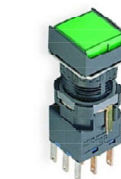


M6 Series Pushbutton

◆ 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)
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

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

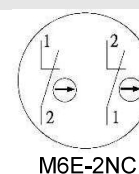
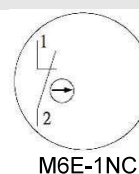
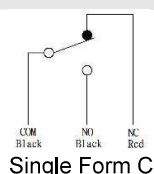
Operation Frequency	Service Life (min.)	Dielectric Strength
Momentary~1800/hr Alternate~1200/hr Selector~1200/hr E-Stop~600/hr	Momentary=2,000,000 Alternate=250,000 Selectors=250,000 E-Stop=100,000	Between live part and ground=2500Vac, 1min Between terminals of different poles=2500Vac, 1min Between terminals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

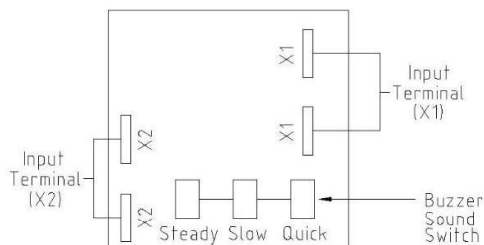
Purpose	Screw type	Tightening
Panel mount	Lock Ring	0.88 N·m MAX

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)

Nomenclature

Pilot Light	Frame:	Terminal:	Lamp:	Lens Color:
M6L –	A	S	24E	G

ø16mm

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

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

Neon (AC)
110=110Vac
220=220Vac

LED (DC)
06E=6Vdc
12E=12Vdc
24E=24Vdc

R=Red
G=Green
Y=Yellow
O=Orange
W=White
B=Blue



(illum & non-illum) Pushbuttons	Frame:	Actuation:	Terminal:	Contact Form(s):	Lamp:	Lens Color:
M6P –	A	M	S	2 –		G

ø16mm

SPDT or
DPDT

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

M=Momentary
A=Alternate
(maintained)

S=Solder/Plug-in
(#110)
P=PCB
(0.8w x 0.5t)

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

Blank
=Non-illum
Neon (AC)
110=110Vac
220=220Vac

LED (DC)
06E=6Vdc
12E=12Vdc
24E=24Vdc

R=Red
G=Green
Y=Yellow
O=Orange
W=White
B=Blue



Note:

-Illumination colors from lamps are the same as lens colors; unless otherwise specified.

(illum &
non-illum)
Selectors

Frame:

Operation:

Terminal:

Contact
Form(s):

Lamp:

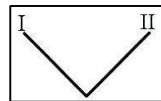
Lens Color:

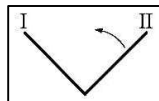
M6S –
A
30
S
2 –
24E
G

ø16mm

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

Blank

=Non-illum

Neon (AC)
110=110Vac

220=220Vac

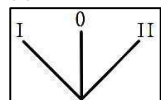
LED (DC)
06E=6Vdc

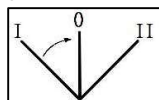
12E=12Vdc

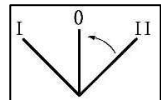
24E=24Vdc

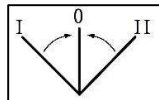
R=Red
G=Green
Y=Yellow
O=Orange
W=White
B=Blue

WO=
Opaque White
(available only for
Non-illumed)

Three Positions - 45° throw
30=

Alternate
(maintained)

31=

spring return
from left,

32=

spring return
from right

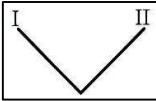
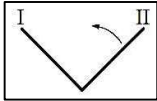
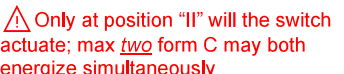
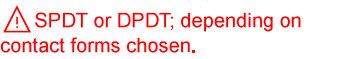
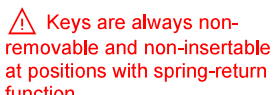
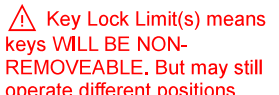
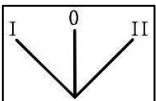
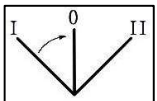
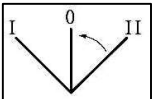
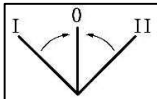
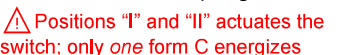
33=

spring return
left & right

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

⚠ Always and only 2*SPDT
configuration possible.

 **Note:**

-Illumination colors from lamps are the same as lens colors; unless otherwise specified.

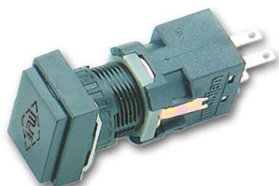
Key Selectors	Frame:	Operation: 	Terminal:	Contact Form(s):	Key Lock Limit(s): 
M6K –	B	30	S	2 –	A
ø16 mm SPDT, or DPDT, or 2*SPDT	A =Circle (ø18mm) B =Square (18x18mm) C =Rectangular (18x24mm)	Two Positions - 90° throw 20=  Alternate (maintained)  Spring return from right  	S =Solder/ Plug-in (#110) 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  
		Three Positions - 45° throw 30=  Alternate (maintained) 31=  Spring return from left, 32=  Spring return from right 33=  Left & right spring return  			



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.

Buzzers	Frame:	Operating Voltage:	Terminal:
M6Z –		24	S
ø16mm	Blank =Rectangular (18x24mm)	06 =6V AC/DC 24 =12~24V AC/DC	S =Solder/Plug-in (#110) P =PCB (0.8w x 0.5t)

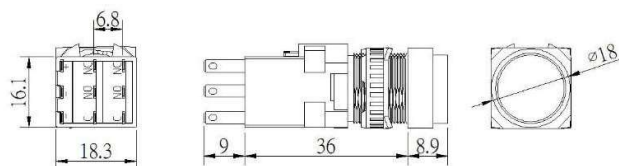


E-Stop Pushbuttons	Positive Opening:	Terminal:	Contact Form(s):	Button Size:	Lens Color:
M6E –	P	S	1	40	R
ø16mm, Positive Opening SPST-NC or DPST-NC	P =Positive Opening	S =Solder/Plug-in (#110)	1 =1x Form B (SPST) 2 =2x Form B (DPST)	30 =ø30mm 40 =ø40mm	R =Red Y =Yellow

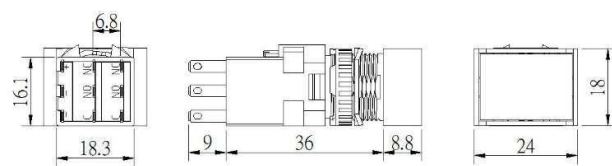


◆ Unit Dimensions

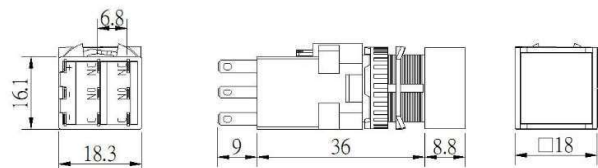
*Measurements in *millimeters*



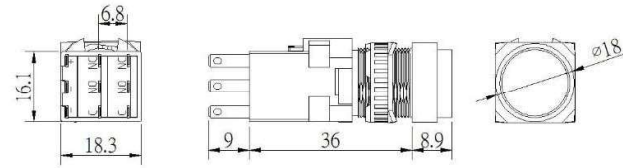
M6L-A (Round)



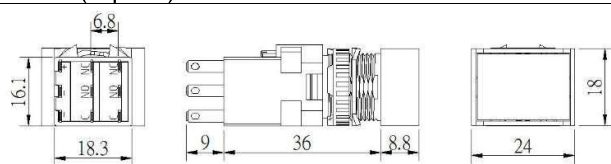
M6L-C (Rectangle)



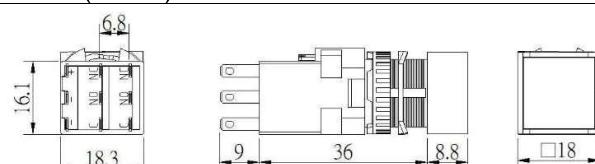
M6L-B (Square)



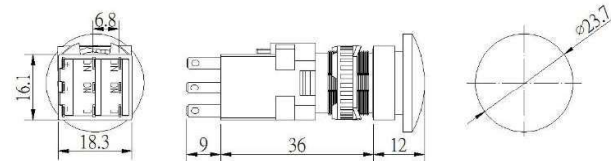
M6P-A (Round)



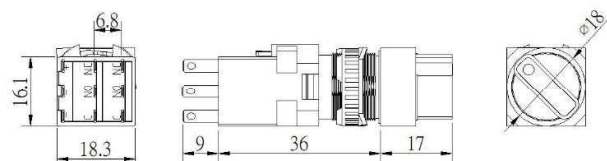
M6P-C (Rectangle)



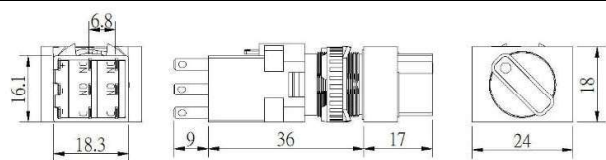
M6P-B (Square)



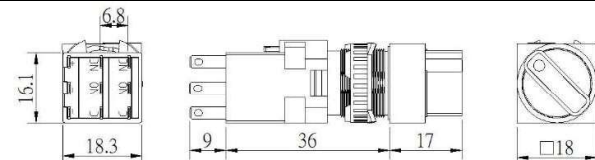
M6P-D (mushroom)



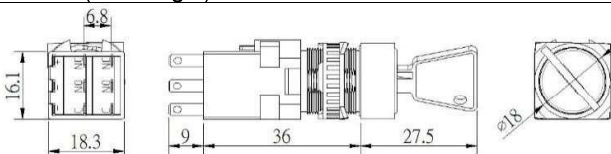
M6S-A (Round)



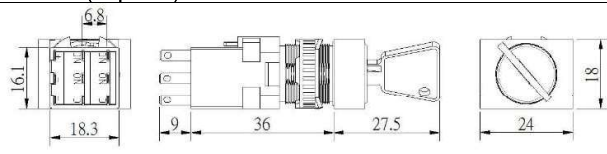
M6S-C (Rectangle)



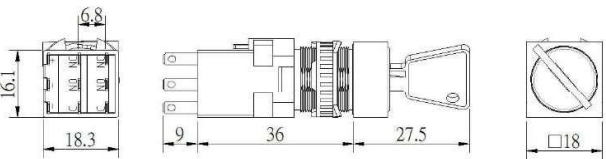
M6S-B (Square)



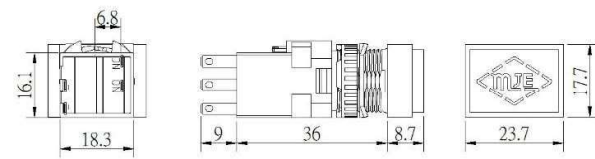
M6K-A (Round)



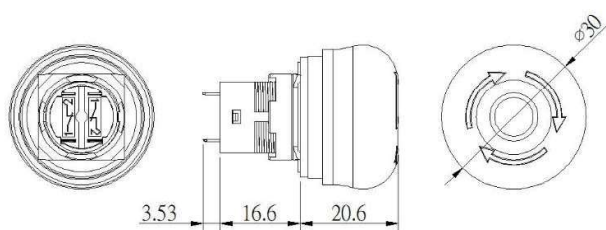
M6K-C (Rectangle)



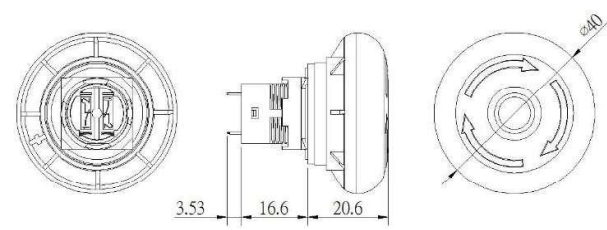
M6K-B (Square)



Buzzer M6Z



E-Stop M6E-30mm

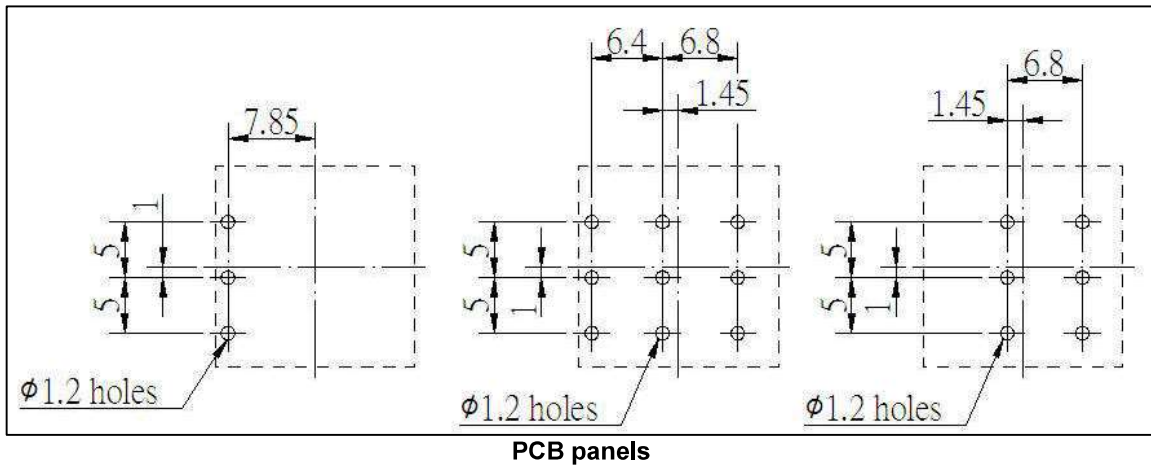
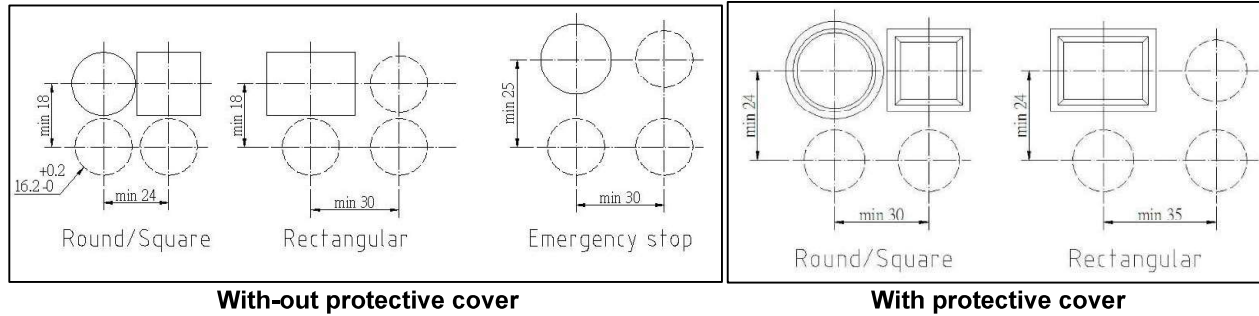


E-Stop M6E-40mm

◆ 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*

