FL

Washable

Hyper-miniature Lever & Rocker Switches



RoHS Compliant

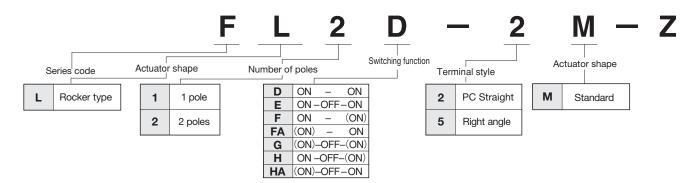
Features -

- 1. Hyper-miniature type. The volumetric ratio is half the conventional Series A.
- 2. Immersion cleaning is possible after soldering.
- 3. The terminal pitch is of the 0.1-inch size..
- 4. The independent detent mechanism ensures light operating feeling.
- 5. For the contact reliability, long-term stability is assured by the clip contacts.
- 6. Since the contacts are gold-plated, the switches are best suited for use in the dry circuit areas.
- 7. The full-molded type prevents malfunction caused by static electricity.

Specifications

| Rating | Max : 0.4VA (28VDC max. |) Min : 1μA 20mVDC |
|-----------------------------|--|-----------------------------------|
| Initial contact resistance | 100mΩ max. | $(1.5\text{mA} 200\mu\text{VAC})$ |
| Dielectric strength | 250VAC 1 minute | |
| Insulation resistance | 500MΩ min. | (250VDC) |
| Electrical life | 10,000 cycles at max. rating 50,000 cycles at max. rating(D,E type) 30,000 cycles at max. rating(F,G,H type) | |
| Operating temperature range | -40°C∼+85°C | |
| Storage temperature range | -40°C∼+85°C | |

■Part Numbering

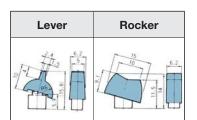


Standard Accessories

«Supplied separately»

| Part name | Lever (PC Straight&R/A) | Rocker (PC Straight&R/A) | Rocker (PC Straight) |
|------------|---|--|--|
| Dimensions | Gloss finish 60.2 1 5 5 80.2 1.5 5 80.2 1.5 6.2 ABS resin | Gloss finish R0.5 - R30 - G - G - G - G - G - G - G - G - G - | Gloss finish R0.5 R0.5 |
| White | 140000050858 | 140000481410 | 140000481594 |
| Red | 140000050859 | 140000481411 | 140000481595 |
| Black | 140000050860 | 140000481412 | 140000481596 |
| Gray | 140000050861 | 140000481413 | 140000481597 |

■Lever •Rocker Mounting



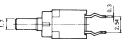
The lever and the rocker are standard accessories. Specify either of the lever or the rocker by part number.

FL











PC Straight

Terminal numbers are not shown on the bottom of the switch.

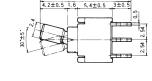
| PC | Hole | Layou | Ì |
|----|------|-------|---|
| | | | |

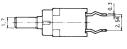
| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|---------|------|
| Part No. | 1 | | 44 |
| FL1D-2M-Z | ON | _ | ON |
| ▲FL1E-2M-Z | ON | OFF | ON |
| ▲FL1F-2M-Z | (ON) | _ | ON |
| ★FL1G-2M-Z | (ON) | OFF | (ON) |
| ▲FL1H-2M-Z | (ON) | OFF | ON |
| Connecting terminals | 2-1 | _ | 2-3 |

DPDT













| PC | Hole | l a | outs |
|----|------|-----|------|
| | | | |

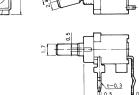
| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|----------|------------|
| Part No. | アア | 上 | 17 |
| ★FL2D-2M-Z | ON | _ | ON |
| ▲FL2E-2M-Z | ON | OFF | ON |
| ★FL2F-2M-Z | (ON) | _ | ON |
| ★FL2G-2M-Z | (ON) | OFF | (ON) |
| ▲FL2H-2M-Z | (ON) | OFF | ON |
| Connecting terminals | 2-1 5-4 | _ | 2-3 5-6 |

SPDT

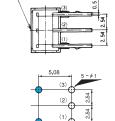








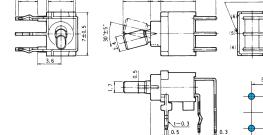
Terminal numbers are not shown on the bottom of the switch.



| Switching | | | | |
|----------------------|-----------|-----------------------------------|------|--|
| function | Viewed fr | Viewed from part No. marking side | | |
| Part No. | 1 | 上 | 44 | |
| ★FL1D-5M-Z | ON | _ | ON | |
| ▲FL1E-5M-Z | ON | OFF | ON | |
| ▲FL1F-5M-Z | ON | _ | (ON) | |
| ▲FL1FA-5M-Z | (ON) | _ | ON | |
| ★FL1G-5M-Z | (ON) | OFF | (ON) | |
| ▲FL1H-5M-Z | ON | OFF | (ON) | |
| ▲FL1HA-5M-Z | (ON) | OFF | ON | |
| Connecting terminals | 2-3 | _ | 2-1 | |

DPDT





(Mount with Rocker)

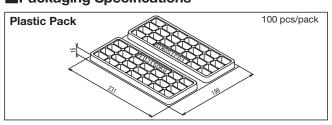
R/A

Terminal numbers are not shown on the bottom of the switch.

PC Hole Layouts

| Switching function | | | |
|----------------------|------------|-----|------------|
| Part No. | 1 | ム州 | 7 |
| ★FL2D-5M-Z | ON | _ | ON |
| ▲FL2E-5M-Z | ON | OFF | ON |
| ▲FL2F-5M-Z | ON | _ | (ON) |
| ▲FL2FA-5M-Z | (ON) | _ | ON |
| ▲FL2G-5M-Z | (ON) | OFF | (ON) |
| ▲FL2H-5M-Z | ON | OFF | (ON) |
| ▲FL2HA-5M-Z | (ON) | OFF | ON |
| Connecting terminals | 2-3 5-6 | _ | 2-1 5-4 |

■ Packaging Specifications



■ Soldering Specifications

(1)Manual Soldering

Device: Soldering iron 380°C, Max.; 3 seconds, Max.

(2)Auto Soldering

Device: Jet wave type or dip type 275°C; 6 seconds, Max.

