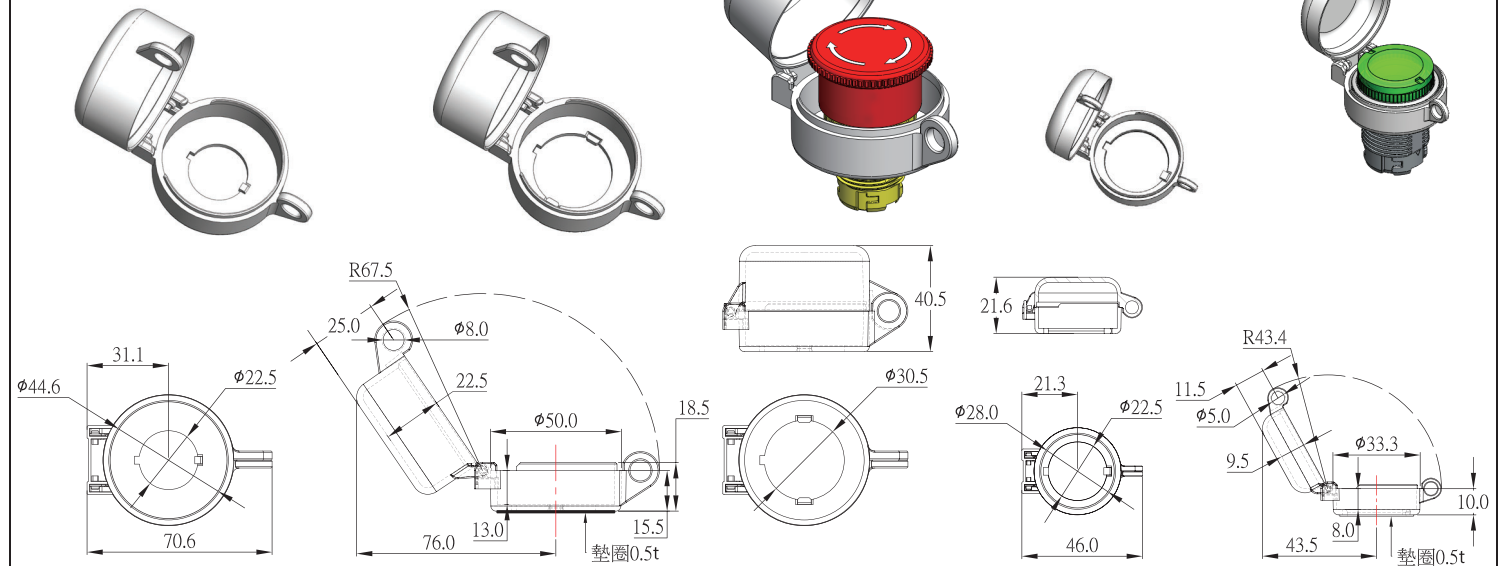
Unit (單位) : mm

Padlock Covers (鎖扣蓋)

NPB22-H06L

NPB30-H06L

NPB22-E06L



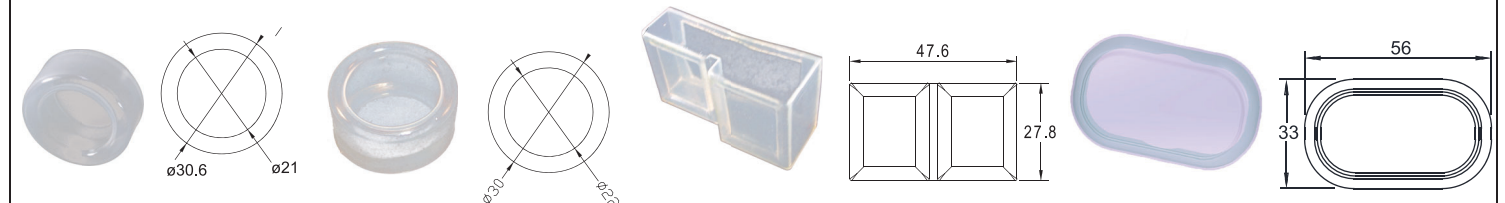
Transparent Boots (保護套)

PPB22-F06

PPB22-P06

PPB22-D06

PPB22-DM06



ACCESSORIES / 附件

Contact Blocks (接點)

CB-10

CB	
10	1a
01	1b
11	1a1b



Ui : 600V Ith : 10A

Buzzer(蜂鳴器)

NBZ22-RA

A	AC.DC 24V
E	AC 100~120V
I	AC 220~240V



LED Bulb (燈球)

1.Color (顏色)

BA9-GA 1 2

R	Red 紅色	Y	Yellow 黃色
G	Green 綠色	S	Blue 藍色
W	White 白色		

2.Voltage Rating (電壓)

A	AC.DC 24V
E	AC.DC 100~120V
I	AC.DC 220~240V
M	AC 380~440V
Y	AC.DC 12V

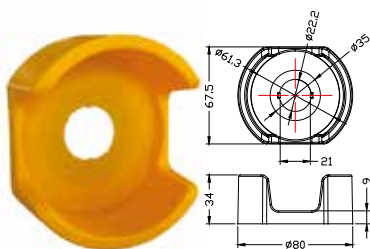


Back row : M Front row : A、E、I、Y
(燈球上圖為:M。下圖為:A、E、I、Y)

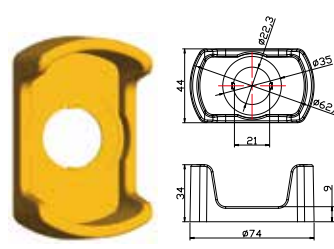
Shrouds (誤觸控保護座)

Unit (單位) : mm

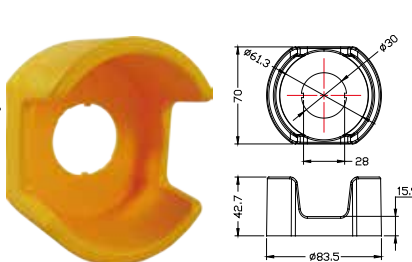
EMO-01Y ● EMO-01W ○



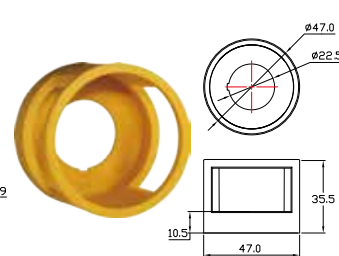
EMO-02Y ● EMO-02W ○



EMO-03Y ●



EMO-04Y ●



Name Plates (緊急停止銘板)

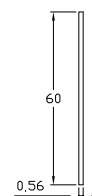
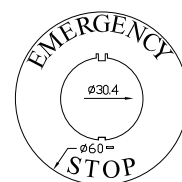
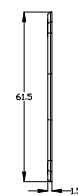
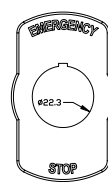
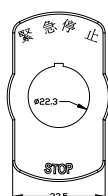
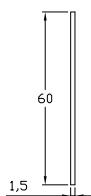
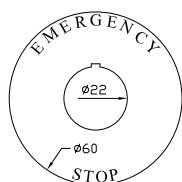
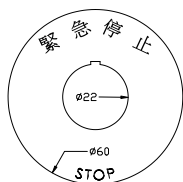
NPB22-R01C-C

NPB22-R01C-E

NPB22-R02C-C

NPB22-R02C-E

NPB30-R03C-E



Anti-Interference Bulb Holder (抗干擾燈座)

BA9-L



Patent Number (專利號碼) : M429166
Voltage Rating (電壓) : AC
Vs > 40V, LED ON
Vs < 40V, LED OFF
Vs(max) depend on LED voltage

Bulb Holder(燈座)

BA9



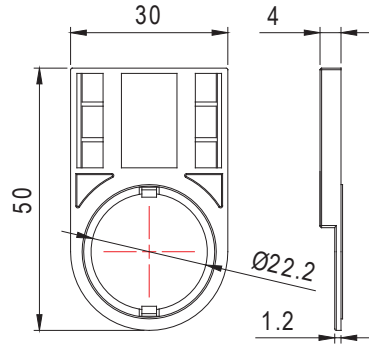
Fixing base(固定座)

NPB22-SB



Name Plates **NPB22-01C**

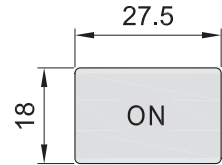
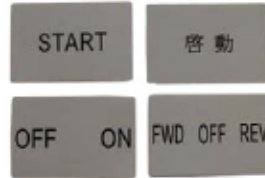
(標示框)



Unit (單位) : mm

Standard Legend Codes **NPB22-01C-01**

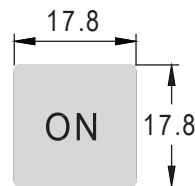
(標示銘板)



01	02	03	04	05	06	07	08	09
ON	OFF	STOP	START	FWD	REV	UP	DOWN	RUN
10	11	12	13	14	15	16	17	18
OFF ON	O I	ON OFF ON	FWD OFF REV	MAN OFF AUTO	LOW OFF HIGH	ON OFF	OPEN	CLOSE
19	20	21	22	23	24	25	26	27
RESET		EM. STOP	BLANK	TRIP	POWER	○	┃	HIGH
28	29	30	50	51	52	53	54	55
LOW	FAULT	MUTE	電源	運轉	啟動	停止	手動 停止 自動	逆轉 停止 正轉
56	57	58	59	60				
正轉	反轉	自動	復歸	電源 關 開				

Standard Legend Codes **NCU-61-01**

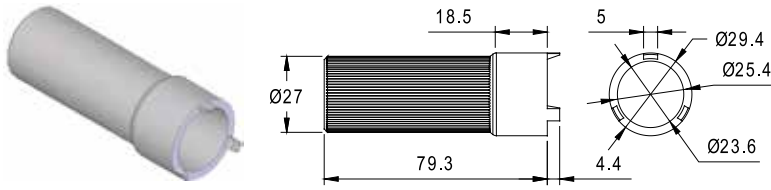
(標示銘板)



01	02	03	04	05	06	07	08	09	10
ON	OFF	START	STOP	FWD	REV	UP	DOWN	FAST	SLOW
11	12	13	14	15	16	17	18	19	20
OPEN	CLOSE	RESET	EM. STOP	┃	ON	START	FWD	UP	FAST
21	22	23	24	25	26	27	28	29	30
OPEN	○ I	OFF ON	STOP START	REV FWD	DOWN UP	SLOW FAST	ES-CLOSE	←	↔
31	32	33	00						
○	┃	POWER							

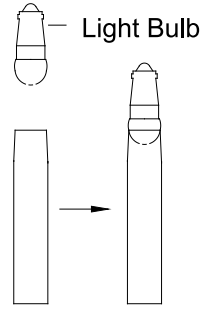
Mounting Ring Tool
(牙圈工具)

PPB22-02T



Bulb extractor
(燈泡工具)

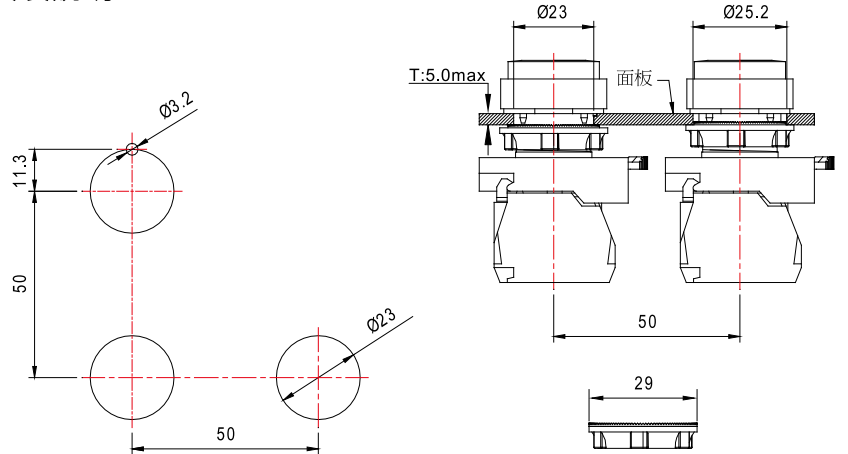
BA9-T2



Exploded Views
分解圖

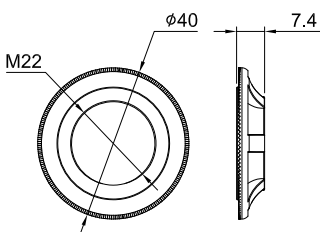
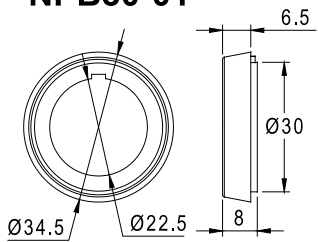


Mounting Dimension
安裝說明



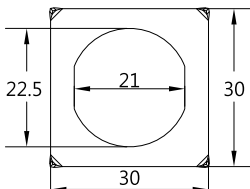
Unit(單位):mm

Mounting Adaptor (轉接環)
From 22mm to 30mm
(22mm 轉 30mm)
NPB30-01



※ Thickness < 3mm
or Smooth surface
(板厚3mm以下或表面
太光滑須加裝此墊片)

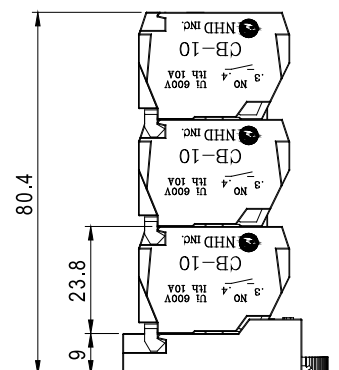
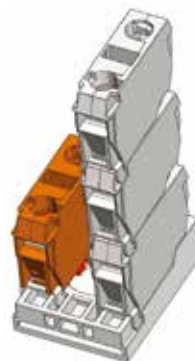
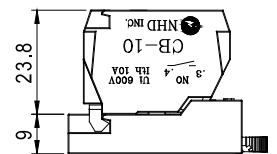
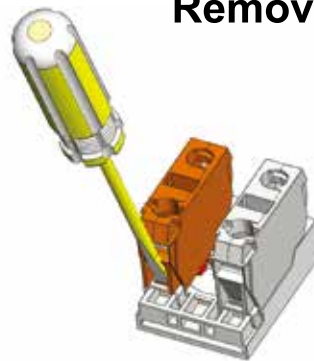
PPB30-01X



※ PPB30-01X

PPB30-02

Contacts Mounting And Removing
接點拆卸圖



Unit(單位):mm



NB22-C1Y ●
NB22-C1W ○



C1Y-001



C1Y-002



C1Y-003



C1Y-004



C1Y-005



NB22-C2Y ●
NB22-C2W ○



C1W-002



C1W-003



C2Y-001



C2Y-002



C2Y-003



NB22-C3Y ●
NB22-C3W ○



C2Y-004



C3Y-001



C3W-001



C3Y-002



C3W-002



NB22-C4Y ●
NB22-C4W ○



C4Y-001



C4Y-002



C4Y-003



C4Y-004



C4Y-005



NB22-C5Y ●



C5Y-001



C5Y-002



C5Y-003



C5Y-004



C5Y-005

CONTROL STATION / 按鈕開關盒

Model Designation :

型號說明

Holes 孔數	Part Number 編號	Ctrl. Station 防塵防水盒	Control Units Combination 按鈕組合					Accessories 配件*
			1	2	3	4	5	
1 Hole 1孔	C1Y-001	NB22-C1Y	NPB22-R11R-A					
	C1Y-002	NB22-C1Y	NSS22-K211B					
	C1Y-003	NB22-C1Y	NPB22-I11R					EMO-02Y · NPB22-R02-E
	C1Y-004	NB22-C1Y	NPB22-J11R					EMO-04Y
	C1Y-005★	NB22-C1Y	NPB22-T01R					NCU-61-14
	C1Y-006	NB22-C1Y	NLB22-T01R					
	C1Y-007	NB22-C1Y	NPB22-T11R					EMO-02Y · NPB22-R02C-E
	C1Y-008	NB22-C1Y	NPB22-J01R					NCU-61-14
	C1Y-009	NB22-C1Y	NPB22-T02R					EMO-02Y · NPB22-R02C-E
	C1W-001	NB22-C1W	NLB22-D11G					
	C1W-002	NB22-C1W	NSS22-S211B					
	C1W-003	NB22-C1W	NLS22-S211G					
2 Holes 2孔	C2Y-001	NB22-C2Y	NPB22-F11G	NSS22-K211B				
	C2Y-002	NB22-C2Y	NLB22-F11GE	NLB22-F11RE				
	C2Y-003	NB22-C2Y	NLB22-F11GE	NLB22-T11RE				
	C2Y-004	NB22-C2Y	NPB22-F11G	NPB22-F11R				
3 Holes 3孔	C3Y-001	NB22-C3Y	NPB22-F11G	NPB22-F11G	NPB22-F11R			Symbol printing 印字
	C3Y-002	NB22-C3Y	NPB22-F11G	NPB22-F11R	NPB22-F11Y			
	C3W-001	NB22-C3W	NLB22-F11GE	NLB22-F11RE	NSS22-K211B			
	C3W-002	NB22-C3W	NLB22-F11GE	NLB22-F11RE	NPB22-R11R-A			
4 Holes 4孔	C4Y-001	NB22-C4Y	NLD22-RE	NPB22-F11G	NPB22-F11R	NPB22-T11R		
	C4Y-002	NB22-C4Y	NLD22-RE	NPB22-F11G	NPB22-F11Y	NPB22-F11R		
	C4Y-003	NB22-C4Y	NPB22-F11G	NPB22-F11Y	NPB22-F11R	NSS22-S211B		
	C4Y-004	NB22-C4Y	NPB22-F11G	NPB22-F11Y	NPB22-F11R	NSS22-K211B		
	C4Y-005	NB22-C4Y	NLB22-F11GE	NLB22-F11RE	NLB22-F11YE	NPB22-R11R-A		
5 Holes 5孔	C5Y-001	NB22-C5Y	NLD22-RE	NPB22-F11G	NPB22-F11R	NPB22-F11Y	NPB22-T11R	
	C5Y-002	NB22-C5Y	NLD22-RE	NPB22-F11G	NPB22-F11R	NPB22-F11Y	NPB22-F11B	
	C5Y-003	NB22-C5Y	NPB22-F11G	NPB22-F11R	NPB22-F11Y	NPB22-F11B	NSS22-S211B	
	C5Y-004	NB22-C5Y	NPB22-F11G	NPB22-F11R	NPB22-F11Y	NSS22-S211B	NPB22-T11R	
	C5Y-005	NB22-C5Y	NPB22-F11G-A	NPB22-F11G-A	NPB22-F11R-O	NSS22-S211B	NPB22-T11R	

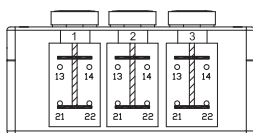
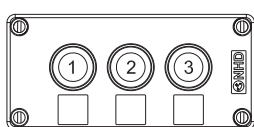
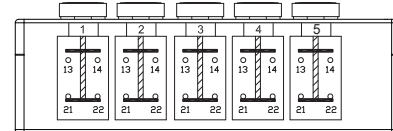
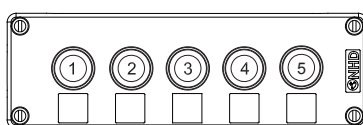
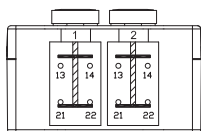
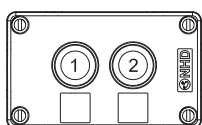
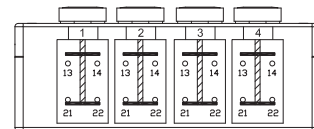
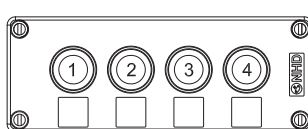
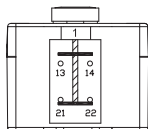
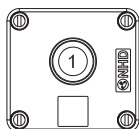
* Note:

The accessories include a. Standard Legend Code

(NCU-61-xx, page 9), b. Padlock Cover (page 7), c. Transparent Boots (page 7), d. Shrouds (page 8)

附註

配件包括 a. 標示銘板 (NCU-61-XX, 第9頁) · b. 鎖扣蓋 (第7頁) · c. 保護套 (第7頁) · d. 誤觸控保護座 (第8頁)



CONTROL STATION / 按鈕開關盒

Model Designation :

型號說明

NB22-C1Y

1

2 3

1. Series(系列)

NB22	Control Station 按鈕開關盒
------	--------------------------

2. Holes(孔數)

1	1 hole 1孔	2	2 holes 2孔
3	3 holes 3孔	4	4 holes 4孔
5	5 holes 5孔		

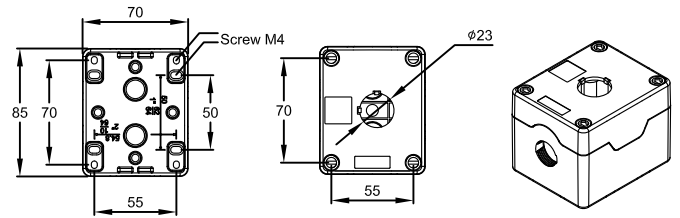
3. Cap Color(顏色)

W	Gray 灰色	Y	Yellow 黃色
---	------------	---	--------------

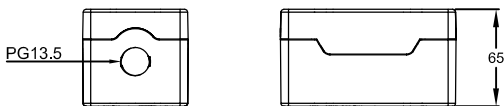
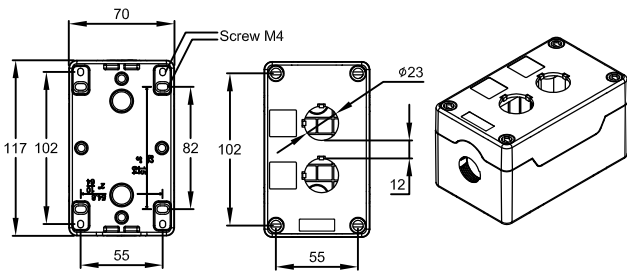
Degree of protection (防護等級) : IP66
Water / Dust-proof (防水、防塵)

Unit (單位) : mm

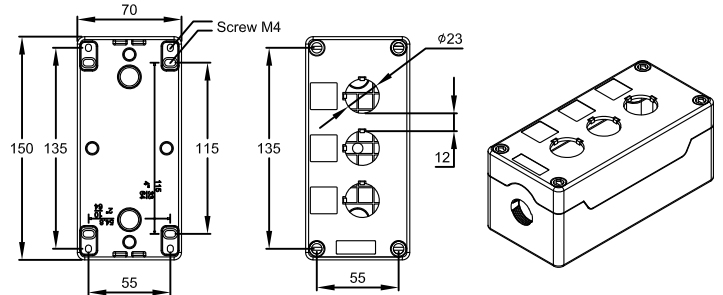
NB22-C1



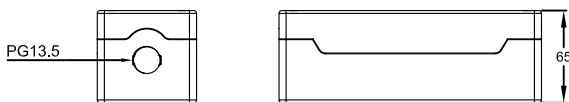
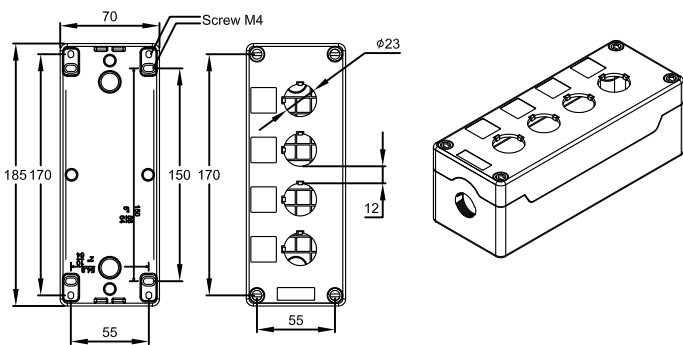
NB22-C2



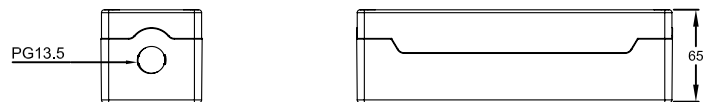
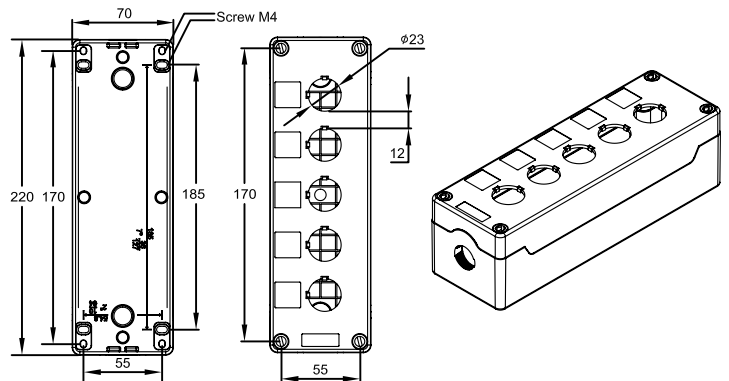
NB22-C3



NB22-C4



NB22-C5



16Φ CONTROL UNITS FEATURES AND CHARACTERISTICS 特性表

概述

General

規格：外觀有圓形(Ø18mm)、方形(18 x 18mm)、矩形(18 x 24mm)三種款式，有按鈕、照光按鈕、選擇開關、鑰匙開關、急停按鈕，標準安裝孔徑為Ø16mm。

性能：具有性能穩定、接觸電阻小、絕緣性強、耐震動耐衝擊等特點；符合IEC60947-5-1、GB14048.5等標準。

結構：每個接點座包含一常開一常閉(1NO+1NC)，每只按鈕最多可配置3個接點座。

防護等級：自身防護等級有IP40。

Specification : There are three shapes: round (Ø18mm), square (18x18mm), rectangular (18x24mm). Includes push button, illuminated push button, selector switch, selector switch with key, emergency stop button, the mounting size is Ø16mm.

The product meets standards of IEC60947-5-1 and GB14048.5.

Switch unit is individually separated, including 1NO+1NC.

Ø16mm control units use modular combination which combine up to three switch units; can make the product meet requirement of many control circuits.

Degree of Protection : IP40.

UL File NO. E239743



規格

Specification

工作環境溫度 Operating temperature	-25°C~+55°C (無霜凍) 照明開關本體周圍必須空氣流通 -25°C~+55°C (No freezing) Keep air flowing around for illuminated push button	
工作環境濕度 Operating humidity	48~+85%RH (無結露) 45~85%RH (No condensation)	
接觸電阻 Contact resistance	≤ 50m Ω	
絕緣電阻 Insulation resistance	≥ 100M Ω	
耐壓 Dielectric strength	接點與燈球引腳之間 Between contact and lamp terminal	2000伏·交流50赫茲·1分鐘。 2000VAC, 50Hz, 1min.
	同極端子之間 Between terminal of the same pole	1000伏·交流50赫茲·1分鐘。 1000VAC, 50Hz, 1min.
	不同電極端子之間 Between terminal of different pole	2000伏·交流50赫茲·1分鐘。 2000VAC, 50Hz, 1min.
耐震動性 Vibration resistance	50赫茲·震幅約1.2mm。 50Hz, Amplitude is about 1.2 mm.	
耐衝擊性 Shock resistance	> 10g	
機 壽 械 命 Mechanical Durability	自動復歸 Momentary type	200萬次以上。 More than 2,000,000 times.
	停置 Maintained	100萬次以上。 More than 1,000,000 times.
	鑰匙開關、急停 Key-lock and emergency type	100萬次以上。 More than 1,000,000 times.
電 氣 壽 命 Electrical Durability	50萬次以上。 More than 500,000 times.	
端 子 Terminal	焊接線直徑：2 x 0.8mm 最大銅線面積：0.75mm ² 接線插PIN：2.8 x 0.5mm Diameter of welded wire : 2 x 0.8mm. Maximum area of copper wire : 0.75mm ² Connecting link : 2.8 x 0.5mm.	
焊錫耐熱 Solder heat resistance	230°C時不超過3秒。 No more than 3 seconds when over 230 °C.	
操作行程 Operating travel	(按鈕)約3mm (push button) about 3mm.	

開關額定值 Switch rating

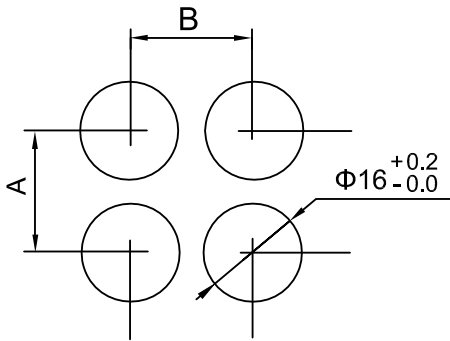
額定絕緣電壓 Rated insulation voltage (Ui)		250V				
耐電流 Thermal current (Ith)		5A溫度不超過最大額定值所允許的電流。 5A Temperature no more than rated current.				
額定電壓 Rated voltage (V)		12V	24V	110V	220V	
工作電流 Working current	AC 50/60Hz	AC-12	—	—	5A	3A
		AC-15	—	—	3A	2A
	DC	DC-12	5A	5A	1A	0.5A
		DC-13	2A	2A	0.5A	0.1A
接點材質 Contact material		銀合金 Silver alloy				

最小適應負載：3V AC/DC 5mA (參考值)(可使用範圍取決於使用環境和負載種類)

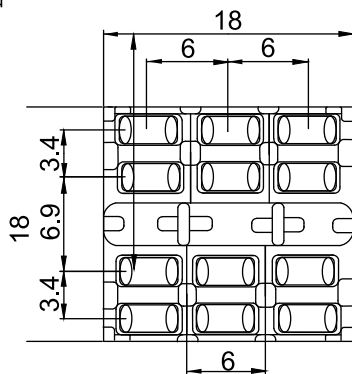
Minimum load : 3V AC/DC 5mA (reference value) The range of application depends on the operating environment and load types.

安裝孔尺寸

Mounting Dimension (unit : mm)



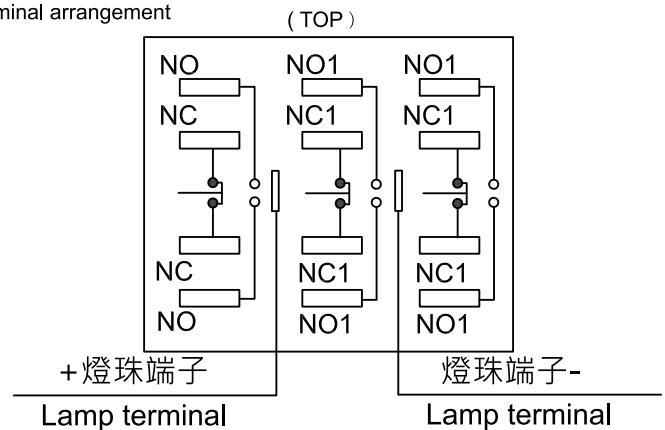
底部視圖
Bottom view



類別 Category	A	B
圓形 Circular	≥ 18 mm	≥ 18 mm
方形 Square	≥ 18 mm	≥ 18 mm
矩形 Rectangular	≥ 18 mm	≥ 24 mm
大頭形 Mushroom	≥ 32 mm	≥ 32 mm

端子排列

Terminal arrangement








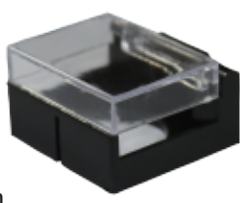
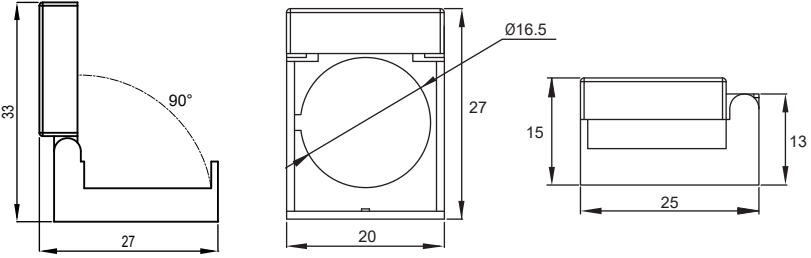

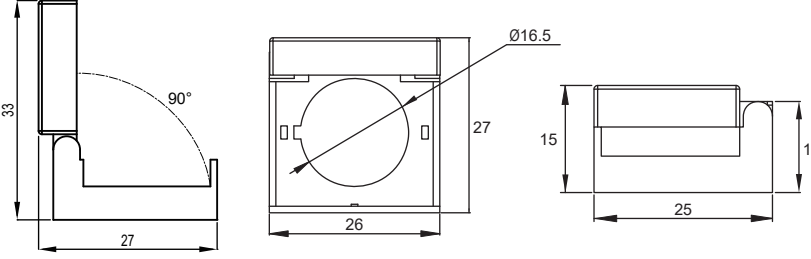

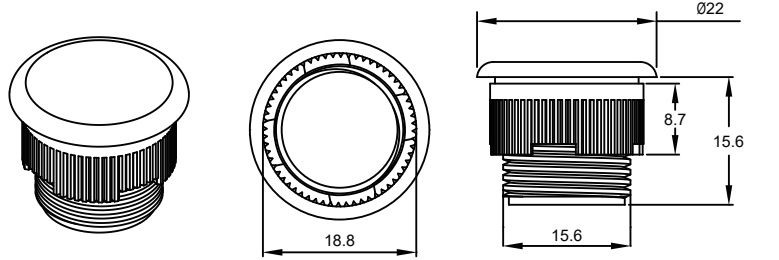

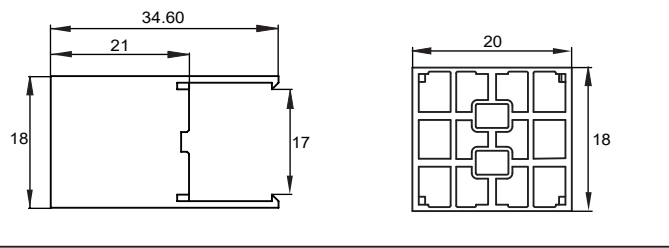

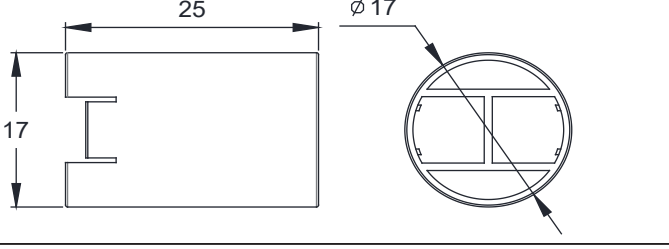

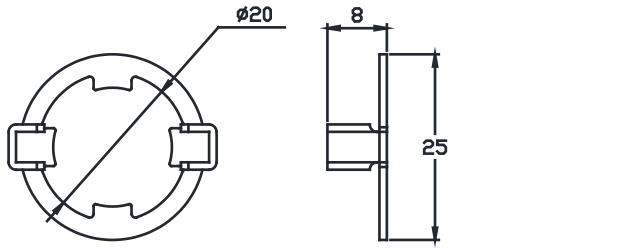
燈球規格

Lamp rating

燈球類型 Lamp type	雙向LED燈球 (標準配置) LED lamp (standard)	
額定電壓 Rated voltage	AC/DC 12V	AC/DC 24V
	AC/DC 110V	AC/DC 220V
發光顏色 Lamp color	R ● G ● Y ● S ● W ○	
壽命 Life	約40000小時 About 40000 hours	

附註：燈球內置保護電阻不需外接。

Note : The lamp contains a current-limiting resistor inside and doesn't need external connection.

<p>Fixing Base (護片) NPB16-SB</p> 	<p>Contact Blocks (接點) CB16-11</p> 	<p>Mounting Base (非照光按鈕底座) PPB16-08S</p> 	<p>Mounting Base (照光按鈕底座) PLB16-08S</p> 	<p>Mounting Base (非照光選擇底座) PSS16-08S</p> 
<p>Rectangular Protection Cover (矩形保護蓋) NPB16-CT</p> <p>防止操作錯誤。 Prevent accidental operation.</p> 				
<p>Square Protection Cover (方形保護蓋) NPB16-CS</p> <p>防止操作錯誤。 Prevent accidental operation.</p> 				
<p>Blanking Plug (面板塞) NPB16-CP</p> <p>預留孔蓋。 Fill unused mounting hole.</p> 				
<p>Terminal Cover (For Push Button, Select Switch) (端子蓋-按鈕用, 選擇開關用) NPB16-TT</p> <p>用於為端子的防塵與保護。 Protective cover for insulation between terminals and live parts.</p> 				
<p>Terminal Cover (For Pilot Lamp) (端子蓋-指示燈用) NLD16-TT</p> <p>用於為端子的防塵與保護。 Protective cover for insulation between terminals and live parts.</p> 				
<p>Mounting Ring Tool (牙圈工具) PPB16-02T</p> 				

PUSH BUTTON SWITCHES / 按鈕開關 16Φ

(NON-ILLUMINATED & LED ILLUMINATED) / 無照光按鈕與照光按鈕

Model Designation :

型號說明

NPB16O-E11RA

1 2 3 4 5 6

1. Series (系列)

NPB 16	Non-Illuminated 無照光按鈕
NLB 16	Led Illuminated 照光按鈕

2. Appearance (外觀)

O	Circular 圓形	Φ18 mm
S	Square 方形	18 x 18 mm
T	Rectangle 矩形	18 x 24 mm

4. Contact Blocks (接點)

11	1a1b
22	2a2b
33	3a3b

3. Type (型式)

NPB 16		NLB 16	
F	* Flush Head 平頭	F	* Flush Head 平頭
L	* Flush Head Maintained 平頭停置	L	* Flush Head Maintained 平頭停置
E	** Elevation Head 凸頭	E	** Elevation Head 凸頭
P	** Elevation Head Maintained 凸頭停置	P	** Elevation Head Maintained 凸頭停置
M	Mushroom Head 大頭		
G	Mushroom Head Maintained 大頭停置		
R	Twist to Release Mushroom Head 大頭連鎖式		

5. Color (顏色)

NPB 16		NLB 16	
R	Red 紅色	R	Red 紅色
G	Green 綠色	G	Green 綠色
Y	Yellow 黃色	Y	Yellow 黃色
S	Blue 藍色	S	Blue 藍色
B	Black 黑色	W	White 白色
W	White 白色		

6. Voltage Rating (電壓)

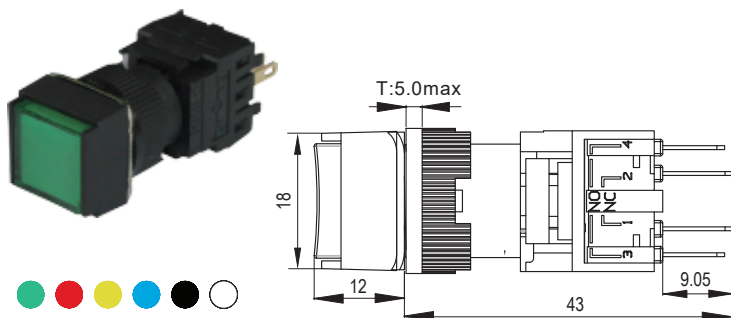
NLB 16	
A	AC/DC 24V
E	AC/DC 100~120V
I	AC/DC 220~240V
Y	AC/DC 12V
Z	AC/DC 6V

方形及矩形只適用於平頭和平頭停置。

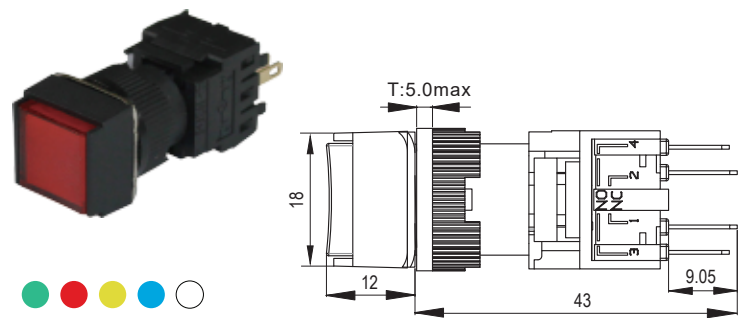
The square and rectangle shapes are for "Flush head" only.

Unit (單位) : mm

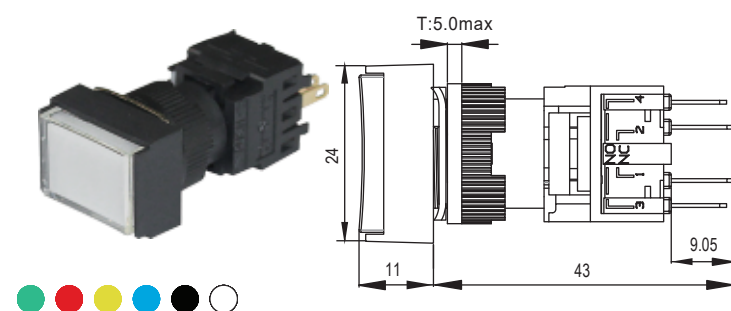
NPB16S-F



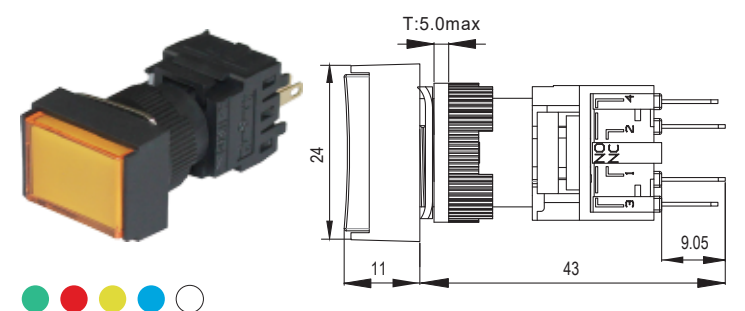
NLB16S-F



NPB16T-F



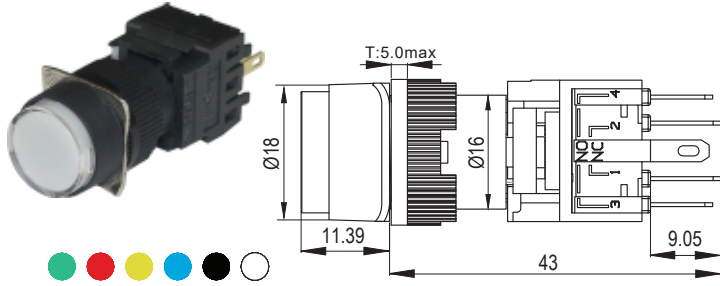
NLB16T-F



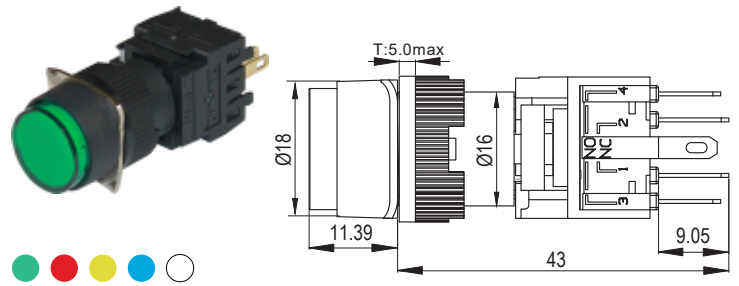
PUSH BUTTON SWITCHES / 按鈕開關 16Φ

(NON-ILLUMINATED & LED ILLUMINATED) / 無照光按鈕與照光按鈕

NPB160-E

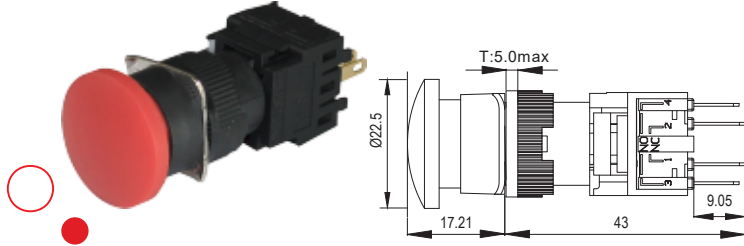


NLB160-E

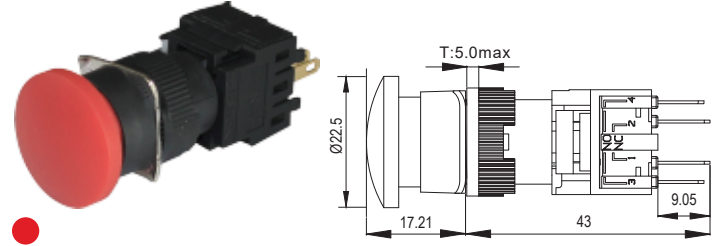


Mushroom Head / 大頭按鈕系列

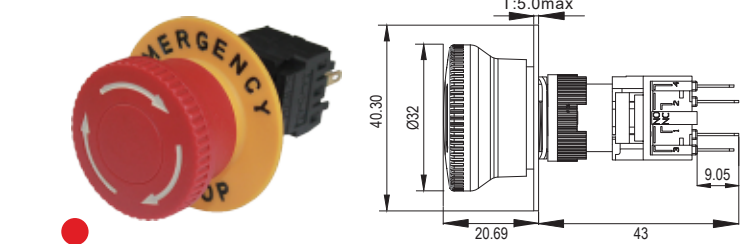
NPB160-M



NPB160-G



NPB160-R



LED PILOT LAMP / 指示燈 16Φ

Model Designation :

型號說明

NLD160-RA

1 2 3 4

1. Series (系列)

NLD16	Led Illuminated 16mm 指示燈
-------	-----------------------------

2. Appearance (外觀)

O	Circular 圓形
T	Rectangle 矩形

3. Color (顏色)

R	Red 紅色	Y	Yellow 黃色
G	Green 綠色	W	White 白色

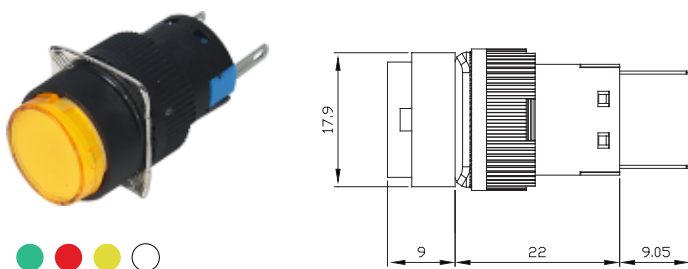
4. Voltage Rating (電壓)

NLD16	
A	AC/DC 24V
E	AC/DC 100~120V
I	AC/DC 220~240V

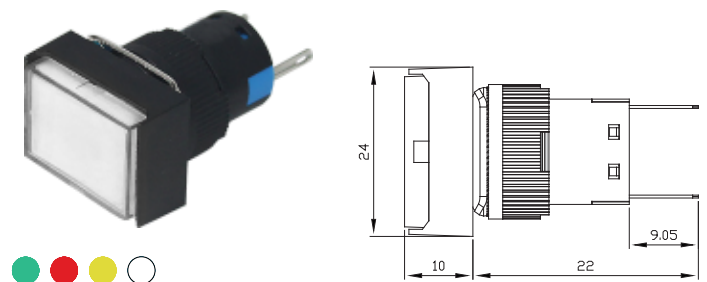
SPECIFICATION

Unit (單位) : mm

NLD160-Y



NLD16T-W



SELECTOR SWITCHES / 選擇開關 16Φ

(NON-ILLUMINATED) / 無照光選擇

Model Designation :

型號說明

NSS16O-S211B2

1 2 3 4 5 6 7

1. Series (系列)

NSS16	Non-Illuminated 無照光選擇鈕
-------	---------------------------

2. Appearance (外觀)

O	Circular 圓形
T	Rectangle 矩形
S	Square 方形

3. Type (型式)

S	Normal Shaft 短柄
K	Key 鑰匙

4. Position (方位)

2	2段選擇90°	
3	3段選擇90°	

5. Contact Blocks (接點)

11	1a1b
22	2a2b
33	3a3b

6. Color (顏色)

B	Black 黑色
---	-------------

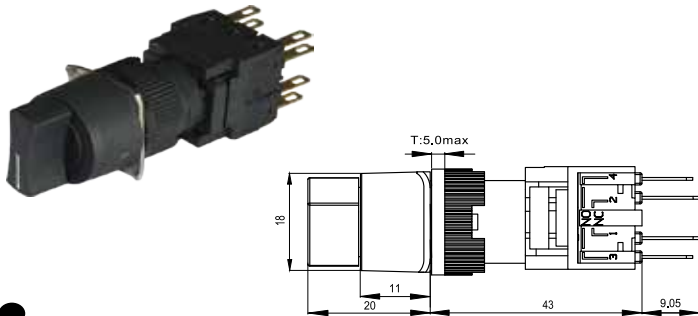
7. NSS16-K positions of key removal (鑰匙抽出方向)
V: Remove key (抽出鑰匙)

code 代碼	3 position 3段選擇			2 position 2段選擇	
	left 左	center 中	right 右	left 左	right 右
0		V			
1	V	V			
2		V	V		
3	V	V	V		
4	V			V	
5			V		V
6	V		V	V	V

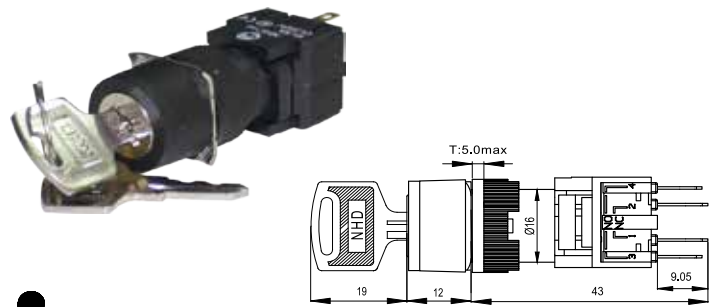
SPECIFICATION

Unit (單位) : mm

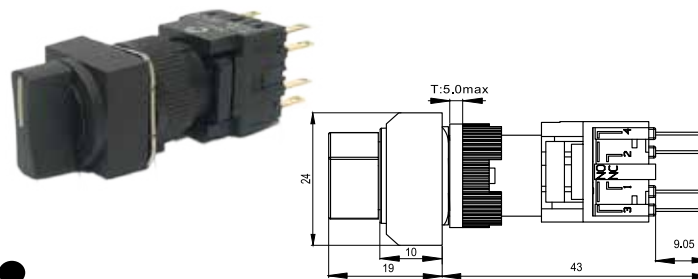
NSS16O-S



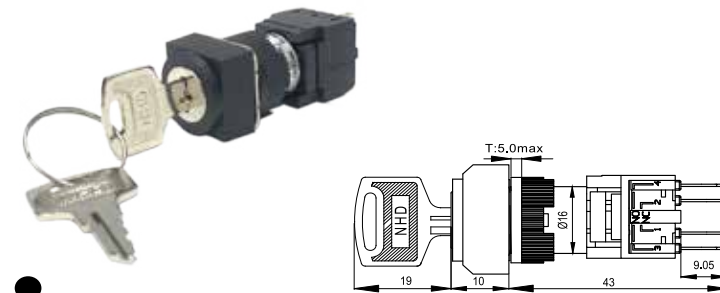
NSS16O-K



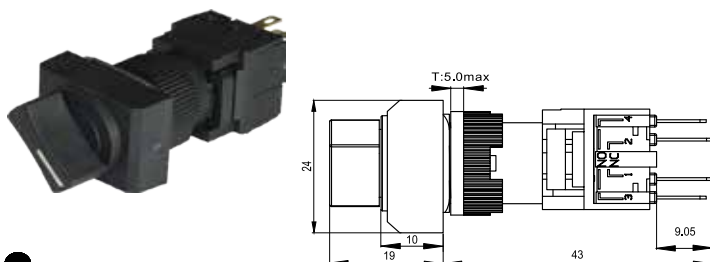
NSS16S-S



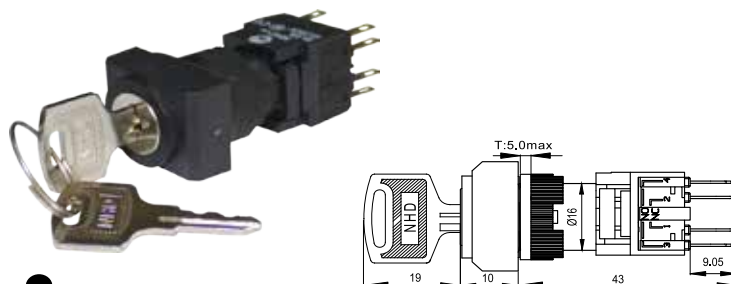
NSS16S-K



NSS16T-S



NSS16T-K



LED TOWER LAMP / 多層警示燈

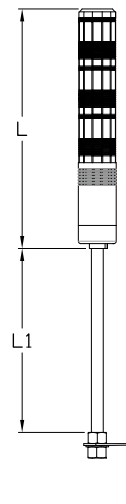
Model Designation :

型號說明

NTL - T L 5 A 3 - ROG - 1

1 2 3 4 5 6 7

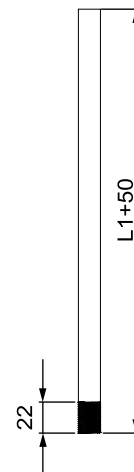
Model Designation 項次	Code 代號	Description 說明
1.Mounting 固定方式	N	Tube Mounting 桿式
	T	Side-Mount Bracket 桿式-L型鐵架
	W	Round Base With Tube 桿式-圓盤底座
	R	Round Base 圓盤底座
	F	Rotatable Fixing Base 可折式
2.Function 功能	L	Non-Flashing Model 常亮型
	F	Flashing Model 閃光型
	S	Flashing Model with Alarm 閃光蜂鳴型
	B	Non-Flashing Model with Alarm 常亮蜂鳴型
3.Lens Dimension 外徑大小	5	Ø 50mm
4.Voltage Rating 使用電壓	A	AC/DC 24V
	E	AC 100V~120V
	I	AC 220V~240V
5.Tier 層數	1~5	1~5
6.Lens (Selecting from top to bottom) 燈殼顏色(由上而下依次排列)	R	Red 紅
	O	Orange 黃
	G	Green 綠
	B	Blue 藍
	W	White 白
7.Length of Tube 附桿長度	0	0 mm
	1	100 mm
	2	180 mm
	3	250 mm



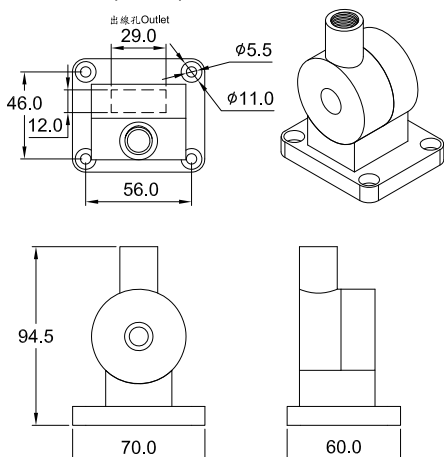
L	
Tier 層數	Height 高度(L)
1	188.8
2	252.8
3	316.8
4	380.8
5	444.8

L1	
Code 代號	Height 高度(L)
0	0
1	100
2	180
3	250

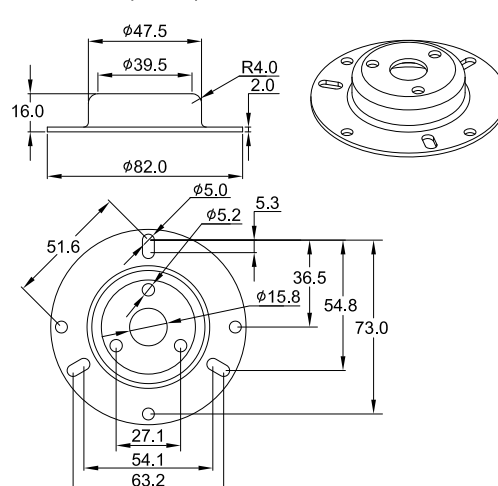
Tube 鋁桿



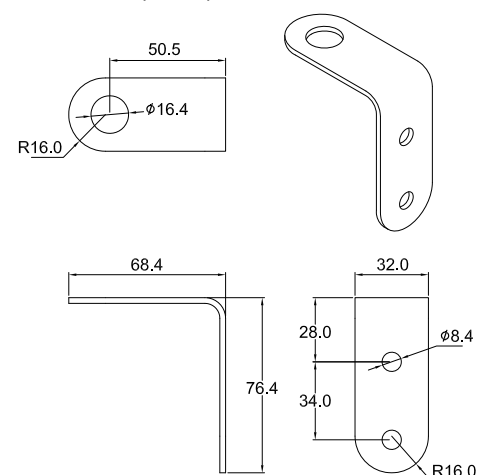
Rotatable Fixing Base(折彎座)
Code(代號) : F



Round Base(圓盤底座)
Code(代號) : R

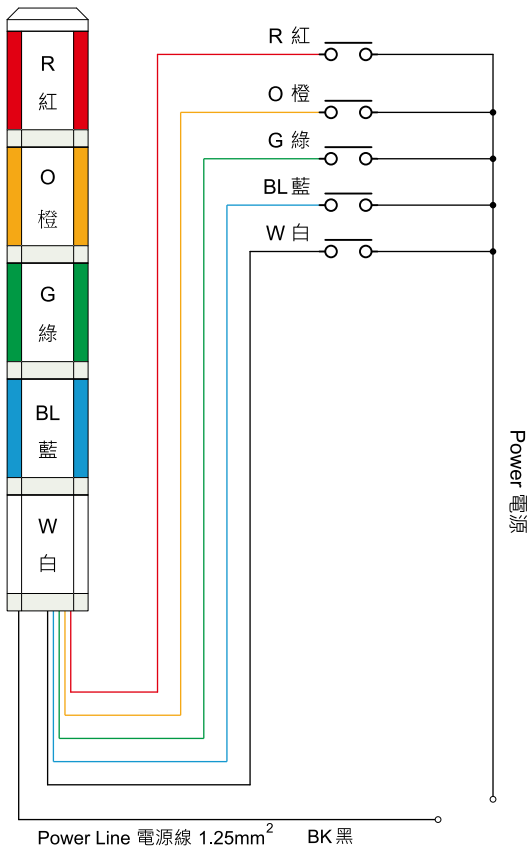


Side-Mount Bracket(L型鐵架)
Code(代號) : T

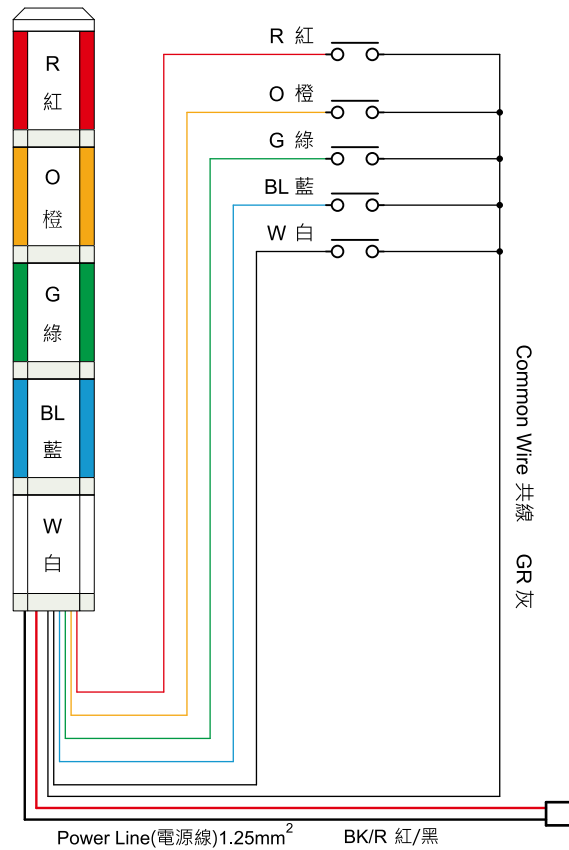


Wiring Diagram / 接線圖

Non-Flashing Model 常亮型

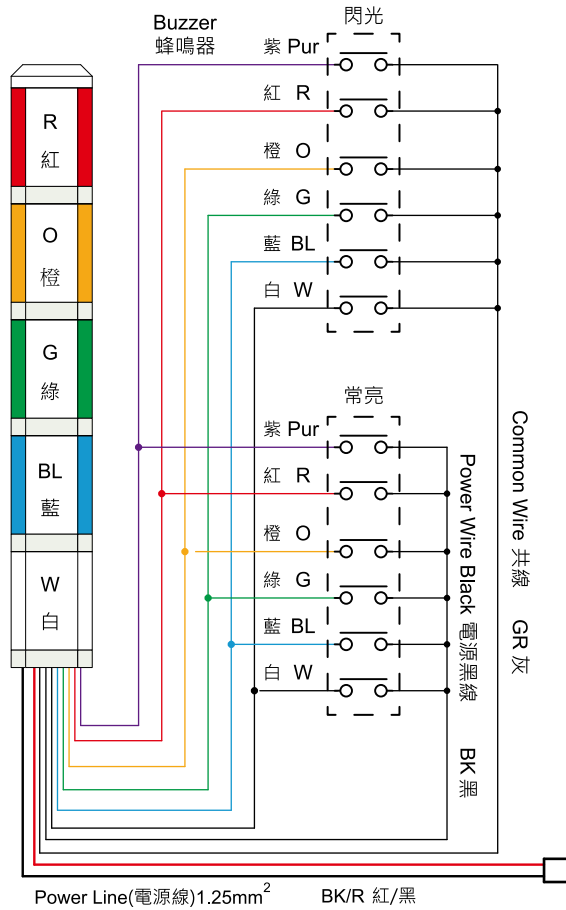


Flashing Model 閃光型



NTL-W

Flashing/Non-Flashing Model with Alarm 閃光/常亮蜂鳴型



NTL-F



NTL-R

LONG SCALE PANEL METERS / 廣角電壓電流表

NLS-110

類別 Type	品名 Part NO.	規格 Specification
交流電壓表 AC Voltmeter	NLS-110-V3	0-300V
	NLS-110-V4	0-400V
	NLS-110-V5	0-500V
	NLS-110-V6	0-600V
	NLS-110-V8	0-800V
交流電流表 AC Ammeter	NLS-100-A3	0-300/5A
	NLS-100-A4	0-400/5A
	NLS-100-A6	0-600/5A
	NLS-100-A8	0-800/5A

電壓錶
AC Voltmeter

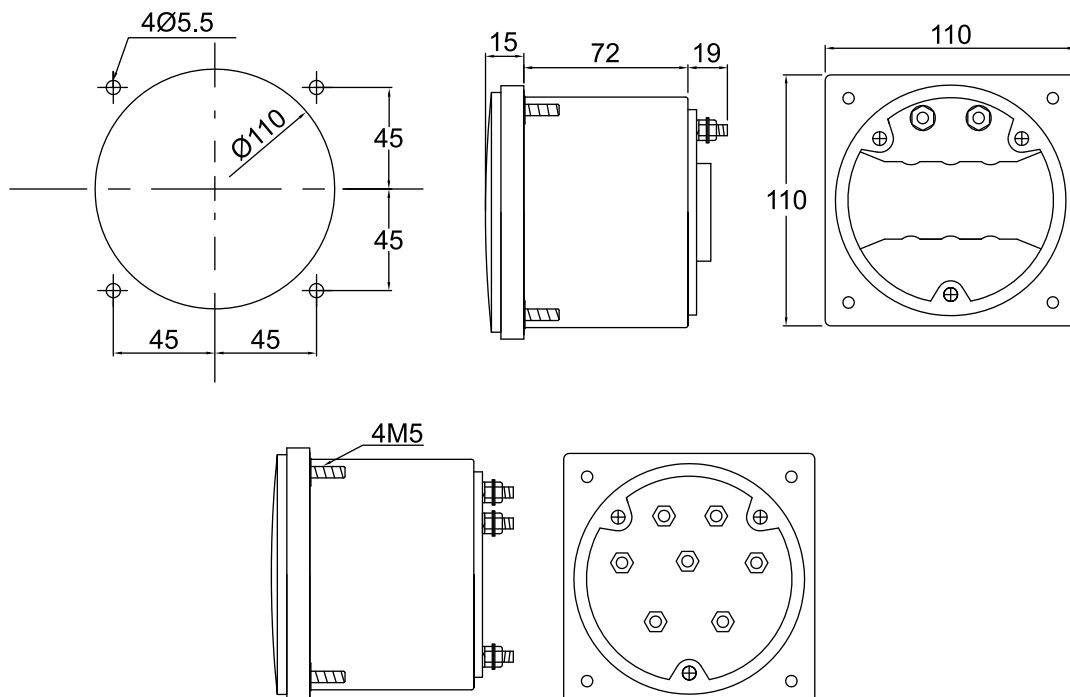


電流錶
AC Ammeter

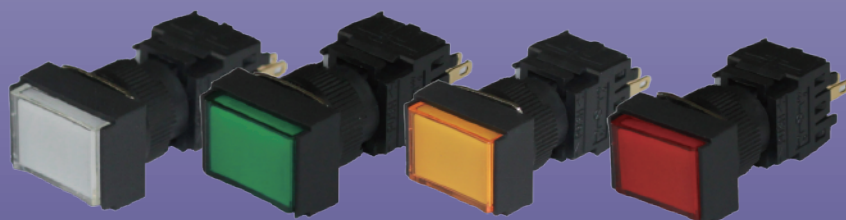


尺寸：
Dimensions

單位(Unit) : (mm)



16mm PUSH BUTTONS



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2021/12 NHD Rev.17