



## Quick Reference Guide

### F Series Switches

The F Series switches offer high performance industrial toggles, rockers, and paddles with high current and high voltage rating in a small case. The F Series encompasses many circuit configurations ranging from single pole through four poles, in two and three positions with a choice of momentary or maintained circuits. This toggle series is UL, CSA recognized for 6A at 250 VAC, 6A at 125VAC with silver contacts and 0.4 VA max. at 20 V AC/DC with optional gold plated contacts, typically used for low energy switching. Electrical life is rated from 25,000 to 50,000 cycles at full load. Other electrical parameters include contact resistance of 10 milliohms max., insulation resistance of 1,000 megohms and actuation force of 19.6 N max.

All F Series switches are panel mounted with 6.0 mm threaded bushing conforming to standard panel cut outs and are constructed of brass with chrome plating. Design engineers are given the option of three toggle styles: standard toggle, locking lever to avoid unwanted switching and long flat toggle.

#### FEATURES

- Wide choice of toggles, rockers, and paddles
- Wide range of switch functions
- Terminals are gold-flashed to prevent oxidation and for ease of soldering

#### Applications

These devices are designed to meet requirements of light to medium-duty applications including:

- Industrial
- Instrumentation
- Medical equipment

Typical Performance Characteristics

**Number of Poles** : 1 to 4  
**Switch Functions** : ON-ON, ON-(ON), ON-OFF-ON, ON-ON-ON, ON-OFF-(ON), (ON)-OFF-(ON)  
**Contact Rating** : 6 A @250 VAC, 6 A @125 VAC,  
**Gold Contact** : 0.4 VA max. 20 V AC/DC  
**Electrical Life** : 25,000 to 50,000 cycles  
**Mechanical Life** : 50,000 to 100,000 cycles  
**Contact Resistance** : Max. 10 mOhm  
0.4 VA Max. at 2-4 VDC 100 mA  
125/250 VAC at 2-4 VDC 1 A  
**Insulation Resistance** : Min. 1,000 MOhm  
**Dielectric Strength** : 1,000 VAC for 1 min.  
**Actuation Force** : Max. 19.6 N  
**Panel Cut-out** : 6.2 mm  
**Standards and Specs** : UL, CSA

Material Specifications

**Contacts** : Brass silver alloy finish  
**Toggle** : Brass chromium plated  
**Terminals** : Brass plate  
**Case** : Phenol resin  
**Cover** : Steel zinc plated  
**Seal** : Rubber seal, insert molded rubber

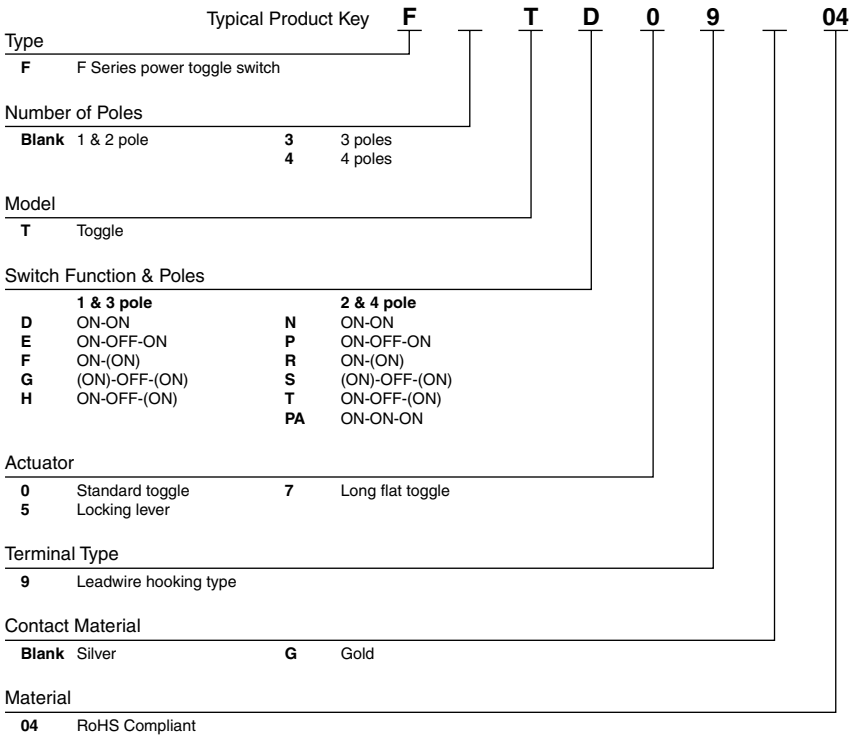
Other Characteristics

**Contact Timing** : Break before Make  
**Right Angle Versions** : No  
**Standard Number of Positions** : 2 or 3  
**Terminals / Mounting Style** : Leadwire hooking  
**Actuator Style** : Standard, long locking; rocker  
**Dimensions Case (LxWxH)** : 14.8 x 8 ... 23 x 10.5 mm  
**Packaging** : Bulk  
**Choice of momentary or maintained circuits**

Environmental Specification

**Operating Temperature** : -20 to +70°C  
**Storage Temperature** : -20 to +70°C  
**Vibration Resistance** : 1.5 mm 10-55 Hz  
**Shock Resistance** : 50 g for 11±1 msec  
**Terminal Strength** : 24.5 N

F Series Toggle Switches Product Key



Actuator



Code 0 — Standard Toggle

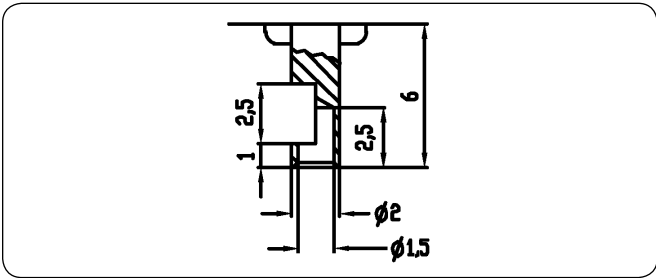


Code 7 — Long Flat Toggle



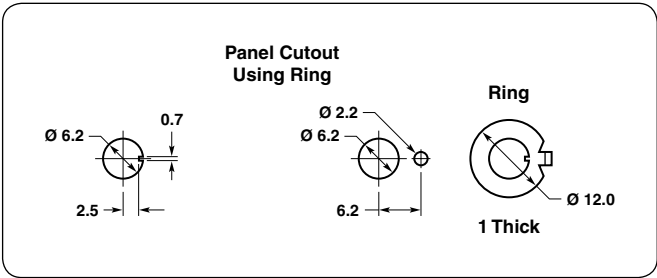
Code 5 — Locking Lever

Terminal



Code 9 — Leadwire Hooking Type

Mounting — F Series Toggles

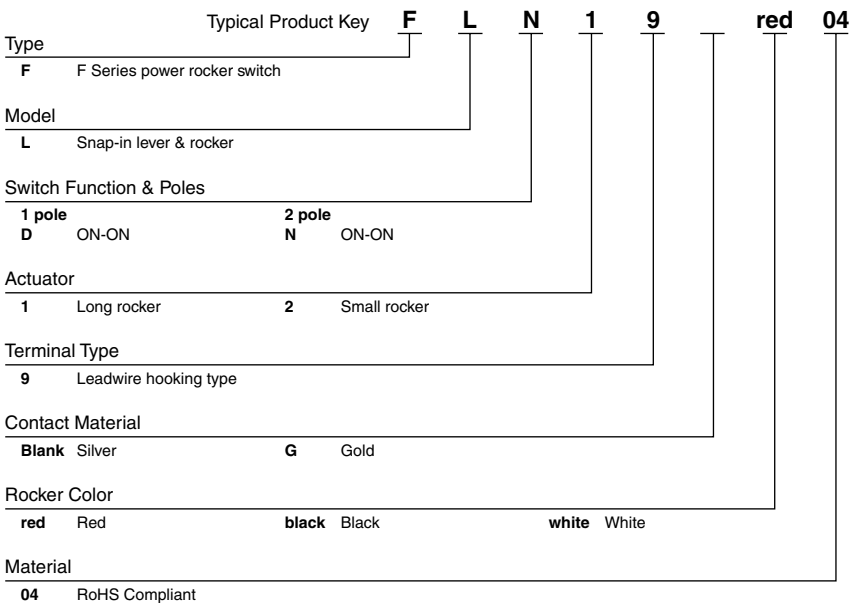


Recommended Hole Layout to Prevent Rotation

| GOLD CONTACTS 0.4 VA MAX. AT 20 V AC/DC |         |                 |               |                       |          |             |
|-----------------------------------------|---------|-----------------|---------------|-----------------------|----------|-------------|
| Product Key                             | Poles   | Switch Function | Actuator      | Terminal              | Contacts | Part Number |
| FTD09G04                                | 1 pole  | ON-ON           | Standard      | Leadwire Hooking Type | Gold     | 3-6437630-4 |
| FTD59G04                                | 1 pole  | ON-ON           | Locking Lever | Leadwire Hooking Type | Gold     | 4-6437630-0 |
| FTD79G04                                | 1 pole  | ON-ON           | Flat Toggle   | Leadwire Hooking Type | Gold     | 5-6437630-4 |
| FTE09G04                                | 1 pole  | ON-OFF-ON       | Standard      | Leadwire Hooking Type | Gold     | 5-6437630-1 |
| FTE79G04                                | 1 pole  | ON-OFF-ON       | Flat Toggle   | Leadwire Hooking Type | Gold     | 5-6437630-8 |
| FTF09G04                                | 1 pole  | ON-(ON)         | Standard      | Leadwire Hooking Type | Gold     | 6-6437630-3 |
| FTG09G04                                | 1 pole  | (ON)-OFF-(ON)   | Standard      | Leadwire Hooking Type | Gold     | 3-6437630-8 |
| FTH09G04                                | 1 pole  | ON-OFF-(ON)     | Standard      | Leadwire Hooking Type | Gold     | 6-6437630-4 |
| FTN09G04                                | 2 poles | ON-ON           | Standard      | Leadwire Hooking Type | Gold     | 6-6437630-8 |
| FTN59G04                                | 2 poles | ON-ON           | Locking Lever | Leadwire Hooking Type | Gold     | 6-6437630-1 |
| FTN79G04                                | 2 poles | ON-ON           | Flat Toggle   | Leadwire Hooking Type | Gold     | 5-6437630-9 |

| SILVER CONTACTS 6A AT 250/125 VAC |         |                 |               |                       |          |             |
|-----------------------------------|---------|-----------------|---------------|-----------------------|----------|-------------|
| Product Key                       | Poles   | Switch Function | Actuator      | Terminal              | Contacts | Part Number |
| F3TD0904                          | 3 Poles | ON-ON           | Standard      | Leadwire Hooking Type | Silver   | 2-6437630-8 |
| F4TD0904                          | 4 Poles | ON-ON           | Standard      | Leadwire Hooking Type | Silver   | 3-6437630-5 |
| F4TPA0904                         | 4 Poles | ON-ON-ON        | Standard      | Leadwire Hooking Type | Silver   | 3-6437630-6 |
| FTD0904                           | 1 Pole  | ON-ON           | Standard      | Leadwire Hooking Type | Silver   | 2-6437630-0 |
| FTD5904                           | 1 Pole  | ON-ON           | Locking Lever | Leadwire Hooking Type | Silver   | 1-6437630-5 |
| FTD7904                           | 1 Pole  | ON-ON           | Flat Toggle   | Leadwire Hooking Type | Silver   | 5-6437630-3 |
| FTE0904                           | 1 Pole  | ON-OFF-ON       | Standard      | Leadwire Hooking Type | Silver   | 6-6437630-2 |
| FTF0904                           | 1 Pole  | ON-(ON)         | Standard      | Leadwire Hooking Type | Silver   | 5-6437630-7 |
| FTG0904                           | 1 Pole  | (ON)-OFF-(ON)   | Standard      | Leadwire Hooking Type | Silver   | 5-6437630-5 |
| FTH0904                           | 1 Pole  | ON-OFF-(ON)     | Standard      | Leadwire Hooking Type | Silver   | 4-6437630-8 |
| FTN0904                           | 2 Poles | ON-ON           | Standard      | Leadwire Hooking Type | Silver   | 4-6437630-2 |
| FTN5904                           | 2 Poles | ON-ON           | Locking Lever | Leadwire Hooking Type | Silver   | 3-6437630-9 |
| FTN7904                           | 2 Poles | ON-ON           | Flat Toggle   | Leadwire Hooking Type | Silver   | 5-6437630-2 |
| FTP0904                           | 2 Poles | ON-OFF-ON       | Standard      | Leadwire Hooking Type | Silver   | 4-6437630-6 |
| FTPA0904                          | 2 Poles | ON-OFF-ON       | Standard      | Leadwire Hooking Type | Silver   | 4-6437630-5 |
| FTR0904                           | 2 Poles | ON-(ON)         | Standard      | Leadwire Hooking Type | Silver   | 4-6437630-4 |
| FTS0904                           | 2 Poles | (ON)-OFF-(ON)   | Standard      | Leadwire Hooking Type | Silver   | 4-6437630-3 |
| FTT0904                           | 2 Poles | ON-OFF-(ON)     | Standard      | Leadwire Hooking Type | Silver   | 4-6437630-1 |

F Series Rocker Switches Product Key



Actuator

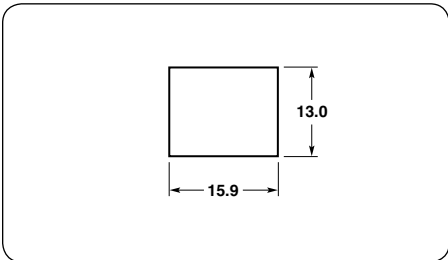


Code 1 — Long Rocker



Code 2 — Small Rocker

Mounting — F Series Rocker



Panel Cutout  
Thickness 1 to 2.5 mm

| ROCKER       |         |                 |              |                |                       |          |             |
|--------------|---------|-----------------|--------------|----------------|-----------------------|----------|-------------|
| Product Key  | Poles   | Switch Function | Actuator     | Actuator Color | Terminal              | Contacts | Part Number |
| FLD19black04 | 1 Pole  | ON-ON           | Long Rocker  | Black          | Leadwire Hooking Type | Silver   | 3-6437630-2 |
| FLD29black04 | 1 Pole  | ON-ON           | Small Rocker | Black          | Leadwire Hooking Type | Silver   | 2-6437630-9 |
| FLN19black04 | 2 Poles | ON-ON           | Long Rocker  | Black          | Leadwire Hooking Type | Silver   | 3-6437630-7 |
| FLN29red04   | 2 Poles | ON-ON           | Long Rocker  | Red            | Leadwire Hooking Type | Silver   | 2-6437630-7 |
| FLN19white04 | 2 Poles | ON-ON           | Long Rocker  | White          | Leadwire Hooking Type | Silver   | 2-6437630-6 |
| FLN29black04 | 2 Poles | ON-ON           | Small Rocker | Black          | Leadwire Hooking Type | Silver   | 2-6437630-5 |
| FLN29red04   | 2 Poles | ON-ON           | Small Rocker | Red            | Leadwire Hooking Type | Silver   | 4-6437630-7 |
| FLN29white04 | 2 Poles | ON-ON           | Small Rocker | White          | Leadwire Hooking Type | Silver   | 2-6437630-3 |

| ACCESSORIES |                      |       |             |
|-------------|----------------------|-------|-------------|
| Product Key | Switch Compatibility | Color | Part Number |
| Bezel       | FL Series            | Black | 9-6437631-0 |
| Bezel       | FL Series            | Red   | 9-6437631-1 |
| Cap04       | F Series Toggles     | Black | 9-6437630-0 |

# How to Specify in a Switch

## Electrical Considerations

Voltage of Applications: \_\_\_\_\_ Current of Application: \_\_\_\_\_

Circuitry Configuration: Number of Poles: \_\_\_\_\_ Number of Throws: \_\_\_\_\_

Number of Operations anticipated: \_\_\_\_\_

Agency Approvals or Listings Desired: \_\_\_\_\_

## Mechanical Considerations

Type of Switch (Actuator Type): \_\_\_\_\_ Toggle \_\_\_\_\_ Pushbutton \_\_\_\_\_ Rotary \_\_\_\_\_ Rocker \_\_\_\_\_ Other

Switch Function (On/Off/On): \_\_\_\_\_ On/Off: \_\_\_\_\_ Momentary: \_\_\_\_\_

Termination: \_\_\_\_\_ Thru-Hole (PC) \_\_\_\_\_ Surface Mount \_\_\_\_\_ Wire Lug \_\_\_\_\_ Quick Connect \_\_\_\_\_ Other

Sealing Contamination Requirements: \_\_\_\_\_

## Product Processing Considerations

Anticipated Soldering Process: \_\_\_\_\_ Hand \_\_\_\_\_ Wave \_\_\_\_\_ SMT \_\_\_\_\_ Other

## FOR MORE INFORMATION

### TE Technical Support Center

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| China:            | +86 (0) 400-820-6015  |

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\*as defined [www.te.com/leadfree](http://www.te.com/leadfree)

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