

ATE

Subminiature Toggle Switch

Washable

FUJISOKU
SWITCHES

RoHS Compliant



UL

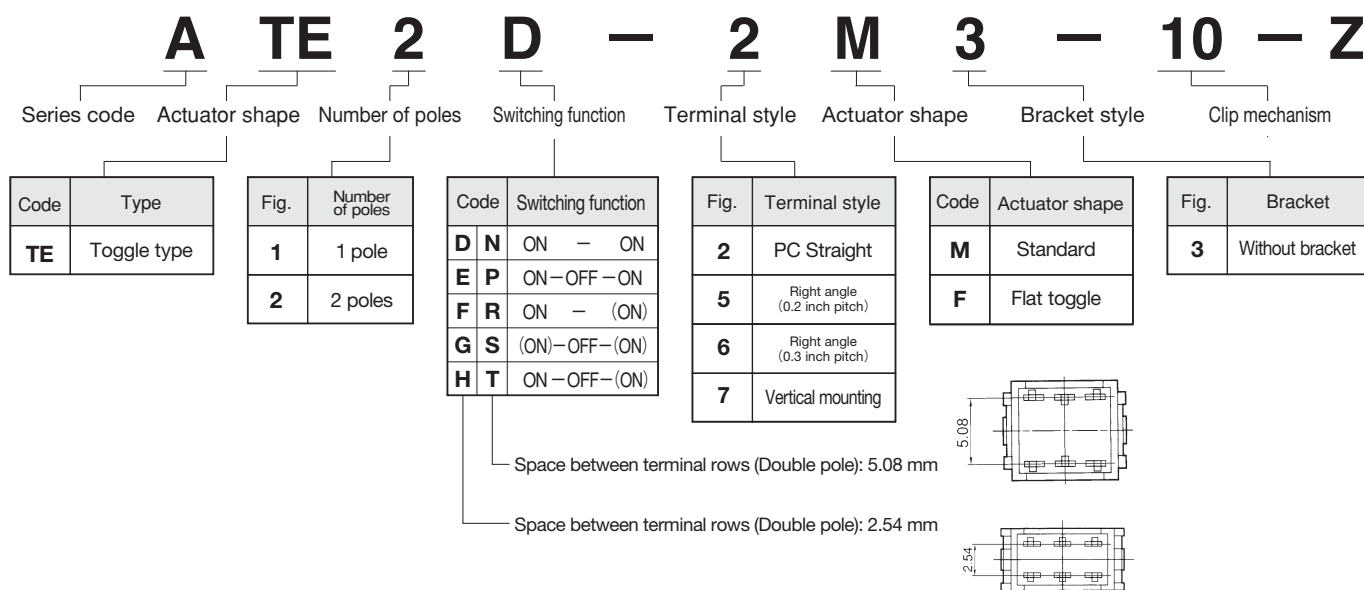
■ Features

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

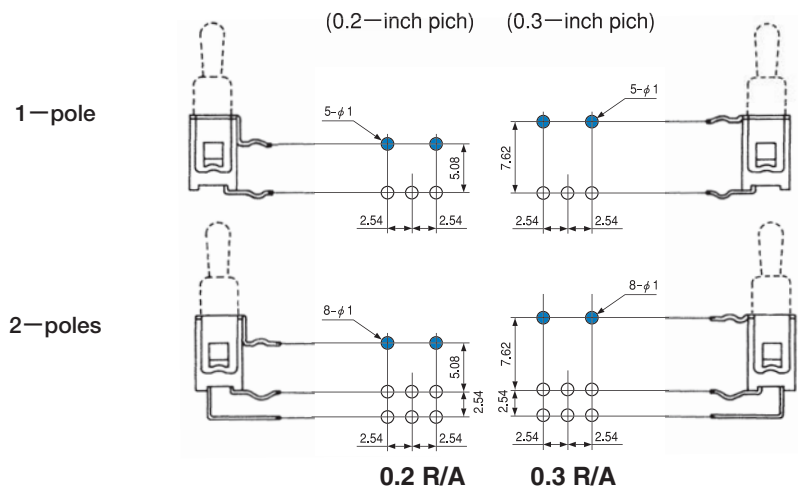
Rating	Max.	50mA 60VAC · DC 0.4VA AC, DC
	Min.	1 μ A 20mVAC · DC
Initial contact resistance	50m Ω Max. (1.5mA 200 μ VAC)	
Dielectric strength	250VAC 1 minute	
Insulation resistance	500M Ω min. (250VDC)	
Electrical life	10,000 cycles at 0.4VA rating.	
	50,000 cycles at 0.4VA rating. (D.E.N.P type)	
	30,000 cycles at 0.4VA rating. (F.G.H.R.S.T type)	
Mechanical life	D.E.N.P type 50,000 cycles	
	F.G.H.R.S.T type 30,000 cycles	
Operating temperature range	-20°C ~ +85°C	
Storage temperature range	-40°C ~ +85°C	

■ Part Numbering



(ON) : Momentary.

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.

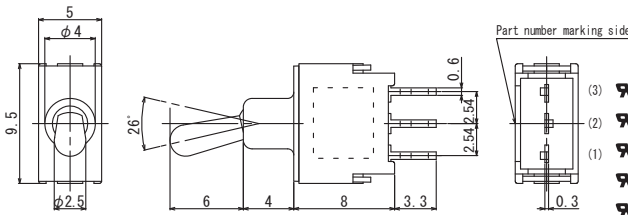
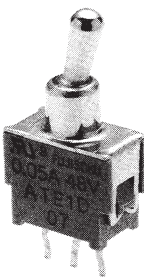
Part name	Bracket		
Poles	Single pole	Double poles	
Box size	5 mm	7.5 mm	5 mm
Type	ATE—2M · 2F		
Dimensions			
Part number	140000640314	140000640315	140000640318

Type	ATE—2M·5M·6M·7M
Part name	Color Cap
Dimensions	Gloss finish Vinyl chloride
White	140000470174
Red	140000470175
Black	140000470173
Gray	140000470179
Green	140000470177
Blue	140000470178
Orange	140000470181
Yellow	140000470176
Brown	140000470180

SPDT

PC Straight

Standard Toggle



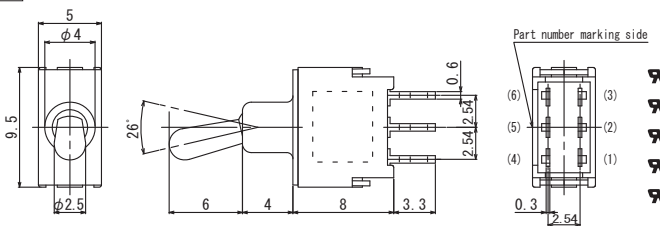
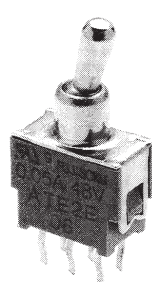
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
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

2.54mm/Distance between two terminal rows : 2.54mm



Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
ATE2D-2M3-10-Z	ON	—	ON
☆ATE2E-2M3-10-Z	ON	OFF	ON
★ATE2F-2M3-10-Z	ON	—	(ON)
☆ATE2G-2M3-10-Z	(ON)	OFF	(ON)
☆ATE2H-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.

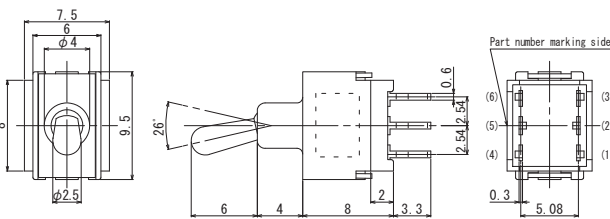
:Optional Accessories.

ATE

DPDT

PC Straight

(Space between terminal rows : 5.08 mm)



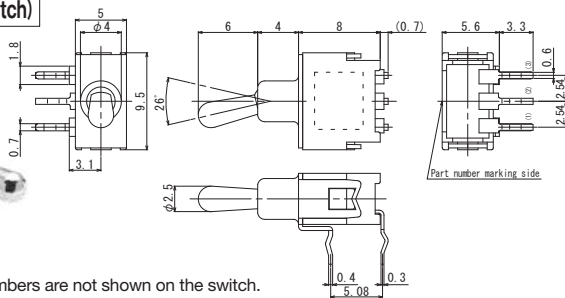
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
☆ATE2N-2M3-10-Z	ON	—	ON
★ATE2P-2M3-10-Z	ON	OFF	ON
★ATE2R-2M3-10-Z	ON	—	(ON)
★ATE2S-2M3-10-Z	(ON)	OFF	(ON)
★ATE2T-2M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

SPDT

Right angle (0.2 inch pitch)

(Mounting height : 3.1mm)



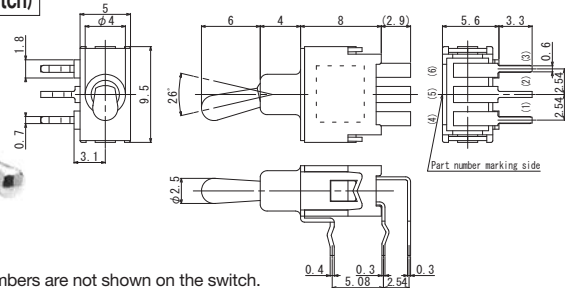
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
ATE1D-5M3-10-Z	ON	—	ON
☆ATE1E-5M3-10-Z	ON	OFF	ON
★ATE1F-5M3-10-Z	ON	—	(ON)
☆ATE1G-5M3-10-Z	(ON)	OFF	(ON)
★ATE1H-5M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT

Right angle (0.2 inch pitch)

(Mounting height : 3.1mm)



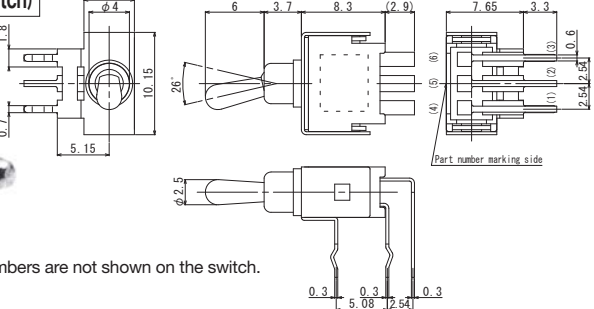
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
☆ATE2D-5M3-10-Z	ON	—	ON
★ATE2E-5M3-10-Z	ON	OFF	ON
★ATE2F-5M3-10-Z	ON	—	(ON)
☆ATE2G-5M3-10-Z	(ON)	OFF	(ON)
▲ATE2H-5M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

DPDT

Right angle (0.2 inch pitch)

(Mounting height : 5.15mm)



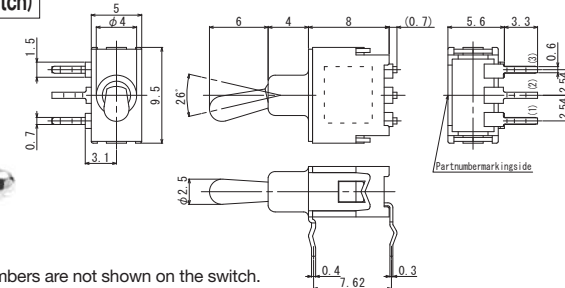
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
☆ATE2N-5M3-10-Z	ON	—	ON
★ATE2P-5M3-10-Z	ON	OFF	ON
▲ATE2R-5M3-10-Z	ON	—	(ON)
★ATE2S-5M3-10-Z	(ON)	OFF	(ON)
▲ATE2T-5M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

SPDT

Right angle (0.3 inch pitch)

(Mounting height : 3.1mm)



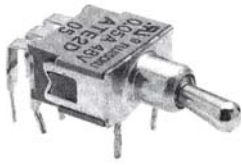
Terminal numbers are not shown on the switch.

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

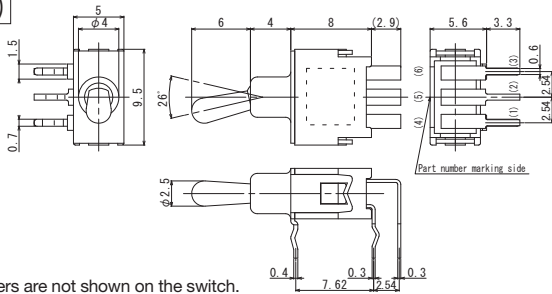
DPDT

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



Terminal numbers are not shown on the switch.



Switching function Part No.		Viewed from part No. marking side		
ATE2D-6M3-10-Z		ON	—	ON
★ATE2E-6M3-10-Z		ON	OFF	ON
★ATE2F-6M3-10-Z		ON	—	(ON)
★ATE2G-6M3-10-Z		(ON)	OFF	(ON)
▲ATE2H-6M3-10-Z		ON	OFF	(ON)
Connecting terminals		2—3 5—6	—	2—1 5—4

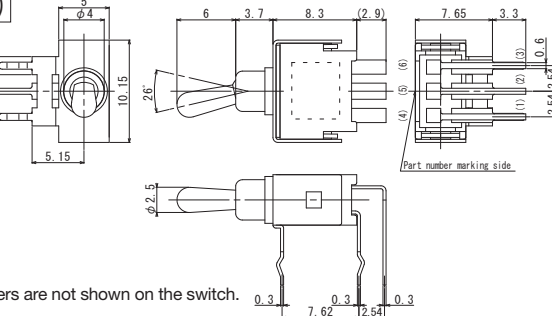
DPDT

(Mounting height : 5.15mm)

Right angle (0.3 inch pitch)



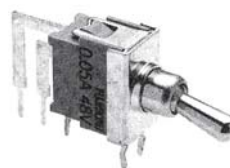
Terminal numbers are not shown on the switch.



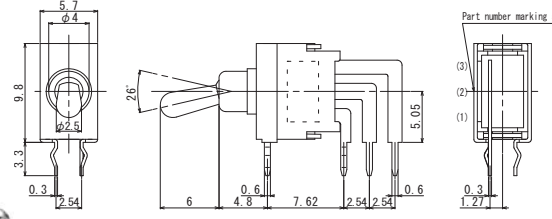
Switching function Part No.		Viewed from part No. marking side		
ATE2N-6M3-10-Z		ON	—	ON
☆ATE2P-6M3-10-Z		ON	OFF	ON
★ATE2R-6M3-10-Z		ON	—	(ON)
★ATE2S-6M3-10-Z		(ON)	OFF	(ON)
★ATE2T-6M3-10-Z		ON	OFF	(ON)
Connecting terminals		2—3 5—6	—	2—1 5—4

SPDT

Vertical mounting



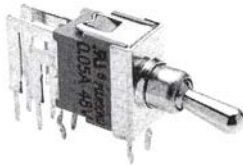
Terminal numbers are not shown on the switch.



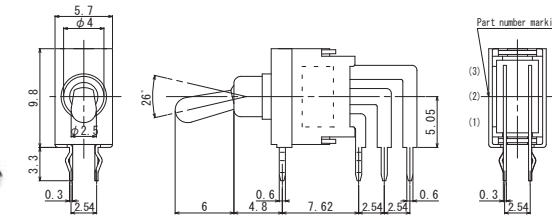
Switching function Part No.		Viewed from part No. marking side		
☆ATE1D-7M3-10-Z		ON	—	ON
☆ATE1E-7M3-10-Z		ON	OFF	ON
★ATE1F-7M3-10-Z		ON	—	(ON)
★ATE1G-7M3-10-Z		(ON)	OFF	(ON)
▲ATE1H-7M3-10-Z		ON	OFF	(ON)
Connecting terminals		2—3	—	2—1

DPDT

Vertical mounting



Terminal numbers are not shown on the switch.



Switching function Part No.		Viewed from part No. marking side		
ATE2D-7M3-10-Z		ON	—	ON
★ATE2E-7M3-10-Z		ON	OFF	ON
★ATE2F-7M3-10-Z		ON	—	(ON)
▲ATE2G-7M3-10-Z		(ON)	OFF	(ON)
▲ATE2H-7M3-10-Z		ON	OFF	(ON)
Connecting terminals		2—3 5—6	—	2—1 5—4

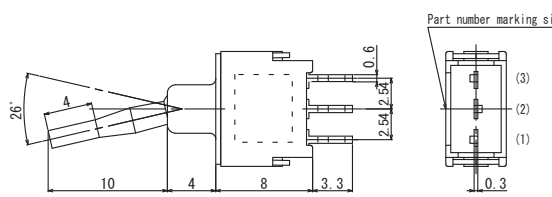
SPDT

PC Straight

Flat Toggle



Terminal numbers are not shown on the switch.



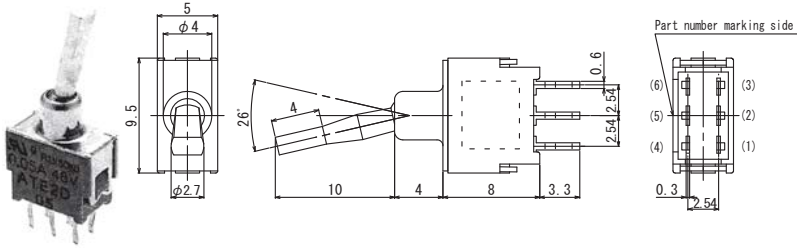
Switching function Part No.		Viewed from part No. marking side		
ATE1D-2F3-10-Z		ON	—	ON
ATE1E-2F3-10-Z		ON	OFF	ON
☆ATE1F-2F3-10-Z		ON	—	(ON)
★ATE1G-2F3-10-Z		(ON)	OFF	(ON)
★ATE1H-2F3-10-Z		ON	OFF	(ON)
Connecting terminals		2—3	—	2—1

ATE

DPDT

PC Straight

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



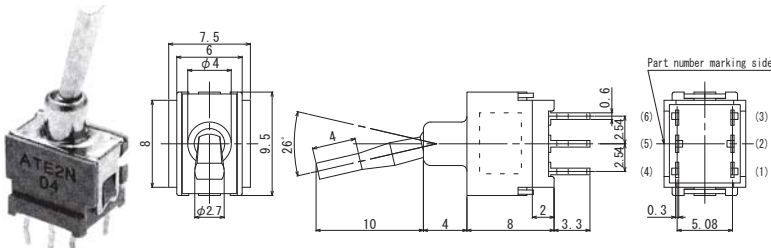
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
☆ ATE2D-2F3-10-Z	ON	—	ON
★ ATE2E-2F3-10-Z	ON	OFF	ON
★ ATE2F-2F3-10-Z	ON	—	(ON)
☆ ATE2G-2F3-10-Z	(ON)	OFF	(ON)
★ ATE2H-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

DPDT

PC Straight

(Space between terminal rows (Double pole): 5.08 mm)



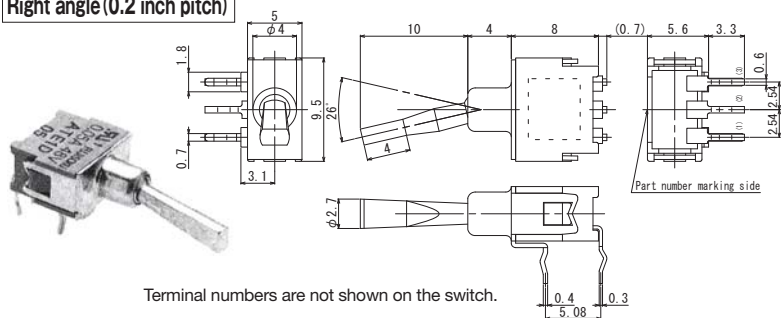
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
☆ ATE2N-2F3-10-Z	ON	—	ON
★ ATE2P-2F3-10-Z	ON	OFF	ON
★ ATE2R-2F3-10-Z	ON	—	(ON)
▲ ATE2S-2F3-10-Z	(ON)	OFF	(ON)
★ ATE2T-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

SPDT

Right angle (0.2 inch pitch)

(Mounting height : 3.1mm)



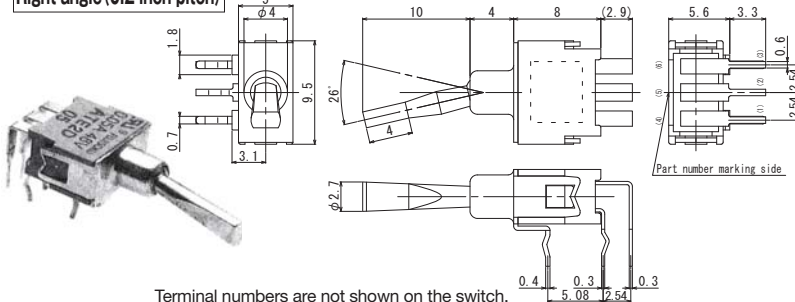
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
☆ ATE1D-5F3-10-Z	ON	—	ON
★ ATE1E-5F3-10-Z	ON	OFF	ON
★ ATE1F-5F3-10-Z	ON	—	(ON)
★ ATE1G-5F3-10-Z	(ON)	OFF	(ON)
★ ATE1H-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT

Right angle (0.2 inch pitch)

(Mounting height : 3.1mm)



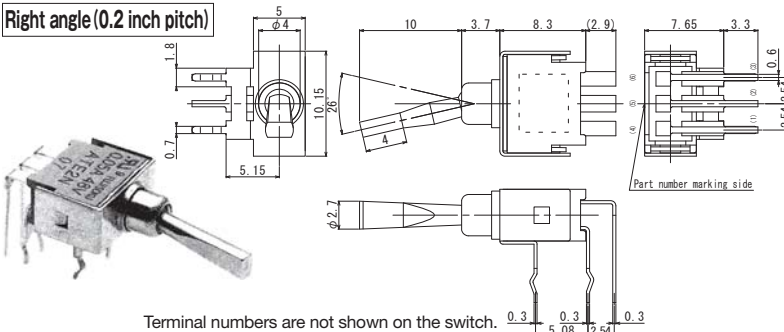
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
★ ATE2D-5F3-10-Z	ON	—	ON
▲ ATE2E-5F3-10-Z	ON	OFF	ON
▲ ATE2F-5F3-10-Z	ON	—	(ON)
★ ATE2G-5F3-10-Z	(ON)	OFF	(ON)
▲ ATE2H-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

DPDT

Right angle (0.2 inch pitch)

(Mounting height : 5.15mm)



Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
★ ATE2N-5F3-10-Z	ON	—	ON
▲ ATE2P-5F3-10-Z	ON	OFF	ON
▲ ATE2R-5F3-10-Z	ON	—	(ON)
★ ATE2S-5F3-10-Z	(ON)	OFF	(ON)
▲ ATE2T-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

(ON) : Momentary.

▲ : Inquiry products.

☆ : Semi-standard products.

★ : Made to order products.

Right angle (0.3 inch pitch)

Technical drawing of a 1P1D1 switch. The drawing includes a perspective view of the switch with terminal numbers 1, 2, 3, 4, 5, and 6 visible on its top. To the right are three detailed cross-sectional views. The top cross-section shows a 26-degree conical contact with dimensions: 10, 4, 8, (0.7), 5.6, 3.3, 0.6, 2.54, 2.54, 1.5, 0.7, 3.1, 9.5, and a diameter of 4. The bottom cross-section shows a 26-degree conical contact with dimensions: 10, 4, 8, (0.7), 5.6, 3.3, 0.6, 2.54, 2.54, 1.5, 0.7, 3.1, 9.5, and a diameter of 4. The side cross-section shows a 26-degree conical contact with dimensions: 10, 4, 8, (0.7), 5.6, 3.3, 0.6, 2.54, 2.54, 1.5, 0.7, 3.1, 9.5, and a diameter of 4. The side cross-section also shows a 26-degree conical contact with dimensions: 10, 4, 8, (0.7), 5.6, 3.3, 0.6, 2.54, 2.54, 1.5, 0.7, 3.1, 9.5, and a diameter of 4.

Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. making side		
			
★ATE1D-6F3-10-Z	ON	—	ON
★ATE1E-6F3-10-Z	ON	OFF	ON
★ATE1F-6F3-10-Z	ON	—	(ON)
☆ATE1G-6F3-10-Z	(ON)	OFF	(ON)
★ATE1H-6F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

Right angle (0.3 inch pitch)

Right angle (0.3 inch pitch)

Technical drawing of a 4-pin right angle connector. The drawing includes a perspective view of the physical component, a top view, a side view, and a detailed view of the pin arrangement. Dimensions are provided in millimeters.

Top View Dimensions:

- Overall width: 5 mm
- Pin area diameter: $\phi 4$ mm
- Pin area height: 9.5 mm
- Pin area width: 3.1 mm
- Pin area height (from base): 1.5 mm
- Pin area width (from base): 0.7 mm

Side View Dimensions:

- Overall height: 10 mm
- Pin area height: 4 mm
- Pin area width: 8 mm
- Pin area height (from base): (2.9) mm

Pin Arrangement Dimensions:

- Pin pitch: 0.3 mm
- Pin length: 2.6 mm
- Pin diameter: $\phi 2.7$ mm
- Pin spacing: 0.4 mm
- Pin length (from base): 7.62 mm
- Pin length (from base): 0.3 mm
- Pin length (from base): 2.54 mm
- Pin length (from base): 0.3 mm

Part number marking side:

Part number marking side

Terminal numbers are not shown on the switch

Switching function Part No.	Viewed from part No. marking side		
			
☆ATE2D-6F3-10-Z	ON	—	ON
★ATE2E-6F3-10-Z	ON	OFF	ON
▲ATE2F-6F3-10-Z	ON	—	(ON)
▲ATE2G-6F3-10-Z	(ON)	OFF	(ON)
▲ATE2H-6F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

Right angle (0.3 inch pitch)

[illegible]

Switching function	Viewed from part No. marking side		
			
Part No.			
★ATE2N-6F3-10-Z	ON	—	ON
▲ATE2P-6F3-10-Z	ON	OFF	ON
▲ATE2R-6F3-10-Z	ON	—	(ON)
▲ATE2S-6F3-10-Z	(ON)	OFF	(ON)
▲ATE2T-6F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

Vertical mounting

[illegible]

Switching function Part No.	Viewed from part No. marking side		
			
★ATE1D-7F3-10-Z	ON	—	ON
▲ATE1E-7F3-10-Z	ON	OFF	ON
★ATE1F-7F3-10-Z	ON	—	(ON)
▲ATE1G-7F3-10-Z	(ON)	OFF	(ON)
★ATE1H-7F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

Vertical mounting

Technical drawing of the 250V 10A 2P 100mm switch, showing front, side, and detail views with dimensions in mm.

Front View Dimensions:

- Top width: 5.7
- Top hole diameter: $\phi 4$
- Overall height: 9.8
- Bottom hole diameter: $\phi 2.7$
- Bottom hole offset from left edge: 0.3
- Bottom hole offset from right edge: 2.54

Side View Dimensions:

- Mounting flange thickness: 4
- Flange angle: 26°
- Base width: 10
- Base offset from left edge: 4.8
- Base offset from right edge: 7.62
- Terminal offset from right edge: 2.54
- Terminal offset from right edge: 2.54
- Terminal offset from right edge: 0.6
- Terminal offset from right edge: 5.05

Detail View Dimensions:

- Terminal offset from left edge: 0.3
- Terminal offset from left edge: 2.54
- Terminal offset from left edge: 0.6
- Terminal offset from left edge: 5.05

Part number marking side:

- (1) Terminal 1
- (2) Terminal 2
- (3) Terminal 3
- (4) Terminal 4
- (5) Terminal 5
- (6) Terminal 6

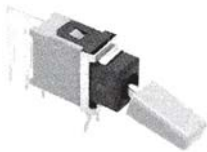
Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
			
★ATE2D-7F3-10-Z	ON	—	ON
★ATE2E-7F3-10-Z	ON	OFF	ON
★ATE2F-7F3-10-Z	ON	—	(ON)
▲ATE2G-7F3-10-Z	(ON)	OFF	(ON)
▲ATE2H-7F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

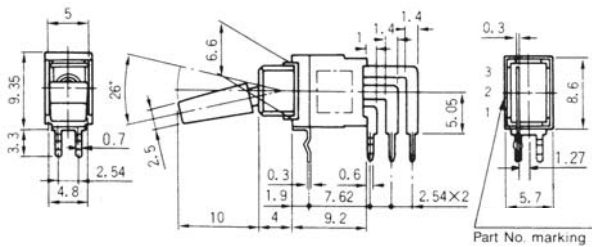
ATE—J

SPDT

Vertical mounting



(Mount with CAP)



Terminal numbers are not shown on the switch.

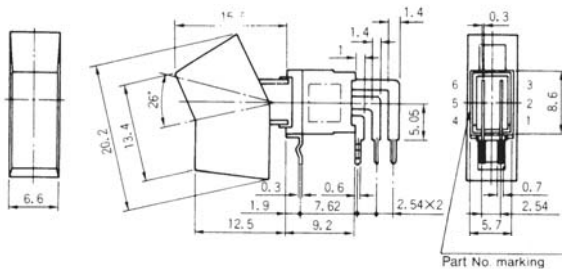
Switching function	Viewed from part No. marking side		
Part No.			
★ATE1D-7J3-10-Z	ON	—	ON
▲ATE1E-7J3-10-Z	ON	OFF	ON
▲ATE1F-7J3-10-Z	ON	—	(ON)
▲ATE1G-7J3-10-Z	(ON)	OFF	(ON)
▲ATE1H-7J3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT

Vertical mounting



(Mount with Rocker)



Terminal numbers are not shown on the switch.

Switching function	Viewed from part No. marking side		
Part No.			
▲ATE2D-7J3-10-Z	ON	—	ON
▲ATE2E-7J3-10-Z	ON	OFF	ON
▲ATE2F-7J3-10-Z	ON	—	(ON)
▲ATE2G-7J3-10-Z	(ON)	OFF	(ON)
▲ATE2H-7J3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

Optional Accessories

《Sold separately》

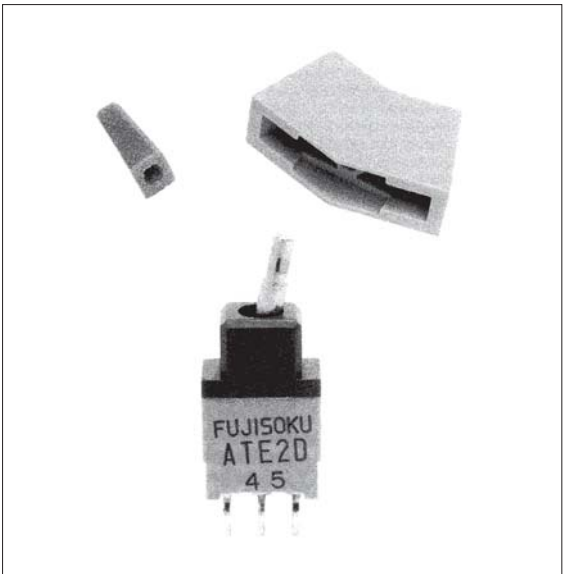
Type	ATE—2J · 6J · 7J	ATE—2J · 6J · 7J
Part name	Color Cap	Rocker
Dimensions	Matte finish ABS resin	Matte finish ABS resin
White	140000050884	140000481541
Red	140000050886	140000481543
Black	140000050885	140000481542
Gray	140000050890	140000481547
Blue	140000050889	140000481546
Green	140000050888	140000481545
Orange	140000050892	140000481549
Yellow	140000050887	140000481544
Brown	140000050891	140000481548

●PC hole layout is different depending on the type of Bracket.

Type	ATE—2J
Part name	Bracket
Dimensions	9.25 6 2.1 5.6 9.8 11.1 3.5 9 0.7 2.54 4
Part number	140000640296

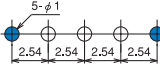
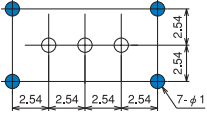
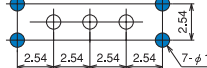
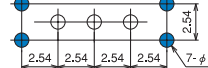
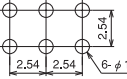
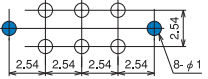
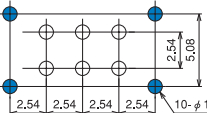
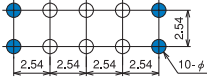
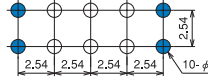
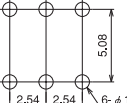
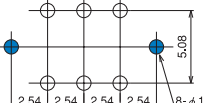
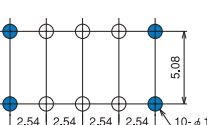
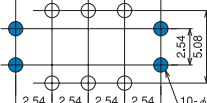
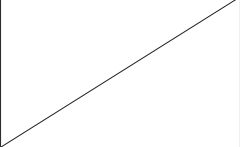
Color Cap and Rocker

Installation Procedure for ATE—J type



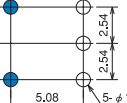
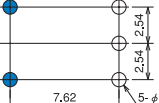
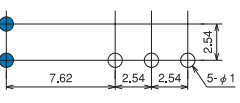
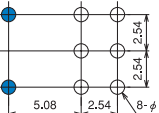
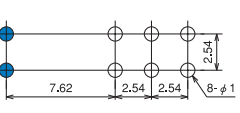
PC Hole Layouts
PC terminal

(Top voew)

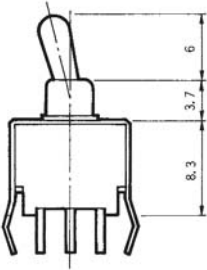
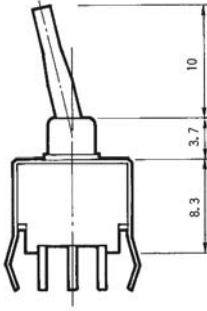
Series code	ATE—2M·2F·2J	ATE—2M·2F			ATE—2J
Installation	Whithout bracket	When optional bracket is used			
		140000640314	140000640315	140000640318	140000640296
1—pole					
2—poles 2.54mm /Tow terminal rows					
2—poles 5.08mm /Tow terminal rows					

Right Angle terminal • Vertical Mount terminal

(Top view)

Series code	ATE—5M · 5F	ATE—6M · 6F · 6J	ATE—7M · 7F · 7J
Terminal	0.2—inch pich	0.3—inch pich	Vertical mount
1—pole			
2—poles			

Bracket Mounted Dimensions.

Type	ATE—2M	ATE—2F
	Standard	Flat
Dimensions		

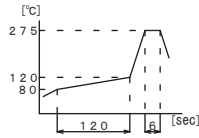
■Soldering Specifications

(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.

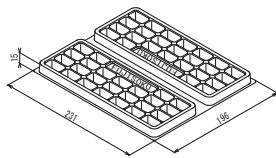
■Flux Cleaning

(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

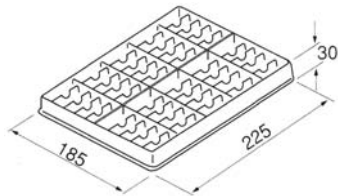
Plastick Pack



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.

