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 μA 20mVAC・DC
Initial contact resistance		50mΩ Max. (1.5mA 200μVAC)
Dielectric strength		250VAC 1 minute
Insulation resistance		500MΩ 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℃～+85℃
Storage temperature range		−40℃～+85℃

■Part Numbering

A TE 2 D — 2 M 3 — 10 — Z

Series code | Actuator shape | Number of poles | Switching function | Terminal style | Actuator shape | Bracket style | Clip mechanism

Code	Type
TE	Toggle type

Fig.	Number of poles
1	1 pole
2	2 poles

Code		Switching function
D	N	ON − ON
E	P	ON−OFF−ON
F	R	ON − (ON)
G	S	(ON)−OFF−(ON)
H	T	ON−OFF−(ON)

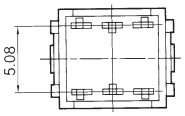
Space between terminal rows (Double pole): 5.08 mm

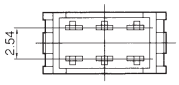
Space between terminal rows (Double pole): 2.54 mm

Fig.	Terminal style
2	PC Straight
5	Right angle (0.2 inch pitch)
6	Right angle (0.3 inch pitch)
7	Vertical mounting

Code	Actuator shape
M	Standard
F	Flat toggle

Fig.	Bracket
3	Without bracket

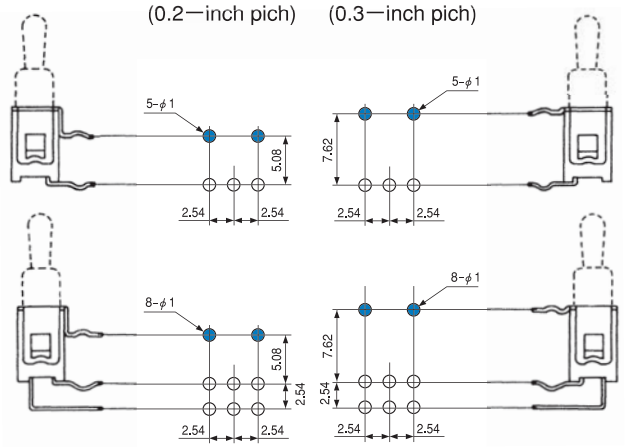




(ON) : Momentary.

ATE

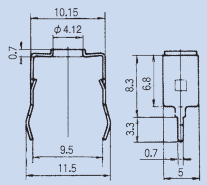
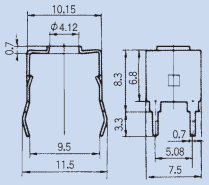
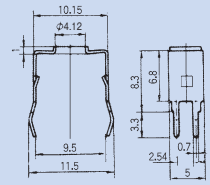
■Right Angle Terminals

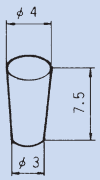


●The space between the terminal rows are available in two dimensions: 0.2 inches (5.08 mm) and 0.3 inches (7.62 mm).
[Example] 0.2-inch pitch: **ATE1D-5M3-10-Z**
0.3-inch pitch: **ATE1D-6M3-10-Z**

■Optional Accessories

Refer to P.371 for PC Hole Layouts.

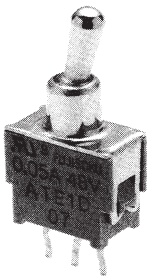
Part name	Bracket		
Poles	Single pole	Double poles	
Box size	5 mm	7.5 mm	5 mm
Type	ATE—2M・2F		
Dimensions			
Part number	140000640314	140000640315	140000640318

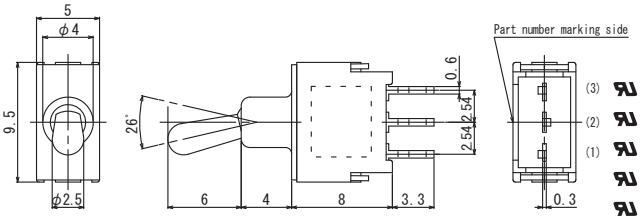
Type	ATE—2M・5M・6M・7M
Part name	Color Cap
Dimensions	Gloss finish  Vinyl chloride
White	140000470174
Red	140000470175
Black	140000470173
Gray	140000470179
Green	140000470177
Blue	140000470178
Orange	140000470181
Yellow	140000470176
Brown	140000470180

SPDT

PC Straight

Standard Toggle





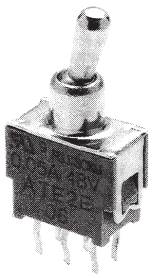
Terminal numbers are not shown on the switch.

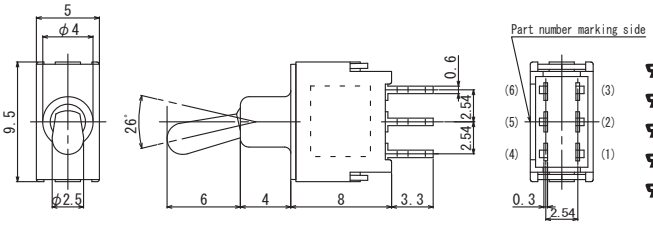
Switching function / Part No.	Viewed from part No. marking side		
ATE1D-2M3-10-Z	ON	—	ON
ATE1E-2M3-10-Z	ON	OFF	ON
ATE1F-2M3-10-Z	ON	—	(ON)
ATE1G-2M3-10-Z	(ON)	OFF	(ON)
☆ATE1H-2M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT

PC Straight

2.54mm/Distance between two terminal rows : 2.54mm





Terminal numbers are not shown on the switch.

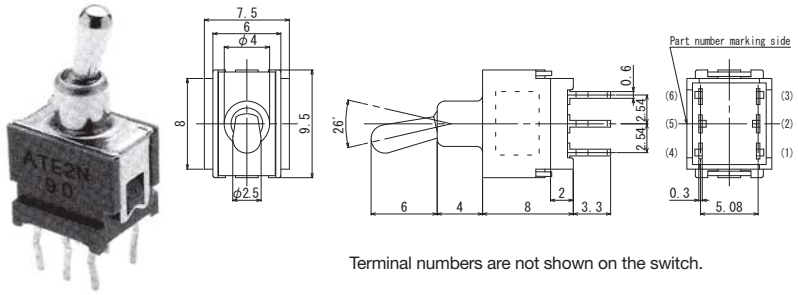
Switching function / Part No.	Viewed from part No. marking side		
ATE2D-2M3-10-Z	ON	—	ON
☆ATE2E-2M3-10-Z	ON	OFF	ON
★ATE2F-2M3-10-Z	ON	—	(ON)
☆ATE2G-2M3-10-Z	(ON)	OFF	(ON)
☆ATE2H-2M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

★ : Made to order products. ☆ : Semi-standard products. (ON) : Momentary. :Optional Accessories.

ATE

DPDT
(Space between terminal rows : 5.08 mm)

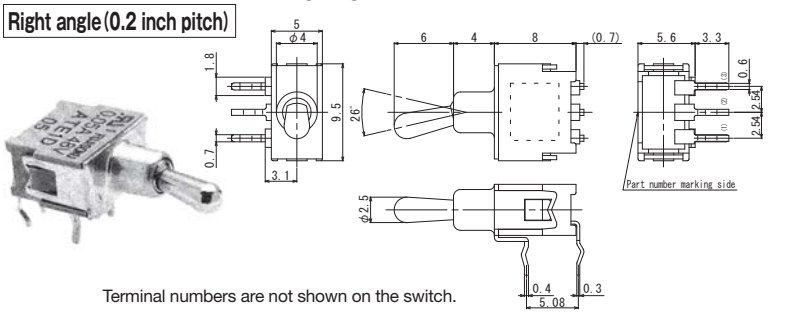
PC Straight



Part No. \ Switching function	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
(Mounting height : 3.1mm)

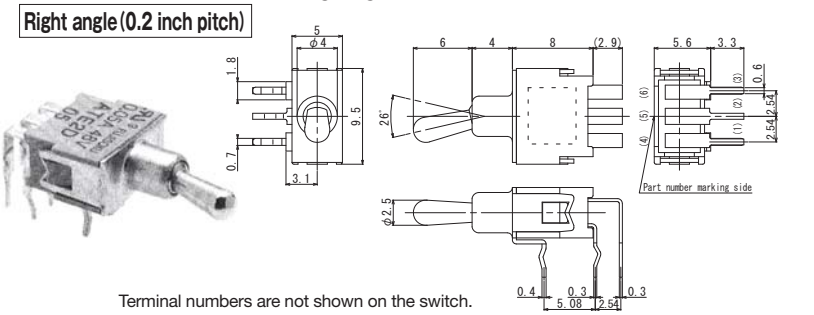
Right angle (0.2 inch pitch)



Part No. \ Switching function	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
(Mounting height : 3.1mm)

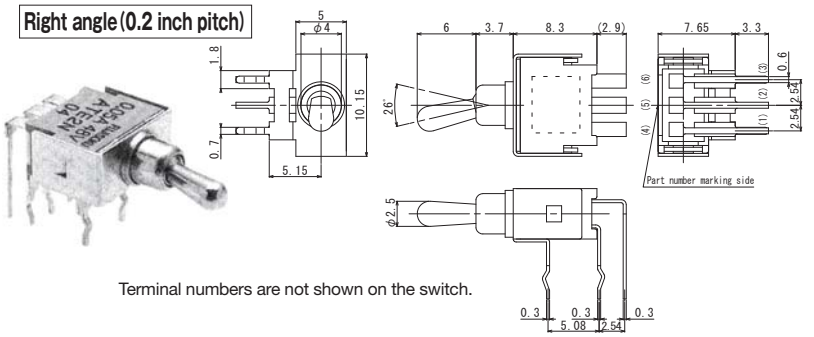
Right angle (0.2 inch pitch)



Part No. \ Switching function	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
(Mounting height : 5.15mm)

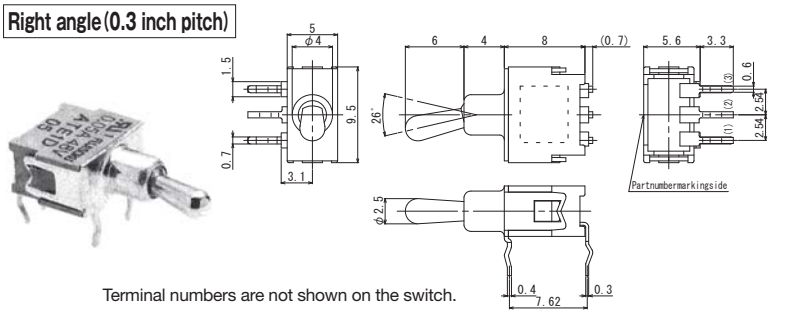
Right angle (0.2 inch pitch)



Part No. \ Switching function	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
(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



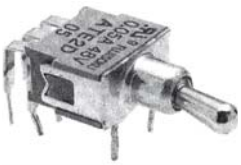
Part No. \ Switching function	Viewed from part No. marking side		
ATE1D-6M3-10-Z	ON	—	ON
ATE1E-6M3-10-Z	ON	OFF	ON
ATE1F-6M3-10-Z	ON	—	(ON)
☆ATE1G-6M3-10-Z	(ON)	OFF	(ON)
☆ATE1H-6M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

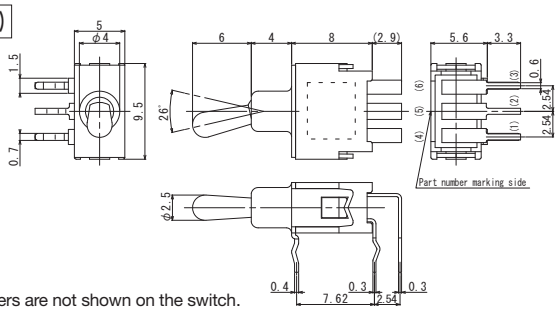
(ON) : Momentary. ▲ : Inquiry products. ☆ : Semi-standard products. ★ : Made to order products.

ATE

DPDT (Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



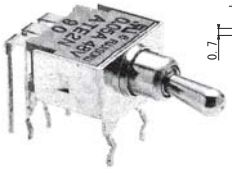


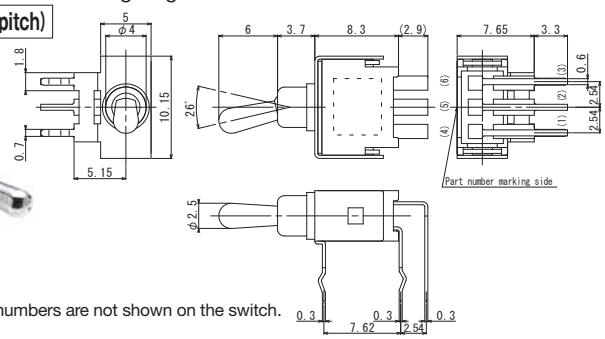
Terminal numbers are not shown on the switch.

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



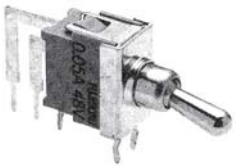


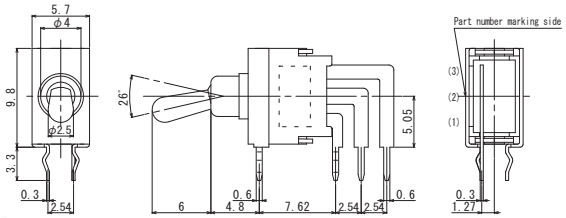
Terminal numbers are not shown on the switch.

Part No. \ Switching function	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



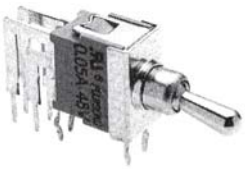


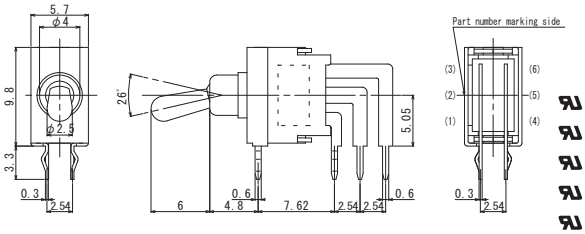
Terminal numbers are not shown on the switch.

Part No. \ Switching function	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





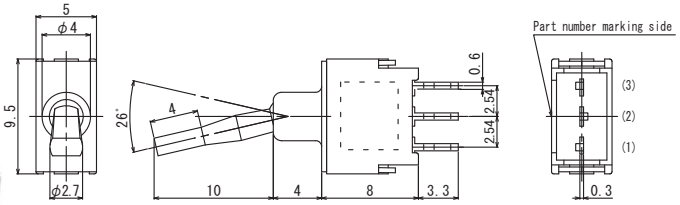
Terminal numbers are not shown on the switch.

Part No. \ Switching function	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.

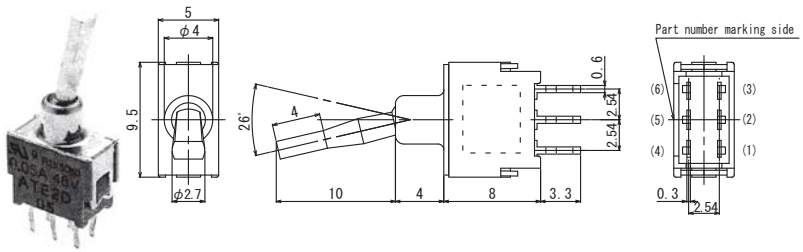
Part No. \ Switching function	Viewed from part No. marking side		
ATE1D-2F3-10-Z	ON	—	ON
ATE1E-2F3-10-Z	ON	OFF	ON
☆ATE1F-2F3-10-Z	ON	—	(ON)
★ATE1G-2F3-10-Z	(ON)	OFF	(ON)
★ATE1H-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

★ : Made to order products. ☆ : Semi-standard products. ▲ : Inquiry products. (ON) : Momentary.

ATE

DPDT
PC Straight

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

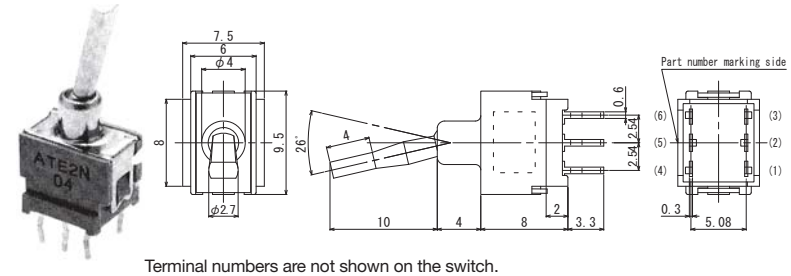


Terminal numbers are not shown on the switch.

Part No. \ Switching function	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)

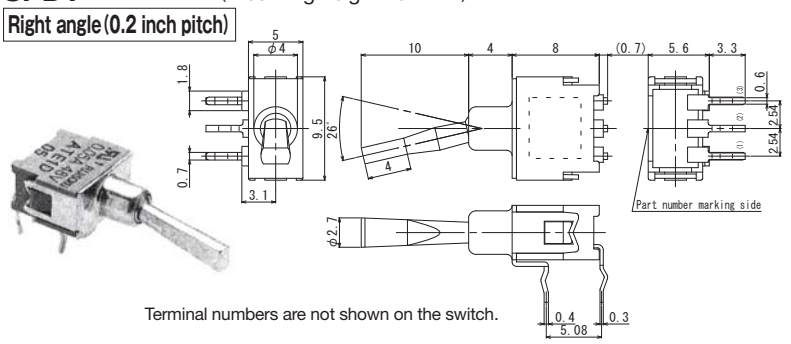


Terminal numbers are not shown on the switch.

Part No. \ Switching function	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)

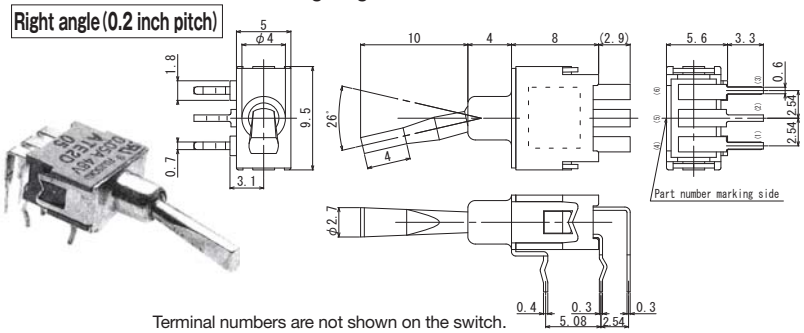


Terminal numbers are not shown on the switch.

Part No. \ Switching function	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)

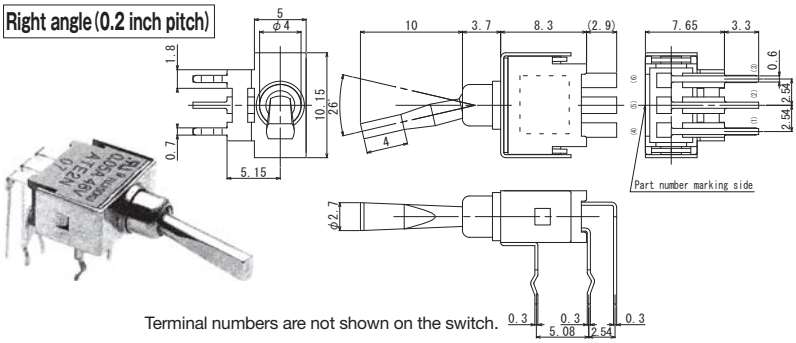


Terminal numbers are not shown on the switch.

Part No. \ Switching function	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.

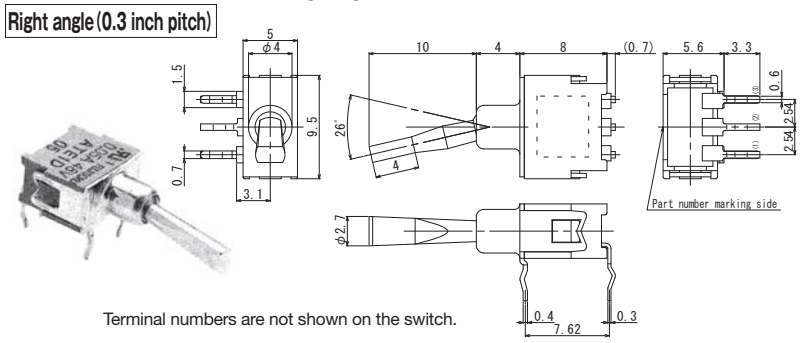
Part No. \ Switching function	Viewed from part No. marking side		
★ATE2N-5F3-10-Z	ON	—	ON
▲ATE2P-5F3-10-Z	ON	OFF	ON
▲ATE2R-5F3-10-Z	ON	—	(ON)
▲ATE2S-5F3-10-Z	(ON)	OFF	(ON)
▲ATE2T-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

(ON) : Momentary. ▲ : Inquiry products. ☆ : Semi-standard products. ★ : Made to order products.

ATE

SPDT (Mounting height : 3.1mm)

Right angle (0.3 inch pitch)

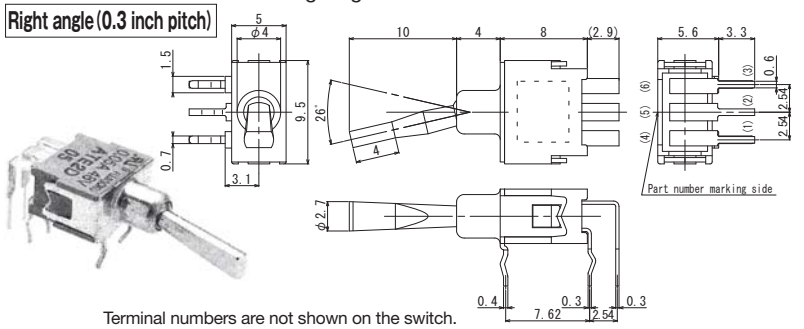


Terminal numbers are not shown on the switch.

Part No. \ Switching function	Viewed from part No. 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

DPDT (Mounting height : 3.1mm)

Right angle (0.3 inch pitch)

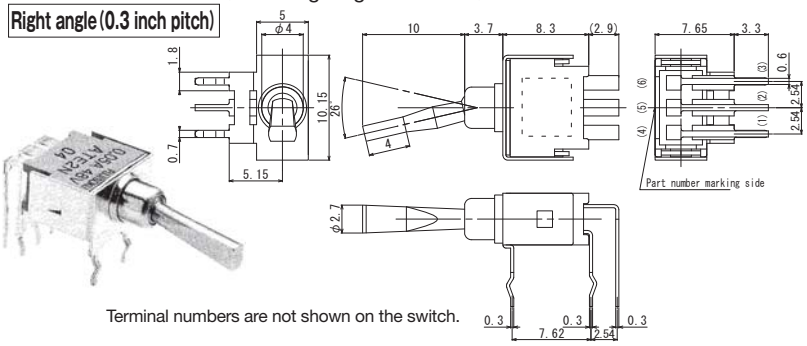


Terminal numbers are not shown on the switch.

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

DPDT (Mounting height : 5.15mm)

Right angle (0.3 inch pitch)

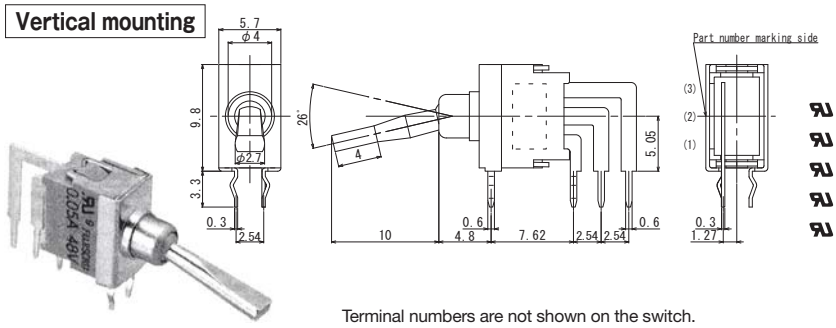


Terminal numbers are not shown on the switch.

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

SPDT

Vertical mounting

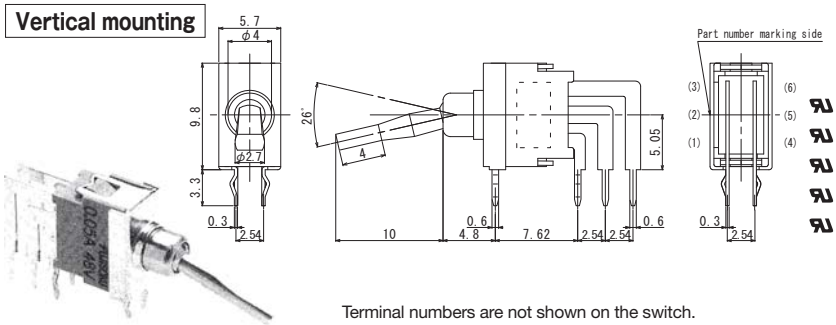


Terminal numbers are not shown on the switch.

Part No. \ Switching function	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

DPDT

Vertical mounting



Terminal numbers are not shown on the switch.

Part No. \ Switching function	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

★ : Made to order products. ☆ : Semi-standard products. (ON) : Momentary.

ATE-J（Plastic type）

■Part Numbering（Plastic cap•Rocker type）

A TE 2 D — 2 J 3 — 10 — Z

Series code | Actuator shape | Number of poles | Switching function | Terminal style | Actuator shape | Bracket style | Clip mechanism

Code	Type
TE	Toggle type

Fig.	Number of poles
1	1 pole
2	2 poles

Code	Switching function
D	ON — ON
E	ON－OFF－ON
F	ON — (ON)
G	(ON)－OFF－(ON)
H	ON－OFF－(ON)

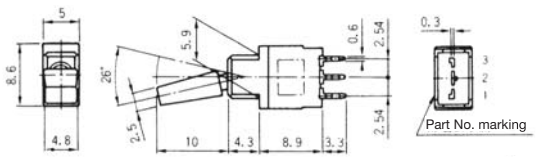
Space between terminal rows (Double pole): 2.54 mm
[5.08 mm is not available]

Fig.	Terminal style
2	P/C terminal
6	Right angle (0.3 inch pitch)
7	Vertical mounting

Code	Actuator shape
J	Plastic Knob type

Fig.	Bracket
3	Without bracket

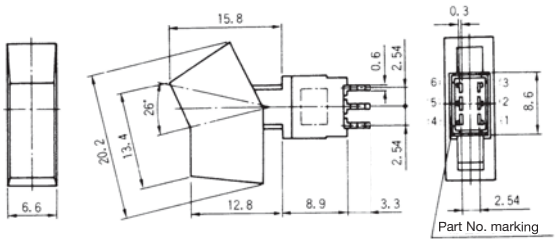
SPDT
PC Straight



(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
▲ATE1F-2J3-10-Z	ON	—	(ON)
▲ATE1G-2J3-10-Z	(ON)	OFF	(ON)
★ATE1H-2J3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

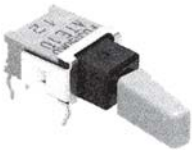
DPDT
PC Straight

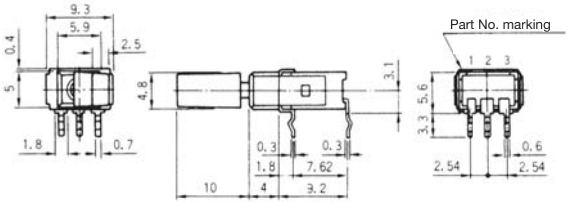


(Mount with **Rocker**)

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

SPDT
Right angle (0.3 inch pitch)

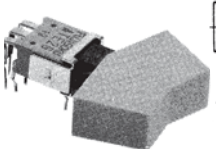


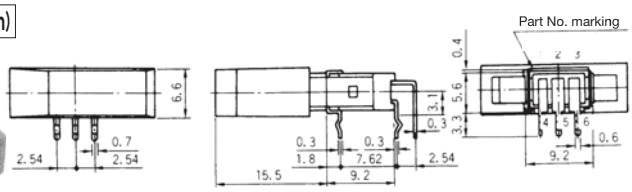


(Mount with **CAP**)

Part No. \ Switching function	Viewed from part No. marking side		
★ATE1D-6J3-10-Z	ON	—	ON
▲ATE1E-6J3-10-Z	ON	OFF	ON
▲ATE1F-6J3-10-Z	ON	—	(ON)
▲ATE1G-6J3-10-Z	(ON)	OFF	(ON)
▲ATE1H-6J3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT
Right angle (0.3 inch pitch)





(Mount with **Rocker**)

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

Notes:
- Install the cap/rocker accessory after soldering and cleaning.
- Specify the shape and coloring when ordering.
- Space between terminal rows: 5.08 mm is not available.

●**Color cap** and **Rocker** accessories are sold separately.

Terminal numbers are not shown on the switch.

(ON)：Momentary.
☆：Semi-standard products.

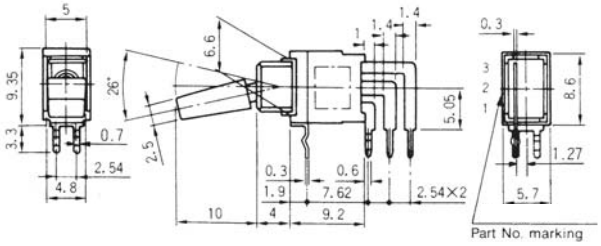
★：Made to order products.
▲：Inquiry products.

ATE—J

SPDT

Vertical mounting

(Mount with **CAP**)



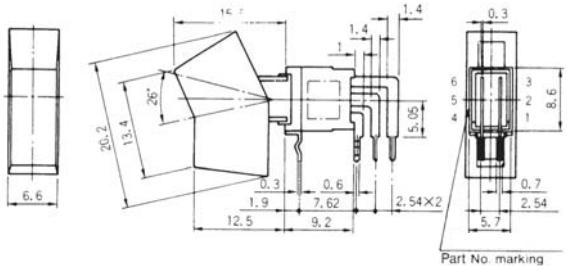
Terminal numbers are not shown on the switch.

Switching function / Part No.	Viewed from part No. marking side		
★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**)

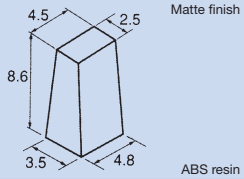
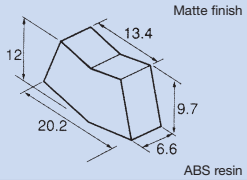


Terminal numbers are not shown on the switch.

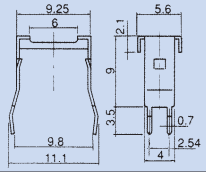
Switching function / Part No.	Viewed from part No. marking side		
▲ATE2D-7J3-10-Z	ON	—	ON
▲ATE2E-7J3-10-Z	ON	OFF	ON
▲ATE2F-7J3-10-Z	ON	—	(ON)
▲ATE2G-7J3-10-Z	(ON)	OFF	(ON)
▲ATE2H-7J3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

■Optional Accessories

《Sold separately》

Type	ATE—2J・6J・7J	ATE—2J・6J・7J
Part name	Color Cap	Rocker
Dimensions		
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	
Part number	140000640296

■Color Cap and Rocker Installation Procedure for ATE—J type

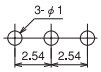
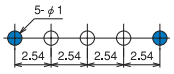
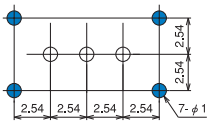
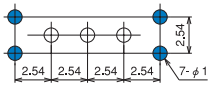
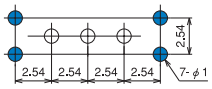
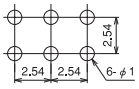
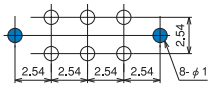
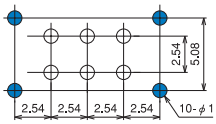
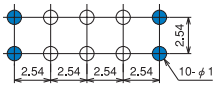
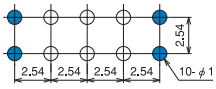
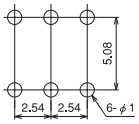
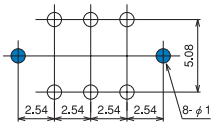
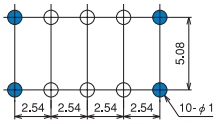
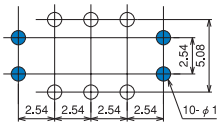
★：Made to order products. (ON)：Momentary. :Optional Accessories.

ATE

■PC Hole Layouts

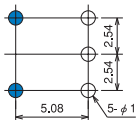
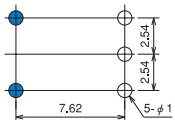
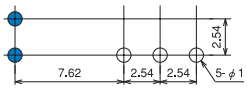
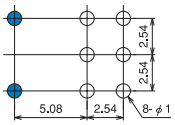
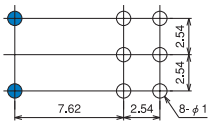
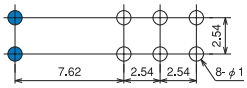
PC terminal

(Top voew)

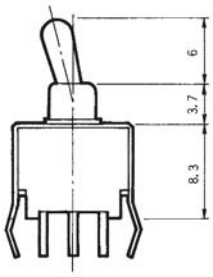
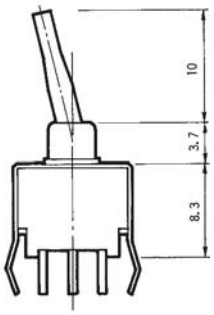
Series code	ATE—2M·2F·2J	ATE—2M·2F			ATE—2J
Installation	Whithout bracket	When optional bracket is used			
		140000640314	140000640315	140000640318	140000640296
1—pole					
2—poles 2.54mm /Tow terminal rows					
2—poles 5.08mm /Tow terminal rows					

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		

ATE

■Soldering Specifications

(1)Manual Soldering

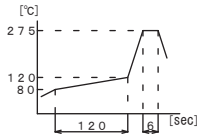
Device ： Soldering iron

380℃, Max.; 3 seconds, Max.

(2)Auto Soldering

Device ： Jet wave type or dip type

275℃, Max.; 6 seconds, Max.



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

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

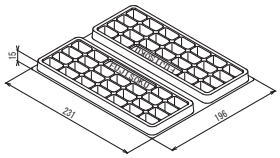
■Flux Cleaning

(1)Solvent : Fluorine or Alcohol type.

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

■Packaging Specifications

Plastick Pack

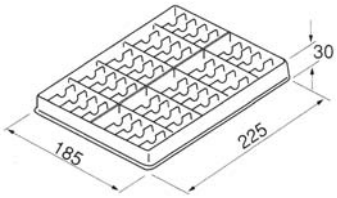


PC terminals
: 100 pcs/pack

Right angle terminals
: 50 pcs/pack

Plastick Pack

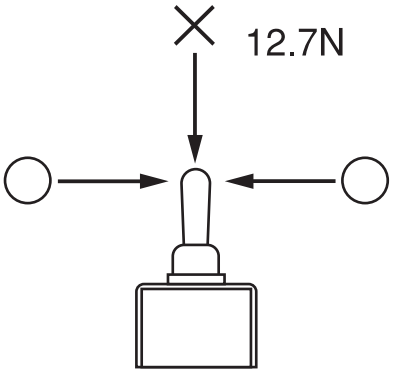
Vertical mounting terminals
100 pcs/pack



■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.