



1. General

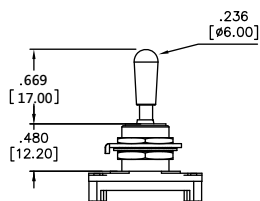
| | |
|---------------------------------|--|
| 1.1 Standard | UL61058 |
| 1.2 Mechanism | Toggle action |
| 1.3 Contact form | Single pole single throw (SPST) Single pole double throw (SPDT) Double pole single throw (DPST) Double pole double throw (DPDT) |
| 1.4 Protective structure | IP68 |
| 1.5 Terminal | Screw , Solder ,#250 Quick Connect, Screw Terminal |

2. Product Selection

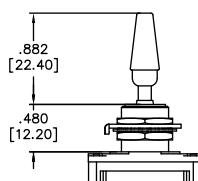
TL - -
1 2 3 4 5 6

1. ACTUATOR TYPE

_: Metal Actuator



P: Metal Actuator W/Plastic Cover



2. CONTACT TYPES

| | |
|-------------------------|------|
| 11: 2P ON-OFF | SPST |
| 12: 3P ON-ON | SPDT |
| 13: 3P ON-OFF-ON | SPDT |
| 21: 4P ON-OFF | DPST |
| 22: 6P ON-ON | DPDT |
| 23: 6P ON-OFF-ON | DPDT |

3. TERMINAL TYPES

- A:** SOLDER
- B:** SCREW
- C:** #250 QUICK CONNECT
- B:** SCREW TERMINAL

4. RATING TYPES

- _: 12A 250VAC
- 12A 125VAC
- 1/2 HP 125VAC
- 1 HP 250VAC

5. REST TYPES

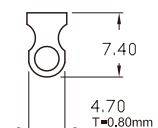
- M1:**(ON)-OFF
- M2:**(ON)-OFF-(ON)

6. CAP COLOR

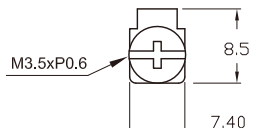
- _:Black
- Y:**Yellow
- For TLP Type

Terminal Dimension

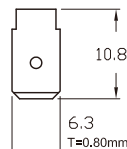
A: SOLDER TYPE



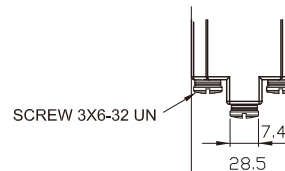
B: SCREW TYPE



C: #250 QUICK CONNECT TYPE



S: Screw Terminal Type



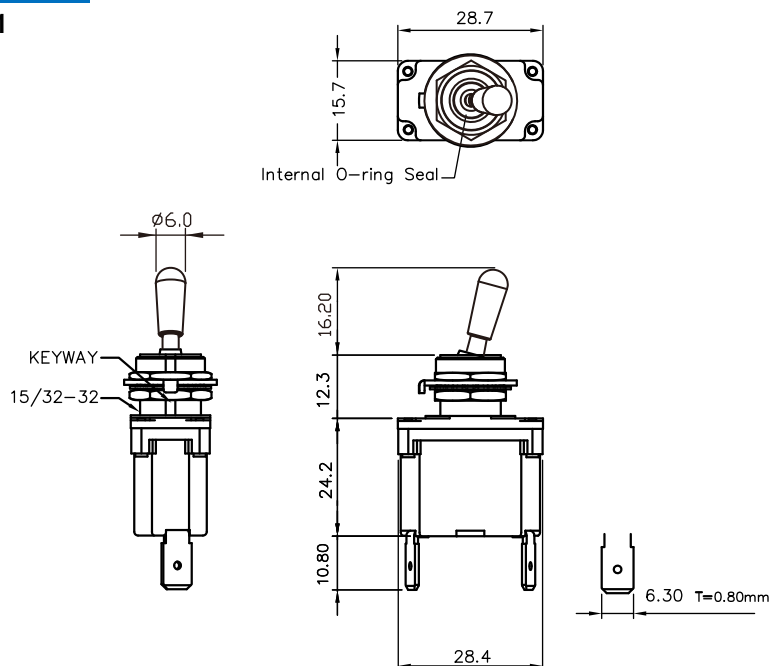
**3. Characteristics**

| Item | Specification |
|-----------------------------------|---|
| Rating | UL61058 : 12A 250V AC /12A 125V AC , 1/2HP 125V AC/ 1HP 250V AC |
| Contacts Specification | |
| Shape | Rivet |
| Material | AgNi +Cu |
| Electrical characteristics | |
| Contact resistance | 20 m Ω max . (initial) |
| Insulation resistance | 100 M Ω min (at 500V DC) |
| Dielectric withstanding voltage | AC 1500V (50 or 60Hz) for 1 minute(Between contacts of each terminal) |
| Mechanical characteristics | |
| Operating frequency | 30 operations / min |
| Vibration | 10 to 55 Hz , 1.5mm double amplitude |
| Operating life | Electrical : 30,000 cycles Mechanical : 100,000 cycles |
| Climatic characteristics | |
| Operating temperature | -30°C~+55°C (humidity of 60% max)UL certification |
| Temperature rise | 55K |
| Operating humidity | 35~85%RH |
| Degree of protection | IP 68 |

*regarding to other temperature conditions test data, please contact with the related sales representative .

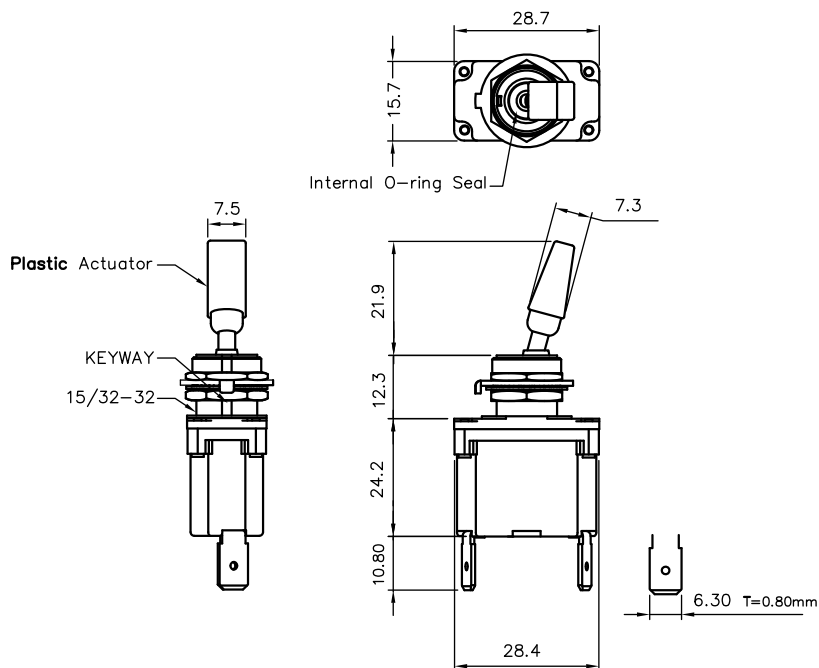
4. Dimension

■ TL-11



| ITEM | FUNCTION | |
|-----------|----------|---------|
| TL-11C | ON-OFF | SPST 2P |
| TL-11C-M1 | (ON)-OFF | SPST 2P |

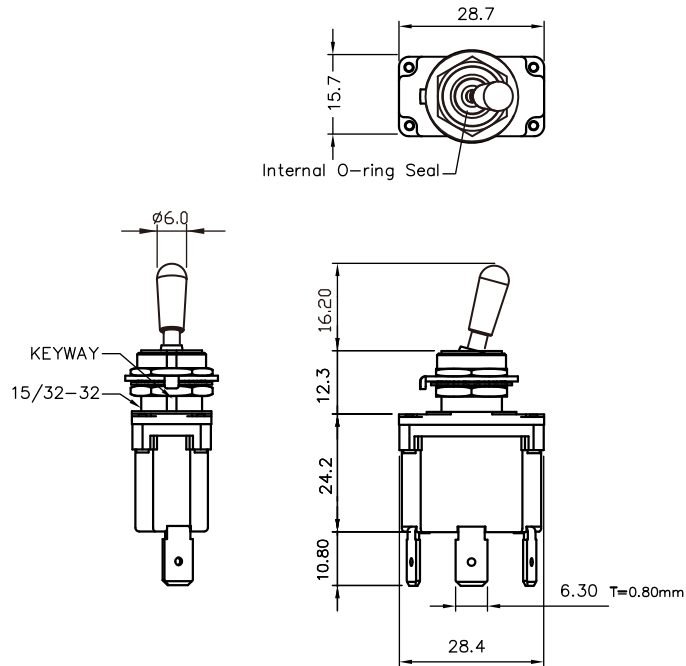
■ TLP-11



| ITEM | FUNCTION | |
|------------|----------|---------|
| TLP-11C | ON-OFF | SPST 2P |
| TLP-11C-M1 | (ON)-OFF | SPST 2P |

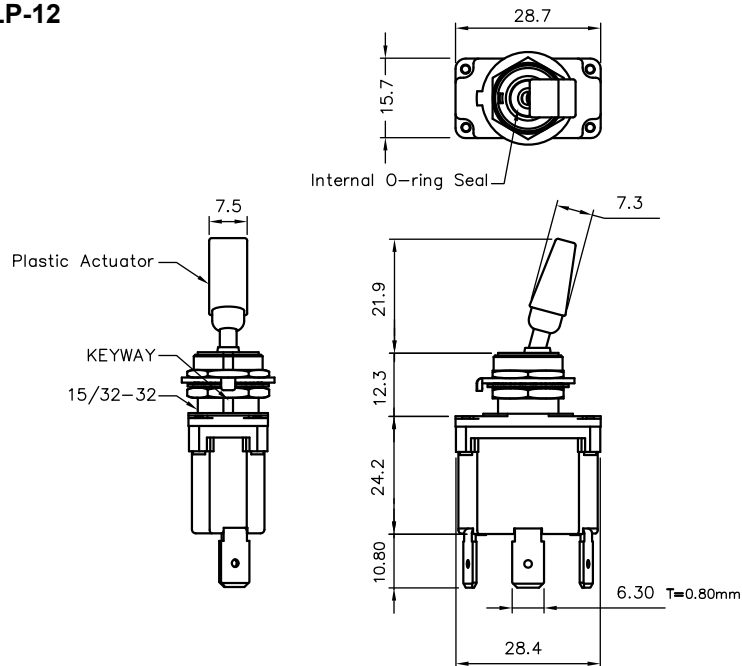
4. Dimension

■ TL-12



| ITEM | FUNCTION | |
|-----------|----------|---------|
| TL-12C | ON-ON | SPDT 3P |
| TL-12C-M1 | ON-(ON) | SPDT 3P |

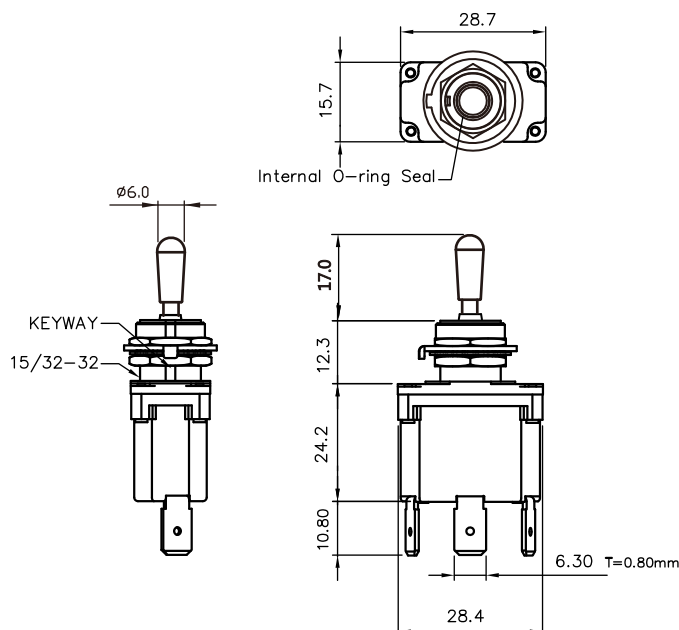
■ TLP-12



| ITEM | FUNCTION | |
|------------|----------|---------|
| TLP-12C | ON-ON | SPDT 3P |
| TLP-12C-M1 | ON-(ON) | SPDT 3P |

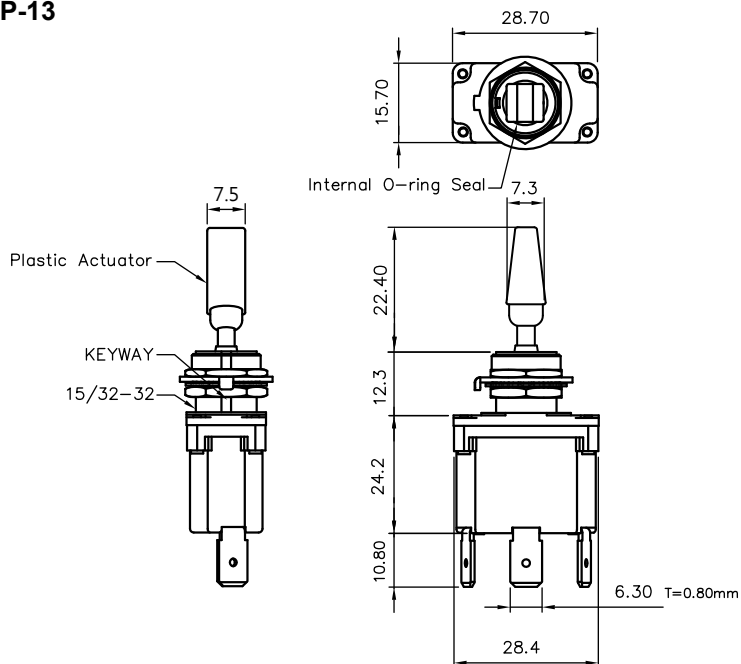
4. Dimension

■ TLP-13



| ITEM | FUNCTION | |
|-----------|---------------|---------|
| TL-13C | ON-ON | SPDT 3P |
| TL-13C-M1 | ON-(ON) | SPDT 3P |
| TL-13C-M2 | (ON)-OFF-(ON) | SPDT 3P |

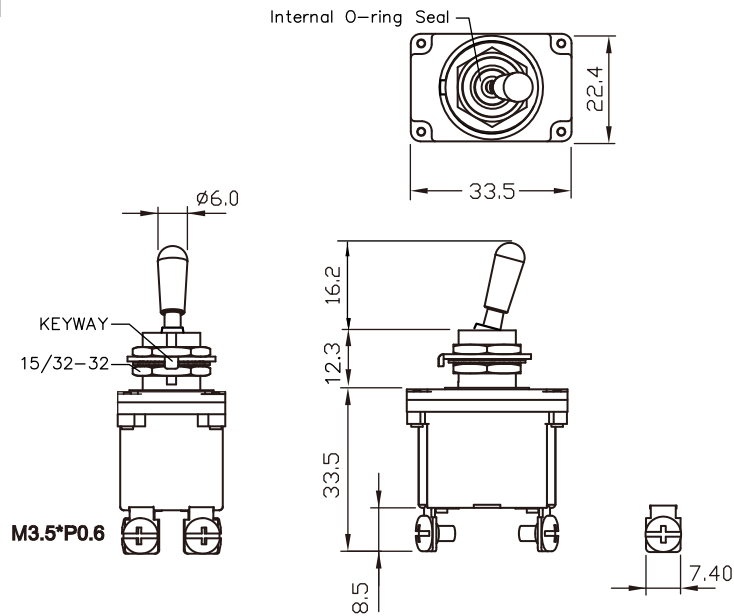
■ TLP-13



| ITEM | FUNCTION | |
|------------|---------------|---------|
| TLP-13C | ON-OFF-ON | SPDT 3P |
| TLP-13C-M1 | ON-OFF-(ON) | SPDT 3P |
| TLP-13C-M2 | (ON)-OFF-(ON) | SPDT 3P |

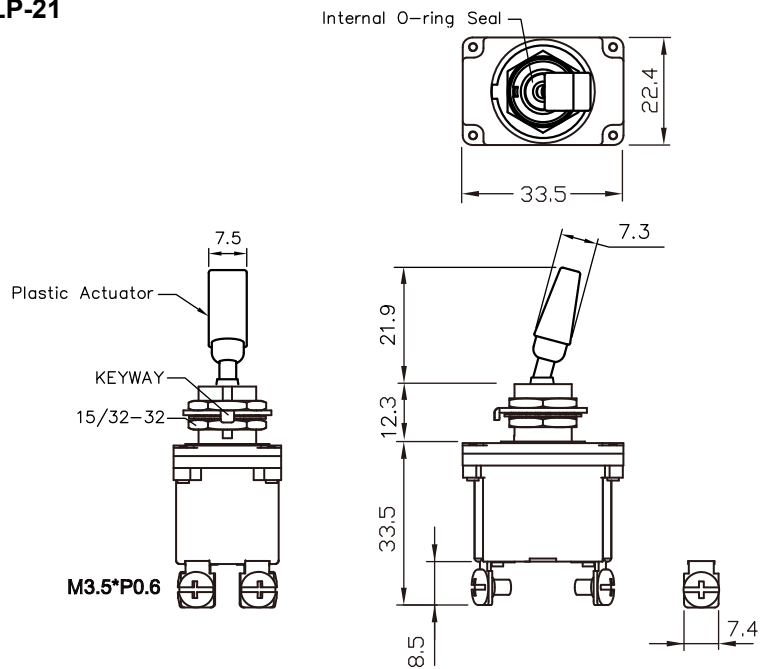
4. Dimension

■ TL-21



| ITEM | FUNCTION | |
|-----------|----------|---------|
| TL-21B | ON-OFF | SPDT 4P |
| TL-21B-M1 | (ON)-OFF | SPDT 4P |

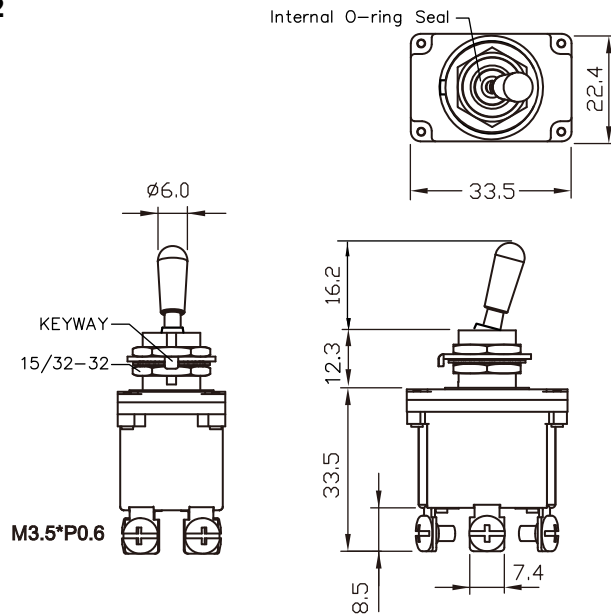
■ TLP-21



| ITEM | FUNCTION | |
|------------|----------|---------|
| TLP-21B | ON-OFF | SPDT 4P |
| TLP-21B-M1 | (ON)-OFF | SPDT 4P |

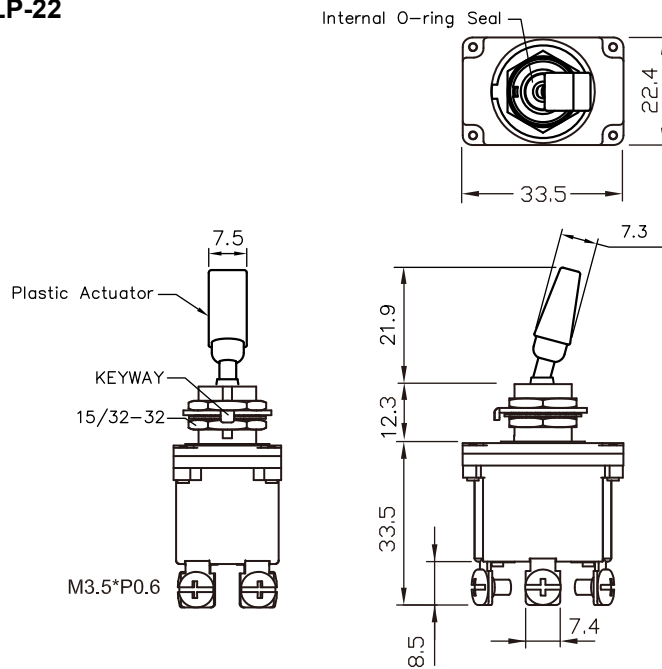
4. Dimension

■ TL-22



| ITEM | FUNCTION | |
|-----------|----------|---------|
| TL-22B | ON-ON | DPDT 6P |
| TL-22B-M1 | ON-(ON) | DPDT 6P |

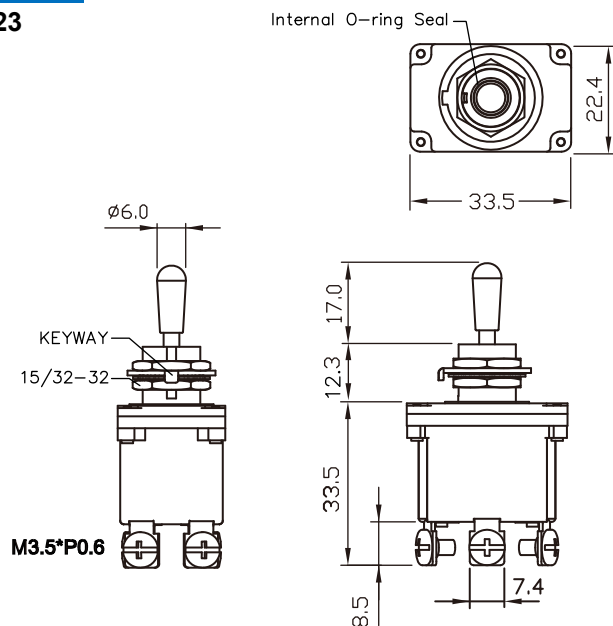
■ TLP-22



| ITEM | FUNCTION | |
|------------|----------|---------|
| TLP-22B | ON-ON | DPDT 6P |
| TLP-22B-M1 | ON-(ON) | DPDT 6P |

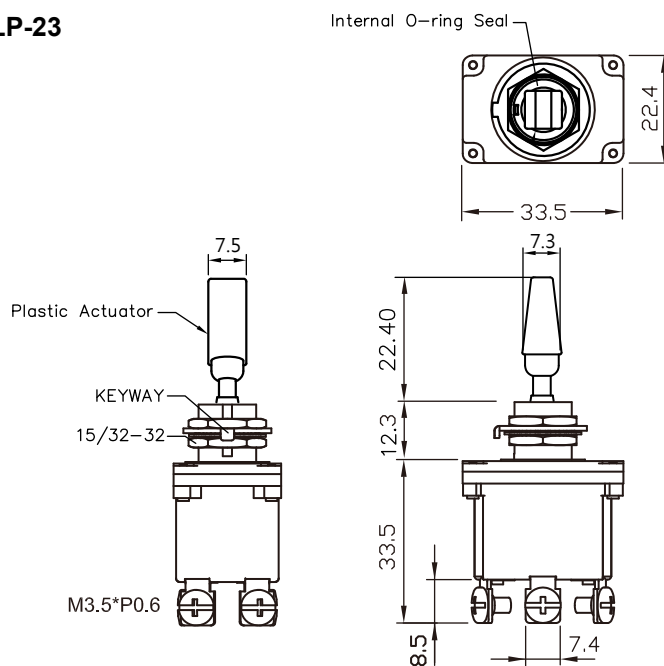
4. Dimension

■ TLP-23



| ITEM | FUNCTION | |
|-----------|---------------|---------|
| TL-23B | ON-ON | DPDT 6P |
| TL-23B-M1 | ON-(ON) | DPDT 6P |
| TL-23B-M2 | (ON)-OFF-(ON) | DPDT 6P |

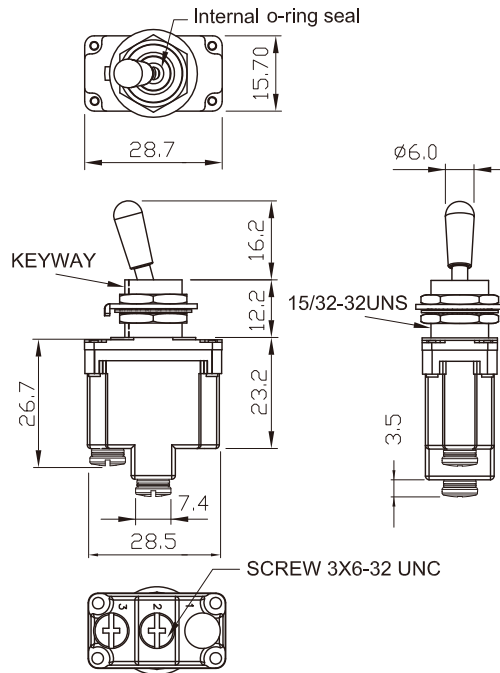
■ TLP-23



| ITEM | FUNCTION | |
|------------|---------------|---------|
| TLP-23B | ON-OFF-ON | DPDT 6P |
| TLP-23B-M1 | ON-OFF-(ON) | DPDT 6P |
| TLP-23B-M2 | (ON)-OFF-(ON) | DPDT 6P |

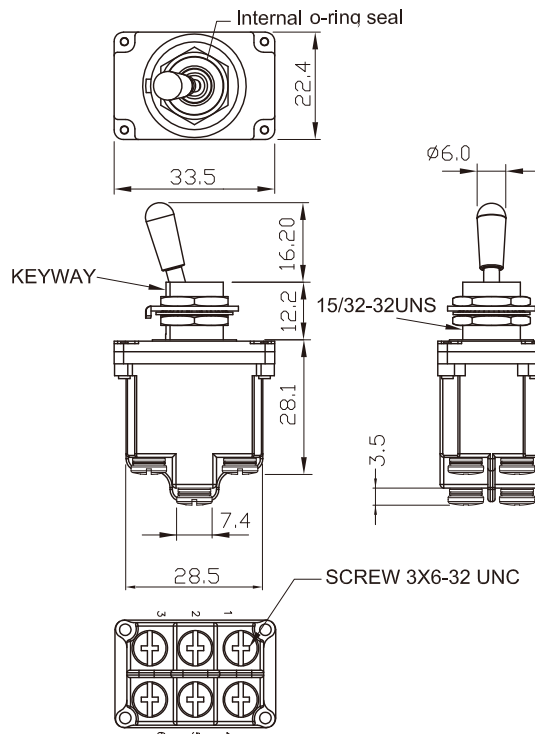
4. Dimension

■ TL-11



| ITEM | FUNCTION | |
|-----------|----------|---------|
| TL-11S | ON-OFF | SPST 2P |
| TL-11S-M1 | (ON)-OFF | SPST 2P |

■ TL-23



| ITEM | FUNCTION | |
|-----------|---------------|---------|
| TL-23S | ON-OFF-ON | DPDT 6P |
| TL-23S-M1 | ON-OFF-(ON) | DPDT 6P |
| TL-23S-M2 | (ON)-OFF-(ON) | DPDT 6P |