

A6 Series – Miniature Switches and Pilot Devices: 16mm

Key features:

- 16mm (5/8") mounting hole
- LED illumination
- Compact design saves space
- Momentary, Maintained, Selectors, and E-Stops
- Gold-clad Silver contacts for reliable low level switching
- Snap action contacts
- IP40 (dustproof) or IP65 (oiltight) versions



UL Recognized
File No. E55996



CSA Certified
File No. LR21451



Specifications	Degree of Protection	IP40: Dustproof IP65 Watertight/Oiltight			
	Contact Configuration	SPDT, DPDT			
	Maximum Voltage	250V AC/DC			
	Thermal Current	3A			
	Minimum Applicable Load	5V AC/DC, 1mA			
	Contact Material	Gold-clad silver			
	Terminal Style	.110" Solder/ Quick Connect			
	Operating Temperature	-25° to +55°C (no freezing)			
	Operating Humidity	45 to 85% RH			
	Contact Resistance	50mΩ maximum (initial value)			
	Insulation Resistance	100MΩ minimum (500V DC megger)			
	Vibration Resistance	10 to 55Hz, amplitude 1.5mm p-p			
	Shock Resistance	Damage limits: 500m/sec ² (approx. 50G) Operating extremes: 200m/sec ² (approx. 20G)			
Electrical Life	100,000 operations minimum (at full rated load)				
Mechanical Life	Maintained: 100,000 operations minimum Momentary: 1,000,000 operations minimum Selector/Keylock: 250,000 operations minimum				
Dielectric Strength	Switch Unit: 2,000V AC, 1 min. between live/dead part and terminals of different poles; 1,000V AC, 1 minute between terminals of the same pole; 1,500V AC, 1 minute between contact and lamp terminals. Illumination Unit: 2,000V AC, 1 min. between live part/ground				
Soldering Temperature	20W/5 seconds or 260°C/3 seconds				
Contact Ratings	Operating Voltage	24V	120V	240V	
	AC (50/60Hz)	Resistive	—	1.0A	0.5A
		Inductive	—	0.7A	0.5A
	DC	Resistive	1.0A	0.2A	—
Inductive		0.7A	0.1A	—	
LED Lamp Ratings	Rated Voltage/Current	5V DC ±5%	6V AC/DC (±10%)	12V AC/DC (±10%)	24V AC/DC (±10%)
		8mA	AC: A, R, W, Y: 8mA G, S: 7mA DC: A, R, W, Y: 6mA G, S: 5mA	AC: 9mA DC: 8mA	AC: 9mA DC: 8mA



1. AC Inductive Load, PF = 0.6 – 0.7; DC Inductive Load, L/R = 7ms.
2. LED lamp contains a built-in current limiting resistor and a protection diode.
3. LED's don't "burn out." Luminance is reduced to 50% of initial intensity after being lit for 50,000 hours continuously.

Switches & Pilot Lights

Display Lights

Relays & Sockets

Timers

Terminal Blocks

Circuit Breakers

AB6 Non-Illuminated Pushbuttons (Assembled)

Non-Illuminated Pushbuttons

Style	Contact	Part Number			
		Momentary		Maintained (Latching)	
		Dustproof (IP40)	Oiltight (IP65)	Dustproof (IP40)	Oiltight (IP65)
Round 18mm 	SPDT DPDT	AB6M-M1-⓪ AB6M-M2-⓪	AB6M-M1P-⓪ AB6M-M2P-⓪	AB6M-A1-⓪ AB6M-A2-⓪	AB6M-A1P-⓪ AB6M-A2P-⓪
Square 18mm 	SPDT DPDT	AB6Q-M1-⓪ AB6Q-M2-⓪	AB6Q-M1P-⓪ AB6Q-M2P-⓪	AB6Q-A1-⓪ AB6Q-A2-⓪	AB6Q-A1P-⓪ AB6Q-A2P-⓪
Rectangular 18mm x 24mm 	SPDT DPDT	AB6H-M1-⓪ AB6H-M2-⓪	AB6H-M1P-⓪ AB6H-M2P-⓪	AB6H-A1-⓪ AB6H-A2-⓪	AB6H-A1P-⓪ AB6H-A2P-⓪
Round 23.5mm 	SPDT DPDT	-	AB6M-M1P-M⓪ AB6M-M2P-M⓪	-	AB6M-A1P-M⓪ AB6M-A2P-M⓪
Square 23.5mm 	SPDT DPDT	-	AB6Q-M1P-Q⓪ AB6Q-M2P-Q⓪	-	AB6Q-A1P-Q⓪ AB6Q-A2P-Q⓪
Rectangular 17.5 X 23.5mm 	SPDT DPDT	-	AB6Q-M1P-H⓪ AB6Q-M2P-H⓪	-	AB6Q-A1P-H⓪ AB6Q-A2P-H⓪


⓪ Button Color Code

Color	Code
Black	B
Green	G
Red	R
Blue	S
White	W
Yellow	Y



1. In place of ⓪, specify Button Color Code from the table at right.
2. To order as sub-assembled, see page 459.
3. For accessories, see page 466.
4. For dimensions, see page 468.

AB6-V Pushlock Turn Reset

Shape	Operation	Contact	Part Number		Remarks
			Dustproof (IP40)	Oiltight (IP65)	
23.5mm Round Mushroom 	Pushlock Turn Reset	SPDT DPDT	AB6M-V1-R AB6M-V2-R	AB6M-V1P-R AB6M-V2P-R	1. Button available in red only. 2. Replacement button: order AB6M-V-R

Buzzer

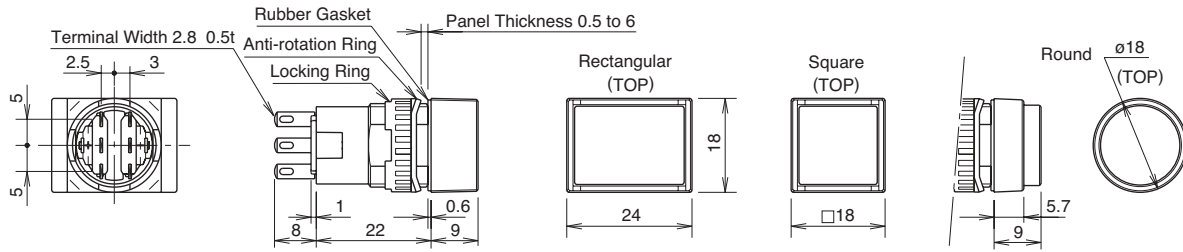
Style	Shape	Voltage	Part Number
	Round (18mm)	12V DC	UZ6-11
		24V DC	UZ6-12

Buzzer Ratings

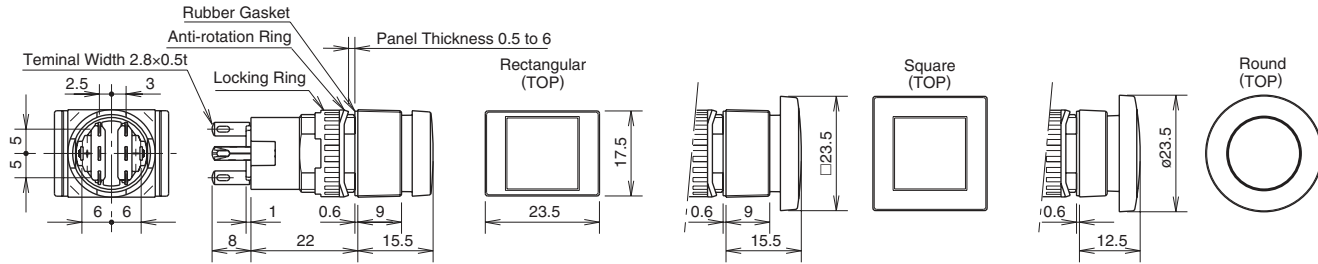
Frequency	2 kHz ± 500 Hz
Amplitude	80db @ 0.1m (at rated voltage)
Operating Voltage	6V AC/DC or 12 - 24V AC/DC ± 10%
Adjustable Cycle	55 to 600 cycles per minute
Current Draw	DC: 7mA, AC: 20mA
Life	1000 hrs. minimum
Insulation Voltage	60V AC/DC
Operating Temperature	-20 to 55 C (no freezing), 45 to 85% rh

Dimensions (mm)

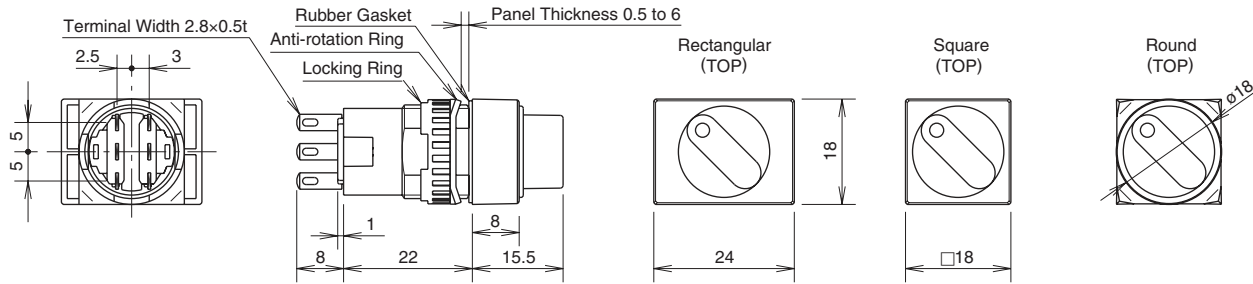
Pushbuttons, Ø 5/8" (16mm)



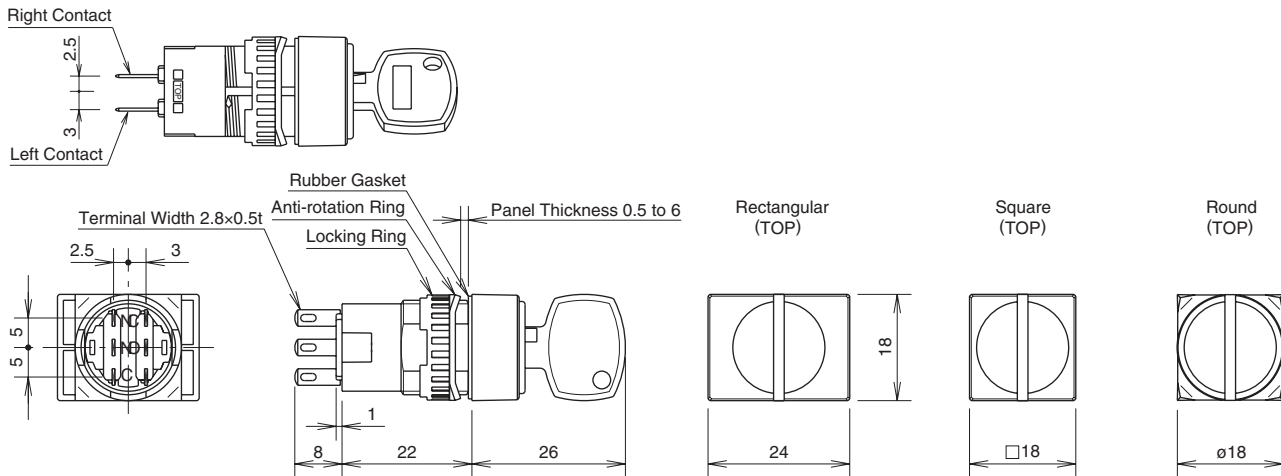
Oversize Lens



Selector Switches, Ø 5/8" (16mm)



Key Selector Switches, Ø 5/8" (16mm)



Switches & Pilot Lights

Display Lights

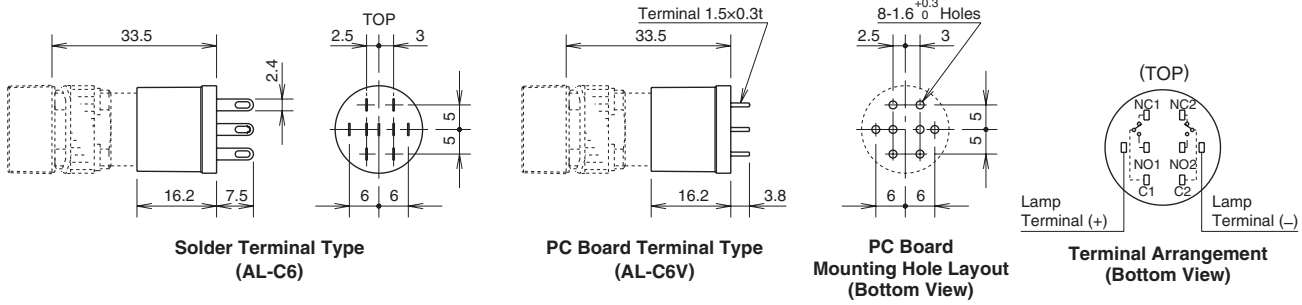
Relays & Sockets

Timers

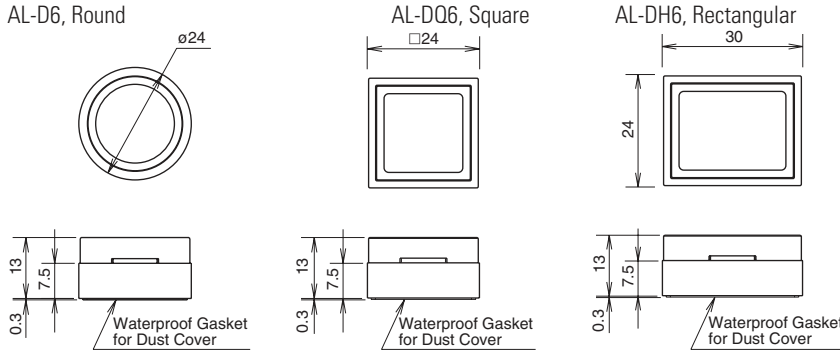
Terminal Blocks

Circuit Breakers

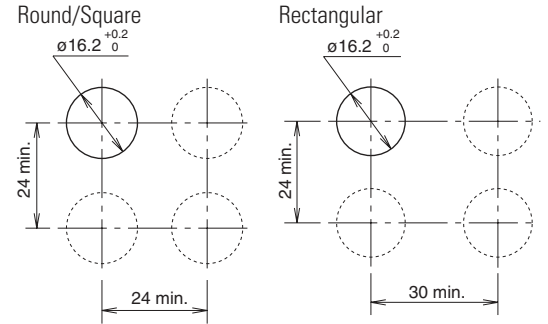
Terminal Sockets



Dust Covers



Panel Cut-Outs For Units w/Dust Cover



Marking Plates

Pushbuttons with Standard Size Lens

Style	Round—AL6M-W	Square—AL6Q-W	Rectangular—AL6H-W
Dimensions			
	Ø 5/8" (16mm)		
Outside (OD)	(13.8mm)	(13.8mm)	(OD¹ x OD²) 13.8 x 19.8mm
Marking Area (a)	(12mm)	(12mm)	(a¹ x a²) 12 x 18mm

Pushbuttons with Oversize Lens

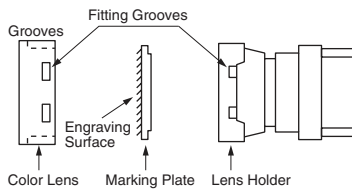
Style	Round—AL6M-MW	Square/Rectangular—AL6Q-QW
Dimensions		
Outside (OD)	Ø 0.491" (12.6mm)	0.491" (12.6mm)
Marking Area (a)	Ø 0.429" (11mm)	0.429" (11mm)

Engraving must be made on the engraving area within 0.02" (0.5mm) deep.

Replacing & and Marking Plate

Removal

Remove the lens holder assembly (lens, marking plate and holder) from the operator by holding the color lens recesses with the lens removal tool (Part No.MT-101) and pulling out. Remove marking plate by pushing the color lens from the rear to disengage the latches. Marking plate must be engraved on the side as shown in the figure on the right. Ø 5/8" (16mm)



Installation

For illuminated pushbuttons:

1. Insert marking plate inside lens in correct direction
2. Press color lens on to lens holder to engage latches.
3. Insert lens holder into housing in correct direction.

Do not loosen spring on illuminated pushbutton units (except on pilot light units). The marking plate must be engraved on the front side as shown above.