

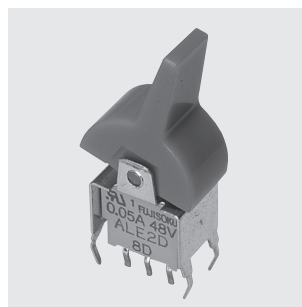
ALE

Washable

RoHS Compliant

Standard Lever & Rocker Switches

UL



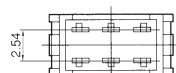
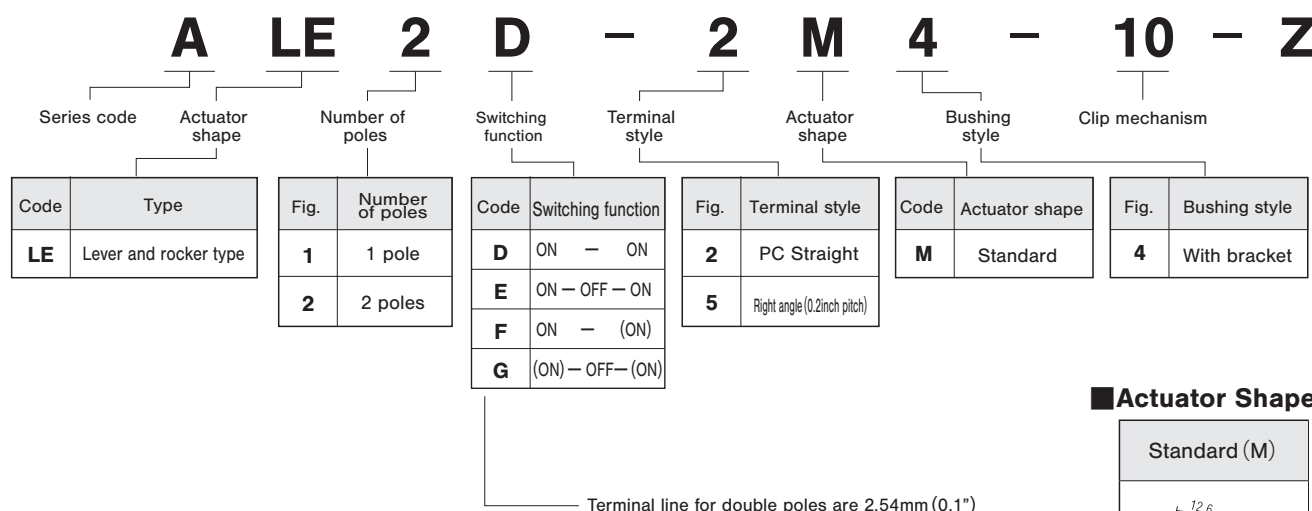
■ Features

- High reliability**
The twin-contact clip mechanism is employed for the contact section to ensure high reliability.
- Process sealed structure**
All types of the switch feature the completely sealed structure.
- Designed for dry circuit applications**
Since the contacts are gold-plated, the switches are best suited for use in the dry circuit areas.
- Designed for PC board applications**
The terminal pitches are all in inch size (2.54 mm).
- Improved operability**
The independent detent structure provides a light operating touch.
- All models are of UL approved type.

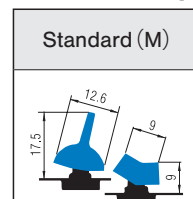
■ Specifications

Rating	Max : 0.4 VA (60 VAC/DC 50 mA) Min:1μA 20 mVAC/DC UL:48 VAC/DC 50 mA
Initial contact resistance	50 mΩ max. (1.5 mA 200 μVAC)
Dielectric strength	250 VAC 1 minute
Insulation resistance	500 MΩ min. (500 VDC)
Electrical life	10,000 cycles at maximum rating 50,000 cycles at 0.4 VA min. (D,E type) 30,000 cycles at 0.4 VA min. (F,G type)
Operating temperature range	-20~+85°C
Storage temperature range	-40~+85°C

■ Part Numbering



■ Actuator Shape



Note : Some model names may not be registered. Please refer to the product list for this series.

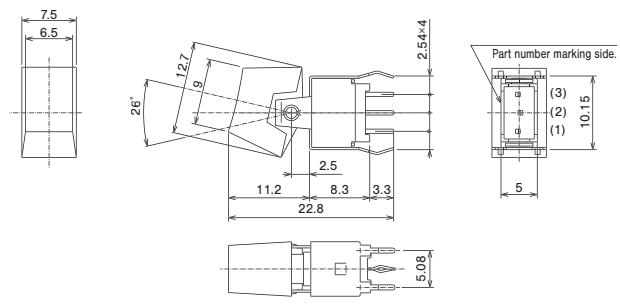
ALE

SPDT

PC Straight



(Mount with Rocker)



Terminal numbers are not shown on the bottom of the switch.

Switching function	Viewed from part No. and rating marking side		
Part No.			
UL ALE1D-2M4-10-Z	ON	—	ON
UL ☆ALE1E-2M4-10-Z	ON	OFF	ON
UL ☆ALE1F-2M4-10-Z	ON	—	(ON)
UL ☆ALE1G-2M4-10-Z	(ON)	OFF	(ON)
Connecting terminals	2-3	—	2-1

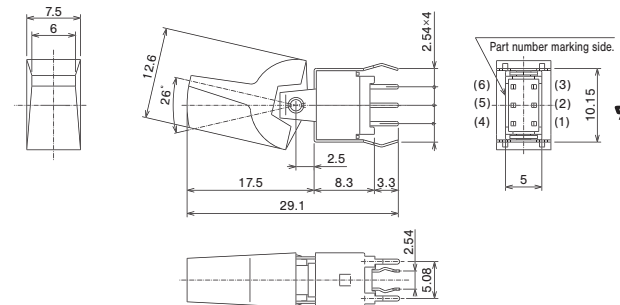
DPDT

PC Straight



(Mount with Lever)

Distance between two terminal rows : 2.54 mm

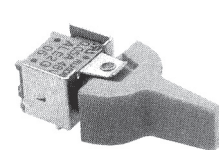


Terminal numbers are not shown on the bottom of the switch.

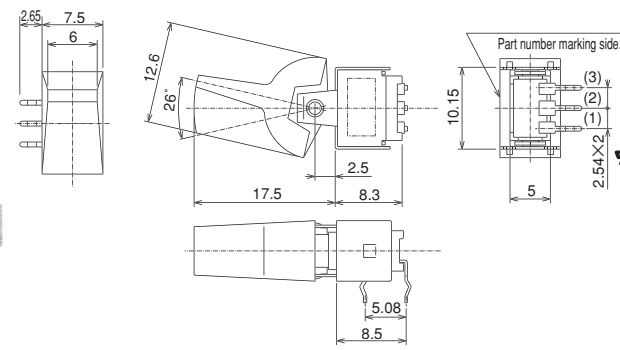
Switching function	Viewed from part No. marking side		
Part No.			
UL ☆ALE2D-2M4-10-Z	ON	—	ON
Connecting terminals	2-3 5-6	—	2-1 5-4

SPDT

0.2R/A



(Mount with Lever)

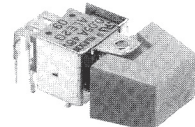


Terminal numbers are not shown on the bottom of the switch.

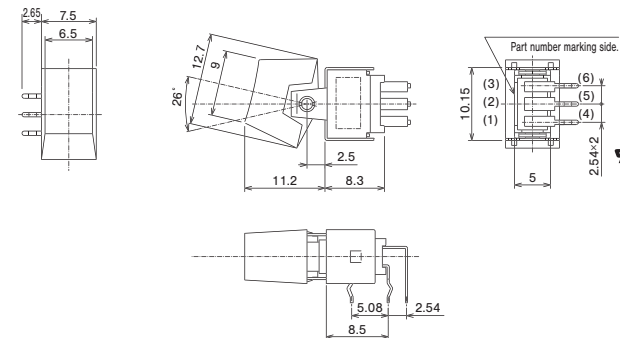
Switching function	Viewed from part No. marking side		
Part No.			
UL ☆ALE1D-5M4-10-Z	ON	—	ON
Connecting terminals	2-3	—	2-1

DPDT

0.2R/A



(Mount with Rocker)



Terminal numbers are not shown on the bottom of the switch.

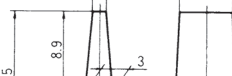
Switching function	Viewed from part No. marking side		
Part No.			
UL ☆ALE2D-5M4-10-Z	ON	—	ON
Connecting terminals	2-3 5-6	—	2-1 5-4

Table of Part Numbers and UL listed

Poles	Part number	Switching function	UL (※1)
1 pole	ALE1D-2M4-10-Z	ON — ON	
	ALE1D-5M4-10-Z		
	ALE1E-2M4-10-Z	ON —OFF— ON	
	ALE1F-2M4-10-Z	ON — (ON)	
	ALE1G-2M4-10-Z	(ON) —OFF— (ON)	
2 poles	ALE2D-2M4-10-Z	ON — ON	
	ALE2D-5M4-10-Z		

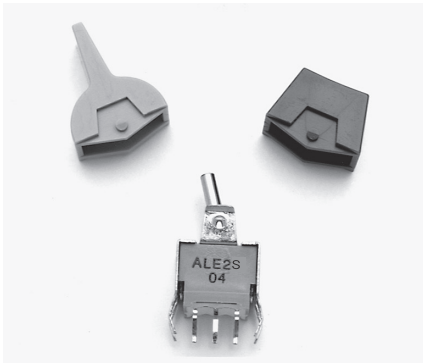
(※1) UL File No. E43275

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

Lever			Rocker		
Dimension	Color	Part No.	Dimensions	Color	Part No.
 ABS resin	White	140000050624	 ABS resin	White	140000480673
	Red	140000050626		Red	140000480675
	Black	140000050625		Black	140000480674
	Gray	140000050630			

The lever and the rocker are standard accessories. Specify either of the lever or the rocker in part number.

■ Lever or rocker Installation procedure



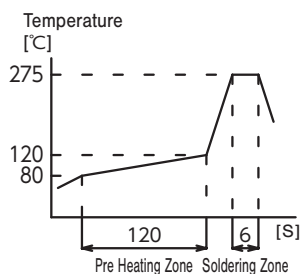
Mount the lever or the rocker after cleaning.

■ PC Hole Layouts (Top view)

PC Straight	1-pole (Compact type)	
	2-poles (Compact type)	
Right angle terminal	1-pole (Compact type)	
	2-poles (Compact type)	

■ 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.
Note: Mount the accessories of knob and lever after the soldering.

■ Flux Cleaning

- (1) For the solvent, use the fluorine- or alcohol-based solvent.
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 Specification

