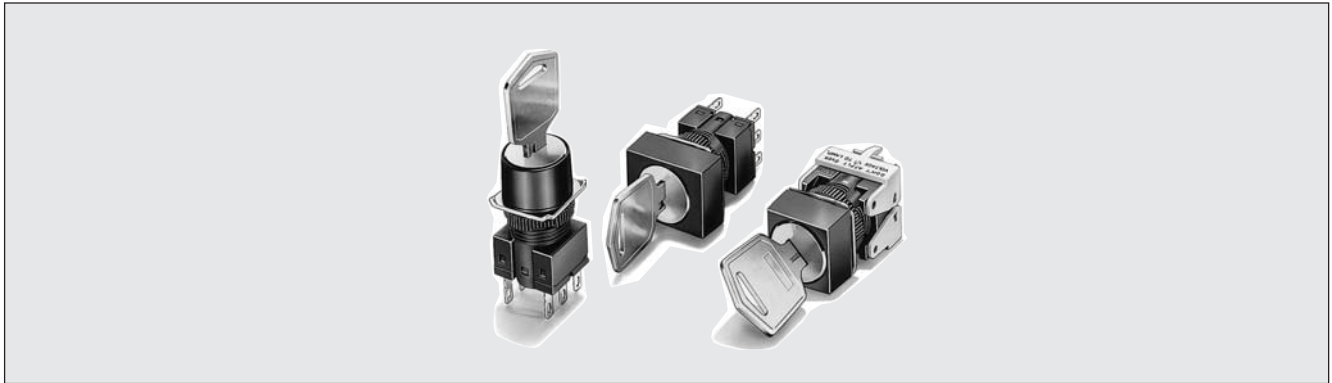


■ Key Selector Switch (Separate Type)



■ Separate Unit Type, Cylindrical $\phi 16$ Series

- Separable structure of the short body in 28.5mm depth, same as the K6 Series Pushbutton Switches.
- Applicable both to general load switching and mill-ampere load switching.
- IP65 Oil resistant type.

● Structure

Operation section

- Flange shape
Round (KL1K)



- Square (KL2K)

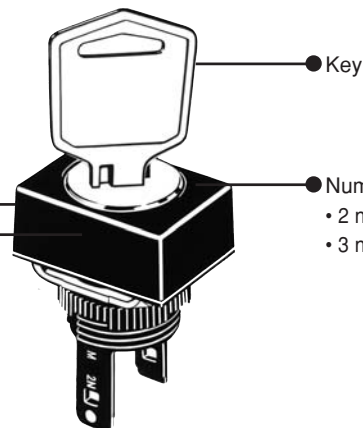


- Rectangular (KL3K)



- Protection degree
IP65 Oil resistant

- Kind of terminal
Soldering terminal
PCB terminal



- Number of notches: Resetting methods
 - 2 notches: Manual reset, automatic reset
 - 3 notches: Manual reset, automatic reset

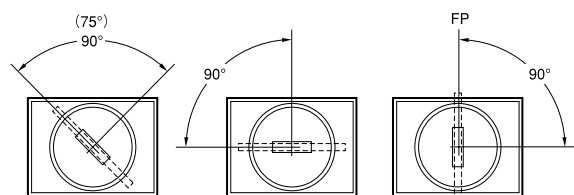
Socket section

- Specifications
125V AC, 5A
250V AC, 3A
30V DC, 3A

Minimum applicable load
5V DC, 1mA

With the flange rotation methods, the knob operation angle is made easily changeable.

<Example with 2-notch type of the Knob Selector Switch>



(Factory shipment)

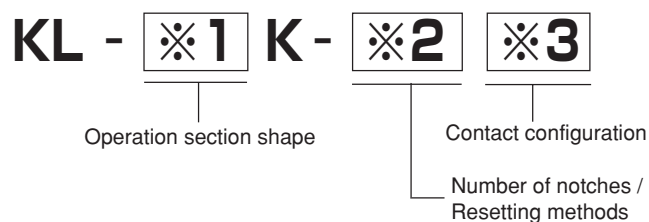
Note: (75°) for the automatic reset type.

Product Models

	Shape		
	Round	Square	Rectangular
Soldering terminal	 KL1K Series	 KL2K Series	 KL3K Series
PCB terminal			

■ **Set Model ...** (Operation section + Socket section) and (Two keys) combined can be delivered in a set.

Model Designation



※1 Operation section shape

Code	Shape	Color
1	Round	Black
2	Square	
3	Rectangular	

※2 Number of notches / Resetting methods

Code	Number of Notches	Resetting Methods	Position for Key Release
2ML	2 notches	Manual	Left
2MR			Right
2M			Left and right
2AL	3 notches	Automatic	Left
3MC		Manual	Center
3MR			Right
3ML			Left
3M			Left, center and right

※3 Contact configuration

Code	Contact	Terminal
1	1C	PCB terminal
2	2C	

B-input: Contact configuration

Code	Contact	Terminal
1P	1C	PCB terminal
2S	2C	
2LS	2C	quick connector

- Only 2c contacts are available with the 2-notch type and quick connector.
- The PCB terminals are available with the 2-notch type only.
- Enquire to our representative about the prices and delivery.

■ **Set Model...** (Operation section + Socket section assembly) and (Two keys) combined can be delivered in a set.

● **Soldering terminal**

▼ **Round**

IP 65 Oil resistant



(KL1K)

Number of Notches	Number of Outputs	Resetting Methods	Position for Key Release	Model
2 notches	1c	Manual	Left	KL1K-2ML1
			Right	KL1K-2MR1
			Left and right	KL1K-2M1
	2c	Automatic	Left	KL1K-2AL1
			Right	KL1K-2ML2
			Left and right	KL1K-2MR2
3 notches	2c	Manual	Left	KL1K-2M2
			Left	KL1K-2AL2
			Center	KL1K-3MC2
			Right	KL1K-3MR2
		Automatic	Left	KL1K-3ML2
			Left, center and right	KL1K-3M2

▼ **Square**

IP 65 Oil resistant



(KL2K)

Number of Notches	Number of Outputs	Resetting Methods	Position for Key Release	Model
2 notches	1c	Manual	Left	KL2K-2ML1
			Right	KL2K-2MR1
			Left and right	KL2K-2M1
	2c	Automatic	Left	KL2K-2AL1
			Right	KL2K-2ML2
			Left and right	KL2K-2MR2
3 notches	2c	Manual	Left	KL2K-2M2
			Left	KL2K-2AL2
			Center	KL2K-3MC2
			Right	KL2K-3MR2
		Automatic	Left	KL2K-3ML2
			Left, center and right	KL2K-3M2

▼ **Rectangular**

IP 65 Oil resistant



(KL3K)

Number of Notches	Number of Outputs	Resetting Methods	Position for Key Release	Model
2 notches	1c	Manual	Left	KL3K-2ML1
			Right	KL3K-2MR1
			Left and right	KL3K-2M1
	2c	Automatic	Left	KL3K-2AL1
			Right	KL3K-2ML2
			Left and right	KL3K-2MR2
3 notches	2c	Manual	Left	KL3K-2M2
			Left	KL3K-2AL2
			Center	KL3K-3MC2
			Right	KL3K-3MR2
		Automatic	Left	KL3K-3ML2
			Left, center and right	KL3K-3M2

Approved Safety Standards

• UL, cUL (File No. E223434)

5A 125V AC, 3A 250V AC (General Use)
3A 30V DC (Resistive)

Ratings

• Switches

Rated Voltage (V)	Resistive Load (A)
125 AC	5
250 AC	3
30 DC	3

Minimum applicable load: 1mA at 5V DC

The test conditions are as follows.

- (1) Load: Resistive
- (2) Physical states: No vibration or no shock applied.
- (3) Ambient temperature: 20° ±2°C
- (4) Operation frequency: 20 times/minute

• LED Lamps

Name	Contact Type
Double throw (c-contact)	

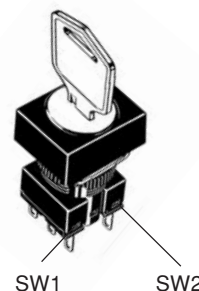
Specifications

• Switch section

Item Category		Pushbutton Switch
Allowable Operation Frequency	Mechanical	Max. 20 times/minute
	Electrical	Max. 10 times/minute
Insulation Resistance		100MΩ or more (by 500V DC megohmmeter)
Withstand Voltage	Between Same Polarities	1000V AC, 50/60Hz, 1 minute
	Between Opposite Polarities	2000V AC, 50/60Hz, 1 minute
	Each terminal - Ground	2000V AC, 50/60Hz, 1 minute
Vibration	Malfunctioning	Double amplitude 1.5mm, 10 ~ 55Hz (Malfunctioning within 1ms)
Shock Resistance	Permanence	500m/s ²
	Malfunctioning	Max. 150m/s ² (Malfunctioning within 1ms)
Life Duration	Mechanical	250 thousand times or more (Fit-pull frequency of key: 10 thousand times or more)
	Electrical	100 thousand times or more
Protection Class against Electrical Shock		Class II
PTI (Tracking Characteristics)		175
Degree of Contamination		3 (IEC947-5-1)
Weight		Approx. 26.5g (With one 2c key)
Operating Ambient Temperature		-10 ~ +55°C (No freezing or condensation)
Operating Ambient Humidity		35 ~ 85%RH
Storage Ambient Temperature		-25 ~ +65°C (No freezing or condensation)

• Quick connector section

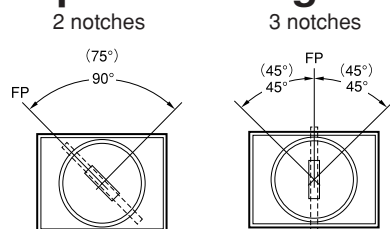
Item Category		Quick Connector		
Recommended Wire		Stranded wire 0.5mm ² or single wire ϕ 0.8mm		
Applicable Wire and Breaking Strength	Stranded Wire	0.3mm ²	0.5mm ²	0.75mm ²
	Single Wire	ϕ 0.5mm	ϕ 0.8mm	ϕ 1.0mm
	Strength	10N	20N	30N
Removing Length of Insulation		10±1mm		
Standards Conformity		JIS C 2811 Industrial Terminal Block		



Operational Characteristics

Features Category	Knob / Key Selector Switch	
	2 Notches	3Notches
Maximum Operating Force OF	0.1N·m	
Set Position SP	90 ±5°	45 ⁺¹⁰ ₀

Operation Angle



Note: In () shows the angle used for automatic reset type.

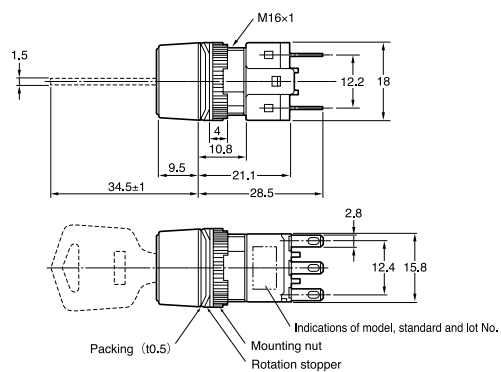
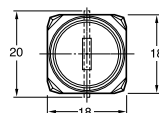
FP: Free position

Contact Configuration

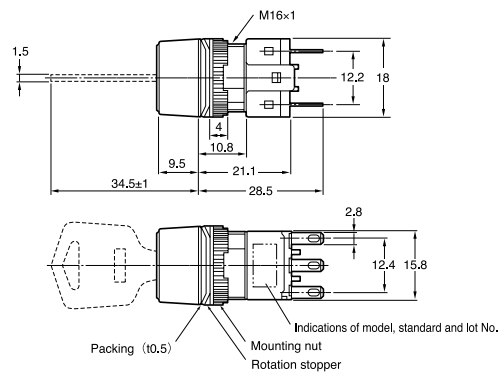
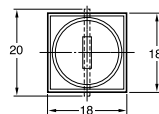
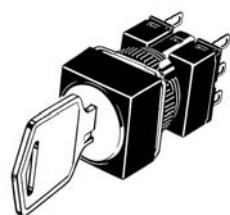
Number of Notches	Contact Configuration				
	1c		2c		
	Position	SW	Position	SW1	SW2
2 Notches					
3 Notches					

■ Dimensions

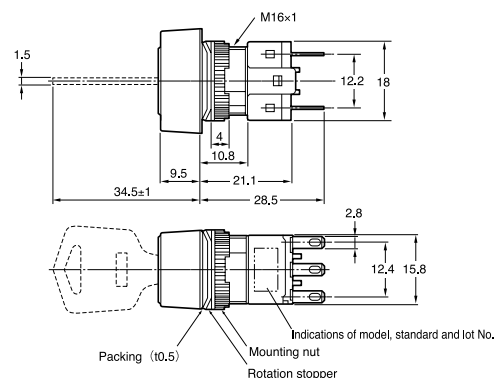
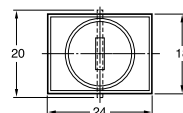
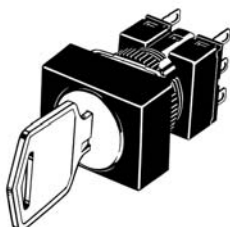
▼ Round / KL1K
Soldering terminal / Tab terminal #110



▼ Square / KL2K
Soldering terminal / Tab terminal #110

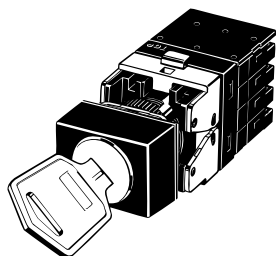


▼ Rectangular / KL3K
Soldering terminal / Tab terminal #110

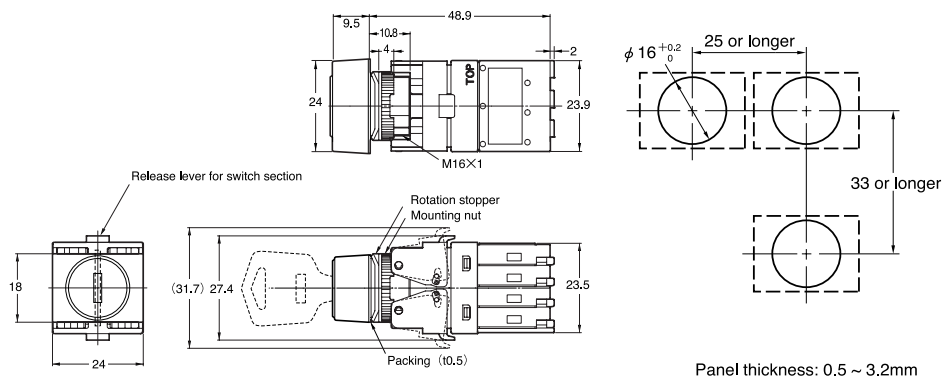


■ Dimensions

▼ Rectangular Quick Connector



The description is an example for the typical rectangular type switch.



■ Terminal Arrangement

Refer to pages 4-12 for the terminal arrangement.