



## Pushbutton Switches Series ZSPEH / ZSPEP



### Feature

- Single LED with Push button switches.
- Momentary and Alternate available.
- Combination of PCB mounting.
- Choice of colored caps.
- Laser or Print marking service.



### Application

- Industrial equipment
- Public building
- Machine tool
- Medical equipment
- Power management equipment

### General Specifications

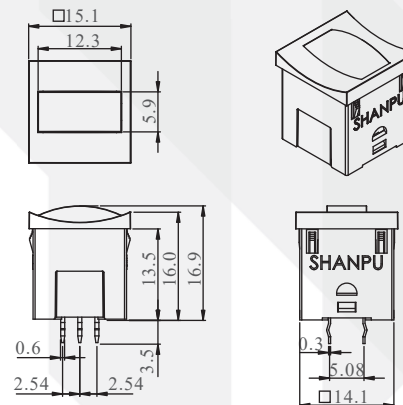
Switch circuit	: DPDT
Switch contact rating	: 100mA @ 30V DC max
LED rating	: Limited forward current(IF) at 20mA max
Contact Resistance	: 50 m Ohm Max(initial)
Insulation Resistance	: 100 M Ohm Min
Operating Force	: 250gf ± 100gf(Lock) 150gf ± 100gf(Momentary)
Total Travel	: 1.5mm ± 0.5mm(Full stroke) 1.0mm ± 0.5mm(Lock stroke)
Mechanical Life	: 10,000 Cycles Min.
Operating Temperature	: -10 °C ~ +70 °C
Function	: Momentary or Alternate

### Material

Cap	: Acrylonitrile Butadine Styrene (ABS)
Terminal contact	: Phosphor bronze (PBS) with silver plating
Spring	: Piano wire
Housing	: Acrylonitrile Butadine Styrene (ABS)
Base	: Polyamide(PA)

### Dimension ZSPEH

/ EX: Without LED

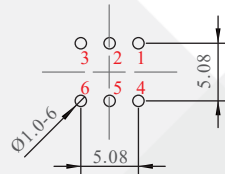
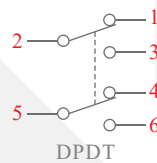




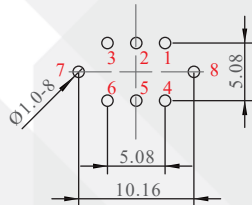
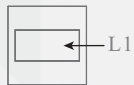
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### ▶ Circuit Diagram & PCB Layout for ZSPEH

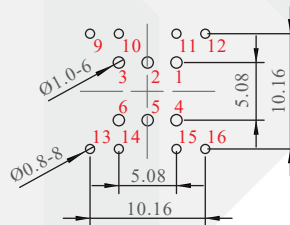
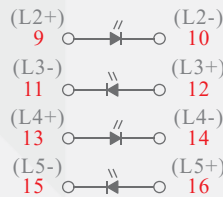
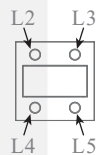
/ Without LED



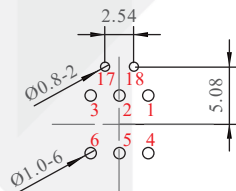
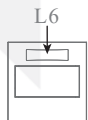
/ L1 Single LED



/ L2,L3,L4,L5 Single LED

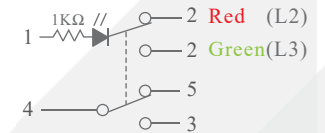
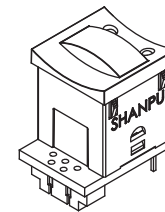
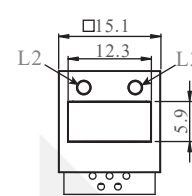


/ L6 Single LED

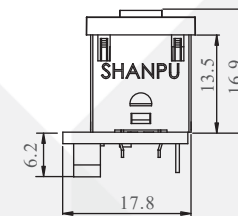
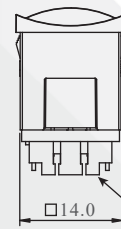


### ▶ Dimension for ZSPEP

/ ZSPEPMC5-0130000-0A9

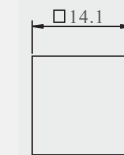
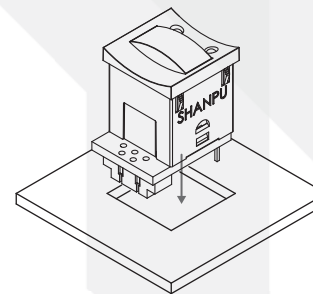


Recommend add resistor to limited each LED forward current at 20mA



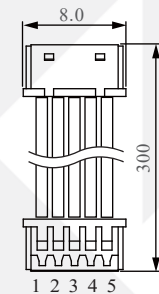
Pin	Function
1	LED (+) ,5V~24V
2	LED (-)
3	SW N.O.
4	SW COM.
5	SW N.C

### ▶ Panel cutting for ZSPEP



Panel thickness 1.0~1.2mm

### ▶ Option



Cable: YCW030-A  
Cable: UL1571#28AWG  
Conductor pitch : 1.25mm  
Conductor width :  $\phi 0.3$ mm



## Pushbutton Switches Series ZSPEH

### How to order



**ZSPEHMA9-0000000-0A5**

Momentary / Grey Housing  
Without LED / Black Cap



**ZSPEHMA5-700000-0A01-L01**

Momentary / Black Housing  
(L1) Blue LED / Paint Black Cap with Laser (START)



**ZSPEHAE9-0000010-KA5**

Alternate / Grey Housing  
(L6) Red LED / Black Cap



**ZSPEHAB5-0700000-0A2**

Alternate / Black Housing  
(L2) Blue LED / Yellow Cap



**ZSPEHMC5-0130000-0A1-P01**

Momentary / Black Housing  
(L2) Red LED, (L3) Green LED / Red Cap with Marking (START)



**ZSPEHMC9-0130000-0A5**

Momentary / Grey Housing  
(L2) Red LED, (L3) Green LED / Black Cap



**ZSPEHMD5-0223300-0A1**

Momentary / Black Housing  
(L2,L3) Yellow LED, (L4,L5) Green LED / Red Cap



**ZSPEPMC5-0130000-0A9**

Momentary / Black Housing  
(L2) Red LED, (L3) Green LED / Grey Cap