

# tend PILOT LAMP

ไฟล๊อตแอมป์ ชนิดหม้อแปลง  
Ø25 / Ø30

ISO 9002

## MODEL DESIGNATIONS

**TPR - 25 2 R**

①      ②      ③      ④

Classification	Bulb type			Price
<b>Ø25 mm</b>				
TPR Series TPF Series TPS Series	E-10	6.3 V	0.15 A	12.-
	E-10	12 V	1 W	16.-
	E-10	24 V	1 W	17.-
	E-10	30 V	1 W	22.-
	E-10	110 V	1 W	41.-
<b>Ø30 mm</b>				
TPR Series TPF Series TPS Series TPL Series	E-12	18 V	0.11 A	22.-
	E-12	24 V	1 W	22.-
	E-12	30 V	1 W	22.-
	E-12	110 V, 220 V	1 W	56.-
	E-12	380 V	1 W	-

Dielectric Strength :

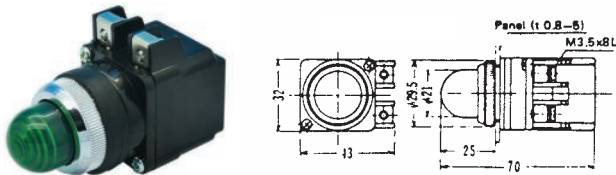
AC 220V for duration of one minute.

Insulation Resistance :

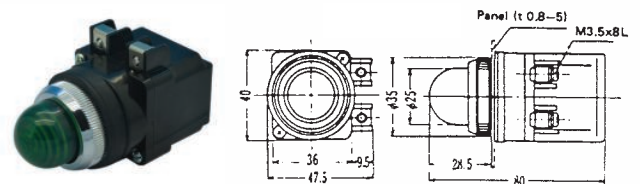
Over 100 megaohm @ DC 500 V

## DIMENSIONS

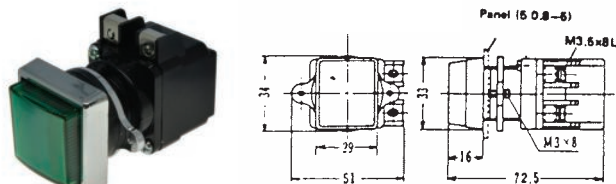
TPR-252 ไฟล๊อตแอมป์ R, G, Y, B, W  
Ø25 mm      220V 115.-  
380V 125.-



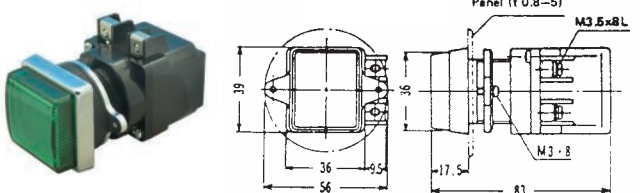
TPR-302 ไฟล๊อตแอมป์ R, G, Y, B, W  
Ø30 mm      220V 165.-  
380V 175.-



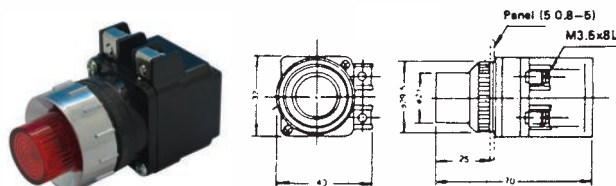
TPS-252 ไฟล๊อตแอมป์หัวเหลี่ยม R, G, Y, W 220V 180.-  
Ø25 mm



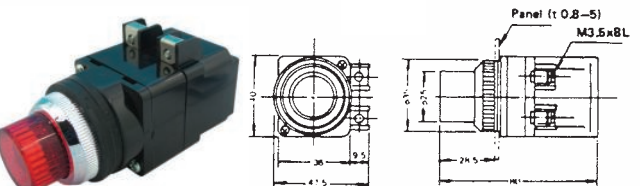
TPS-302 ไฟล๊อตแอมป์หัวเหลี่ยม R, G, Y, W 220V 185.-  
Ø30 mm



TPF-252 ไฟล๊อตแอมป์หัวตัด R, G, Y  
Ø25 mm      220V 150.-



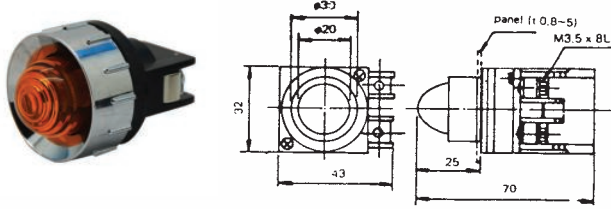
TPF-302 ไฟล๊อตแอมป์หัวตัด R, G, Y  
Ø30 mm      220V 155.-



\*ขอสงวนสิทธิ์ในการเปลี่ยนแปลงราคา

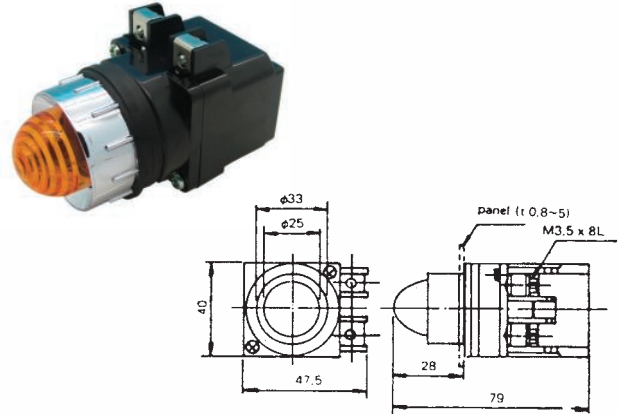
TPRR-252 ไฟล๊อตแลมป์ชนิดมีถาด  
Ø25 mm

155.-



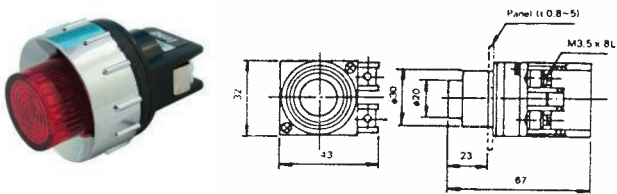
TPRR-302 ไฟล๊อตแลมป์ชนิดมีถาด

170.-



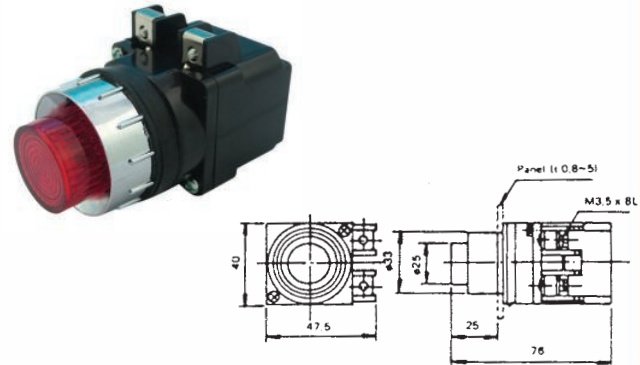
TPFR-252 ไฟล๊อตแลมป์หัวตัดชนิดมีถาด

185.-



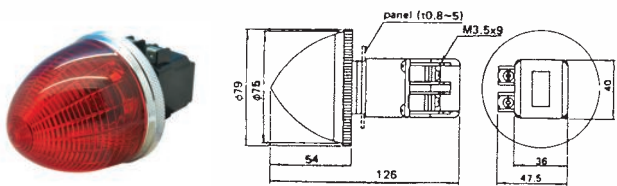
TPFR-302 ไฟล๊อตแลมป์หัวตัดชนิดมีถาด

185.-



TPL-302 ไฟล๊อตแลมป์หัวตัดชนิดหัวกลม

475.-

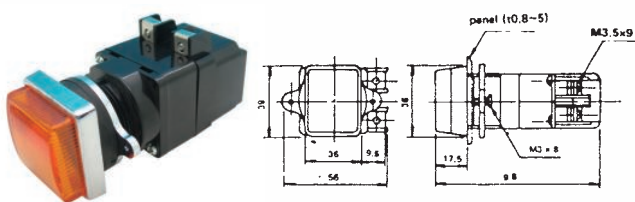


### FLASH LAMP

### ไฟกะพริบ

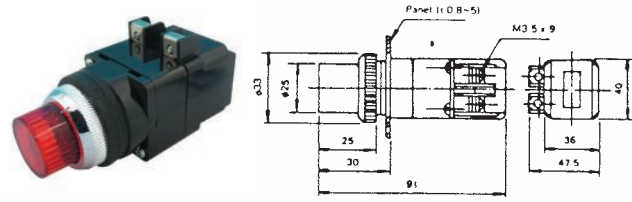
TPSF-302 ไฟล๊อตแลมป์ชนิดกะพริบหัวเหลี่ยม

640.-



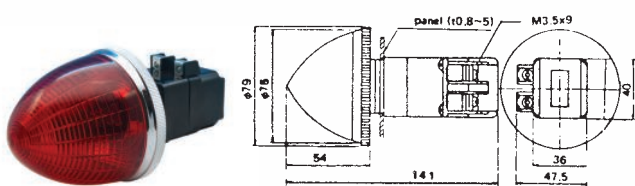
TPFF-302 ไฟล๊อตแลมป์ชนิดกะพริบหัวตัด

670.-



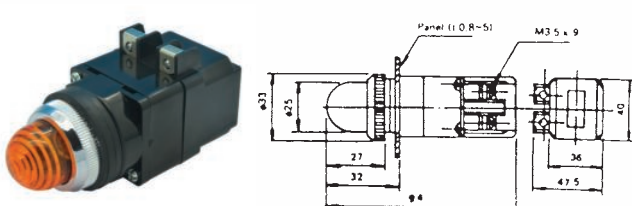
TPLF-302 ไฟล๊อตแลมป์ชนิดกะพริบหัวใหญ่

830.-



TPRF-302 ไฟล๊อตแลมป์ชนิดกะพริบ

610.-



หมายเหตุ : สอบถามเพิ่มเติมกรณีต้องการใช้หลอด LED

# tend PILOT LAMP

## ไฟล๊อตแลมป์ ชนิดต่อตรง

### Ø25 / Ø30

ISO 9002

These types of Pilot lamps are direct type, without transformers. AC 110V, AC 220V, AC 380V, AC 440V are Neon lamps.

#### MODEL DESIGNATIONS

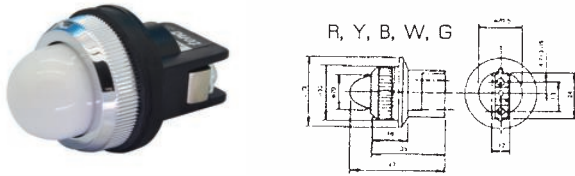
**TPNR - 25 2 R**

① ② ③ ④

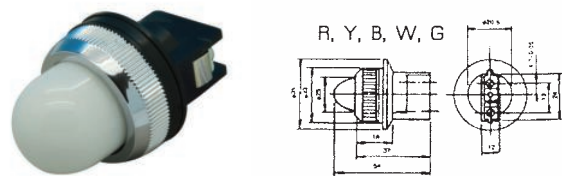
TPN-11, TPN-15 series are 110V AC, 220V AC only.

#### DIMENSIONS

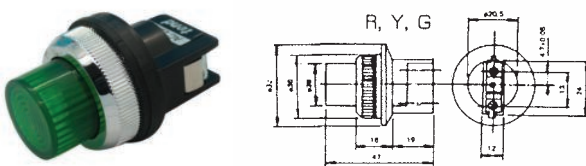
**TPNR-252** ไฟล๊อตแลมป์ชนิดต่อตรง Ø25 mm (R, Y, B, W, G) **75.-**



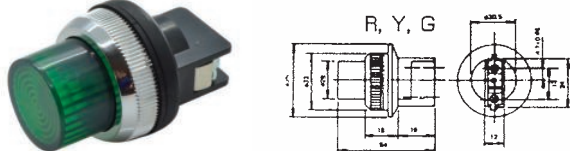
**TPNR-302** ไฟล๊อตแลมป์ชนิดต่อตรง Ø30 mm (R, Y, B, W, G) **85.-**



**TPNF-252** ไฟล๊อตแลมป์ชนิดต่อตรง Ø25 mm (R, Y, G, BL, W) **90.-**



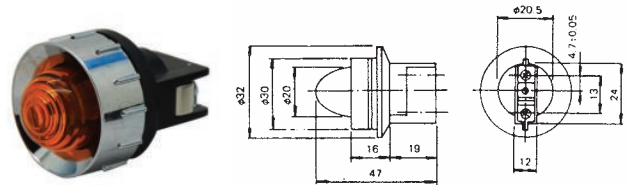
**TPNF-302** ไฟล๊อตแลมป์ชนิดต่อตรง Ø30 mm (R, Y, G, BL, W) **100.-**



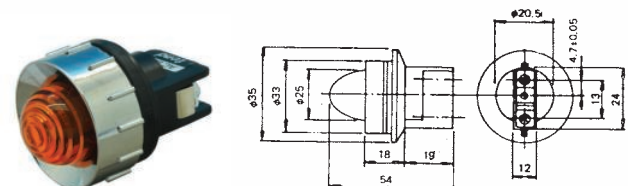
หมายเหตุ : สอบถามเพิ่มเติมกรณีต้องการใช้หลอด LED

Designation	Signal	Description
1.Type	TPNR	Round neon lamp
	TPNF	Flat neon lamp
	TPNRR	Round type (with ring)
	TPNFR	Flat type (with ring)
	TPNS	Square neon lamp
2.Mounting hole	11	Ø11 mm
	12	Ø12 mm
	15	Ø15 mm
	16	Ø16 mm
	25	Ø25 mm
	30	Ø30 mm
3.Rated voltage	1	110V AC
	2	220V AC
	3	380V AC
	4	440V AC
	5	6.8V AC (DC)
	6	18V AC (DC)
	7	24V AC (DC)
	8	30V AC (DC)
	9	12V AC (DC)
4.Lens color	R	Red
	G	Green
	O	Orange
	W	White
	BL	Blue

**TPNRR-252** ไฟล๊อตแลมป์ชนิดต่อตรงมีการ์ด **95.-**

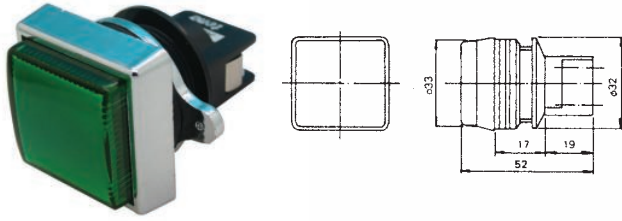


**TPNRR-302** ไฟล๊อตแลมป์ชนิดต่อตรงมีการ์ด **105.-**

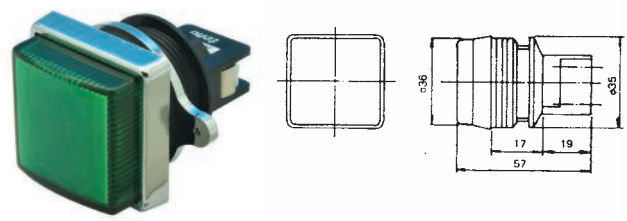


\*ขอสงวนสิทธิ์ในการเปลี่ยนแปลงราคา

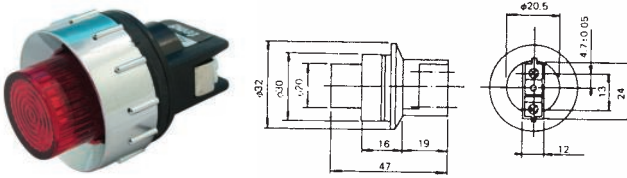
TPNS-252 ไฟลือตแลมปีชนิดต่อตรงแบบหัวเหลี่ยม 145.-



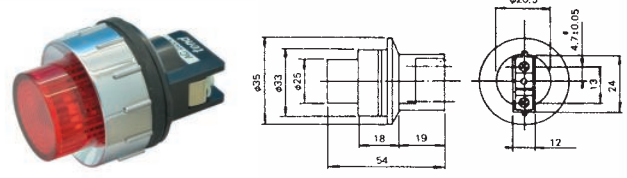
TPNS-302 ไฟลือตแลมปีชนิดต่อตรงแบบหัวเหลี่ยม 155.-



TPNFR-252 ไฟลือตแลมปีชนิดต่อตรงหัวตัดมีการ์ด 95.-



TPNFR-302 ไฟลือตแลมปีชนิดต่อตรงหัวตัดมีการ์ด 105.-

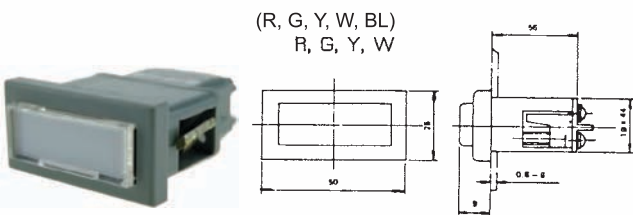


## FLASH LAMP

### ไฟกะพริบ

TSL-25 Mounting hole 20x45 mm  
220V, 24V

475.-

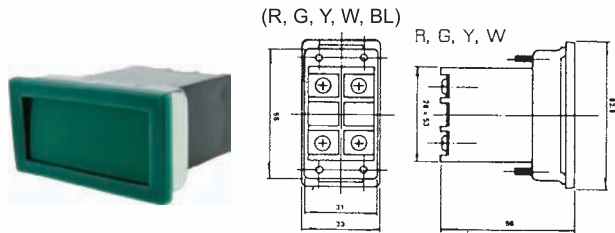


(R, G, Y, W, BL)  
R, G, Y, W

TSL-36 Mounting hole 29x53 mm  
220V, 24V

TSL-36-1 1 Lamp ชนิด 1 หลอด  
TSL-36-2 2 Lamp ชนิด 2 หลอด

415.-  
435.-



(R, G, Y, W, BL)

R, G, Y, W

**tend****ILLUMINATED PUSH BUTTON SWITCH**

สวิตช์กดมีแสงไฟ ชนิดหม้อแปลง

Ø25 / Ø30

ISO 9002

**MODEL DESIGNATION**

**TIB - 25 2 R**

①      ②      ③      ④

**SPECIFICATIONS CURRENT RATINGS**

Alternate current	AC125V	AC250V	AC500V	AC600V
	10 A	6 A	3 A	2 A
Direct current	DC125V	DC250V	DC600V	
	2 A	1 A	0.4 A	

Dielectric Strength : AC220V for duration of one minute.  
Insulation Resistance : Over 100MΩ @DC500V

Temperature Rise :

At Contacts Less than 30 degrees.

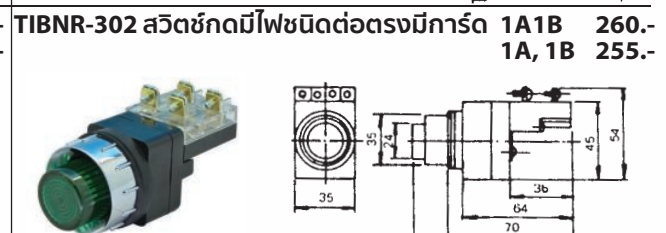
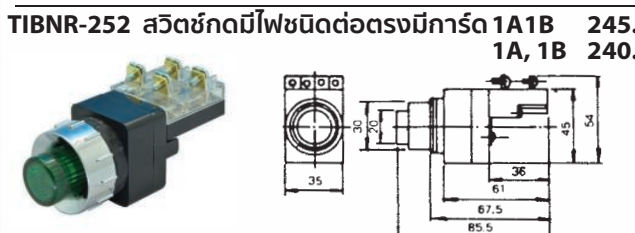
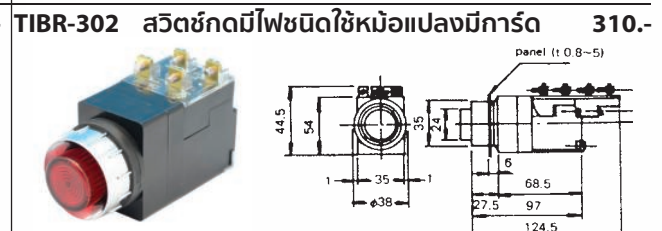
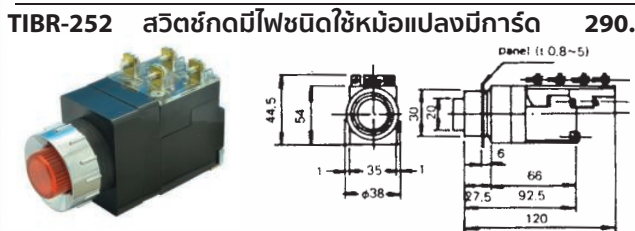
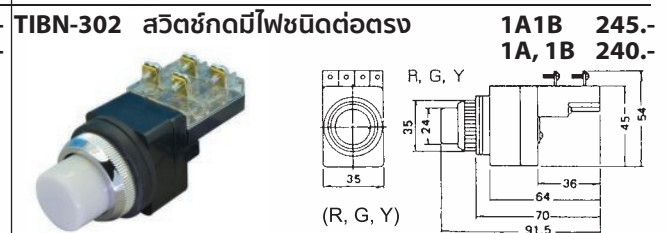
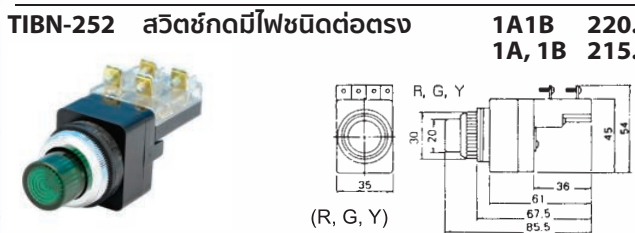
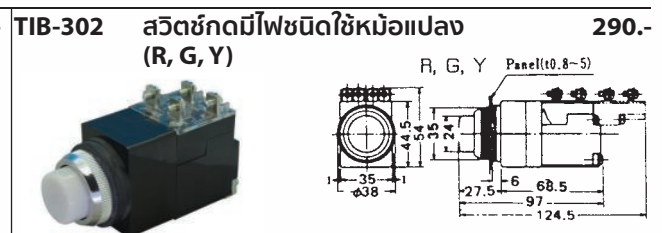
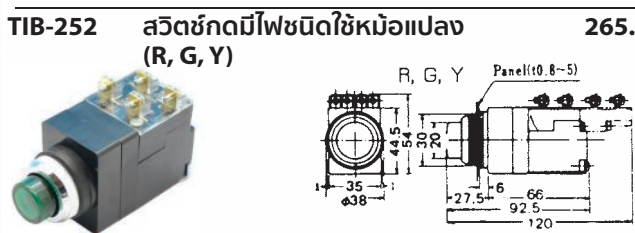
At Terminals Less than 25 degrees.

(@ Ambient temperature of 40°C,  
and a continuous current of 10 amperes)

Contact Resistance : Less than 30mΩ

Ambient Temperature Allowable : -20°C ~ 60°C

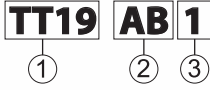
Designation	Signal	Description	
1.Type	TIB	Standard	
	TIBN	Standard (Neon Lamp)	
	TIBR	With Ring	
	TIBNR	With Ring (Neon Ring)	
2.Mounting hole	25	Ø25 mm	
	30	Ø30 mm	
3.Rated voltage	1	110V AC	
	2	220V AC	
	3	380V AC	
	4	440V AC	
	5	6.3V AC (DC)	Without Transformer
	6	18V AC (DC)	
	7	24V AC (DC)	
	8	30V AC (DC)	
4.Lens color	R	Red	
	G	Green	
	O	Orange	
	W	White	

**DIMENSIONS**

หมายเหตุ : สอบถามเพิ่มเติมกรณีต้องการใช้หลอด LED

\*ขอสงวนสิทธิ์ในการเปลี่ยนแปลงราคา

#### MODEL DESIGNATION

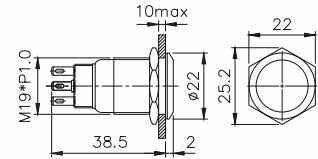


Designation	Signal	Description
1.Mounting Hole	TT19	19 mm Series
2.Type	AB	Metal Push Button(Alternate)
	MB	Metal Push Button(Momentary)
3.Contact blocks	1	1a1b
	2	2a2b

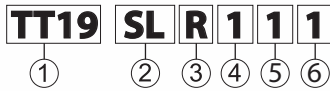
#### DIMENSIONS

TT19-AB/MB  
TT19-AB  
TT19-MB

740.-  
720.-



#### MODEL DESIGNATION

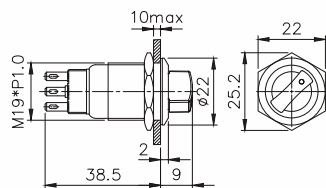


Designation	Signal	Description
1.Mounting hole	TT19	19 mm Series
2.Type	SL	Illuminated Metal Selector Switch
	SS	Metal Selector Switch
3.Lens color	R	Red
	G	Green
	Y	Yellow
	O	Orange
	W	White
	B	Blue
	Blank	No Lights

Designation	Signal	Description	
4.Positions	1	90° 2-Position	
	7	90° 3-Position	
5.Voltage	1	110V AC LED lamp	
	2	220V AC LED lamp	
	5	6V LED lamp	
	7	24V LED lamp	
	9	12V LED lamp	
	Blank	No Light	
6.Type of contact blocks fitted	1	2-Position	3-Position
		1a1b (1NO 1NC)	-
	2	2a2b (2NO 2NC)	1a1b 0 1a1b

#### DIMENSIONS

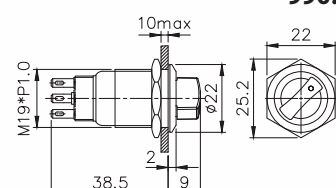
##### TT19-SL



##### TT19-SS

2 Position (110V)  
2 Position (220V)  
3 Position (220V)

895.-  
990.-  
990.-



TEND

BANDEX

TAKAMURA

TEEFLEX

KENION

NISSEI

ROSI

APEKS

LKEW

TAC

MARLOW

HARU

WIND  
SPEED

COMMAX

ADVANTE

UNIVERSAL  
ADAPTER

ALION

EXOWELD

CONTROL  
MAX

JKN

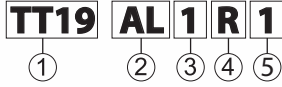
SYLVIA

WANG

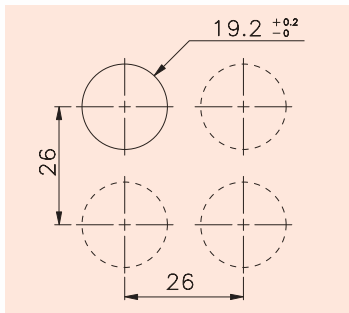
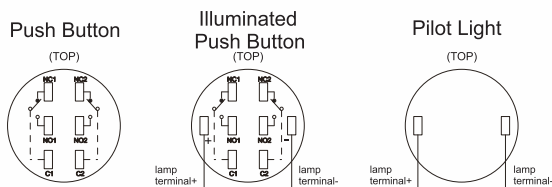
MACCON

**tend****ILLUMINATED METAL PUSH  
BUTTON SWITCH**  
สวิตช์กดโลหะมีแอลซี

Ø19

**MODEL DESIGNATION**

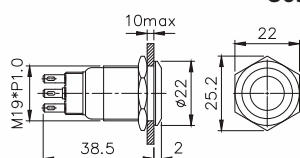
Designation	Signal	Description
<b>1.Mounting hole</b>	TT19	19 mm series
<b>2.Type</b>	AL	Illuminated metal push button (Alternate)
	ML	Illuminated metal push button (Momentary)
	PL	Pilot lamp
<b>3.Voltage</b>	1	110V AC LED lamp
	2	220V AC LED lamp
	5	6V LED lamp
	7	24V LED lamp
	9	12V LED lamp
<b>4.Lens color</b>	R	Red
	G	Green
	Y	Yellow
	O	Orange
	W	White
	BL	Blue
<b>5.Contact blocks</b>	1	1a1b (1NO 1NC)
	2	2a2b (2NO 2NC)

**PANEL CUT-OUT****TERMINAL ARRANGMENT****DIMENSIONS**

TT19-AL/ML

TT19-AL

TT19-ML

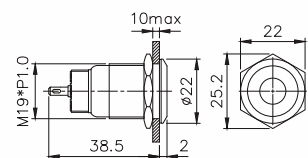


835.-

805.-

TT19-PL

600.-

**CHARACTERISTICS**

<b>Contact resistance</b>	50 mΩ max. (Initial)
<b>Insulation resistance</b>	100 MΩ min. (At 500V DC)
<b>Dielectric strength</b>	1000V AC, 50/60 Hz for 1 minute between non-continuous terminals 2000V AC, 50/60 Hz for 1 minute between current-carrying part and ground
<b>Vibration</b>	Mechanical durability : 10 to 55Hz 1.5 mm double amplitude
<b>Shock</b>	Mechanical durability : Approx : 500 m/ sec <sup>2</sup> (approx.50G's) Mechanical durability : Approx : 500 m/ sec <sup>2</sup> (approx.50G's)
<b>Ambient operation temperature</b>	Operating : -25°C to 55°C Storage : -30°C to 80°C
<b>Humidity</b>	45% to 80% RH
<b>Mechanical life (min)</b>	Momentary : 2,000,000 operations Alternate : 250,000 operations
<b>Electric life (min)</b>	Momentary : 100,000 operations (1,800 operations/ hour) Alternate : 100,000 operations (1,200 operations/ hour)
<b>Nut torque value</b>	14 Nm (140 Kgf.cm) max.

**CONTACT RATINGS**

Rated insulation voltage	250VAC	125VAC			
Rated continuous current (A)	3A	5A			
Rated operating current (A)					
	AC		DC		
Voltage	AC13	AC12	Voltage	DC13	DC12
110V	0.7A	1A	12V	0.7A	1A
220V	0.5A	0.5A	24V	0.7A	1A

AC13/DC13:Inductive load; AC12/DC12:Resistive load

\*ขอสงวนสิทธิ์ในการเปลี่ยนแปลงราคา

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#### MODEL DESIGNATION

BK/BKL only Round and Red.

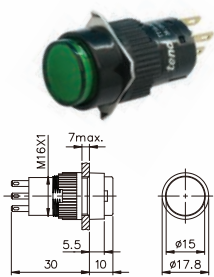
#### CHARACTERISTICS

Designation	Signal	Description
1. Mounting hole	TT16	Ø16 mm Series
	AB	Push Button (Alternate)
2. Type	MB	Push Button (Momentary)
	MM	Push Button (Momentary)(Mushroom Head)
	BK	Push-lock Turn-Reset
	BKL	Push-lock Turn-Reset (Mushroom Head)
3. Shape	R	Round
	S	Square
	L	Rectangular
4. Operator protection	4	IP40
	6	IP65
5. Lens color	R	Red
	G	Green
	O	Orange
	W	White
	BL	Blue
	B	Black
6. Contact blocks	1	1a1b(1NO 1NC)
	2	2a2b(2NO 2NC)

Contact resistance	50 mΩ max. (initial)
Insulation resistance	100 MΩ min. (at 500V DC)
Dielectric strength	1000V AC, 50/ 60 Hz for 1 minute between non-continuous terminals
	2000V AC, 50/ 60 Hz for 1 minute current-carrying part and ground.
Vibration	Mechanical durability : 10 to 55 Hz 1.5 mm double amplitude
	Mechanical durability :
Shock	Approx. 500 m/ sec <sup>2</sup> (approx. 50 G's)
	Malfunction durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50G's)
Ambient operating temperature	Operating : -25°C to 55°C Storage : -30°C to 80°C
Humidity	45% to 80% RH
Mechanical life (min)	Momentary : 2,000,000 Alternate/ BKR : 250,000
Electrical life (min)	Momentary : 100,000 (1,800 operations/ hour) Alternate/ BKR : 100,000 (1,200 operations/ hour)

#### DIMENSION

##### TT16-ABR/MBR



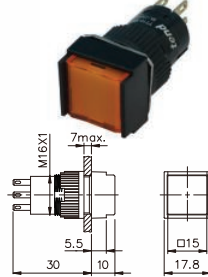
##### TT16-ABR รุ่นกดล็อก

Type	IP	Contact	Price
TT16-ABR	IP44	1NO 1NC	340.-
TT16-ABR	IP44	2NO 2NC	450.-
TT16-ABR	IP65	1NO 1NC	430.-
TT16-ABR	IP65	2NO 2NC	535.-

##### TT16-MBR รุ่นกดปล่อย

Type	IP	Contact	Price
TT16-MBR	IP44	1NO 1NC	240.-
TT16-MBR	IP44	2NO 2NC	390.-
TT16-MBR	IP65	1NO 1NC	400.-
TT16-MBR	IP65	2NO 2NC	500.-

##### TT16-ABS/MBS



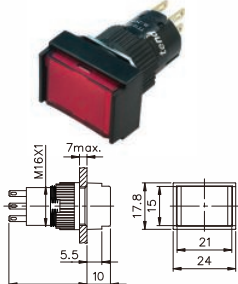
##### TT16-ABS รุ่นกดล็อก

Type	IP	Contact	Price
TT16-ABS	IP44	1NO 1NC	340.-
TT16-ABS	IP44	2NO 2NC	450.-
TT16-ABS	IP65	1NO 1NC	430.-
TT16-ABS	IP65	2NO 2NC	535.-

##### TT16-MBS รุ่นกดปล่อย

Type	IP	Contact	Price
TT16-MBS	IP44	1NO 1NC	240.-
TT16-MBS	IP44	2NO 2NC	390.-
TT16-MBS	IP65	1NO 1NC	400.-
TT16-MBS	IP65	2NO 2NC	500.-

##### TT16-ABL/MBL



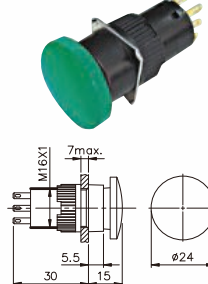
##### TT16-ABL รุ่นกดล็อก

Type	IP	Contact	Price
TT16-ABL	IP44	1NO 1NC	340.-
TT16-ABL	IP44	2NO 2NC	450.-
TT16-ABL	IP65	1NO 1NC	430.-
TT16-ABL	IP65	2NO 2NC	535.-

##### TT16-MBL รุ่นกดปล่อย

Type	IP	Contact	Price
TT16-MBL	IP44	1NO 1NC	240.-
TT16-MBL	IP44	2NO 2NC	390.-
TT16-MBL	IP65	1NO 1NC	400.-
TT16-MBL	IP65	2NO 2NC	500.-

##### TT16-AMR/MMR



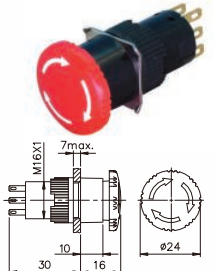
##### TT16-AMR รุ่นหัวเห็ดใหญ่กดล็อก

Type	IP	Contact	Price
TT16-AMR	IP44	1NO 1NC	395.-
TT16-AMR	IP44	2NO 2NC	490.-
TT16-AMR	IP65	1NO 1NC	470.-
TT16-AMR	IP65	2NO 2NC	560.-

##### TT16-MMR รุ่นหัวเห็ดใหญ่กดปล่อย

Type	IP	Contact	Price
TT16-MMR	IP44	1NO 1NC	380.-
TT16-MMR	IP44	2NO 2NC	470.-
TT16-MMR	IP65	1NO 1NC	450.-
TT16-MMR	IP65	2NO 2NC	540.-

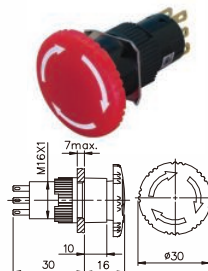
##### TT16-BKR



##### TT16-BKR รุ่นหัวเห็ดกลมไม่ล็อก

Type	IP	Contact	Price
TT16-BKR	IP44	1NO 1NC	600.-
TT16-BKR	IP44	2NO 2NC	695.-
TT16-BKR	IP65	1NO 1NC	675.-
TT16-BKR	IP65	2NO 2NC	770.-

##### TT16-BKLR



##### TT16-BKLR รุ่นหัวเห็ดใหญ่กดล็อก

Type	IP	Contact	Price
TT16-BKLR	IP44	1NO 1NC	610.-
TT16-BKLR	IP44	2NO 2NC	700.-
TT16-BKLR	IP65	1NO 1NC	680.-
TT16-BKLR	IP65	2NO 2NC	775.-



**tend****ILLUMINATED PUSH BUTTON SWITCH**

สวิตช์กดมีแสง IP44 IP65

Ø16

**MODEL DESIGNATION**

**TT16** - **AI** **R** **4** **1** **R** **1**

①                      ② ③ ④ ⑤ ⑥ ⑦

Designation	Signal	Description		
<b>1.Mounting hole</b>	TT16	Ø16 mm Series		
<b>2.Type</b>	AI	Illuminated Push Button (Alternate)(LED Lamp)		
	ML	Illuminated Push Button (Momentary)(LED Lamp)		
	PL	Pilot Lamp (LED Lamp)		
<b>3.Shape</b>	R	Round		
	S	Square		
	L	Rectangular		
<b>4.Operator protection</b>	4	IP40		
	6	IP65		
<b>5.Voltage</b>	1	110V AC LED Lamp		
	2	220V AC LED Lamp		
	5	6V LED Lamp		
	7	24V LED Lamp		
	9	12V LED Lamp		
<b>6.Lens color</b>	R	Red	W	White
	G	Green	BL	Blue
	Y	Yellow		
<b>7.Contact blocks</b>	1	1a1b (1NO 1NC)		
	2	2a2b (2NO 2NC)		

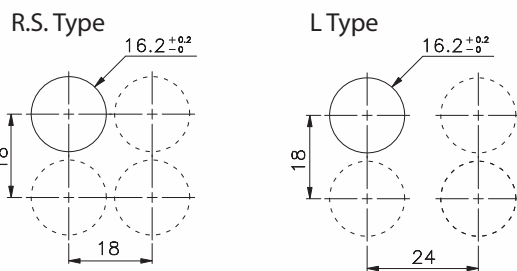
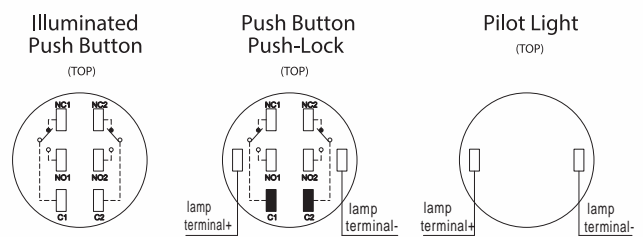
**CHARACTERISTICS**

<b>Contact resistance</b>	50 mΩ max. (initial)
<b>Insulation resistance</b>	100 MΩ min. (at 500V DC)
<b>Dielectric strength</b>	1000V AC, 50/ 60 Hz for 1 minute between non-continuous terminals 2000V AC, 50/ 60 Hz for 1 minute between current-carrying part and ground.
<b>Vibration</b>	Mechanical durability : 10 to 55 Hz 1.5 mm double amplitude
<b>Shock</b>	Mechanical durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50 G's) Malfunction durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50G's)
<b>Ambient operating temperature</b>	Operating : -25°C to 55°C Storage : -30°C to 80°C
<b>Humidity</b>	45% to 80% RH
<b>Mechanical life (min)</b>	Momentary : 2,000,000 Alternate/ BKR : 250,000
<b>Electrical life (min)</b>	Momentary : 100,000 (1,800 operations/ hour) Alternate/ BKR : 100,000 (1,200 operations/ hour)

**RATING (CONTACT)**

<b>Rated insulation voltage</b>	250 VAC	125 VAC			
<b>Rated continuous current (A)</b>	3A	5A			
<b>Rated operating current (A)</b>					
	<b>AC</b>		<b>DC</b>		
Voltage	AC13	AC12	Voltage	DC13	DC12
110 V	0.7 A	1 A	12 V	0.7 A	1 A
220 V	0.5 A	0.5 A	24 V	0.7 A	1 A

AC13/DC13 : Inductive load; AC12/DC12 : Resistive load

**PANEL CUT-OUT****TERMINAL ARRANGEMENT****LAMP DESIGNATION**

Lamp type	Signal	Rated voltage	Signal	Operating voltage	Rated current	Color code	Signal	Designation
LED	TL	6V AC/ DC	6	6V AC/ DC	26 mA	Red Blue Green Orange White	R BL G O W	TL -6 R
		12V AC/ DC	12	12V AC/ DC	26 mA			
		24V AC/ DC	24	24V AC/ DC	26 mA			
		110V AC	110	110V AC	1.5 mA			
		220V AC	220	220V AC	1.5 mA			

Designation need to be completed according to signals.

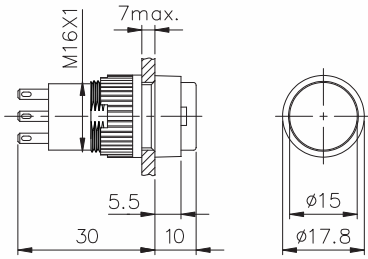
**LAMP DIMENSIONS (For TT16)**

TL-□□ (LED)                      140.-



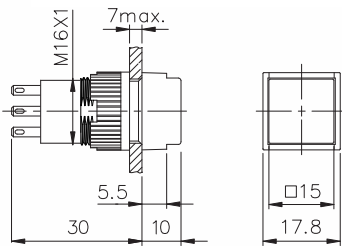
\*ขอสงวนสิทธิ์ในการเปลี่ยนแปลงราคา

■ สวิตช์กดพร้อมแลมป์ ชนิดคอนแทคสั้น



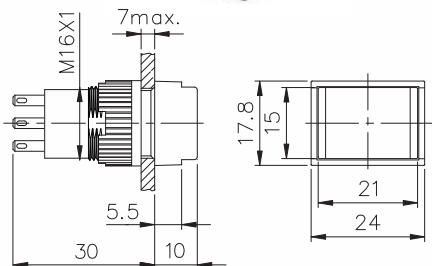
Bulb	Type	IP	Description	Contact	Price
LED	TT16-ALR-4	IP44	กดลือค	1NO 1NC	400.-
	TT16-ALR-4	IP44	กดลือค	2NO 2NC	460.-
	TT16-ALR-6	IP65	กดลือค	1NO 1NC	500.-
	TT16-ALR-6	IP65	กดลือค	2NO 2NC	560.-
LED	TT16-MLR-4	IP44	กดไม่ลือค	1NO 1NC	285.-
	TT16-MLR-4	IP44	กดไม่ลือค	2NO 2NC	400.-
	TT16-MLR-6	IP65	กดไม่ลือค	1NO 1NC	385.-
	TT16-MLR-6	IP65	กดไม่ลือค	2NO 2NC	500.-

■ สวิตช์กดพร้อมแลมป์ ชนิดคอนแทคสั้น



Bulb	Type	IP	Description	Contact	Price
LED	TT16-ALS-4	IP44	กดลือค	1NO 1NC	400.-
	TT16-ALS-4	IP44	กดลือค	2NO 2NC	460.-
	TT16-ALS-6	IP65	กดลือค	1NO 1NC	500.-
	TT16-ALS-6	IP65	กดลือค	2NO 2NC	560.-
LED	TT16-MLS-4	IP44	กดไม่ลือค	1NO 1NC	285.-
	TT16-MLS-4	IP44	กดไม่ลือค	2NO 2NC	400.-
	TT16-MLS-6	IP65	กดไม่ลือค	1NO 1NC	385.-
	TT16-MLS-6	IP65	กดไม่ลือค	2NO 2NC	500.-

■ สวิตช์กดพร้อมแลมป์ ชนิดคอนแทคสั้น



Bulb	Type	IP	Description	Contact	Price
LED	TT16-ALL	IP44	กดลือค	1NO 1NC	400.-
	TT16-ALL	IP44	กดลือค	2NO 2NC	460.-
	TT16-ALL	IP65	กดลือค	1NO 1NC	500.-
	TT16-ALL	IP65	กดลือค	2NO 2NC	560.-
LED	TT16-MLL	IP44	กดไม่ลือค	1NO 1NC	285.-
	TT16-MLL	IP44	กดไม่ลือค	2NO 2NC	400.-
	TT16-MLL	IP65	กดไม่ลือค	1NO 1NC	385.-
	TT16-MLL	IP65	กดไม่ลือค	2NO 2NC	500.-

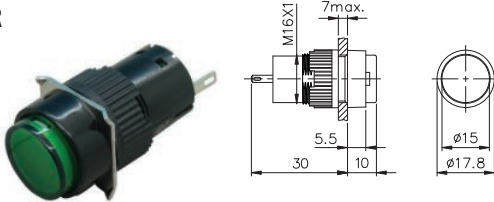
# tend PILOT LAMP

## ไฟล๊อตแลมป์ IP44 IP65

### Ø16

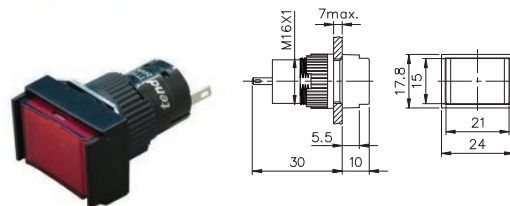
#### ■ ไฟล๊อตแลมป์ ชนิดคอนแทคสัน

##### TT16-PLR



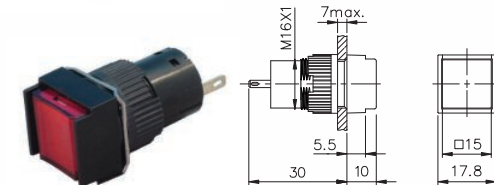
Type	IP	Description	Contact	Price
TT16-PLR	IP44	หลอด LED	1NO 1NC	215.-
TT16-PLR	IP65	หลอด LED	1NO 1NC	260.-

##### TT16-PLL



Type	IP	Description	Contact	Price
TT16-PLL	IP44	หลอด LED	1NO 1NC	215.-
TT16-PLL	IP65	หลอด LED	1NO 1NC	260.-

##### TT16-PLS



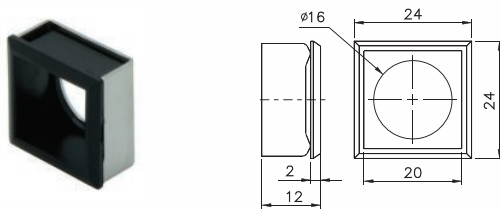
Type	IP	Description	Contact	Price
TT16-PLS	IP44	หลอด LED	1NO 1NC	215.-
TT16-PLS	IP65	หลอด LED	1NO 1NC	260.-

#### ■ COVER

##### TT16-FS

##### Square Cover

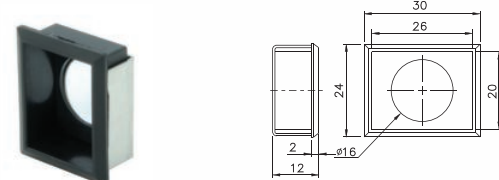
75.-



##### TT16-FL

##### Rectangular Cover

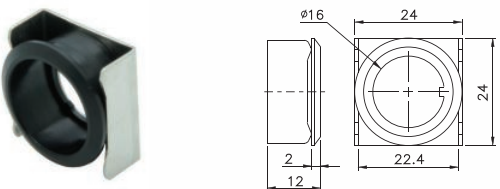
75.-



##### TT16-FR

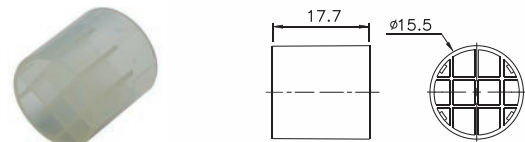
##### Round Cover

75.-



##### Terminal Cover

30.-



**TT16 - KS R 4 B 1 1 1 A**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

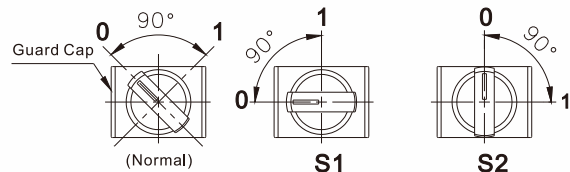
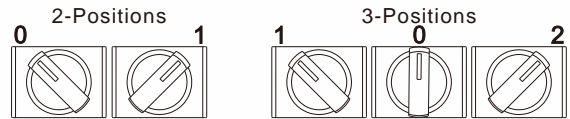
#### MODEL DESIGNATION

KSR/KSS/KLS only black.

Designation	Signal	Description
1.Mounting hole	TT-16	Ø16 mm Series
2.Type	SS	Knob Operator
	KS	Key Operator
3.Shape	R	Round
	S	Square
	L	Rectangular
4.Operator protection	4	IP44
	6	IP65
5.Lens color	R	Red
	G	Green
	B	Black
6.Positions	1	90° 2-Positions
	2	90° 2-Positions Spring return from right
	7	90° 3-Positions
	8	90° 3-Positions Spring return from right
	9	90° 3-Positions Spring return from left
	0	90° 3-Positions 2-Ways Spring return

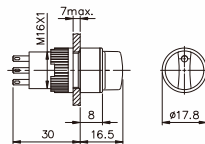
Designation	Signal	Description	
		2-Positions	3-Positions
7.Type contact blocks fitted	1	1a1b	-
	2	2a2b	1a1b 0 1a1b
8.Key withdrawable	1	0	1
	2	0	1
	3	2 Positions	
	4	1	0 2
	5	3 Positions	
9.Key no.	A	331	
	B	311	
	C	131	

#### KEY WITHDRAWABLE



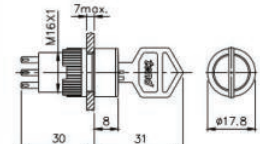
#### DIMENSION

##### TT16-SSR สวิตช์ลูกศร



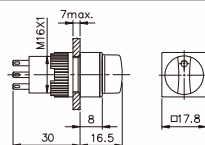
Type	IP	Contact	Price
TT16-SSR	IP44	1NO 1NC	530.-
TT16-SSR	IP44	2NO 2NC	620.-
TT16-SSR	IP65	1NO 1NC	600.-
TT16-SSR	IP65	2NO 2NC	695.-

##### TT16-KSR สวิตช์กุญแจ



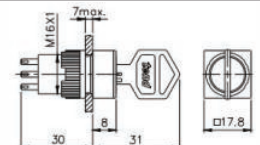
Type	IP	Contact	Price
TT16-KSR	IP44	1NO 1NC	730.-
TT16-KSR	IP44	2NO 2NC	815.-
TT16-KSR	IP65	1NO 1NC	800.-
TT16-KSR	IP65	2NO 2NC	890.-

##### TT16-SSS สวิตช์ลูกศร



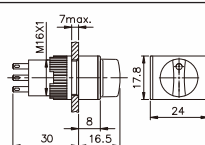
Type	IP	Contact	Price
TT16-SSS	IP44	1NO 1NC	530.-
TT16-SSS	IP44	2NO 2NC	620.-
TT16-SSS	IP65	1NO 1NC	600.-
TT16-SSS	IP65	2NO 2NC	695.-

##### TT16-KSS สวิตช์กุญแจ



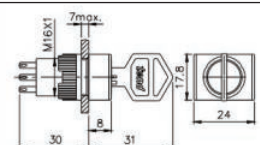
Type	IP	Contact	Price
TT16-KSS	IP44	1NO 1NC	730.-
TT16-KSS	IP44	2NO 2NC	815.-
TT16-KSS	IP65	1NO 1NC	800.-
TT16-KSS	IP65	2NO 2NC	890.-

##### TT16-SSL สวิตช์ลูกศร



Type	IP	Contact	Price
TT16-SSL	IP44	1NO 1NC	530.-
TT16-SSL	IP44	2NO 2NC	620.-
TT16-SSL	IP65	1NO 1NC	600.-
TT16-SSL	IP65	2NO 2NC	695.-

##### TT16-KSL สวิตช์กุญแจ



Type	IP	Contact	Price
TT16-KSL	IP44	1NO 1NC	730.-
TT16-KSL	IP44	2NO 2NC	815.-
TT16-KSL	IP65	1NO 1NC	800.-
TT16-KSL	IP65	2NO 2NC	890.-

# tend PUSH BUTTON SWITCH

สวิตช์กด IP44 IP65  
Ø16

## MODEL DESIGNATION

**TN16 - AB R 4 R 1 P**

① ② ③ ④ ⑤ ⑥ ⑦

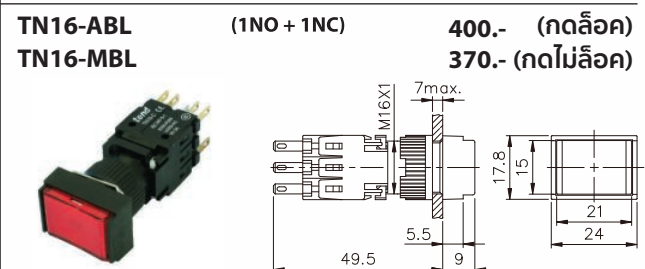
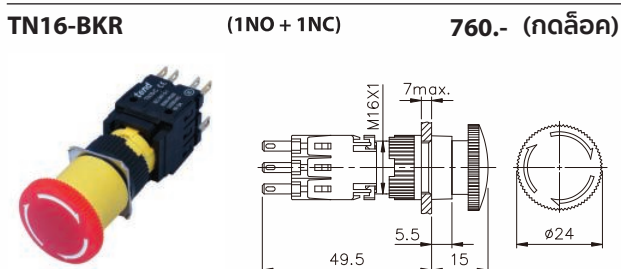
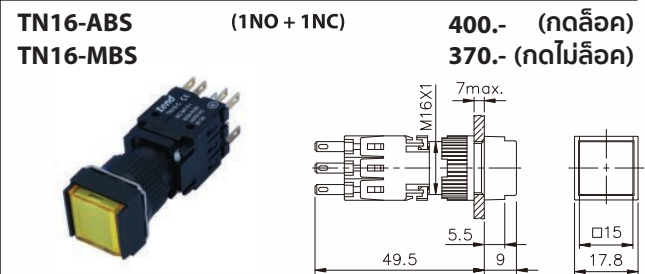
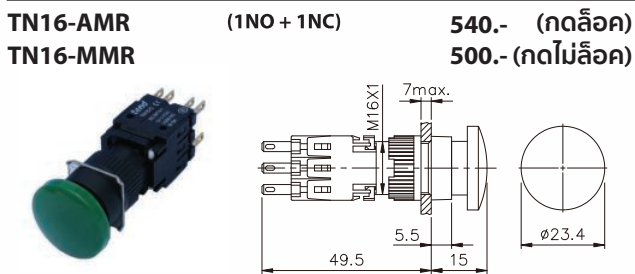
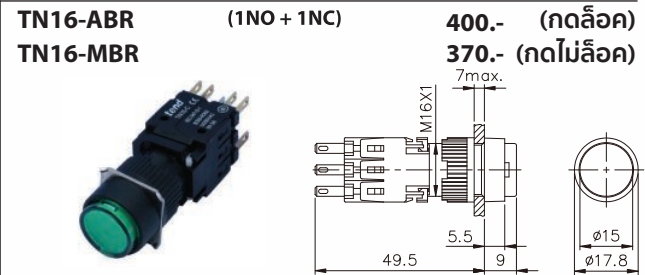
Designation	Signal	Description
<b>1.Mounting hole</b>	TN-16	Ø16 mm Series
<b>2.Type</b>	AB	Push Button (Alternate)
	MB	Push Button (Momentary)
	AM	Push Button (Alternate)(Mushroom Head)
	MM	Push Button (Momentary)(Mushroom Head)
<b>3.Shape</b>	R	Round
	S	Square
	L	Rectangular
<b>4.Operator protection</b>	4	IP40
	6	IP65
<b>5.Lens color</b>	R	Red
	G	Green
	Y	Yellow
	O	Orange
	W	White
	BL	Blue
<b>6.Contact blocks</b>	1	1a1b
	2	2a2b
	3	3a3b
<b>7.Terminal</b>	None	Solder/ Plug-in
	P	PC Board

- AM/MM/BK Types only available in round shape.
- AM/MM Types available in Red, Yellow, Green, Black Colors.
- BK Type available in Red colors

## CHARACTERISTICS

<b>Contact resistance</b>	50 mΩ max. (initial)
<b>Insulation resistance</b>	100 MΩ min. (at 500V DC)
<b>Dielectric strength</b>	1000V AC, 50/ 60 Hz for 1 minute between non-continuous terminals 2000V AC, 50/ 60 Hz for 1 minute between current-carrying part and ground.
<b>Vibration</b>	Mechanical durability : 10 to 55 Hz 1.5 mm double amplitude
<b>Shock</b>	Mechanical durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50 G's) Malfunction durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50G's)
<b>Ambient temperature</b>	Operating : -25°C to 55°C Storage : -30°C to 80°C
<b>Humidity</b>	45% to 80% RH
<b>Mechanical life(min)</b>	Momentary : 2,000,000 Alternate/ BKR : 250,000
<b>Electrical life(min)</b>	Momentary : 100,000 (1,800 operations/ hour) Alternate/ BKR : 100,000 (1,200 operations/ hour)

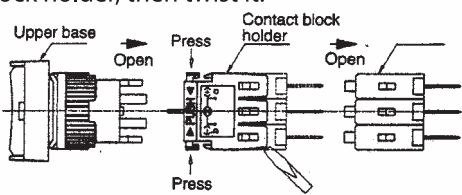
## DIMENSIONS



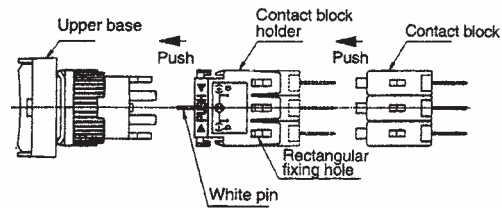
\*ขอสงวนสิทธิ์ในการเปลี่ยนแปลงราคา

### FEATURES

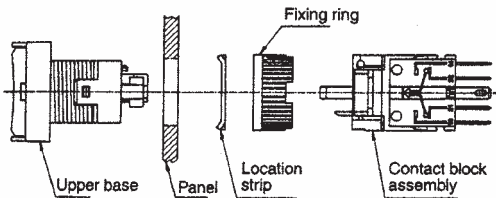
① TN16 series are highly modular detachable switches. Including upper base, contact block holder and contact block. When disassembling, press the contact block holder in the direction of arrow with "Push" by manual or a flat "—" screwdriver to disassemble contact block assembly from upper base. To disassemble contact block from contact block holder, insert the screwdriver in the groove between contact block and contact block holder, then twist it.



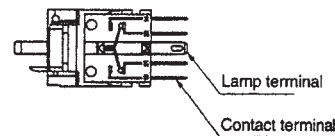
① When Assembling the contact block and contact block holder, aiming the rectangular spot on the contact block to the rectangular fixing hole on the contact block holder, then push in Aiming the white pin of the contact block assembly to the slot of white pin located on the upper base to assemble the switch.



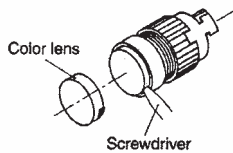
### Mounting method



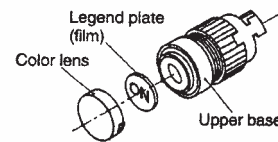
① The lamp terminal for pilot lamp and illuminated push button switch is in the middle position which is 90 degrees from other terminals.



① Method of replacing color lens, insert a flat "—" screwdriver into the groove of the lens twist it.

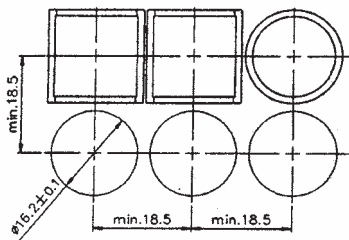


① The legend plate can be removed by detaching the lens, and replace the legend plate you need.

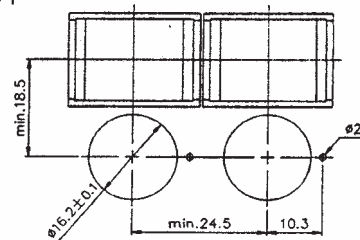


### THE SPACE OF MOUNTING HOLES (MM)

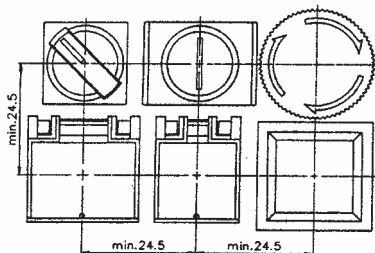
① (Round, square) pilot lamp, illuminated push button Switch



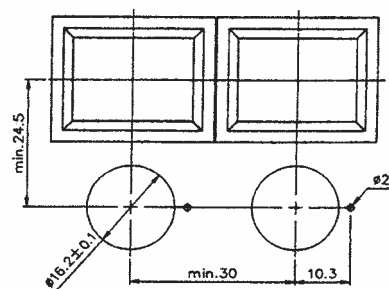
① (Rectangular) pilot lamp, illuminated push button Switch (Square) protection cover.



① (Round, square rectangular) selector, key switch (Round, square) waterproof cap, (Rectangular) protection cover Mushroom head, push-lock push button Switch



① Rectangular waterproof cap



**tend****ILLUMINATED PUSH BUTTON SWITCH**

สวิตช์กดมีแสง IP44 IP65

Ø16

**MODEL DESIGNATION**

<b>TN16</b>	-	<b>AN</b>	<b>R</b>	<b>4</b>	<b>1</b>	<b>R</b>	<b>1</b>	<b>P</b>
①		②	③	④	⑤	⑥	⑦	⑧

Designation	Signal	Description
<b>1.Mounting hole</b>	TN16	Ø16 mm Series
<b>2.Type</b>	AI	Illuminated Push Button (Alternate) (Incandescent Lamp)
	AL	Illuminated Push Button (Alternate) (LED Lamp)
	AN	Illuminated Push Button (Alternate) (Neon Lamp)
	MI	Illuminated Push Button (Momentary) (Incandescent Lamp)
	ML	Illuminated Push Button (Momentary) (LED Lamp)
	MN	Illuminated Push Button (Momentary) (Neon Lamp)
	PI	Pilot Lamp (Incandescent Lamp)
	PL	Pilot Lamp (LED Lamp)
<b>3.Shape</b>	PN	Pilot Lamp (Neon Lamp)
	R	Round
	S	Square
	L	Rectangular

AL/ML/PL use DC voltage; AN/MN/PN use AC voltage

**CHARACTERISTICS**

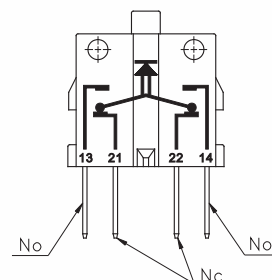
<b>Contact resistance</b>	50 mΩ max. (initial)
<b>Insulation resistance</b>	100 MΩ min. (at 500V DC)
<b>Dielectric strength</b>	1000V AC, 50/ 60 Hz for 1 minute between non-continuous terminals 2000V AC, 50/ 60 Hz for 1 minute between current-carrying part and ground.
<b>Vibration</b>	Mechanical durability : 10 to 55 Hz 1.5 mm double amplitude
<b>Shock</b>	Mechanical durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50 G's) Malfunction durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50G's)
<b>Ambient temperature</b>	Operating : -25°C to 55°C Storage : -30°C to 80°C
<b>Humidity</b>	45% to 80% RH
<b>Mechanical life(min)</b>	Momentary : 2,000,000 Alternate/ BKR : 250,000
<b>Electrical life(min)</b>	Momentary : 100,000 (1,800 operations/ hour) Alternate/ BKR : 100,000 (1,200 operations/ hour)

Designation	Signal	Description
<b>4.Operator protection</b>	4	IP40
	6	IP65
<b>5.Voltage</b>	1	110V AC
	2	220V AC
	3	380V AC
	5	6V
	7	24V
	8	28V
<b>6.Lens color</b>	9	12V
	R	Red
	G	Green
	Y	Yellow
	O	Orange
	W	White
<b>7.Contact blocks</b>	BL	Blue
	1	1a1b
	2	2a2b
	3	3a3b
<b>8.Terminal</b>	None	Solder/ Plug-in
	P	PC Board

**RATING (CONTACT)**

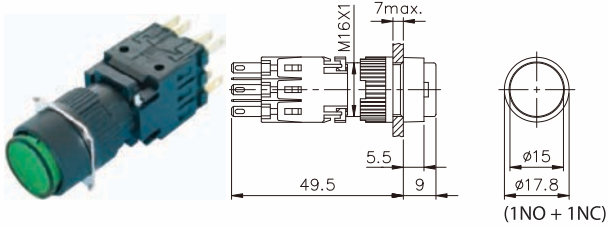
<b>Rated insulation voltage</b>	250 V AC/DC					
<b>Rated continuous current (A)</b>	5A					
<b>Rated operating current (A)</b>						
	AC			DC		
Voltage	AC13	AC12	Voltage	DC13	DC12	
110V	1.0	1.5	24V	0.7	1	
220V	0.7	1.0	110V	0.15	0.2	

AC13/DC13 : Inductive load : AC12/DC12 : Resistive load

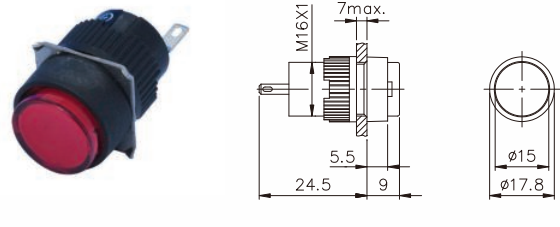
**CONTACT CONFIGURATION**

#### ■ DIMENSIONS

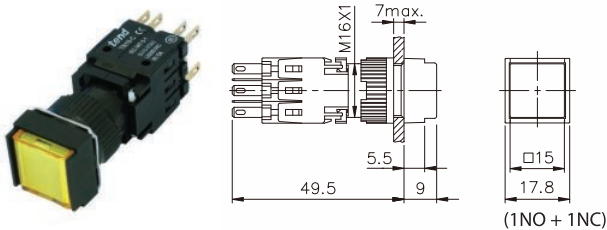
TN16-AIR 395.- / ALR 520.- / ANR 460.- (กดคืออก) TN16-PIR 210.- / PLR 325.- / PNR 275.-  
 TN16-MIR 370.- / MLR 495.- / MNR 435.- (กดไม่คืออก)



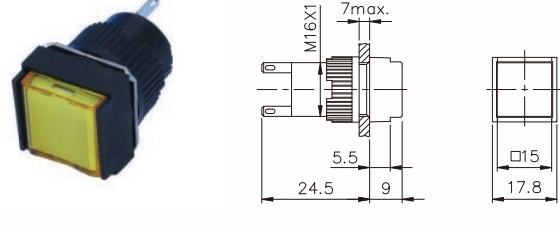
TN16-PIR 210.- / PLR 325.- / PNR 275.-



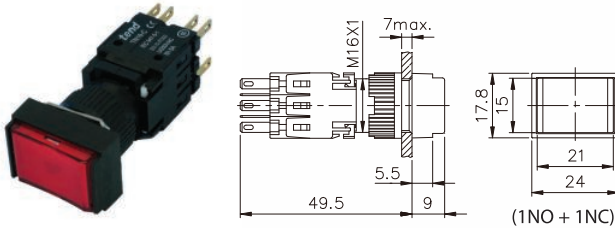
TN16-AIS 395.- / ALS 520.- / ANS 460.- (กดคืออก) TN16-PIS 210.- / PLS 325.- / PNS 275.-  
 TN16-MIS 370.- / MLS 495.- / MNS 435.- (กดไม่คืออก)



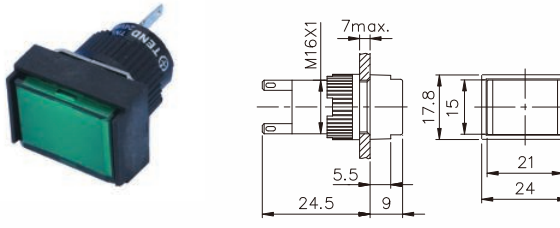
TN16-PIS 210.- / PLS 325.- / PNS 275.-



TN16-AIL 395.- / ALL 520.- / ANL 460.- (กดคืออก) TN16-PIL 210.- / PLL 325.- / PNL 275.-  
 TN16-MIL 370.- / MLL 495.- / MNL 435.- (กดไม่คืออก)



TN16-PIL 210.- / PLL 325.- / PNL 275.-



#### ■ LAMP DESIGNATION

\*หมายเหตุ : รุ่น TN16 LED สีน้ำเงิน, สีเขียว, สีขาว ต้องเพิ่มราคาอีก 20 บาท\*

Lamp type	Signal	Rated voltage	Signal	Operating voltage	Rated current	Color code	Signal	Designation
Incandescent	I	6.3V AC/ DC	6	6.3V AC/ DC	110 mA	None	None	□ - □
		14V AC/ DC	14	12V AC/ DC	50 mA			
		28V AC/ DC	28	24/ 28V AC/ DC	25 mA			
LED	L	6V DC	6	6V DC	26 mA	Red Orange	R O	□ - □ □
		12V DC	12	12V DC	26 mA	Green Blue	G BL	
		24V DC	24	24V DC	26 mA	Yellow White	Y W	
Neon	N	110V AC	110	110V AC	1.5 mA	Red Green	R G	□ - □ □ □
		220V AC	220	220V AC	1.5 mA			
		380V AC	380	380V AC	1.5 mA			

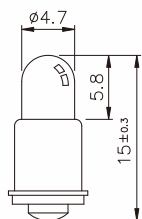
● Designation need to be completed according to signals.

#### ■ LAMP DIMENSIONS (T1 3/4 BASE)

2T1.75□ 60.-



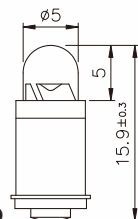
Incandescent



2T1.75 L□ 190.-



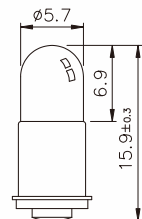
LED สีแดง, ส้ม, เหลือง  
LED สีเขียว, น้ำเงิน, ขาว



2T1.75□ 115.-



Neon





# tend SELECTOR SWITCH / KEY SWITCH







## สวิตช์กดลูกศร / สวิตช์กุญแจ IP40 IP65

### Ø16

#### MODEL DESIGNATION

**TN16 - KSR4B111AP**





① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Designation	Signal	Description
1.Mounting hole	TN-16	Ø16 mm Series
2.Type	SS	Knob Operator
	KS	Key Operator
3.Shape	R	Round
	S	Square
	L	Rectangular
4.Operator protection	4	IP 40
	6	IP 65
5.Lens color	R	Red
	G	Green
	B	Black
6.Positions	1	 90° 2 - Positions
	2	 90° 2 - Positions Spring return from right
	3	 180° 3 - Positions
	4	 150° 3 - Positions Spring return from right
	5	 150° 3 - Positions Spring return from left
	6	 150° 3 - Positions 2-Ways Spring return

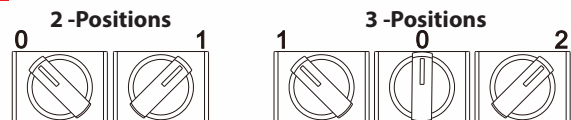
● KSR/KSS/KSL Type only available in black colors.

#### CHARACTERICS

Contact resistance	50 mΩ max. (initial)
Insulation resistance	100 MΩ min. (at 500V DC)
Dielectric strength	1000V AC, 50/ 60 Hz for 1 minute between non-continuous terminals 2000V AC, 50/ 60 Hz for 1 minute between current-carrying part and ground.
Vibration	Mechanical durability : 10 to 55 Hz 1.5 mm double amplitude
Shock	Mechanical durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50 G's) Malfunction durability : Approx. 500 m/ sec <sup>2</sup> (approx. 50G's)
Ambient temperature	Operating : -25°C to 55°C Storage : -30°C to 80°C
Humidity	45% to 80% RH
Mechanical life(min)	250,000 operations
Electrical life(min)	100,000 operations

Designation	Signal	Description		
6.Positions	7	 90° 3 - Positions		
	8	 90° 3 - Positions Spring return from right		
	9	 90° 3 - Positions Spring return from left		
	0	 90° 3 - Positions 2-Ways Spring return		
7.Type of contact blocks fitted		<b>2 Positions</b>		
	1	1a1b		
	2	2a2b		
8.Key withdrawable		<b>3 Positions</b>		
	1	1a1b 0 1a1b		
	2	1a1b 1a1b 1a1b		
9.Key no.	A	F	2132	3123
	B	G	2231	3133
	C	H	2313	3213
	D	I	2331	3231
	E	J	3131	3331
	10.Terminal	None	Solder / Plug-in	
	P	PC Board		

#### KEY WITHDRAWABLE



#### 2 - Positions

Key withdrawable	1		2		3	
	0	1	0	1	0	1
1	•	•	•	-	-	•
2	•	•	•	-	-	•

#### 3 - Positions

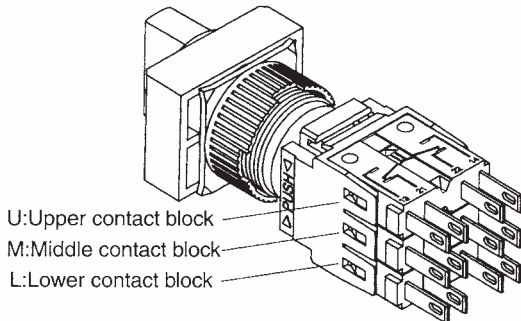
Key withdrawable	4			5		
	1	0	2	1	0	2
3	•	•	•	-	•	-
4	-	-	-	-	•	-
5	-	-	-	-	•	-
6	-	-	-	-	•	-
7	-	-	-	-	•	-
8	-	-	-	-	•	-
9	-	-	-	-	•	-
0	-	-	-	-	•	-

● KEY WITHDRAWABLE

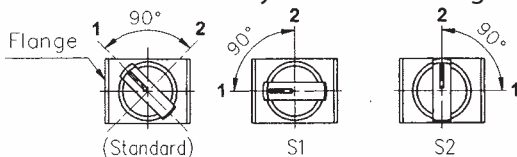
\*ขอสงวนสิทธิ์ในการเปลี่ยนแปลงราคา

### CONTACT BLOCK POSITIONS

#### View from back



The operating angle range can be changed as shown below by setting the attached flange shifted by 45° in combination with the contact block. In this case, the minimum mounting pitch is 26 mm because the contact block is shifted by 45° from the flange.



#### Contact arrangement and operator positions:

##### 2-Positions selector switch / Key switch

Contact arrangement	1 NO + 1 NC (1a1b)	2 NO + 2 NC (2a2b)	3NO + 3 NC (3a3b)
Operator position	Left 		
	Right 		

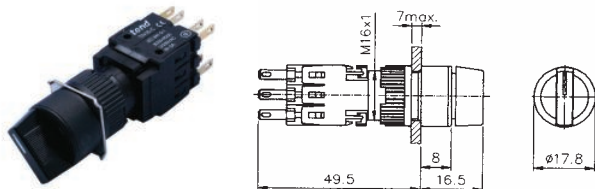
##### 3-Positions selector switch / Key switch

Contact arrangement	2 NO + 2 NC (2a2b)	3NO + 3 NC (3a3b)
Operator position	Left 	
	Center 	
	Right 	

### DIMENSIONS

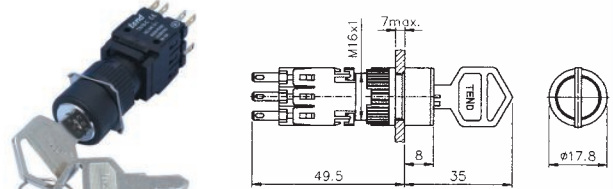
#### TN16-SSR (1NO+1NC)

635.-



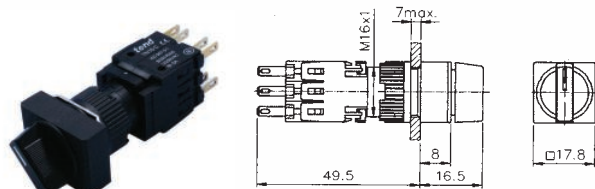
#### TN16-KSR (1NO+1NC)

800.-



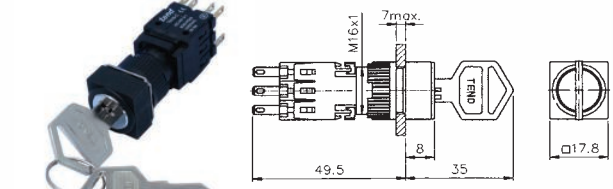
#### TN16-SSS (1NO+1NC)

635.-



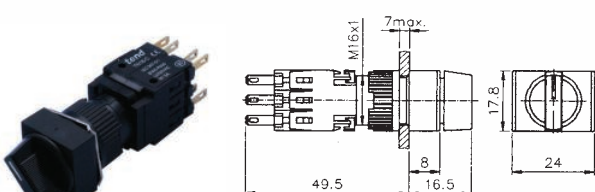
#### TN16-KSS (1NO+1NC)

800.-



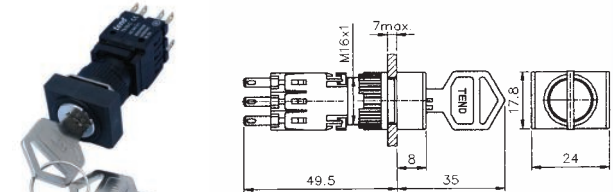
#### TN16-SSL (1NO+1NC)

635.-



#### TN16-KSL (1NO+1NC)

800.-



หมายเหตุ:ราคานี้เป็นราคาชนิด IP40 สามารถเพิ่ม contact ได้ถึง 3a 3b (3NO+3NC) : เพิ่ม contact 1NO+1NC รุ่น TN16-C หรือ TN16-CP อีก

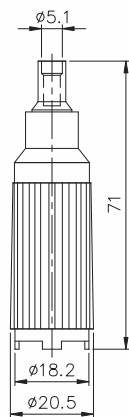
# tend ACCESSORIES

อุปกรณ์เสริม

## Ø16

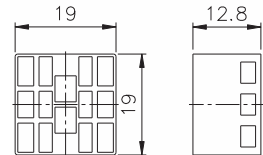
### DIMENSIONS

Lamp changer and wrench  
TN16-A



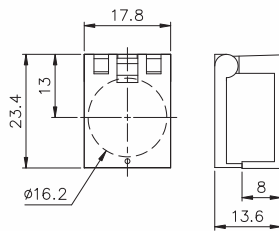
145.-

TN16-Terminal cover  
TN16-TC



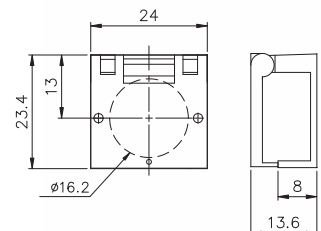
35.-

TN16-Round/square protection cover  
TN16-GS



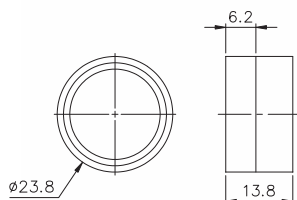
110.-

Rectangular protection cover  
TN16-GL



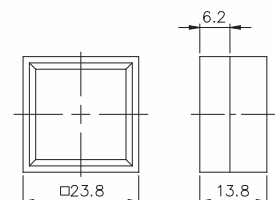
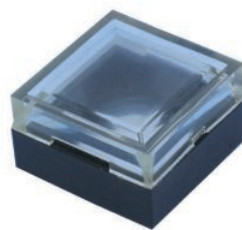
110.-

Round head duct-tight cover  
TN16-WR



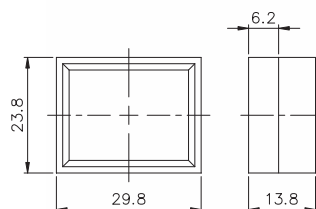
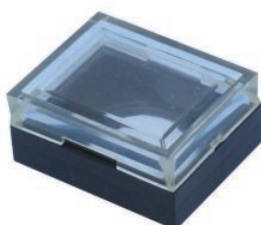
110.-

Square head duct-tight cover  
TN16-WS



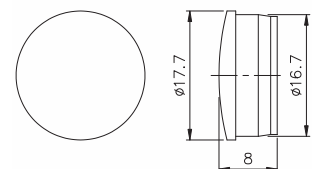
110.-

Rectangular head duct-tight cover  
TN16-WL



110.-

Blanking plug  
TN16-BP



20.-

# tend ACCESSORIES

## อุปกรณ์เสริม

### Ø16

TEND

BANDEX

TAKAMURA

TEEFLEX

KENION

NISSEI

ROSI

APEKS

LKEW

TAC

MARLOW

HARU

WIND  
SPEED

COMMAX

ADVANTE

UNIVERSAL  
ADAPTER

ALION

EXOWELD


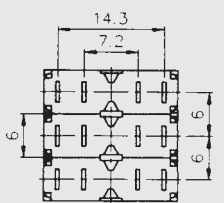

CONTROL  
MAX

JKN

SYLVIA

WANG

MACCON

Features	Model	Type	Designation			
	Contact blocks assembly	TN16-A <b>B</b> <b>1</b> <b>P</b> Please use signal for <input type="checkbox"/>	1.Contact blocks holder	Item	Designation	
	(View -From back)			2.Contact blocks fitted	B	contact blocks holder or push button
					I	contact blocks holder for Illuminated button
		S	contact blocks holder for SS,KS,BK			
<b>TN16-BB</b> 30.-	Contact blocks holder	TN16-A <b>B</b> <b>B</b> Please use signal for <input type="checkbox"/>	Contact blocks holder	I	contact blocks holder for Push Button	
<b>TN16-BI</b> 30.-						
<b>TN16-BS</b> 30.-						
<b>TN16-C</b> 130.-	Contact blocks	TN16-C <b>P</b> Please use signal for <input type="checkbox"/>	Contact blocks	None	Solder / Plug-in	
<b>TN16-CP</b> 130.-				P	PC Board	
	Block	<b>TN16-D</b>	<b>20.-</b>			

**tend****ILLUMINATED PUSH BUTTON SWITCH**

สวิตช์กดมีแสง

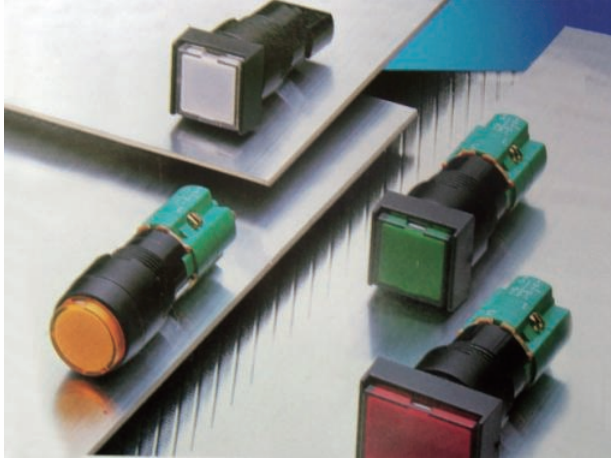
Ø16

ISO 9002

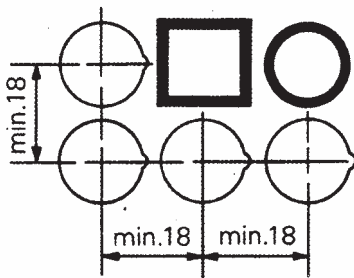
**MODEL DESIGNATION**

**T16 - IR1R1**

①      ② ③ ④ ⑤ ⑥

**CHARACTERISTICS**

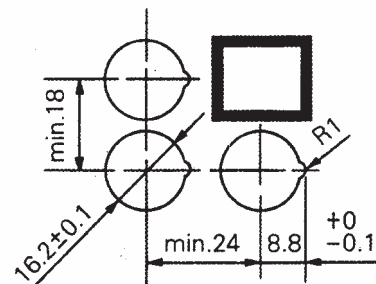
<b>Contact resistance</b>	15 mΩ max
<b>Insulation resistance</b>	100 MΩ
<b>Dielectric strength</b>	1,500 V AC, 50/60 Hz for 1 minute
<b>Ambient temperature</b>	Operating : - 20°C ~ 80 °C
<b>Humidity</b>	95% RH max.
<b>Operation force</b>	150 g
<b>Service life</b>	Mechanically : 1,000, 000 Operations min. Electrically : 100, 000 Operations min.
<b>Weight</b>	10 gr (1a1b)
	15 gr (4a4b)

**PANEL MOUNTING****(R, S TYPE)**

Designation	Signal	Description	
<b>1.Mounting hole</b>	T16	Ø16 mm Series	
<b>2.Type</b>	I	Illuminated Push Button (Alternate)	
	B	Illuminated Push Button (Momentary)	
	P	Pilot Lamp	
	K	Key Switch	
	G	Switch Guard	
	S	Sealing Cap	
<b>3.Shape</b>	R	Round	
	S	Square	
	L	Rectangular	
<b>4.Voltage</b>	1	110 V AC	
	2	220 V AC	
	5	6 V	
	6	18 V	
	7	24 V	
	8	28 V	
	9	12 V	
	<b>5.Lens color</b>	R	Red
		G	Green
O		Orange	
W		White	
BL		Blue	
<b>6.Contact blocks</b>	1	1a1b (1NO 1NC)	
	2	2a2b (2NO 2NC)	
	3	3a3b (3NO 3NC)	
	4	4a4b (4NO 4NC)	

**RATING**

Rated voltage	Resistive load	Inductive	Contact	Length
<b>125V AC</b>	4A	3A	1a1b	41.5 mm
<b>250V AC</b>	4A	3A	2a2b	49.5 mm
<b>24V DC</b>	1A	0.7A	3a3b	57.5 mm
<b>12V DC</b>	0.2A	0.05A	4a4b	65.5 mm

**(LTYPE)**

■ สวิตช์กดมีไฟในตัว (12V, 24V, 110V, 220V)

■ ไฟลือตแลมป์ (24V, 220V)

**T16-IR (กดลือค)** 1a1b 350.- 2a2b 470.-  
3a3b 585.- 4a4b 700.-

**T16-BR (กดไม่ลือค)** 1a1b 320.- 2a2b 435.-  
3a3b 550.- 4a4b 660.-

**T16-PR ไฟลือตแลมป์** 200.-

**T16-IS (กดลือค)** 1a1b 350.- 2a2b 470.-  
3a3b 585.- 4a4b 700.-

**T16-BS (กดไม่ลือค)** 1a1b 320.- 2a2b 435.-  
3a3b 550.- 4a4b 660.-

**T16-PS ไฟลือตแลมป์** 200.-

**T16-IL (กดลือค)** 1a1b 350.- 2a2b 470.-  
3a3b 530.- 4a4b 700.-

**T16-BL (กดไม่ลือค)** 1a1b 320.- 2a2b 435.-  
3a3b 550.- 4a4b 660.-

**T16-PL ไฟลือตแลมป์** 200.-

**T16-WL** 99.-

**T16-GL** 90.-

■ MINIATURE TELEPHONE BULB

**T-4.5** 60.-

Voltage	Wattage	Diameter	Length
v	w	mm	mm
6	0.3	4.2 ±0.2	16.5 +0.5 -1
12	0.5		
18	0.5		
24	0.5		
28	0.7		
110V	0.3		
220V	0.3		

■ TIGHTENING TOOL FOR FIXING LAMP

**T16-A** 85.-