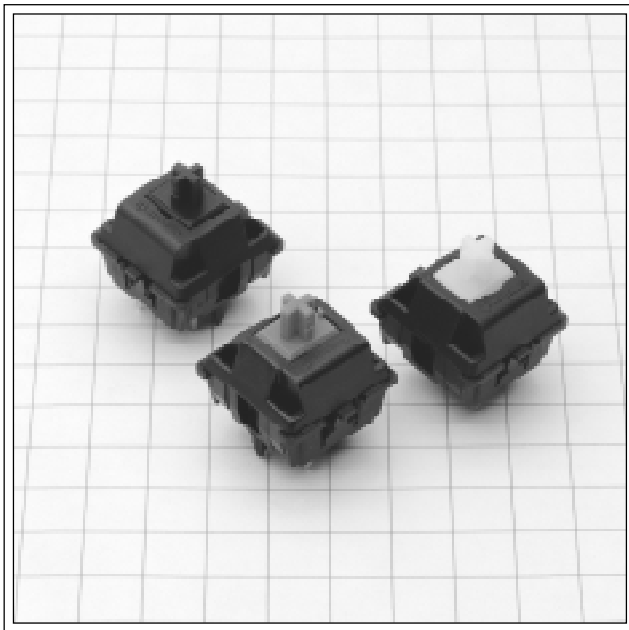


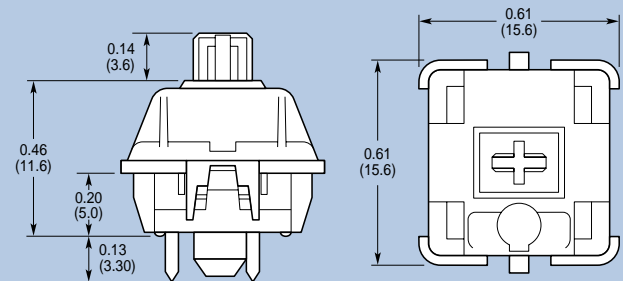
MX Series

Keyswitch

MX Desktop Profile



Dimensions: Inches (mm)



Specifications

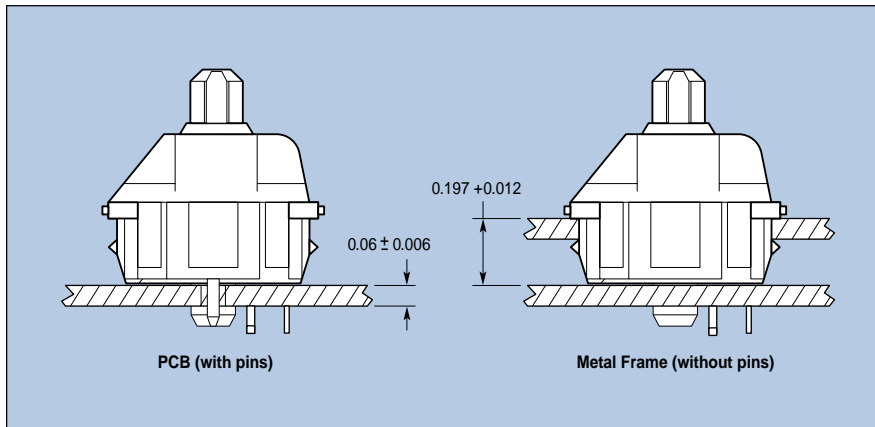
Voltage	12 VAC/DC max. 2 VDC min.
Current	10mA AC/DC max. 10 μ A DC min.
Insulation Resistance	100 M Ω at 100 VDC
Capacitance	<2pF (at 1kHz)
Bounce Time	\leq 5 msec (at 16 in/sec actuation speed)
Life	(at 5 V, 1mA, no load)
MX Linear	50 x 10 ⁶ cycles
MX Soft Tactile	20 x 10 ⁶ cycles
MX Click Tactile	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

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

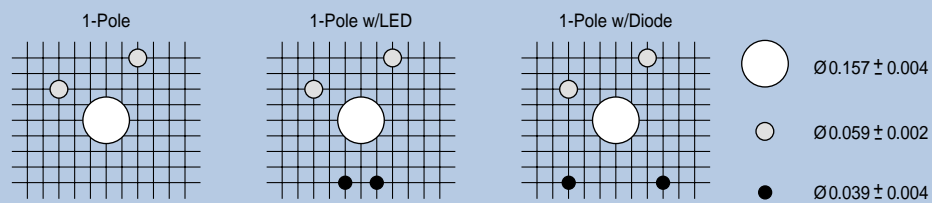
Mounting Options



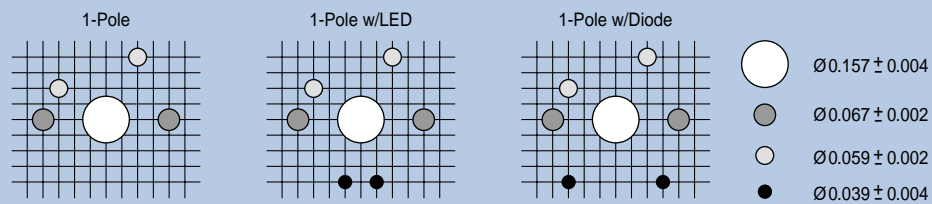
Circuit Board Layouts

Grid line spacing = 0.05 inch

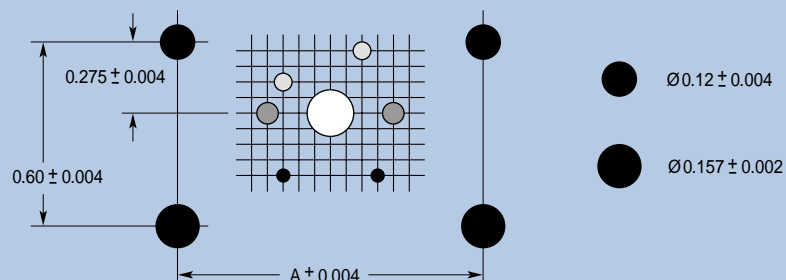
Keyswitch without fixation pins



Keyswitch with fixation pins



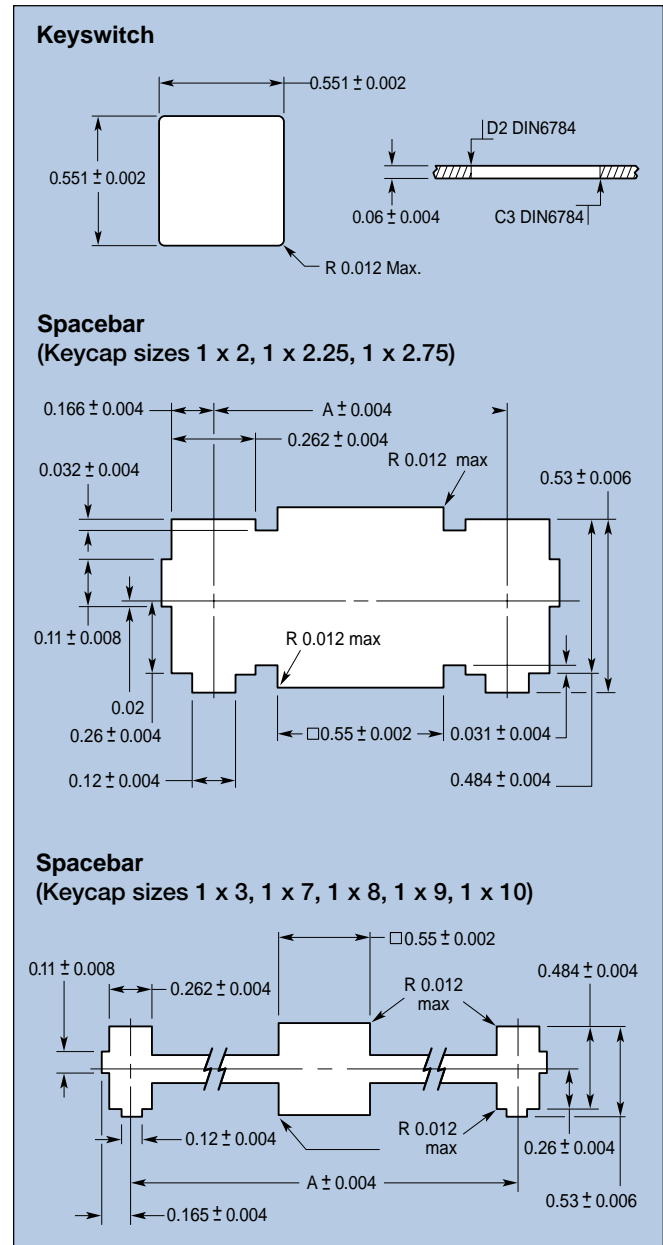
Spacebar without frame



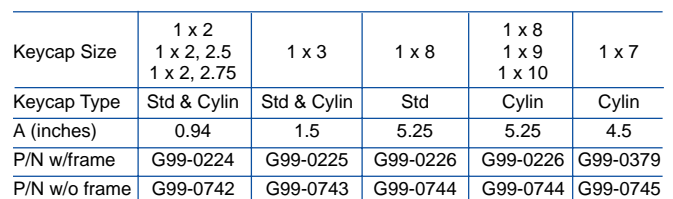
Keyswitch

Metal Frame Cutout Dimensions

Keyswitch



Leveling Mechanism Kits



Soldering Parameters

1. Flux Station

- A. Flux – Fry type GR8
- B. Applied by foaming
- C. Specific gravity – 0.820 g/cm3

2. Conveyor Speed

- A. 2.3 meters/min.

3. Pre-heat Temperature

- A. +88°C measured on top surface of PCB

4. Solder

- A. 63/37 alloy
- B. Dry wave – no oil
- C. Approximate contact with wave – 2 seconds

5. Cleaning

- A. Fry GR8 is non-hygroscopic flux and does not require cleaning
- B. If cleaning is required on isolated areas such as finger connector, cold cleaning by hand with Alpha 564 is recommended. Care must be taken to avoid solvent entering the keymodule.

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

Ordering Information

MX		1	A		1	1		1		N		N		
Keyswitch/Type														
Code	Contact Material		Code	Contact Config.	C O D E	Operating Characteristics, Actuating Force and Key Style			C O D E	Keystem Configuration		C O D E	PCB Mounting Pins	
1	AuAg10 10mA/12V max		A	SPSTNO	0	Special			1	Std straight for cylin & std keycaps		N	No pins (metal frame req)	
2	—		B	—	1	Momentary, single pole, 2.1 oz, standard keyswitch, black keystem						W	With pins	
3	—		C	Special	2	Momentary, single pole, 2.8 oz, spacebar, grey 37 keystem								
4	—		D	—	3	Alternate action, single pole, 2.1 oz								
5	Special				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								
			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										