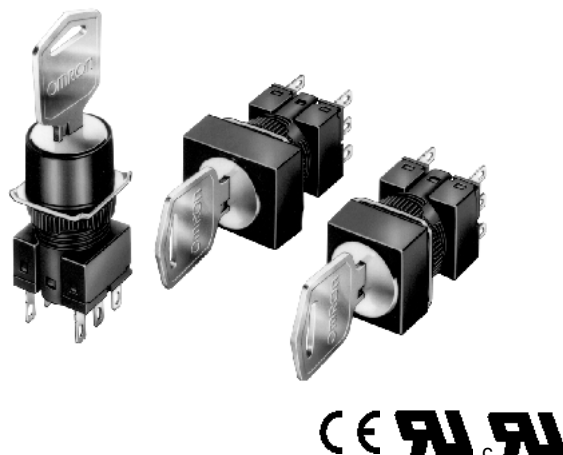


Key-Type Selector Switch

A165K

Mounting Aperture of 16 mm

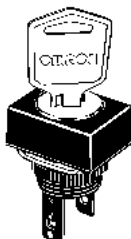
- Tool-free installation
- 2-piece construction
- Oil-resistant IP65 models
- Short mounting depth, less than 28.5 mm below panel
- Wide range of switching capacity from general to microload
- Maintained and spring return models available
- UL and CSA approved, VDE (pending)
- Conforms to EN60947-5-1, IEC947-5-1



Ordering Information

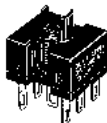
■ CONSTRUCTION

Flange Shape



Protective Case and Terminal Type

- **Protective Structure**
Oil-resistant IP65
- **Terminal Type**
Solder terminals
(tab terminals #110)



Key Types

- Four key types are available in addition to the standard key.

Number of positions and Reset Method

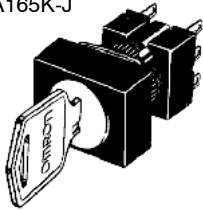
- **2 positions**
Maintained
Spring Return
- **3 positions**
Maintained
Spring Return

Switch Unit Specifications

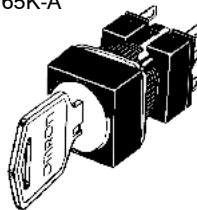
- **General-purpose Loads**
125 VAC: 5 A
250 VAC: 3 A
30 VDC 3 A
Minimum applicable load: 1 mA at 5 VDC

■ PART NUMBER NOMENCLATURE A165K ASSEMBLED KEY-TYPE SELECTOR SWITCH (COMPLETE ASSEMBLY)

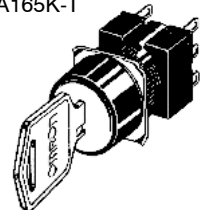
A165K-J



A165K-A



A165K-T



A165K-12345

1 Flange Shape

Code	Shape
T	Round
A	Square
J	Rectangular

4 Key Release Position

Code	Position
None	All
C	Center
R	Right
L	Left

2 Number of Positions

Code	Description
2	2 Position
3	3 Position

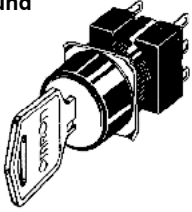
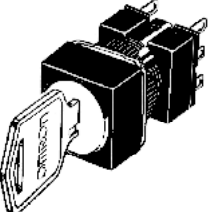
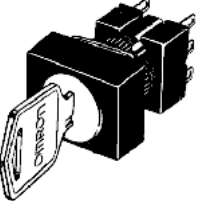
5 Contacts

Code	Description
1	SPDT
2	DPDT

3 Reset Method


Code	Description
M	Maintained
A	Spring returned

■ PART NUMBERS: NON-ILLUMINATED KEY-TYPE SELECTOR SWITCH (COMPLETE ASSEMBLY)



Shape	Number of positions	Contact	Reset method	Key release position	Part number
Round 	2 positions	SPDT	Maintained	Left	A165K-T2ML-1
				Right	A165K-T2MR-1
				All	A165K-T2M-1
		DPDT	Maintained	Left	A165K-T2AL-1
				Right	A165K-T2MR-2
				All	A165K-T2M-2
	3 positions	DPDT	Maintained	Left	A165K-T2AL-2
				Right	A165K-T2MR-2
				All	A165K-T2M-2
				Left	A165K-T3ML-2
				Right	A165K-T3MR-2
				All	A165K-T3M-2
Square 	2 positions	SPDT	Maintained	Left	A165K-A2ML-1
				Right	A165K-A2MR-1
				All	A165K-A2M-1
		DPDT	Maintained	Left	A165K-A2AL-1
				Right	A165K-A3MR-2
				All	A165K-A2M-2
	3 positions	DPDT	Maintained	Left	A165K-A2AL-2
				Right	A165K-A3MR-2
				All	A165K-A3M-2
				Center	A165K-A3MC-2
				Left	A165K-A3ML-2
				Right	A165K-A3MR-2
Rectangular 	2 positions	SPDT	Maintained	Left	A165K-J2ML-1
				Right	A165K-J2MR-1
				All	A165K-J2M-1
		DPDT	Maintained	Left	A165K-J2AL-1
				Right	A165K-J2MR-2
				All	A165K-J2M-2
	3 positions	DPDT	Maintained	Left	A165K-J2AL-2
				Right	A165K-J2MR-2
				All	A165K-J2M-2
				Center	A165K-J3MC-2
				Left	A165K-J3ML-2
				Right	A165K-J3MR-2

Accessories (Order Separately)_____

■ PANEL PLUGS

Shape	Classification	Remarks	Part number
	Rectangular	Used for covering the panel cutouts for future panel expansion.	A3BJ-3003
	Square		A3BA-3003
	Round		A3BT-3003

■ TOOLS

Name	Shape	Applicable types					Remarks	Part number
		Pushbutton Switch	Knob-type Selector Switch	Key-type Selector Switch	Emergency Stop Switch	Indicator		
Screw fitting		Yes	Yes	Yes	Yes	Yes	Convenient for ganged installation. Tighten to a torque of 0.39 N • m (5 kgf • cm) min.	A3B-3004
Extractor		Yes	Yes	Yes	Yes	Yes	Convenient for extracting the Switch Unit and Lamps.	A16Z-5080

Specifications

■ APPROVED STANDARDS

UL, cUL (File No. E41515)

5 A at 125 VAC, 3 A at 250 VAC (general use)

3 A at 30 VDC (resistive)

EN60947-5-1 (Low Voltage Directive)

■ RATINGS

AC resistive load	DC resistive load
3 A, 250 VAC 5 A, 125 VAC	3 A, 30 VDC

Minimum applicable load: 1 mA at 5 VDC

Rated values are obtained from tests conducted under the following conditions according to JIS C4505 and C4520.

1. Load: Resistive load
2. Mounting conditions: No vibration and no shock
3. Temperature: 20°±2°C
4. Operating frequency: 20 times/min

■ CONTACT

Name	Contact
SPDT	

■ CHARACTERISTICS

Item		Key-type Selector Switch
Allowable operating frequency	Mechanical	20 operations/min max.
	Electrical	10 operations/min max.
Insulation resistance		100 MΩ min. (at 500 VDC)
Dielectric strength		1,000 VAC, 50/60 Hz for 1 min between terminals of same polarity 2,000 VAC, 50/60 Hz for 1 min between terminals of different polarity and also between each terminal and ground
Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms)
Shock resistance	Mechanical	500 m/s ² (50G)
	Malfunction	150 m/s ² (15G) max. (malfunction within 1 ms)
Life expectancy	Mechanical	250,000 operations min. (life of key: 10,000 operations min.)
	Electrical	100,000 operations min.
Ambient temperature		Operating: -10°C to 55°C (14°F to 131°F) with no icing or condensation Storage: -25°C to 65°C (-13°F to 149°F) with no icing or condensation
Ambient humidity		Operating: 35% to 85%
Electric shock protection class		Class II
Degree of contamination		3 (IEC947-5-1)
Weight		Approx. 26.5 g (0.93 oz) in the case of a DPDT switch key

Note: Set and reset constitute one operation.

■ OPERATING CHARACTERISTICS

Type		Key-type Selector Switch
Features	2 positions	3 positions
	Operating force (OF) max.	9.8 N • m (1,000 gf • cm)
Set position (SP)		90±5° 45±10°