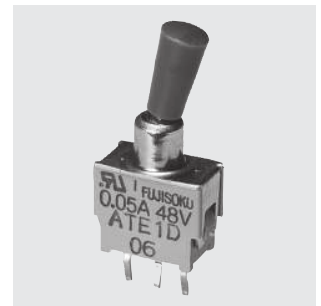


ATE

Subminiature Toggle Switch

Washable



RoHS Compliant

UL

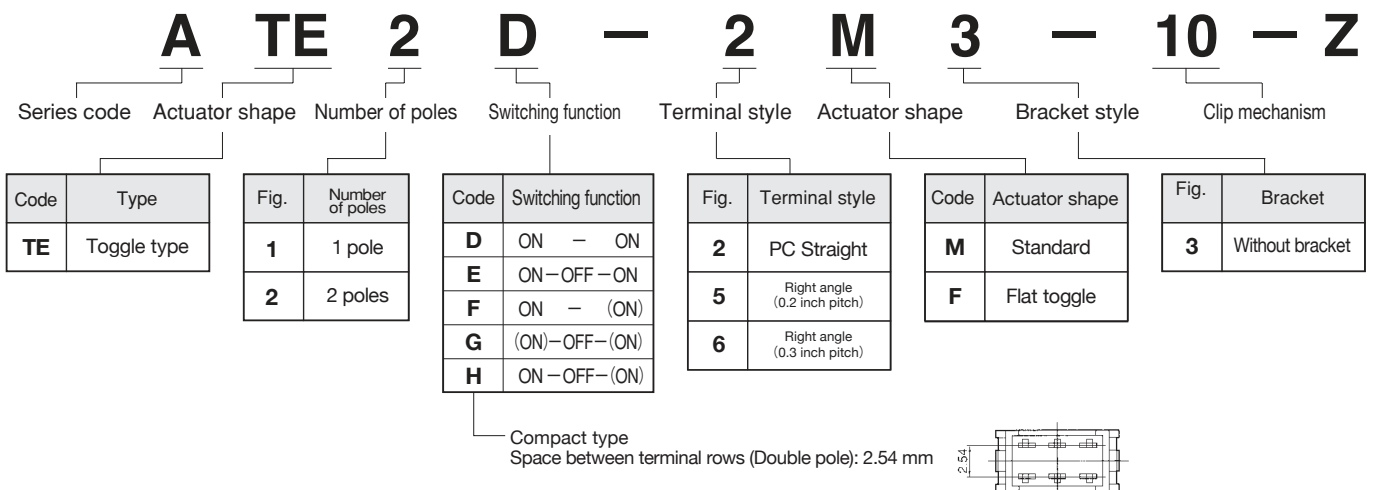
Features

1. Twin-contact clip mechanism for high reliability.
2. Process sealed structure
3. Gold-plated contacts.
4. Terminal pin pitch: 2.54 mm.
5. Independent detent mechanism ensures light operational feel.
6. UL recognized (Excluding ATE-J series with plastic cap/rocker)

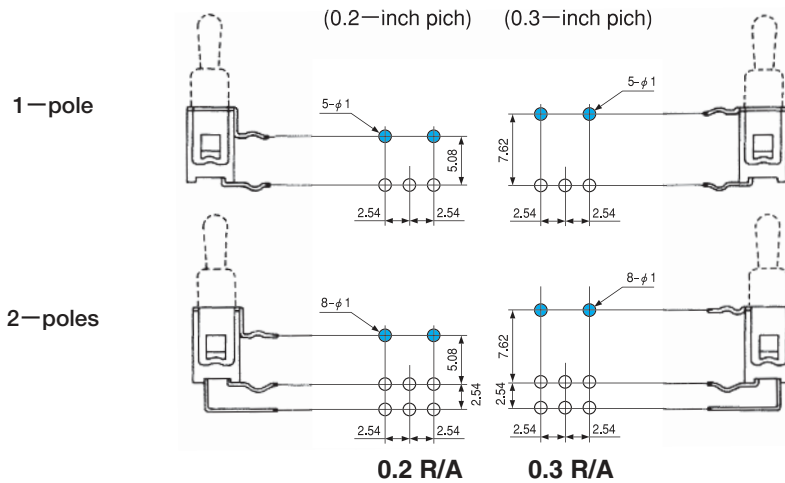
Specifications

| | | |
|-----------------------------|---|---------------------------|
| Rating | Max. | 50mA 60VAC/DC 0.4VA AC/DC |
| | Min. | 1 μ A 20mVAC/DC |
| | UL | 48VAC/DC 50mA |
| Initial contact resistance | 50m Ω Max. (1.5mA 200 μ VAC) | |
| Dielectric strength | 250VAC 1 minute | |
| Insulation resistance | 500M Ω min. (500VDC) | |
| Electrical life | 10,000 cycles at 0.4VA rating. | |
| | 50,000 cycles at 0.4VA rating. (D.E type) | |
| | 30,000 cycles at 0.4VA rating. (F.G.H type) | |
| Mechanical life | D.E type 50,000 cycles | |
| | F.G.H type 30,000 cycles | |
| Operating temperature range | -20 $^{\circ}$ C ~ +85 $^{\circ}$ C | |
| Storage temperature range | -40 $^{\circ}$ C ~ +85 $^{\circ}$ C | |

Part Numbering



Right Angle Terminals



● The space between the terminal rows are available in two dimensions: 0.2 inches (5.08 mm) and 0.3 inches (7.62 mm).

[Example] 0.2-inch pitch: **ATE1D-5M3-10-Z**
0.3-inch pitch: **ATE1D-6M3-10-Z**

Optional Accessories

Refer to P.371 for PC Hole Layouts.

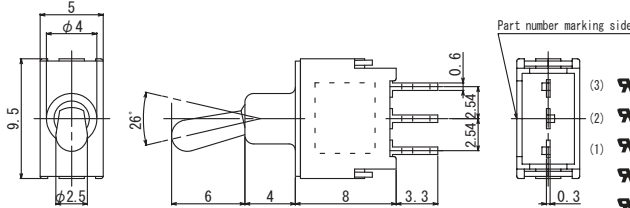
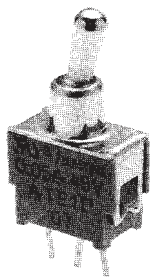
| Part name | Bracket | | |
|-------------|---------------------|---------------------|---------------------|
| Poles | Single pole | Double poles | |
| Box size | 5 mm | 7.5 mm | 5 mm |
| Type | ATE-2M · 2F | | |
| Dimensions | | | |
| Part number | 140000640314 | 140000640315 | 140000640318 |

| Type | ATE-2M·5M·6M |
|------------|------------------------------------|
| Part name | Color Cap |
| Dimensions | Gloss finish Vinyl chloride |
| | |
| White | 140000470174 |
| Red | 140000470175 |
| Black | 140000470173 |
| Gray | 140000470179 |

SPDT

PC Straight

Standard Toggle



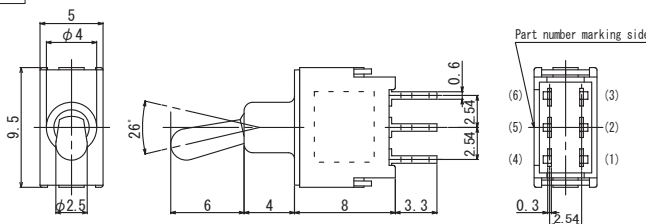
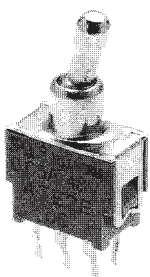
Terminal numbers are not shown on the switch.

| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|-----|------|
| | | | |
| Part No. | | | |
| ATE1D-2M3-10-Z | ON | — | ON |
| ATE1E-2M3-10-Z | ON | OFF | ON |
| ATE1F-2M3-10-Z | ON | — | (ON) |
| ATE1G-2M3-10-Z | (ON) | OFF | (ON) |
| ☆ATE1H-2M3-10-Z | ON | OFF | (ON) |
| Connecting terminals | 2-3 | — | 2-1 |

DPDT

PC Straight

Distance between two terminal rows : 2.54mm



Terminal numbers are not shown on the switch.

| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|-----|------------|
| | | | |
| Part No. | | | |
| ATE2D-2M3-10-Z | ON | — | ON |
| ☆ATE2E-2M3-10-Z | ON | OFF | ON |
| ☆ATE2G-2M3-10-Z | (ON) | OFF | (ON) |
| Connecting terminals | 2-3 5-6 | — | 2-1 5-4 |

★ : Made to order products.

☆ : Semi-standard products.

(ON) : Momentary.

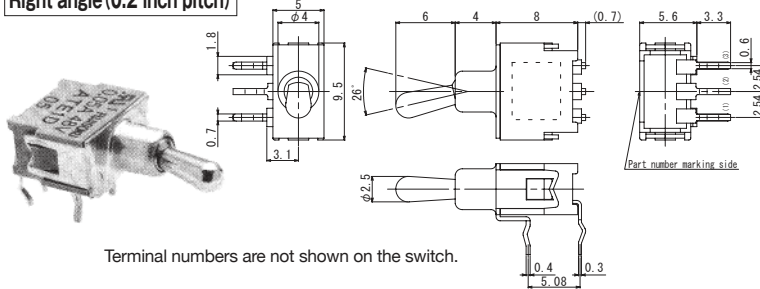
: Optional Accessories.

ATE

SPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)



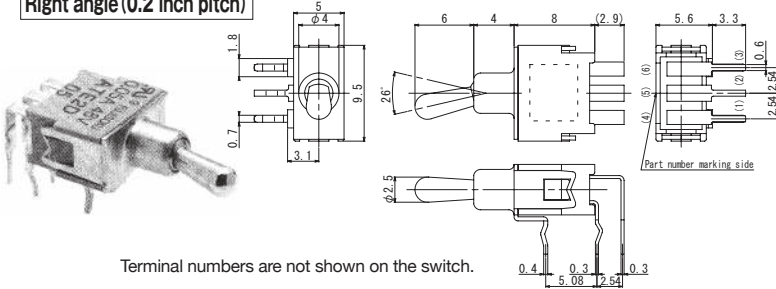
Terminal numbers are not shown on the switch.

| Part No. | Switching function | Viewed from part No. marking side | | |
|----------------------|--------------------|-----------------------------------|-----|------|
| | | | | |
| ATE1D-5M3-10-Z | ON | ON | — | ON |
| ☆ATE1E-5M3-10-Z | ON | ON | OFF | ON |
| ☆ATE1G-5M3-10-Z | (ON) | (ON) | OFF | (ON) |
| ★ATE1H-5M3-10-Z | ON | ON | OFF | (ON) |
| Connecting terminals | | 2-3 | — | 2-1 |

DPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)



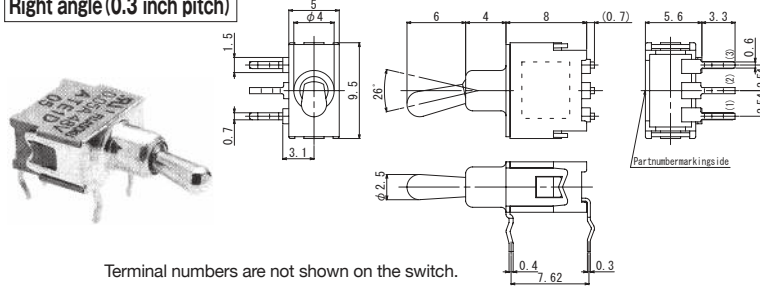
Terminal numbers are not shown on the switch.

| Part No. | Switching function | Viewed from part No. marking side | | |
|----------------------|--------------------|-----------------------------------|-----|------------|
| | | | | |
| ☆ATE2D-5M3-10-Z | ON | ON | — | ON |
| ☆ATE2G-5M3-10-Z | (ON) | (ON) | OFF | (ON) |
| Connecting terminals | | 2-3 5-6 | — | 2-1 5-4 |

SPDT

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



Terminal numbers are not shown on the switch.

| Part No. | Switching function | Viewed from part No. marking side | | |
|----------------------|--------------------|-----------------------------------|-----|------|
| | | | | |
| ATE1D-6M3-10-Z | ON | ON | — | ON |
| ATE1E-6M3-10-Z | ON | ON | OFF | ON |
| ATE1F-6M3-10-Z | ON | ON | — | (ON) |
| ☆ATE1G-6M3-10-Z | (ON) | (ON) | OFF | (ON) |
| ☆ATE1H-6M3-10-Z | ON | ON | OFF | (ON) |
| Connecting terminals | | 2-3 | — | 2-1 |

(ON) : Momentary.

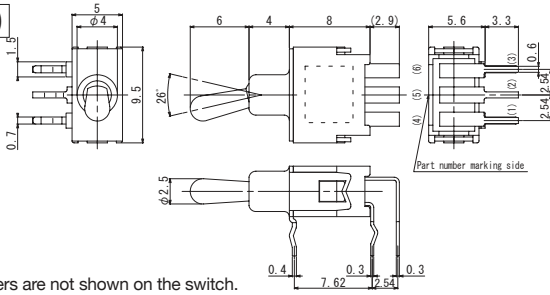
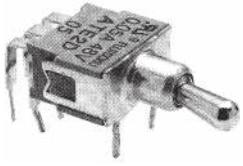
☆ : Semi-standard products.

★ : Made to order products.

DPDT

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



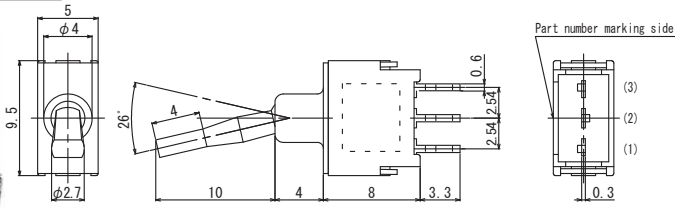
Terminal numbers are not shown on the switch.

| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|---|------------|
| | | | |
| Part No. | ATE2D-6M3-10-Z | — | ON |
| Connecting terminals | 2-3 5-6 | — | 2-1 5-4 |

SPDT

Flat Toggle

PC Straight



Terminal numbers are not shown on the switch.

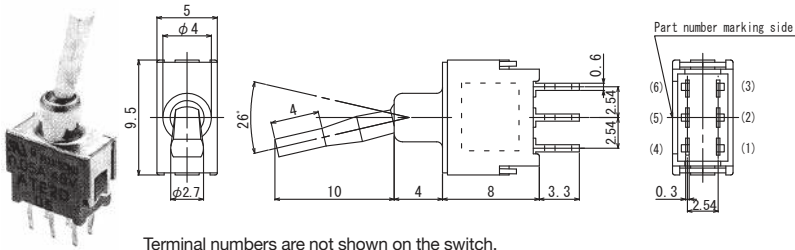
| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|----|-----|
| | | | |
| Part No. | ATE1D-2F3-10-Z | — | ON |
| Part No. | ATE1E-2F3-10-Z | ON | OFF |
| Connecting terminals | 2-3 | — | 2-1 |

ATE

DPDT

(Space between terminal rows (Double pole): 2.54 mm)

PC Straight



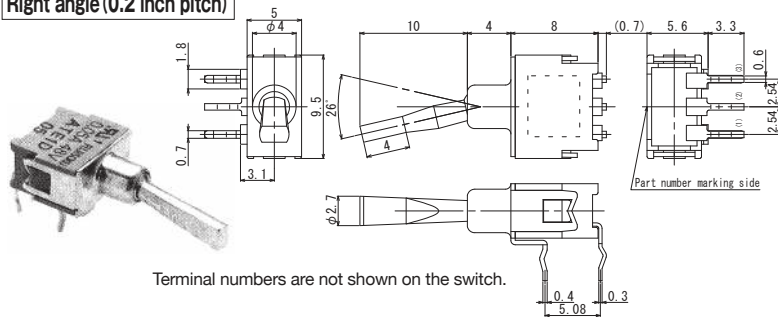
Terminal numbers are not shown on the switch.

| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|------|------------|
| | | | |
| Part No. | ☆ ATE2D-2F3-10-Z | — | ON |
| Part No. | ☆ ATE2G-2F3-10-Z | (ON) | (ON) |
| Connecting terminals | 2-3 5-6 | — | 2-1 5-4 |

SPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)



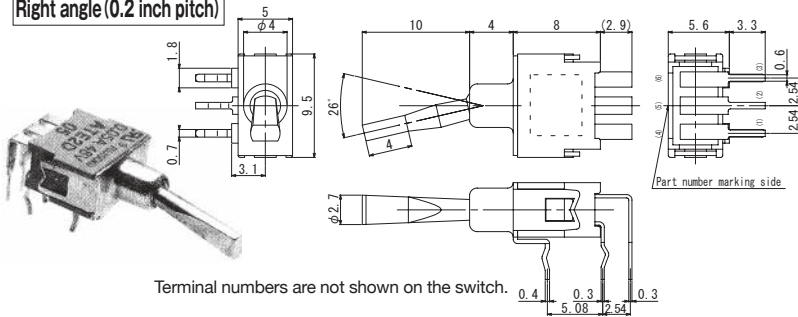
Terminal numbers are not shown on the switch.

| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|------|------|
| | | | |
| Part No. | ★ ATE1G-5F3-10-Z | (ON) | (ON) |
| Part No. | ★ ATE1H-5F3-10-Z | ON | (ON) |
| Connecting terminals | 2-3 | — | 2-1 |

DPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)



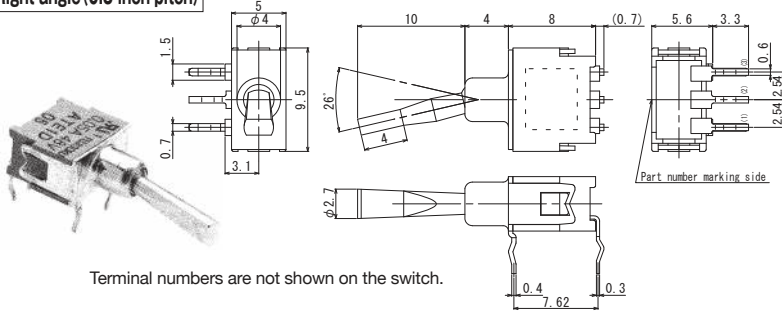
Terminal numbers are not shown on the switch.

| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|----|------------|
| | | | |
| Part No. | ★ ATE2D-5F3-10-Z | ON | ON |
| Connecting terminals | 2-3 5-6 | — | 2-1 5-4 |

SPDT

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



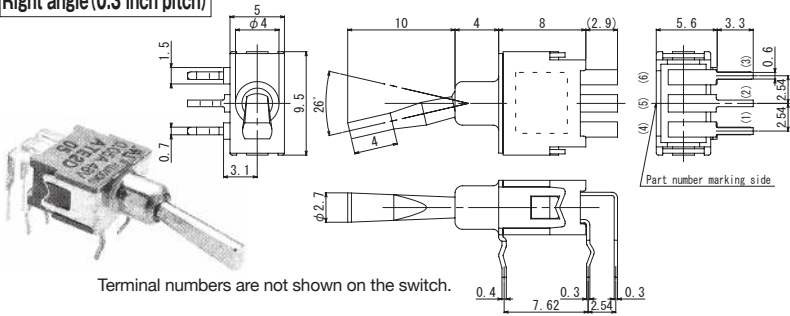
Terminal numbers are not shown on the switch.

| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|------|------|
| | | | |
| Part No. | ☆ATE1G-6F3-10-Z | (ON) | (ON) |
| Connecting terminals | 2-3 | - | 2-1 |

DPDT

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)

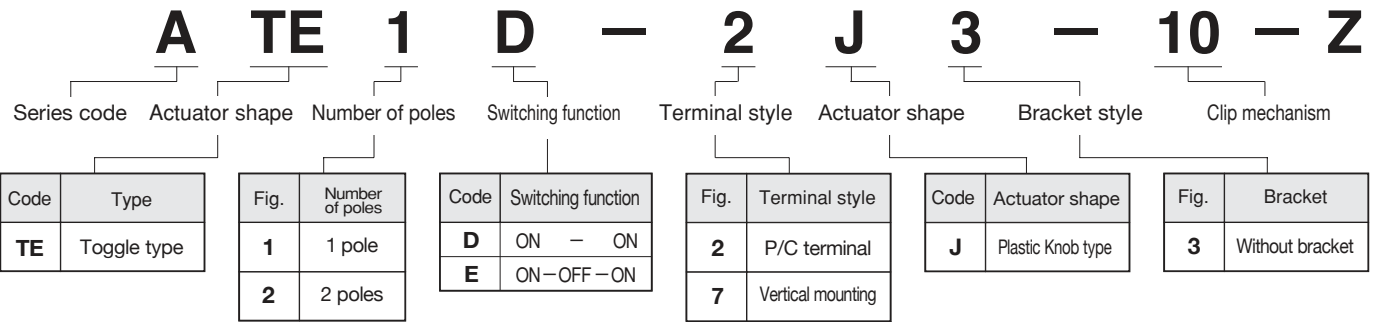


Terminal numbers are not shown on the switch.

| Switching function | Viewed from part No. marking side | | |
|----------------------|-----------------------------------|----|------------|
| | | | |
| Part No. | ☆ATE2D-6F3-10-Z | ON | ON |
| Connecting terminals | 2-3 5-6 | - | 2-1 5-4 |

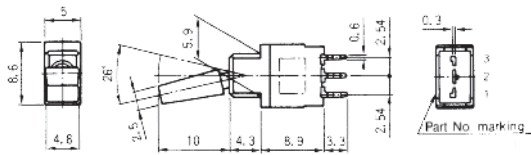
ATE-J(Plastic type)

Part Numbering(Plastic cap•Rocker type)



SPDT

PC Straight

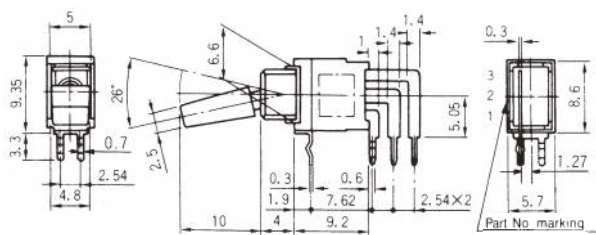
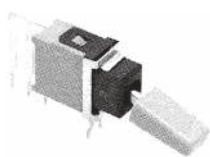


Mount with CAP

| Part No. | Switching function | Viewed from part No. marking side | | |
|----------------------|--------------------|-----------------------------------|---|-----|
| | | | | |
| ☆ATE1D-2J3-10-Z | ON | — | — | ON |
| ★ATE1E-2J3-10-Z | ON | OFF | — | ON |
| Connecting terminals | | 2—3 | — | 2—1 |

SPDT

Vertical mounting



| Switching function | Viewed from part No. marking side | | | |
|----------------------|-----------------------------------|----|-----|----|
| | | | | |
| Part No. | ★ATE1D-7J3-10-Z | ON | — | ON |
| Connecting terminals | 2-3 | — | 2-1 | |

Mount with CAP

Terminal numbers are not shown on the switch.

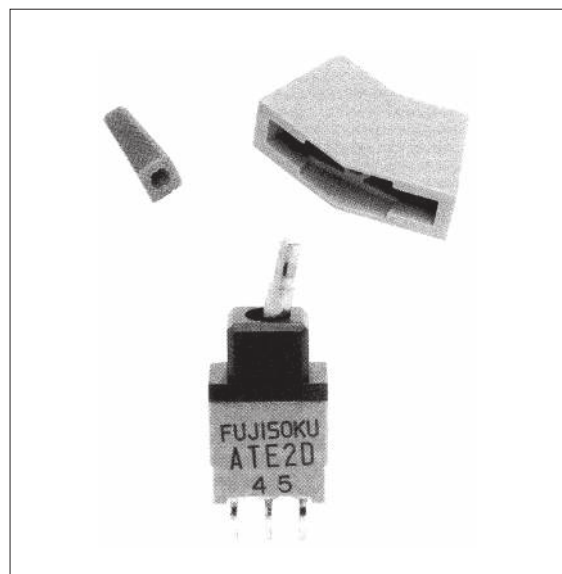
Optional Accessories

《Sold separately》

| Type | ATE-2J · 7J | ATE-2J · 7J |
|------------|--------------------|---------------------|
| Part name | Color Cap | Rocker |
| Dimensions | | |
| White | 14000050884 | 140000481541 |
| Red | 14000050886 | 140000481543 |
| Black | 14000050885 | 140000481542 |

Color Cap and Rocker

Installation Procedure for ATE-J type



PC Hole Layouts

PC terminal

(Top view)

| Series code | ATE-2M-2F-2J | ATE-2M-2F | | |
|--|------------------|-------------------------------|--------------|--------------|
| Installation | Whithout bracket | When optional bracket is used | | |
| | | 140000640314 | 140000640315 | 140000640318 |
| 1-pole | | | | |
| 2-poles 2.54mm Two terminal rows | | | | |

Right Angle terminal • Vertical Mount terminal

(Top view)

| Series code | ATE-5M-5F | ATE-6M-6F | ATE-7J |
|-------------|-----------------------|-----------------------|----------------|
| Terminal | R/A 0.2-inch pitch | R/A 0.3-inch pitch | Vertical mount |
| 1-pole | | | |
| 2-poles | | | |

Bracket Mounted Dimensions.

| Type | ATE-2M | ATE-2F |
|------------|----------|--------|
| | Standard | Flat |
| Dimensions | | |

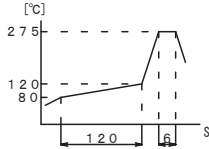
■ Soldering Specifications

(1) Manual Soldering

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

(2) Auto Soldering

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



● Pre-heating should be done at temperatures ranging from 80°C to 120°C and within 120 seconds

(3) Install the cap/rocker accessory after soldering and cleaning.

■ Flux Cleaning

(1) Solvent : Fluorine or Alcohol type.

(2) Cleaning after soldering should be done after the terminal temperature falls to 90°C or below, or after leaving the switch for five minutes or longer at room temperature.

■ Packaging Specifications

| | | |
|---------------|--|--|
| Plastick Pack | | PC terminals : 100 pcs./pack |
| | | Right angle terminals : 50 pcs./pack |
| Plastick Pack | | Vertical mounting terminals 100 pcs./pack |

■ Mounting of Switch

- Use PC boards with hole diameter of 1mm.
- Do not bend the terminal pins before mounting the switch on the PC board.
- After mounting the switch, do not place the device in such a way that the device weight will be applied on to the actuator of the switch.
- Do not apply load exceeding 12.7 N to the actuator.

