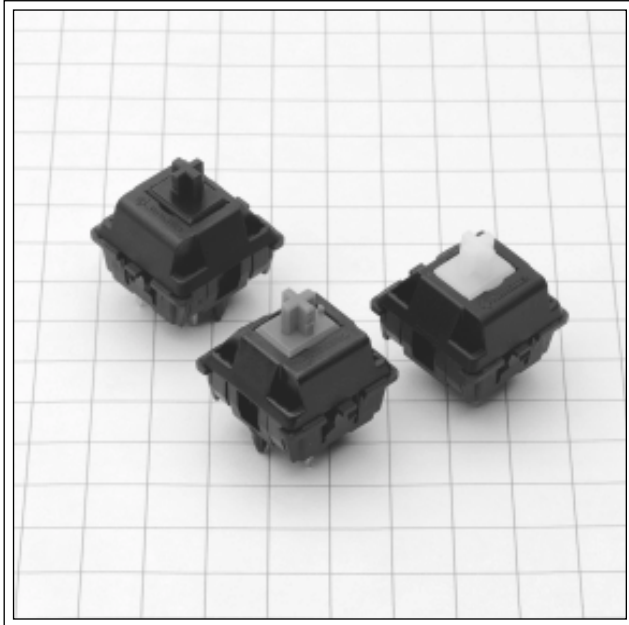


MX Series

Keyswitch

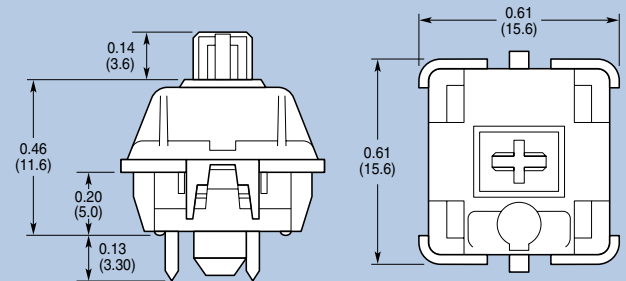
MX Desktop Profile



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)

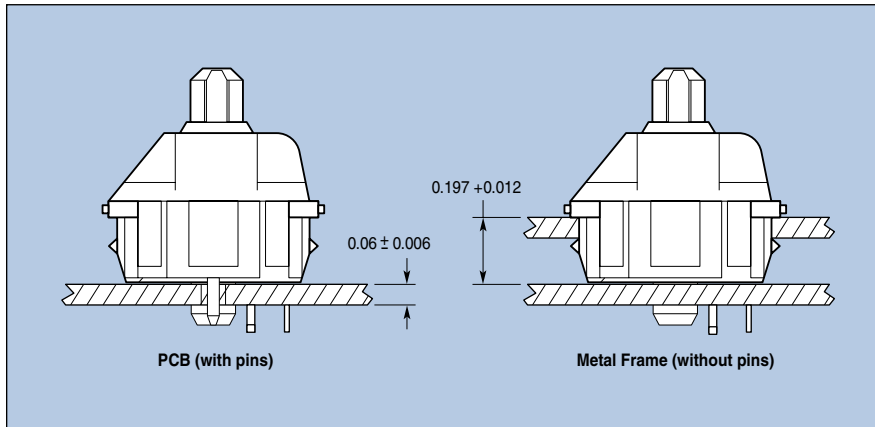


Mechanical Motion

	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

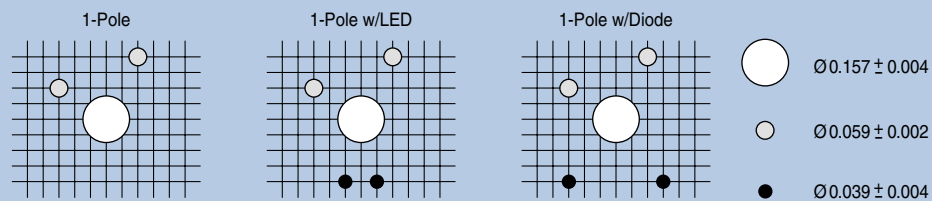
Mounting Options



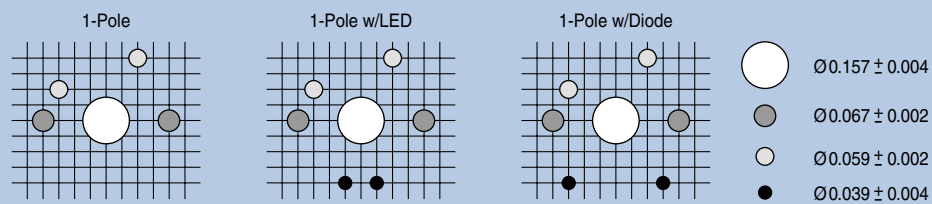
Circuit Board Layouts

Grid line spacing = 0.05 inch

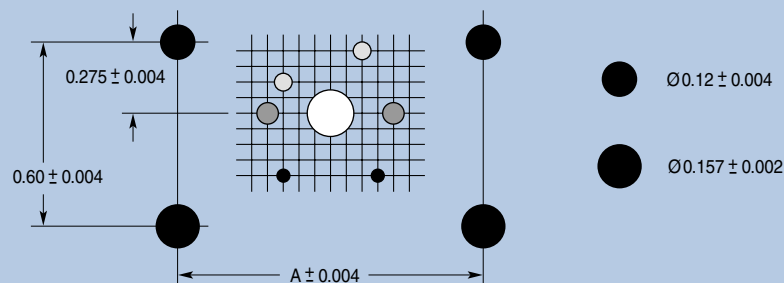
Keypress without fixation pins



Keypress with fixation pins



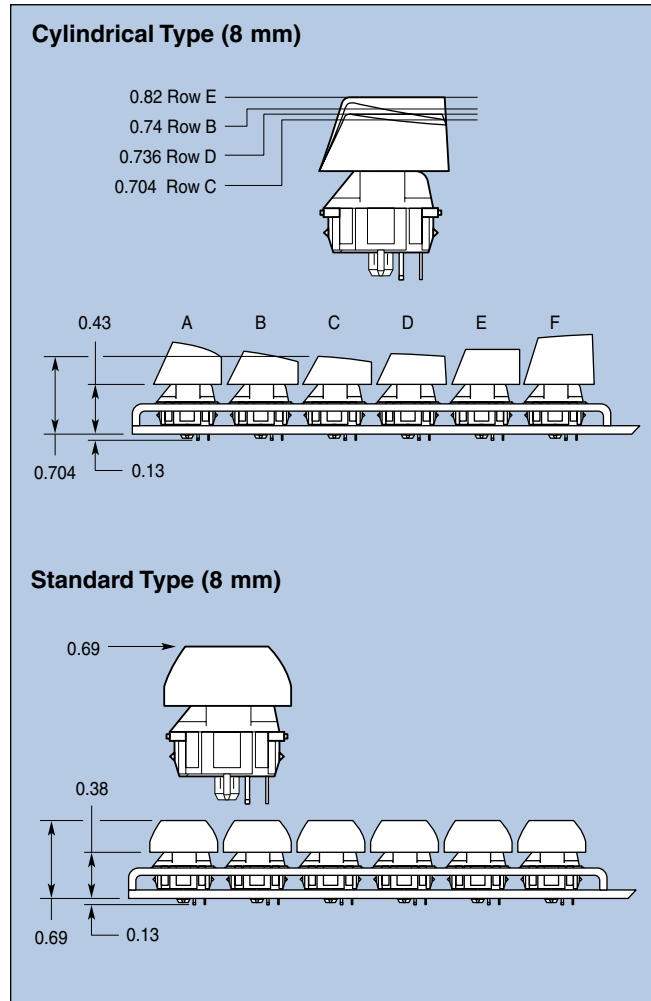
Spacebar without frame



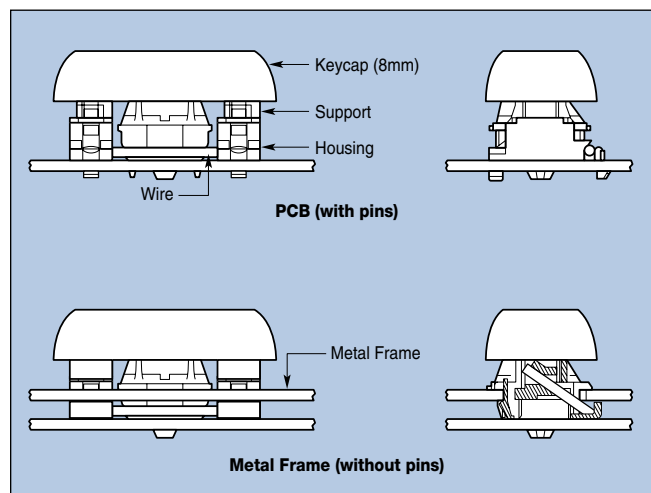
MX Series

Keypress

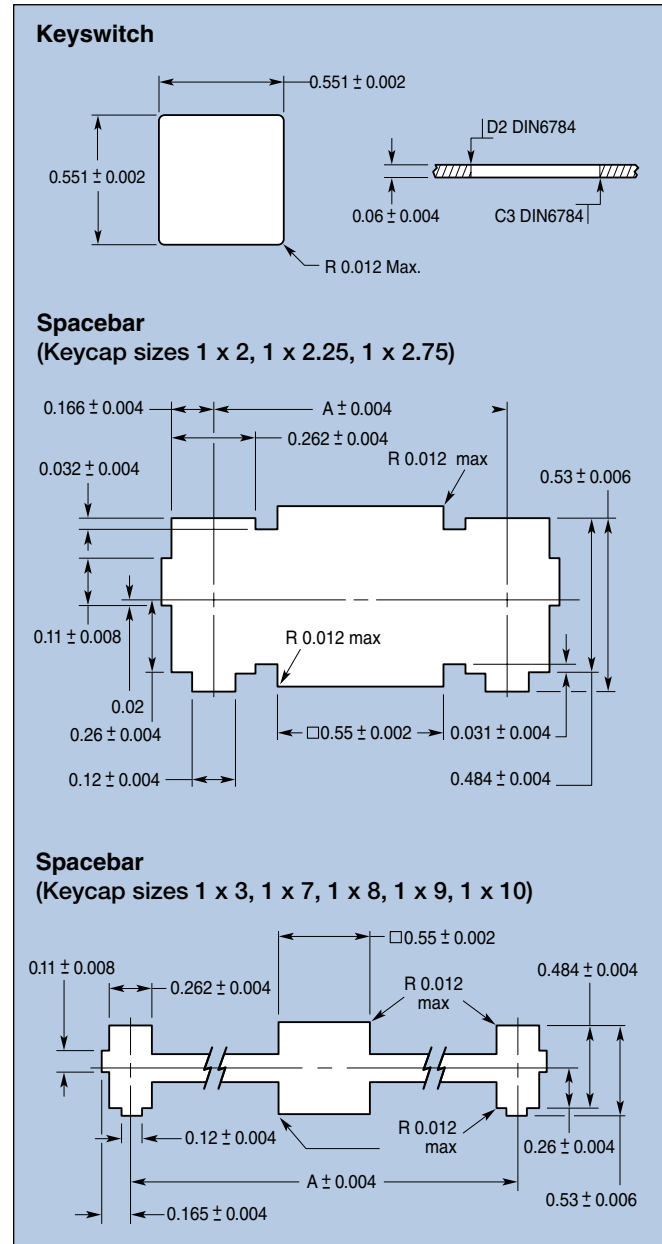
Keycap Dimensions



Spacebar Mounting Options



Metal Frame Cutout Dimensions



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

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

MX

1

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

Keyswitch/Type

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

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