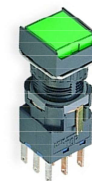


**M6 Series
Pushbutton**
◆ Features

- ✓ For front panel cut-outs measuring $\varnothing 16.2\text{mm}$
- ✓ IP65 & V-0 rated enclosure
- ✓ Solder/plug-in #110 (2.8mm) terminals
- ✓ PCB (0.8w x 0.5t) terminals
- ✓ Tough and durable plastic body with fiber glass
- ✓ Positive opening E-Stop Pushbuttons



Pushbuttons (M6P)



Selectors (M6S)

◆ Recognition(s)

- ✓ CE – EN60947
- ✓ CSA – 6241 90
- ✓ RoHS Compliant
- ✓ Reach Unaffected



Pilot lights (M6L)



Emergency Stop (M6E)



Key Selectors (M6K)



Buzzers (M6Z)

◆ Characteristics

Positive Opening	Electrical Contact	Terminal Type	Contact Form(s)	Poles & Throws	Actuation Sequence(s)
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Yes & No	Max 9	Solder/Plug-in (#110), or PCB (0.8w x 0.5t)	M6L= <i>not applicable</i> M6P=1 or 2 "C" M6S=1 or 2 "C" M6K=1 or 2 "C" M6Z= <i>not applicable</i> M6E=1 or 2 "B"	M6L= <i>not applicable</i> M6P=SPDT/DPDT M6S=SPDT/2*SPDT/DPDT M6K=SPDT/2*SPDT/DPDT M6Z= <i>not applicable</i> M6E=SPST-NC/DPST-NC	Break(1)-Make(2), DB(1)-DM(2), Single Break, Double Break
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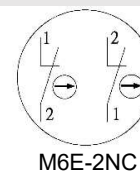
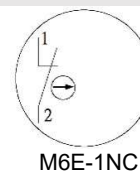
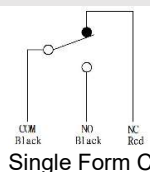
Operating Temp.	AC Rated	DC Rated	Oil Resist	Dust Resist	Water Resist	IP
-25 to 55 C	Switch=2A 250V	Switch=0.4A 125V	Yes	Yes	Yes	65

Operation Frequency	Service Life (min.)	Dielectric Strength
Momentary~1800/hr Alternate~1200/hr Selector~1200/hr E-Stop~600/hr	Momentary=2,000,000 Alternate=250,000 Selectors=250,000 E-Stop=100,000	Between live part and ground=2500Vac, 1min Between terminals of different poles=2500Vac, 1min Between terminals of the same poles=1000Vac, 1min

Operating Humidity	Contact Resistance	Insulation Resistance	Vibration
85% RH max	50m Ω max. (initial)	100M Ω min. (500VDC)	1.5mm amplitude at 10-55Hz

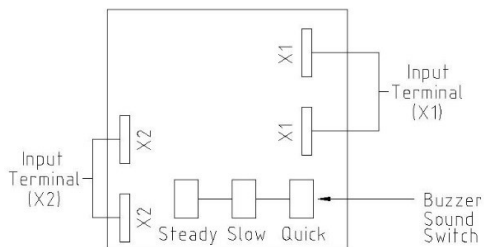
Recommended tightening forces

Purpose	Screw type	Tightening
Panel mount	Lock Ring	0.88 N·m MAX

Circuitry


Additional Characteristics: Internal Illumination Lamps	
LED (DC)	6 Vdc 25mA
	12 Vdc 25mA
	24 Vdc 25mA
Neon (AC)	110 Vac 1.2mA
	220 Vac 1.2mA

Additional Characteristics: Buzzer (inside M6Z)	
Sound types: (select type at bottom of unit):	Steady sound, Quick cycle (600cycles/min), Slow cycle (100cycles/min)
Sound Pressure:	80dB min.
Sound Frequency:	2KHz±500HZ
Insulation Voltage:	60V AC/DC
Operating Voltage:	6V AC/DC, 12~24V AC/DC
Current Draw:	DC=7mA AC=20mA
Operating Temperature:	-25 to 55 C
Operating Humidity	85% RH max
Insulation Resistance	100MΩ min. (500VDC)
Dielectric Strength	Between live and dead part=1000Vac, 1min
Vibration	1.5mm amplitude at 10-55Hz
Service Life (min.)	1000 hours



Buzzer unit bottom view:

◆ **Materials**

Actuation touch part	Electrical contact point	Enclosure
PC Plastic	Palladium plated silver(99%)	PBT Plastic+Glass fiber (V-0 rating)

Key Selectors	Frame:	Operation:	Terminal:	Contact Form(s):	Key Lock Limit(s):
M6K -	B	30	S	2 -	A

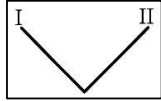
ø16 mm

SPDT, or DPDT, or 2*SPDT

A=Circle (ø18mm)
B=Square (18x18mm)
C=Rectangular (18x24mm)

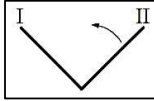
Two Positions - 90° throw

20=



Alternate (maintained)

22=



Spring return from right

Only at position "II" will the switch actuate; max two form C may both energize simultaneously

SPDT or DPDT; depending on contact forms chosen.

S=Solder/Plug-in (#110)
P=PCB (0.5t)

1=1x Form C
2=2x Form C

Applicable for **two** or **three** positions

A=No lock limits
B=Right
C=Left

Applicable only for **three** positions

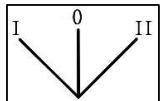
D=Right and left
E=Center
G=Center and right
H=Left and center

Keys are always non-removable and non-insertable at positions with spring-return function.

Key Lock Limit(s) means keys **WILL BE NON-REMOVEABLE**. But may still operate different positions.

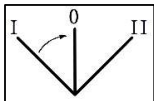
Three Positions - 45° throw

30=



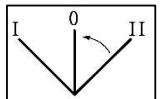
Alternate (maintained)

31=



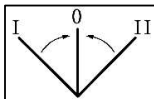
Spring return from left,

32=



Spring return from right

33=



Left & right spring return

Positions "I" and "II" actuates the switch; only one form C energizes

Always and only 2*SPDT configuration possible.

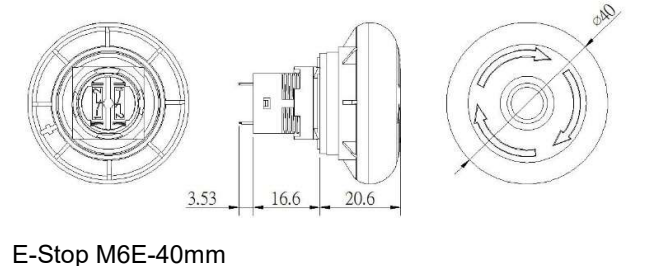
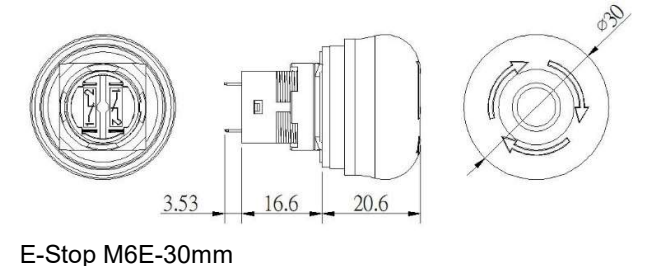
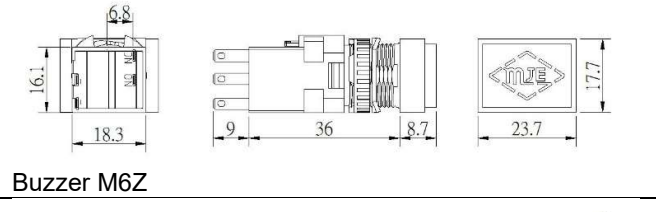
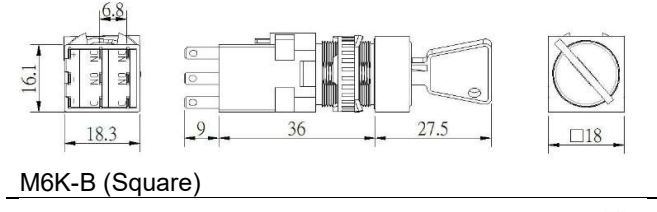
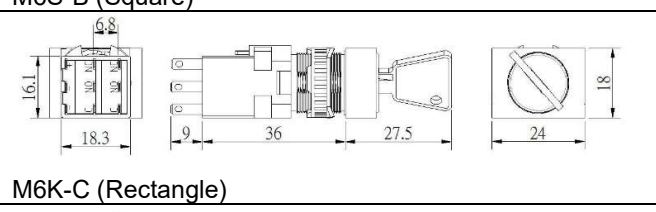
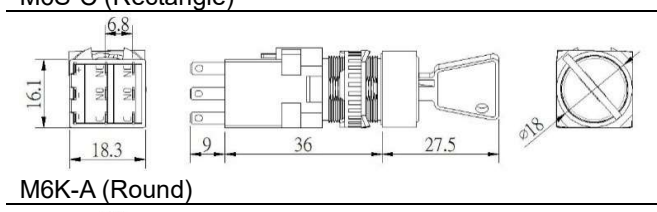
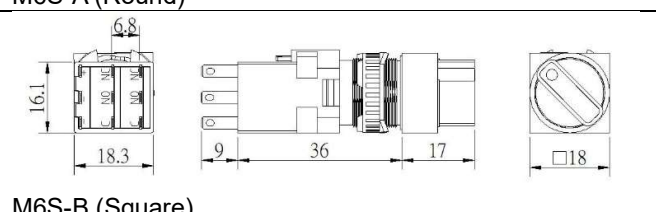
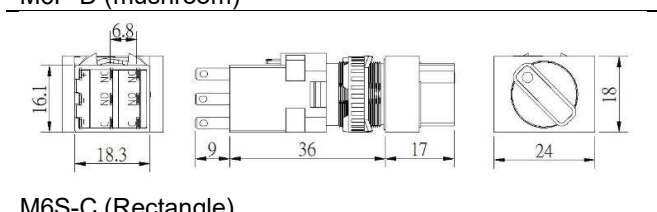
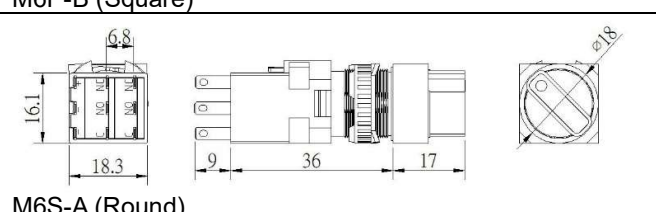
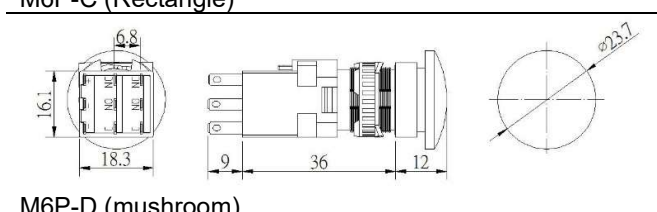
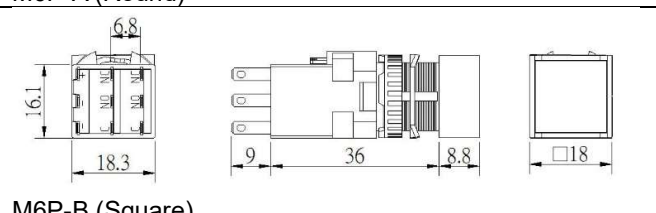
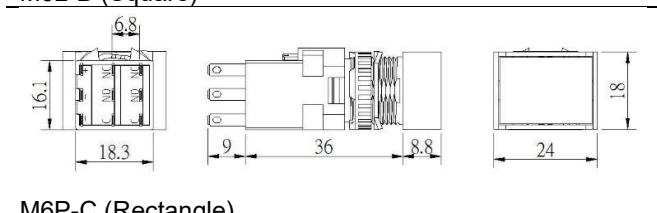
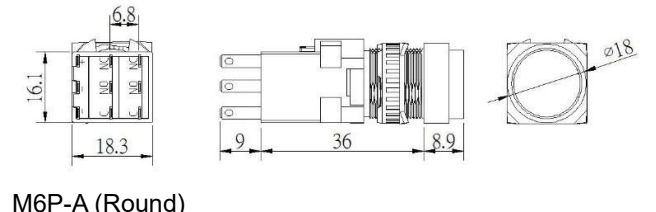
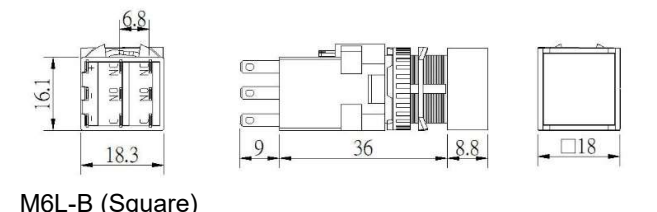
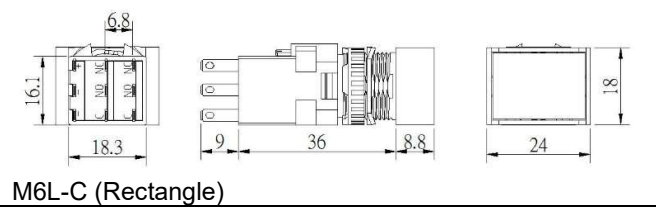
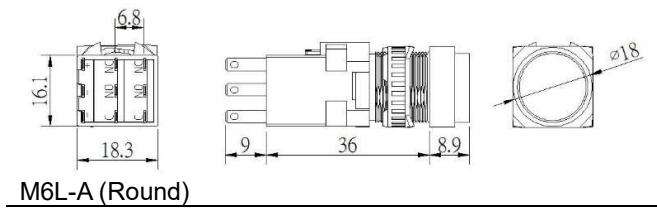


Note:

-Please be careful when matching Operations with Key Lock Limits. *Example:* Matching Operation "20" with Key Lock Limit "C" means operator(s) **MAY NOT** be able to remove the key; the switch contacts will still be energized. This may be hazardous with some applications.

-Additionally, *Example:* Matching Operation "33" with Key Lock Limit "E" is not possible, because impossible to insert key.

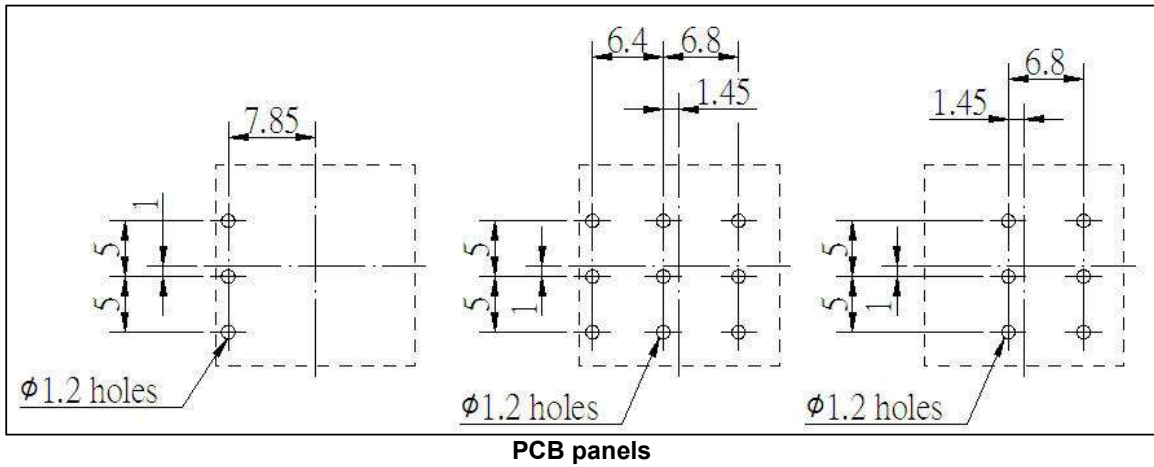
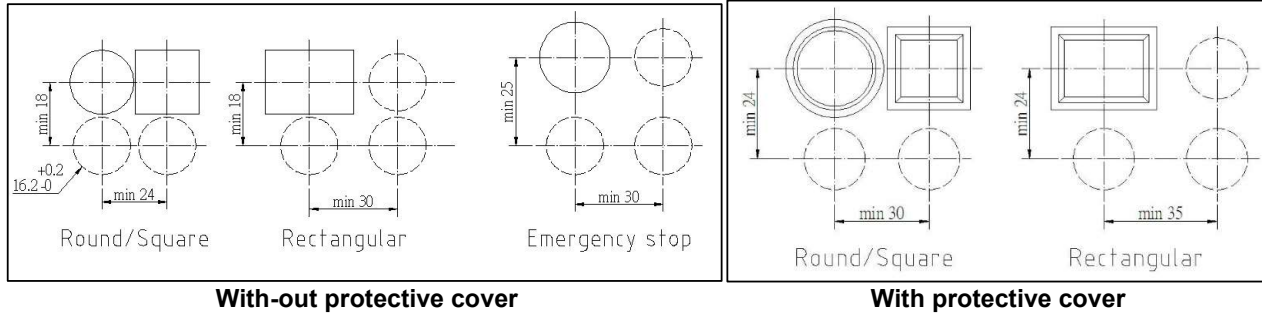
◆ Unit Dimensions

 *Measurements in *millimeters*


◆ **Panel cut-outs**

*Measurements in *millimeters*

△ All M6-series products fits best in a circular panel cut out that measures 16.2mm in diameter, with a thickness of 2~3mm. Damage and bad operation may occur to product if installed into incorrect diameter through-holes and incorrect tightening forces.



◆ **Terminal Dimensions**

*Measurements in *millimeters*

