STANDARD TOGGLE SWITCHES ATE

■ FEATURES

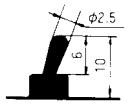
- **High Reliability**
  Twin-contact clip mechanism is used in the contact section to ensure reliability.
- **Washable Structure**
  All switches are of a completely sealed construction.
- **Ideal for Extremely Dry Circuit Applications**
  Gold-plated contacts make these switches ideal for use with extremely dry circuit applications.
- **Designed for PC Boards**
  Terminal pitches are all in inch size (multiples of 2.54 mm).
- **Quality Touch**
  Independent detent construction provides a light operating touch.
- **UL approved.**

RoHS compliant

■ SPECIFICATIONS

Rating	Max.	50mA 48VAC・DC
	Min.	1μA 20mVAC・DC
Initial contact resistance		50mΩMax (1.5mA 200 μVAC)
Dielectric strength		250VAC 1 minute
Insulation resistance		500MΩMin. (250VDC)
Electrical life		10,000 cycles at max. rating, 50,000 cycles at 0.4VAmax.(**D,E** type) 30,000 cycles at 0.4VAmax.(**F** type)
Operating temperature range		−20～+85℃
Storage temperature range		−40～+85℃

■ ACTUATOR SHAPE

Standard (**M**)


■ TYPE OF BUSHING AND BRACKET MOUNT

Fig.	Type of bushing	Shape
3	Unthreaded Bushing	

■ PART NUMBERING

A TE 2 D — 2 M 3 — 10 — Z

Series code | Structure | Number of poles | Switching function | Terminal style | Actuator shape | Bushing | 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)

Terminal line for double poles are 2.54mm(0.1")

Fig.	Terminal style
2	P/C terminal
5	Right angle (0.2 inch pitch)

Code	Actuator shape
M	Standard

Fig.	Bushing
3	Without bracket

■ TABLE OF PART NUMBERS

Number of poles	Switching function	P/C terminal	Right angle (0.2 inch pitch)
1	ON - ON	ATE1D-2M3-10-Z	ATE1D-5M3-10-Z
	ON - OFF - ON	ATE1E-2M3-10-Z	ATE1E-5M3-10-Z
	ON - (ON)	ATE1F-2M3-10-Z	ATE1F-5M3-10-Z
2	ON - ON	ATE2D-2M3-10-Z	ATE2D-5M3-10-Z
	ON - OFF - ON	ATE2E-2M3-10-Z	ATE2E-5M3-10-Z
	ON - (ON)	★ATE2F-2M3-10-Z	ATE2F-5M3-10-Z

★ : Made-to-order items.

※Please contact us if you can't find your preferable combination in the table of part numbers.

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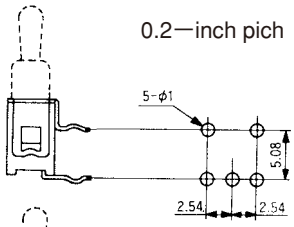
ATE
STANDARD TOGGLE SWITCHES

■ RIGHT ANGLE TERMINALS

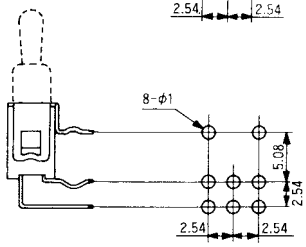
● The pitch between terminals and PC support is as the sketch below.
Examples: 0.2 inch pitch ATE1D–5M3–10

0.2—inch pich

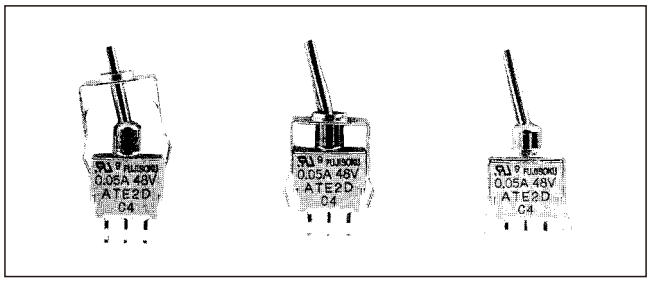
1—pole



2—pole



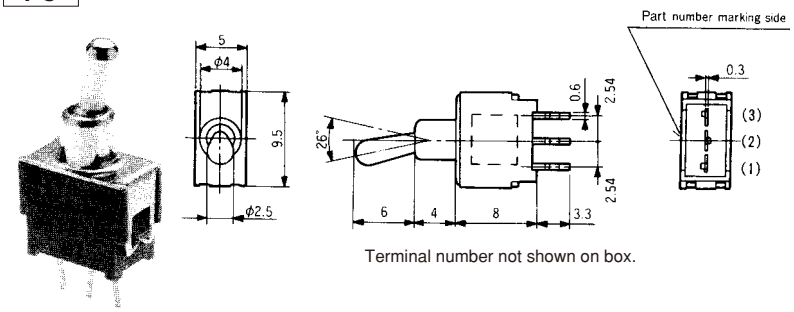
■ BRACKET INSTALLATION PROCEDURE



■ OUTLINE DIMENSIONS

SPDT

PC

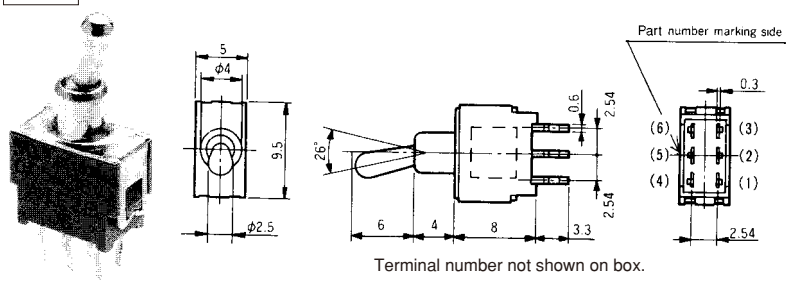


Terminal number not shown on box.

Part No. \ Switching function	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)
Connecting terminals	2—3	—	2—1

DPDT

PC



Terminal number not shown on box.

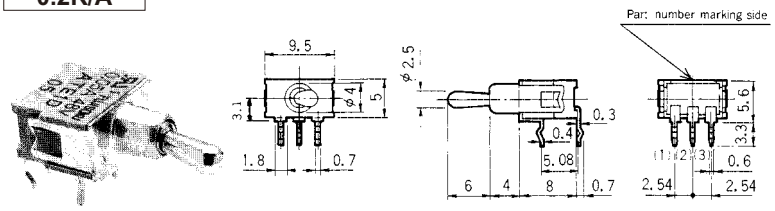
Part No. \ Switching function	Viewed from part No. marking side		
ATE2D-2M3-10-Z	ON	—	ON
ATE2E-2M3-10-Z	ON	OFF	ON
★ATE2F-2M3-10-Z	ON	—	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

(ON) : Momentary.
★ : Made-to-order items.

ATE
STANDARD TOGGLE SWITCHES

■ OUTLINE DIMENSIONS

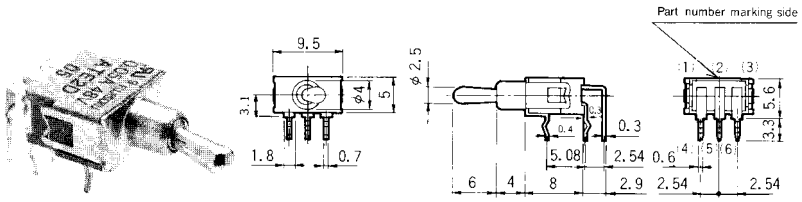
SPDT
0.2R/A



Terminal number not shown on box.

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)
Connecting terminals	2—3	—	2—1

DPDT
0.2R/A

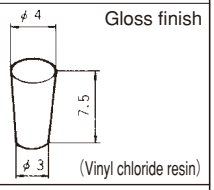


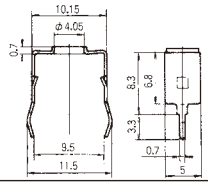
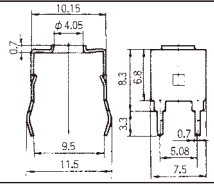
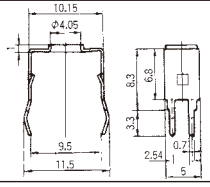
Terminal number not shown on box.

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)
Connecting terminals	2—3 5—6	—	2—1 5—4

(ON) : Momentary.
☆ : Quasi-standard items.
★ : Made-to-order items.

■ OPTIONAL ACCESSORIES

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

Type	ATE—2M		
Part name	Bracket		
Dimensions			
Part number	140000640314	140000640315	140000640318

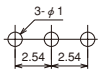
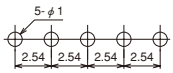
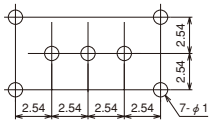
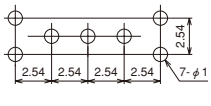
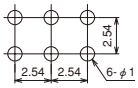
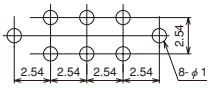
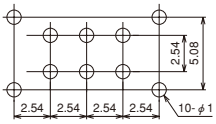
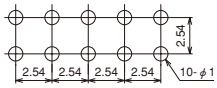
● When using **Bracket,** pay attention to the printed circuit board hole dimensions which differ according to type of bracket.

ATE
STANDARD TOGGLE SWITCHES

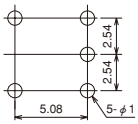
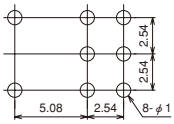
■ PC HOLE LAYOUTS

PC terminal

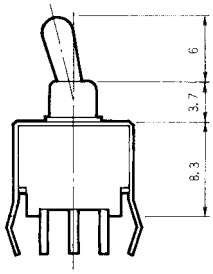
(Top view)

Series	ATE−2M	ATE−2M		
Installation	Without bracket	When optional bracket is used		
		140000640314	140000640315	140000640318
1−pole				
2−pole Tow terminal rows 2.54mm				

Right Angle terminal・Vertical Mount terminal (Top view)

Series	ATE−5M・5F
Terminal	0.2−inch pitch
1−pole	
2−pole	

■ BRACKET MOUNTED DIMENSIONS

Type	ATE−2M
	Standard
Dimensions	

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ATE
STANDARD TOGGLE SWITCHES

■ SOLDERING

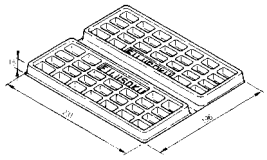
(1) Hand soldering
Device : Solder iron
380 °C Max. 3 sec. Max.
(2) Auto soldering
Device : Wave or dip type
275 °C Max. 6 sec. Max.
● Preheat should be within 80-120 °C, 120sec.

■ FLUX CLEANING

(1) Solvent : Fluorine or Alcohol type.
(2) Cleaning shall be made when terminal temperature falls to 90 °C or lower. Or, leave the switch at normal temperature for 5 minutes or longer, before cleaning.

■ PACKAGING SPECIFICATIONS

Plastick Pack

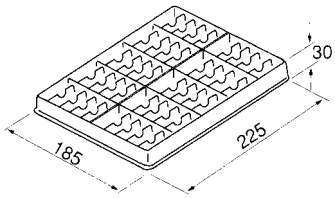


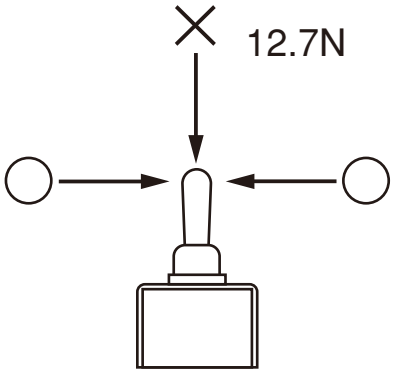
PC terminals
: 100 pcs/pack

Right—angle terinals
: 50 pcs/pack

Plastick Pack

Vertical mounting terminals
100 pcs/pack



■ INSTALLATION

● Use printed circuit boards with 1 mm diameter holes.
● Do not bend the terminals prior to installation to PC Board.
● Following the switch installation, avoid placing the device in a position where its weight will be placed on the switch actuator, etc.
● Do not apply a load exceeding 12.7N to the actuator.
Use Bracket (option) when a force exceeding 12.7N is to be applied to the actuator.