

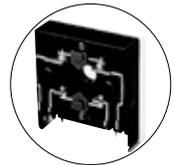


ILLUMINATED MICRO CAM-OPERATED SWITCH

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 mm² 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		0.5~2.0mm ²	
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 (1.2/50 μs)	Between individual live lines
			±3kV/3 times for each pole (1.2/50 μs)
Contact resistance		50mΩ or less	
Mechanical life		100,000 operations or more (1200 times / hour)	
Electrical life		100,000 operations or more (0.5A/110V DC L/R=40ms)	
Shock resistance		500m/s ²	
Vibration resistance		20m/s ² (10~150Hz)	
Minimum applicable load		24V 10mA (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
A C	AC110V	10 A	5 A	10 A	3 A
	AC220V	7 A	3 A	5 A	2 A
D C	DC5V	10 A	10 A	10 A	7 A
	DC12V	10 A	6 A	10 A	4 A
	DC24V	10 A	3 A	10 A	2 A
	DC48V	10 A	2 A	7 A	1 A
	DC110V	7 A	0.7 A	5 A	0.5 A
	DC125V	5 A	0.5 A	4 A	0.3 A

*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.



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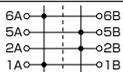
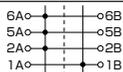
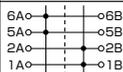
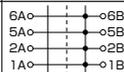
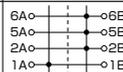
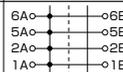
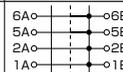
HOW TO ORDER

UL-SP 2001-235 A C Y

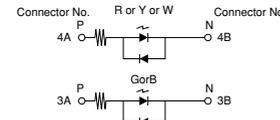
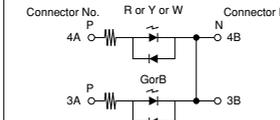
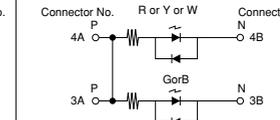
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

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 chose 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 chose 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.						

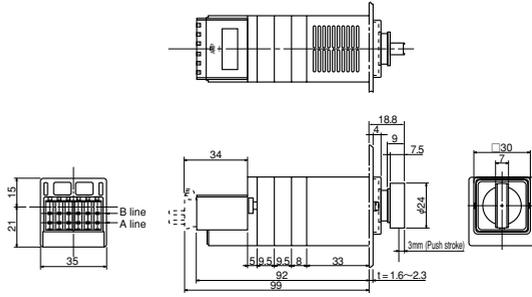
■ LED circuit diagram

Standard (Non-common)	N-common	P-common
 <p>Connector No. P R or Y or W Connector No. N</p> <p>4A ○ — — 4B</p> <p>3A ○ — — 3B</p> <p>GorB</p>	 <p>Connector No. P R or Y or W Connector No. N</p> <p>4A ○ — — 4B</p> <p>3A ○ — — 3B</p> <p>GorB</p>	 <p>Connector No. P R or Y or W Connector No. N</p> <p>4A ○ — — 4B</p> <p>3A ○ — — 3B</p> <p>GorB</p>

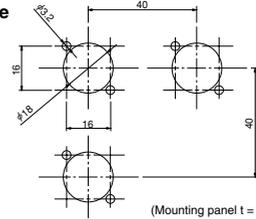
STANDARD PRODUCTS

UL- Type Y

Square type



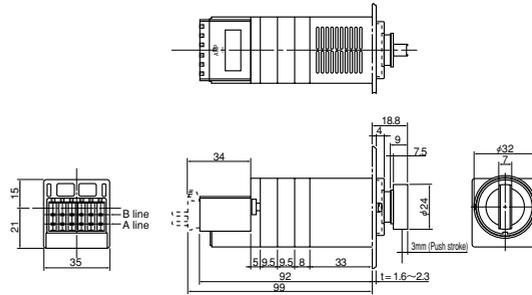
● Mounting hole size



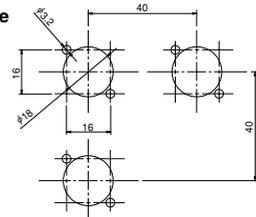
(Mounting panel t = 1.6, 2.3)

UL- Type Z

Round type



● Mounting hole size



(Mounting panel t = 1.6, 2.3)

A SWITCH

B PILOT LAMP & INDICATOR

C CONNECTING DEVICES

D ELECTRONIC DEVICES

E CONTROL CENTER PARTS



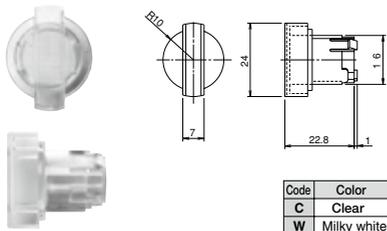
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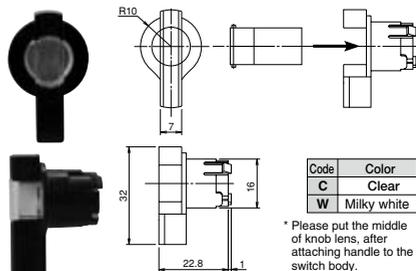
ACCESSORIES

Handle

●UL-A-**color**

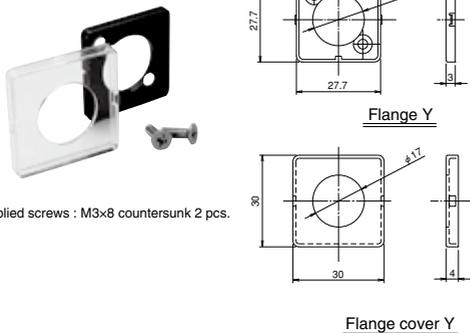


●UL-B-**color** (Dedicated to pull operation)



Flange set

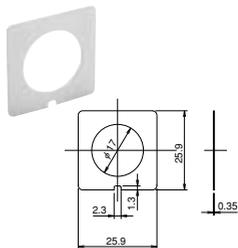
●UL-Y (Square type)



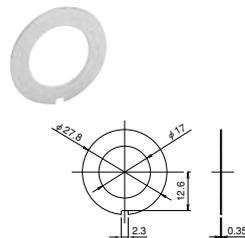
Supplied screws : M3x8 countersunk 2 pcs.

Nameplate (selling separately)

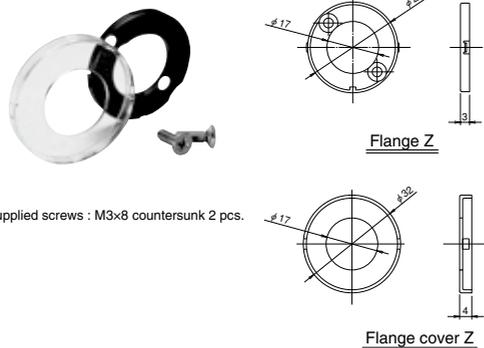
●UL-NP-Y000



●UL-NP-Z000



●UL-Z (Round type)



Supplied screws : M3x8 countersunk 2 pcs.

UL type indicator



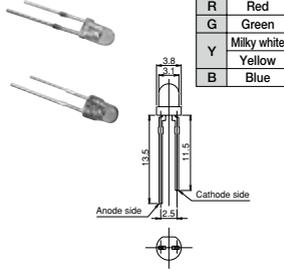
UL - LAMP - 2 3 5 N L W Y - N
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

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
		Y	Square type
⑨	Flange shape	Z	Round type
		N	Beige
⑩	Color of flange	B	Black

* For the details, please inquire us separately.

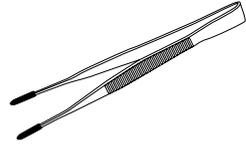
LED lamp

●UL-LED-color



LED removing tool

●UL-LN



Crimp tool

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



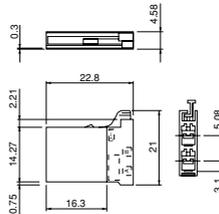
Contact

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

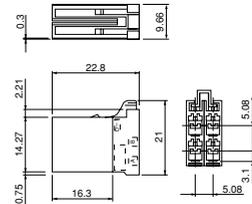


Connector

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



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





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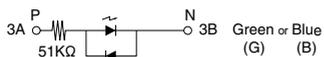
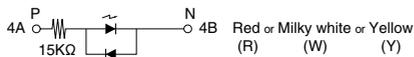
UL TYPE

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.