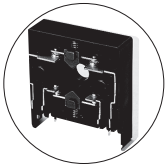
ILLUMINATED MICRO CAM-OPERATED SWITCH

UL TYPE

Cam-operated switch structure is used for the contact, resulting in compact body and high performance.



4-element, highly-bright LED provides illumination of two colors.

Use of connector applicable to a wire of up to 2 mm^2 size

The back terminal structure enables high-density mounting.

Incorporating a limiting resistor, the LED can be directly turned on from 110 V DC power supply.

The surface area is approx. 30 mm square. Approx. 50% smaller than the conventional model. *

* As compared with our conventional BHL type.

SPECIFICATIONS (RATINGS, PERFORMANCE)

Specification \ Type	UL TYPE			
Rated insulation voltage (Ui)	250V			
Rated current-carrying capacity (Ith)	1A			
Instantaneous operating current	20A／1 sec.			
Connectable wire size	0.5～2.0mm²			
Withstand voltage	Between live line and ground	2,000V AC / 1min	Between individual live lines	1,000V AC / 1min
Lightning impulse	Between live line and ground	±7kV/3 times for each pole (1.2/50μs)	Between individual live lines	±3kV/3 times for each pole (1.2/50μs)
Contact resistance	50mΩ or less			
Mechanical life	100,000 operations or more (1200 times / hour)			
Electrical life	100,000 operations or more (0.5 A／110 V DC L／R=40ms)			
Shock resistance	500m/s²			
Vibration resistance	20m/s² (10～150Hz)			
Minimum applicable load	24 V 10m A (in suitable operating conditions)			
Operating temperature	–25 to 50°C			
Storing temperature	–40 to 70°C			
Altitude	2,000 m or less			

■Making and breaking capacity

		Resistive load		Inductive load	
		10,000 operations	100,000 operations	10,000 operations	100,000 operations
AC	AC110V	10A	5A	10A	3A
AC	AC220V	7A	3A	5A	2A
DC	DC5V	10A	10A	10A	7A
DC	DC12V	10A	6A	10A	4A
DC	DC24V	10A	3A	10A	2A
DC	DC48V	10A	2A	7A	1A
DC	DC110V	7A	0.7A	5A	0.5A
DC	DC125V	5A	0.5A	4A	0.3A

*Inductive load For AC : Power factor 0.6 to 0.7
For DC : Time constant 40±6ms

⚠Precautions for use

In the above table, interruption current indicates actual performance of the UL type micro cam-operated switch. During use of the UL type, make sure that the rated operating current and instantaneous operating current do not exceed 1 A and 20 A/sec. respectively.

ILLUMINATED MICRO CAM-OPERATED SWITCH

UL TYPE

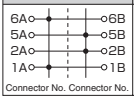
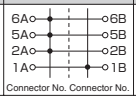
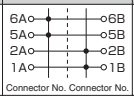
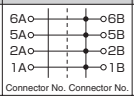
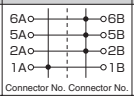
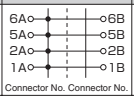
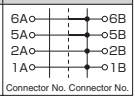
HOW TO ORDER

UL-SP 2001-235 □ A C Y

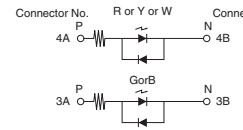
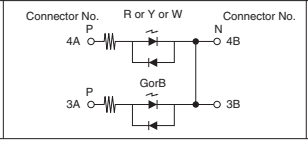
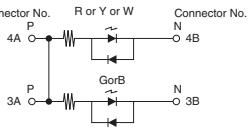
① ② ③ ④⑤⑥ ⑦ ⑧ ⑨ ⑩

No.	Item	Code		Detail	Note
①	Basic type	UL		Illuminated micro cam-operated switch	—
②	Operation method	SP		Push at center → Manual turn by 45° (CW or CCW) → Automatic return to center → Automatic return to non-push status	
		S		Manual turn by 45° (CW or CCW) → Automatic return to center	
		HP		Push at left → Manual turn by 45° (CW) → Manual return to left → Automatic return to non-push status	—
		H		Manual operation by 90° (CW/CCW), Stop at each position	
		SB		Pull at center → Manual turn by 45° (CW or CCW) Automatic return to center → Automatic return to non-pull status	
③	Contact arrangement	2001～2007		Please choose from Contact Configuration diagram	—
④	Indication circuit	1		1 lamp	—
		2		2 lamp	
⑤	Lamp voltage	1		DC24V	
		2		DC48V	
		3		DC100 / 110V	—
		4		DC125V	
		5		DC220V	
⑥	Lamp color	1		W (Milky white)	
		5		R (Red), G (Green)	—
		8		Y (Yellow), B (Blue)	
⑦	LED circuit	—		Standard (Non-common)	Please choose from LED circuit diagram.
		N		N-common	
		P		P-common	
⑧	Handle code	A		Manual return type and automatic return type	Except SB
		B		Pull operation	For SB
⑨	Color of handle	C		Clear	—
		W		Milky white	
⑩	Flange shape	Y		Square type	Only black color
		Z		Round type	(N1.5) is available

■Contact arrangement

2001	2002	2003	2004	2005	2006	2007
						
Connector No. Connector No.	Connector No. Connector No.	Connector No. Connector No.	Connector No. Connector No.	Connector No. Connector No.	Connector No. Connector No.	Connector No. Connector No.

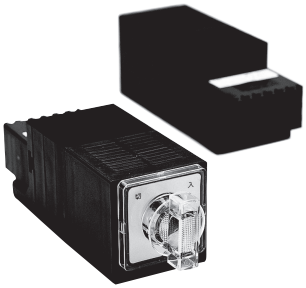
■LED circuit diagram

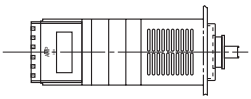
Standard (Non-common)	N-common	P-common
		

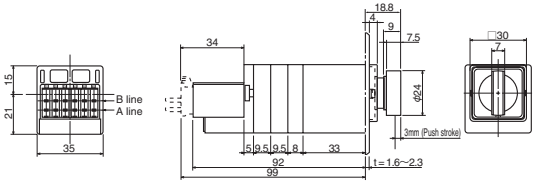
STANDARD PRODUCTS

UL- Type Y

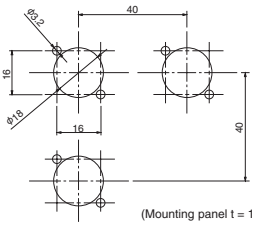
Square type







●Mounting hole size

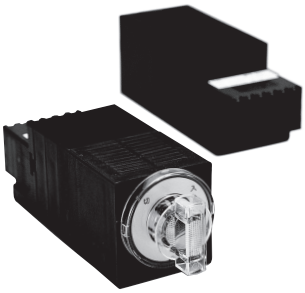


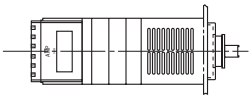
(Mounting panel t = 1.6, 2.3)

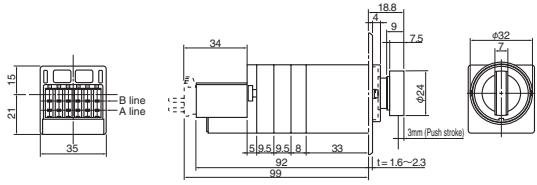
* Name plate is sold separately.

UL- Type Z

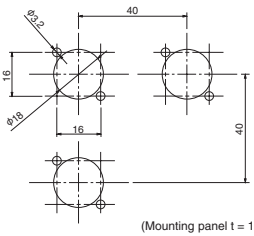
Round type







●Mounting hole size



(Mounting panel t = 1.6, 2.3)

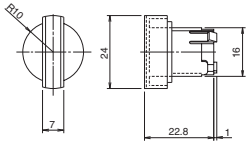
* Name plate is sold separately.

UL TYPE

ACCESSORIES

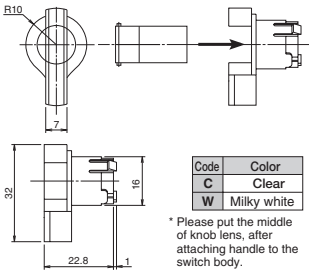
Handle

●U Tsumami color



Code	Color
C	Clear
W	Milky white

●UL-B-color (Dedicated to pull operation)



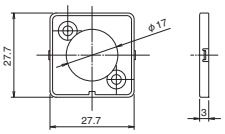
Code	Color
C	Clear
W	Milky white

* Please put the middle of knob lens, after attaching handle to the switch body.

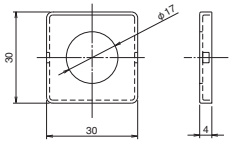
Flange set

●UL-Y (Square type)

Supplied screws : M3×8 countersunk 2 pcs.



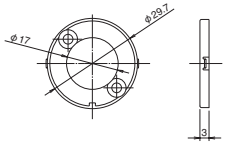
Flange Y



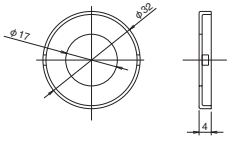
Flange cover Y

●UL-Z (Round type)

Supplied screws : M3×8 countersunk 2 pcs.



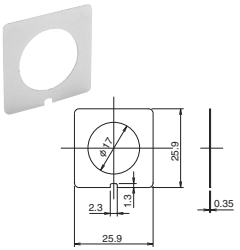
Flange Z



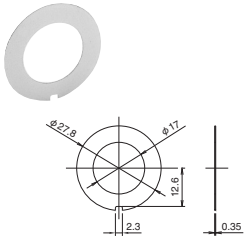
Flange cover Z

Nameplate (selling separately)

●UL-NP-Y000 t=0.35



●UL-NP-Z000 t=0.35



Nameplate No.	Detail	
UL-NP-Y000	Square type	Plain
UL-NP-Y001		切/入
UL-NP-Y002		切/起動
UL-NP-Y003		異系統/同系統
UL-NP-Y004		手動/自動
UL-NP-Y005		受電/送電
UL-NP-Y006		単相/多相
UL-NP-Y007		ロック/使用
UL-NP-Z000	Round type	Plain
UL-NP-Z001		切/入
UL-NP-Z002		着/脱

UL type indicator

UL - LAMP - 2 3 5 N L W Y - N
① ② ③④⑤ ⑥ ⑦ ⑧ ⑨ ⑩

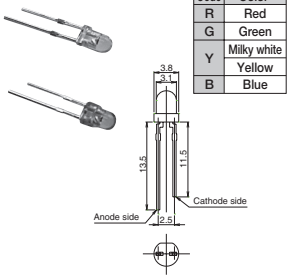
No.	Item	Code	Detail
①	Basic type	UL	—
②	Type	LAMP	—
③	Circuit of display	1	For 1 lamp
		2	For 2 lamps
④	Rated supply Voltage of display	3	100 / 110V DC
⑤	Color of display	1	W
		5	R、G
		8	Y、B
⑥	N-common	N	—
⑦	Lamp code	L	—
⑧	Color of lens	W	Milky white
⑨	Flange shape	Y	Square type
		Z	Round type
⑩	Color of flange	N	Beige
		B	Black

* For the details, please inquire us separately.

LED lamp

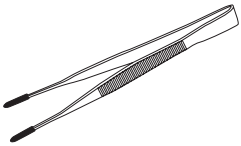
●UL-LED-color

Code	Color
R	Red
G	Green
Y	Milky white
	Yellow
B	Blue



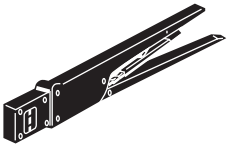
LED removing tool

●UL-LN



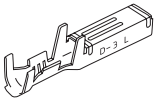
Crimp tool

●91558-1 (For 0.5～1.25㎟)
●91561-1 (For 1.25～2㎟)
Made by Tyco AMP (formerly AMP)



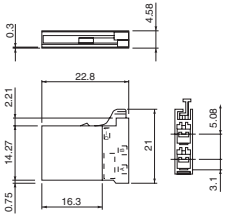
Contact

●175218-2 (For 0.5～1.25㎟)
●353717-2 (For 1.25～2㎟)
Made by Tyco AMP (formerly AMP)

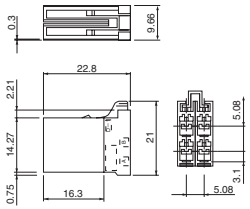


Connector

●175362-1
Made by Tyco AMP (formerly AMP)
(For 2 poles)



●175363-1
Made by Tyco AMP (formerly AMP)
(For 4 poles)

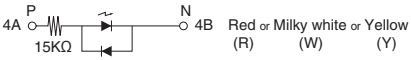


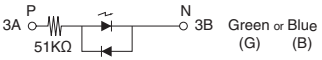
UL TYPE

TECHNICAL DATA

●LED replacement

If you replace the built-in LED, the color of the LED should conform to the original color.
The internal resistance varies depending on the color. If you intend to change the color of the LED, please consult us, or check the following circuit.





The LED is easily affected by static electricity. When handling the LED, do not touch the LED lead wire directly by hand, and do not allow a voltage to be directly applied to the LED.