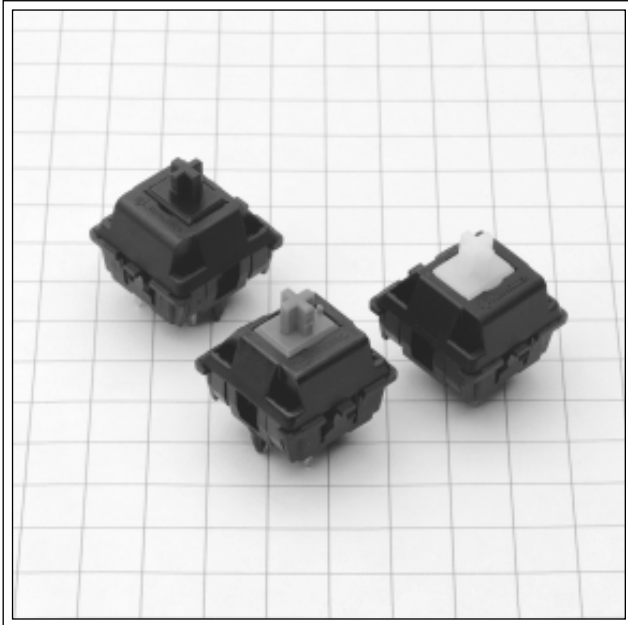


MX Series

Keyswitch

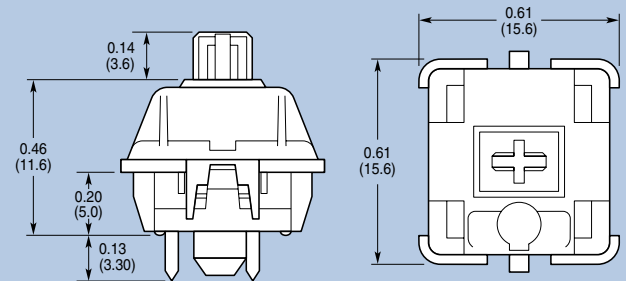
MX Desktop Profile



Specifications

Voltage	12 VAC/DC max. 2 VDC min.
Current	10mA AC/DC max. 10 μ A DC min.
Insulation Resistance	100 M Ω at 100 VDC
Capacitance	<2pF (at 1kHz)
Bounce Time	$\leq$ 5 msec (at 16 in/sec actuation speed)
Life	(at 5 V, 1mA, no load)
MX Linear	50 x 10 ⁶ cycles
MX Soft Tactile	20 x 10 ⁶ cycles
MX Click Tactile	20 x 10 ⁶ cycles
MX Alternate Action	50 x 10 ⁵ cycles
Initial Contact Resist.	200 m Ω (25 m Ω typical)
Materials	
Plastics	Thermoplastic, UL-rated
Contacts	AuAg 10
Spring	Stainless steel
Flammability Rating	UL94HB
Solderability	Wave solder 5 seconds at 500°F
Environmental	
Operating Temp. Range	-10° to +70°C
Storage Temp. Range	-40° to +70°C
Relative Humidity	5% to 95%, non-condensing

Dimensions: Inches (mm)

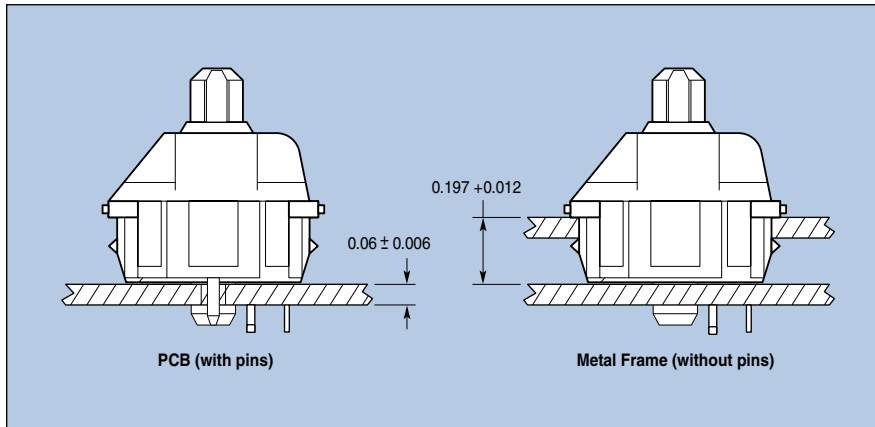


Mechanical Motion

	Linear Feel	Soft Tactile Feel
Operating Force	2.1 oz $\pm$ 0.7 oz	2.0 oz $\pm$ 0.7 oz
Pretravel	0.08" $\pm$ 0.24"	0.08" $\pm$ 0.24"
Total Travel	0.16" -0.015"	0.16" -0.2"
Tactile Force	N/A	2.3 oz $\pm$ 0.7 oz

	Click Tactile Feel	Alternate Action
Operating Force	1.8 oz $\pm$ 0.5 oz	2.1 oz $\pm$ 0.7 oz
Pretravel	0.09" $\pm$ 0.24"	0.05" $\pm$ 0.015"
Total Travel	0.16" -0.02"	0.16" $\pm$ 0.01"
Tactile Force	2.1 oz $\pm$ 0.5 oz	N/A

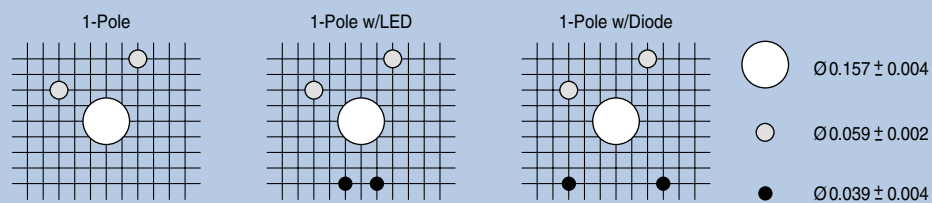
Mounting Options



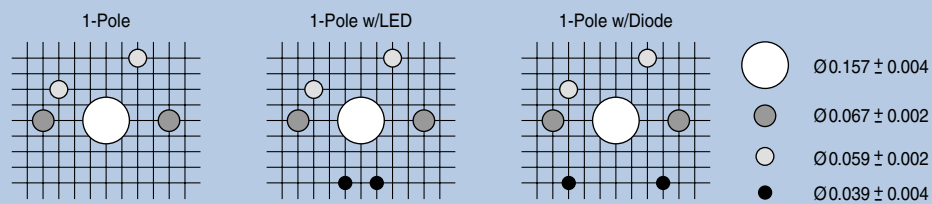
Circuit Board Layouts

Grid line spacing = 0.05 inch

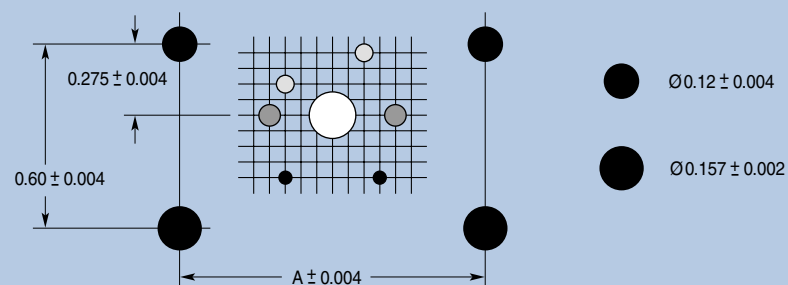
Keypress without fixation pins



Keypress with fixation pins



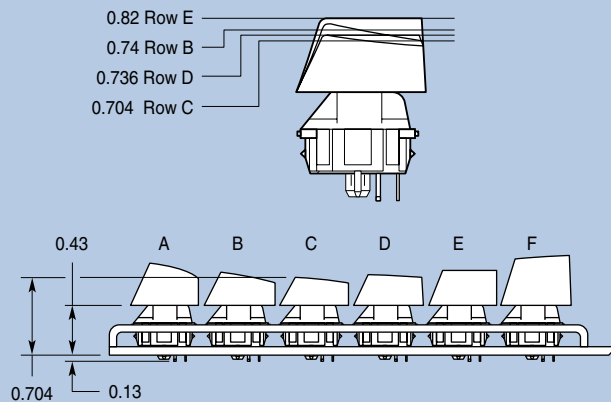
Spacebar without frame



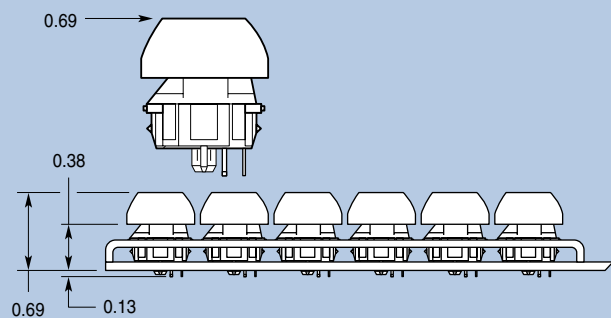
Keyswitch

Keycap Dimensions

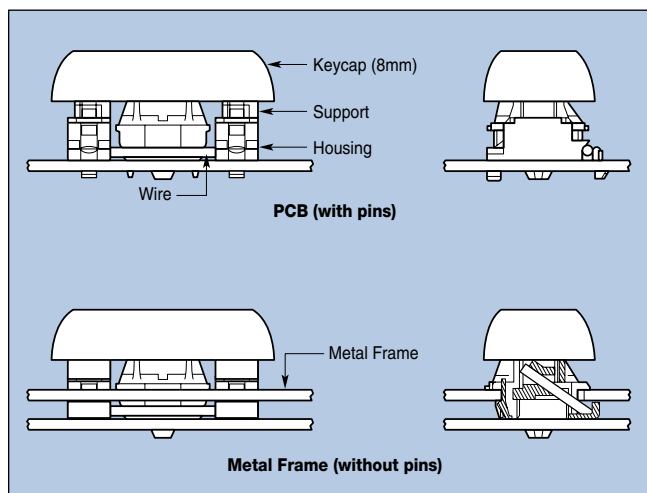
Cylindrical Type (8 mm)



Standard Type (8 mm)

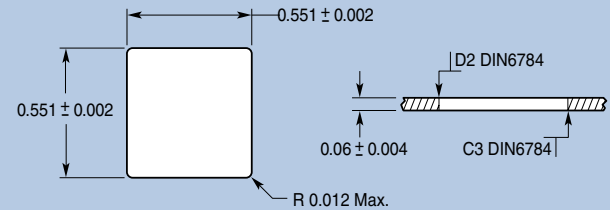


Spacebar Mounting Options

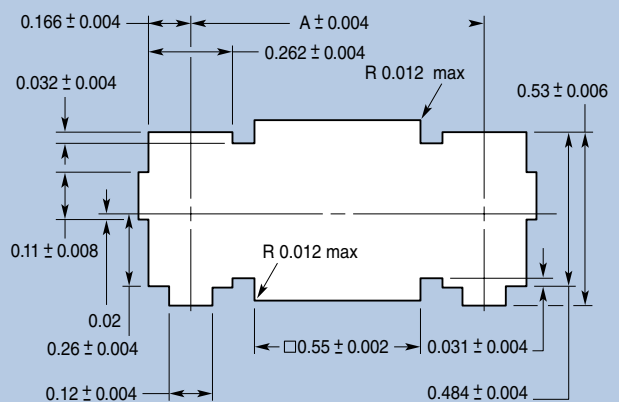


Metal Frame Cutout Dimensions

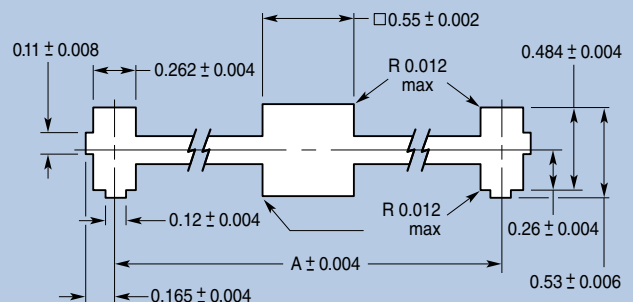
Keyswitch



Spacebar
(Keycap sizes 1 x 2, 1 x 2.25, 1 x 2.75)



Spacebar
(Keycap sizes 1 x 3, 1 x 7, 1 x 8, 1 x 9, 1 x 10)



Leveling Mechanism Kits

Keycap Size	1 x 2 1 x 2, 2.5 1 x 2, 2.75	1 x 3	1 x 8	1 x 8 1 x 9 1 x 10	1 x 7
Keycap Type	Std & Cylin	Std & Cylin	Std	Cylin	Cylin
A (inches)	0.94	1.5	5.25	5.25	4.5
P/N w/frame	G99-0224	G99-0225	G99-0226	G99-0226	G99-0379
P/N w/o frame	G99-0742	G99-0743	G99-0744	G99-0744	G99-0745

Keyswitch

Ordering Information

Part Number	Description
-------------	-------------

- | | |
|-----------|---|
| MX1A-11DN | Standard force, momentary face plate mount with diode |
| MX1A-11NN | Standard force, linear, face plate mount |
| MX1A-11NW | Standard force, linear, PCB mount |
| MX1A-21NW | Higher force, linear, PCB mount |
| MX1A-31NN | Alternate action, face plate mount |
| MX1A-31NW | Alternate action, PCB mount |
| MX1A-C1NN | Standard force, soft tactile, face plate mount |
| MX1A-C1NW | Standard force, soft tactile, PCB mount |
| MX1A-E1NN | Standard force, click tactile, face plate mount |
| MX1A-E1NW | Standard force, click tactile, PCB mount |

MX1A-C1NN	Standard force, soft tactile, face plate mount
MX1A-C1NW	Standard force, soft tactile, PCB mount
MX1A-E1NN	Standard force, click tactile, face plate mount
MX1A-E1NW	Standard force, click tactile, PCB mount

- | | |
|-----------|---|
| MX1A-C1NN | Standard force, soft tactile, face plate mount |
| MX1A-C1NW | Standard force, soft tactile, PCB mount |
| MX1A-E1NN | Standard force, click tactile, face plate mount |
| MX1A-E1NW | Standard force, click tactile, PCB mount |

- | | |
|-----------|---|
| MX1A-C1NN | Standard force, soft tactile, face plate mount |
| MX1A-C1NW | Standard force, soft tactile, PCB mount |
| MX1A-E1NN | Standard force, click tactile, face plate mount |
| MX1A-E1NW | Standard force, click tactile, PCB mount |

MX1A-C1NN	Standard force, soft tactile, face plate mount
MX1A-C1NW	Standard force, soft tactile, PCB mount
MX1A-E1NN	Standard force, click tactile, face plate mount
MX1A-E1NW	Standard force, click tactile, PCB mount

- | | |
|-----------|---|
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| MX1A-C1NW | Standard force, soft tactile, PCB mount |
| MX1A-E1NN | Standard force, click tactile, face plate mount |
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| MX1A-C1NW | Standard force, soft tactile, PCB mount |
| MX1A-E1NN | Standard force, click tactile, face plate mount |
| MX1A-E1NW | Standard force, click tactile, PCB mount |

MX

1

Keyswitch/Type

Code	Contact Material
1	AuAg10 10mA/12V max
2	—
3	—
4	—
5	Special

A

Code	Contact Config.
A	SPSTNO
B	—
C	Special
D	—

1

C O D E	Operating Characteristics, Actuating Force and Key Style
0	Special
1	Momentary, single pole, 2.1 oz, standard keyswitch, black keystem
2	Momentary, single pole, 2.8 oz, spacebar, grey 37 keystem
3	Alternate action, single pole, 2.1 oz
C	Momentary, single pole, tactile feel, 2.3 oz, clear keystem
D	Momentary, single pole, tactile feel, 2.8 oz, spacebar, grey 39 keystem
E	Momentary single pole, tactile feel 2.1 oz, "click" differential movement, blue keystem
F	Momentary, single pole, tactiel feel, 2.8 oz, "click" differential movement, space bar, green keystem

1

C O D E	Keystem Configuration
1	Std straight for cylin & std keycaps

N

C O D E	PCB Mounting Pins
N	No pins (metal frame req)
W	With pins

LED Diode

Code	LED Diode
N	No LED No diode
R	Red LED no diode
G	Green LED no diode
Y	Yellow LED w/diode
D	No LED w/diode
J	w/jumper wire no LED no diode

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CHERRY:

[MX1A-11DN](#) [MX1A-11NW](#)