



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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SERIES 86
Unsealed, .500" Centers,
Flange Mounted

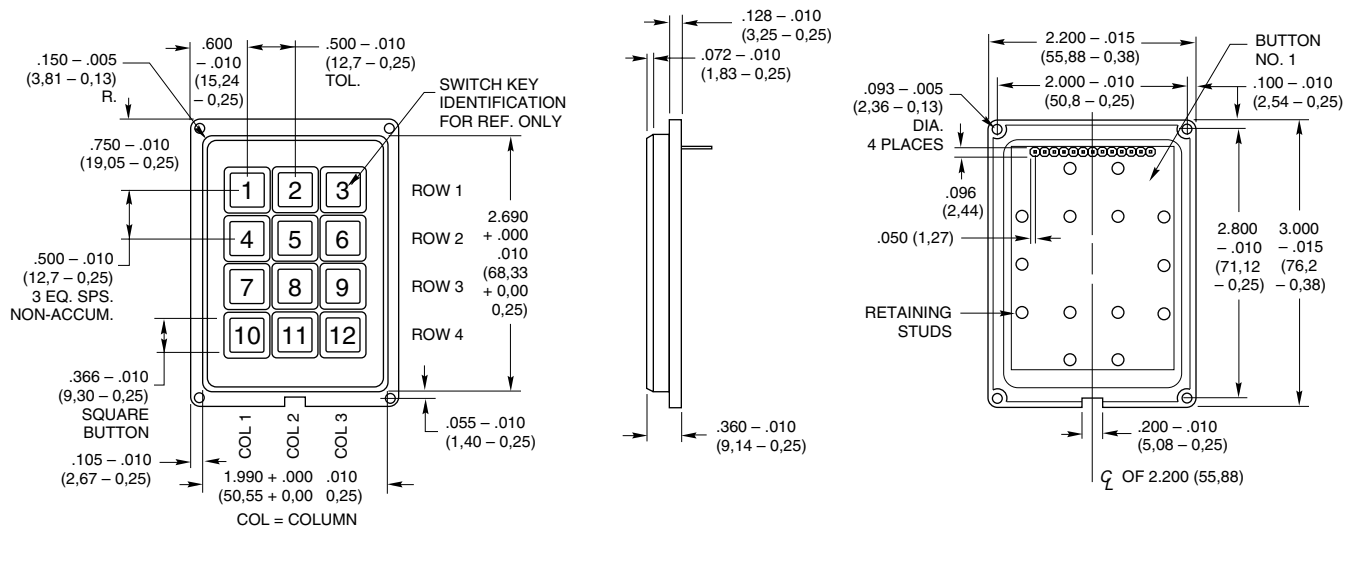
FEATURES

- 1/2" Button Centers
- Flange Mounted
- Top Surface or Sub Surface Mounting
- Snap-Dome Contact Provides Positive Feedback



DIMENSIONS in inches (and millimeters)

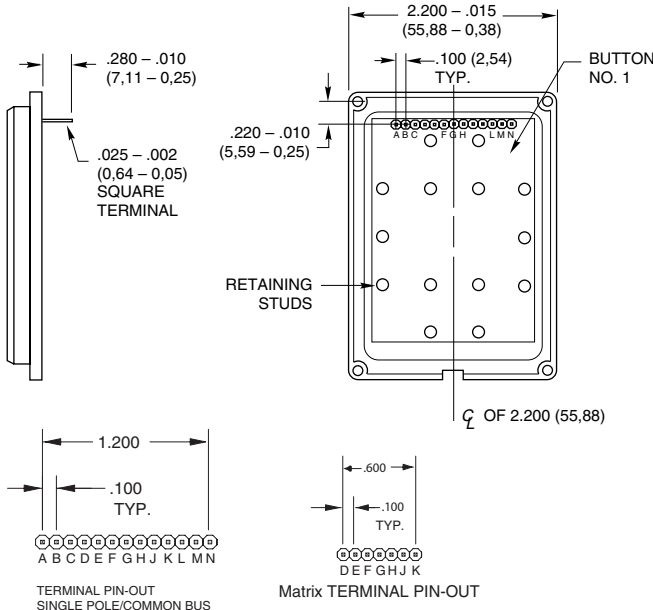
3x4 Keyboard



Termination in inches (and millimeters)

Code and Truth Table

3x4



Dots in the chart indicate connected terminals when switch is closed. Terminals are identified on the keyboard.

3x4		CODES																		
		Matrix						Single Pole/Common Bus												
BUTTON LOCATION	1	•					•					•								
	2	•	•	•			•	•				•								
	3			•	•							•								
	4	•			•				•			•								
	5		•			•						•								
	6			•								•								
	7	•				•			•			•								
	8		•			•						•								
	9			•								•								
	10	•				•						•								
	11		•			•						•								
	12			•								•								
		F	E	D	K	J	H	G	I	A	K	F	B	L	G	C	M	H	D	N
		TERMINAL LOCATION																		

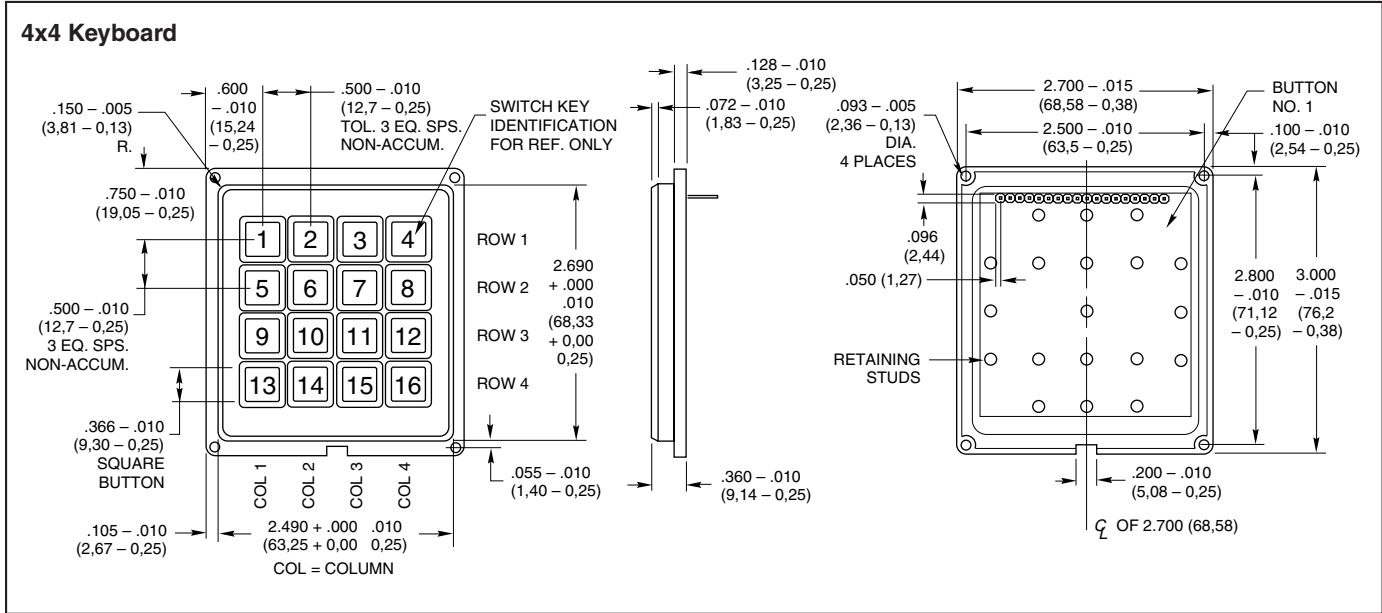
SERIES 86
Unsealed, .500" Centers,
Flange Mounted

FEATURES

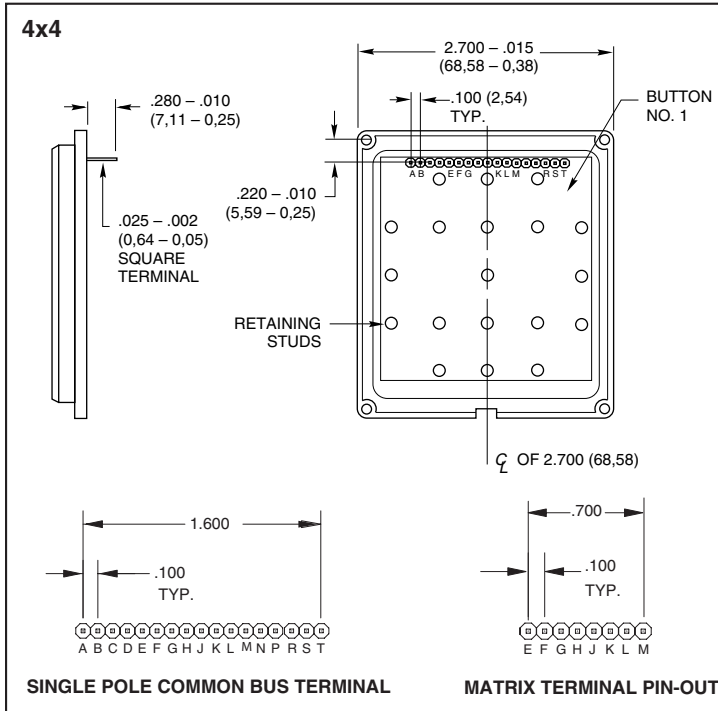
- 1/2" Button Centers
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DIMENSIONS in inches (and millimeters)



Termination in inches (and millimeters)



Code and Truth Table

Dots in the chart indicate connected terminals when switch is closed. Terminals are identified on the keyboard.

		CODES																									
		Matrix								Single Pole/Common Bus																	
BUTTON LOCATION	1	•																									
	2		•																								
	3			•																							
	4				•																						
	5					•																					
	6						•																				
	7							•																			
	8								•																		
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	10										•																
	11											•															
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	13													•													
	14														•												
	15															•											
	16																•										
		H	G	F	E	M	L	K	J	P	J	E	A	R	L	F	B	S	M	H	C	T	N	G	D	K	
		TERMINAL LOCATION																									

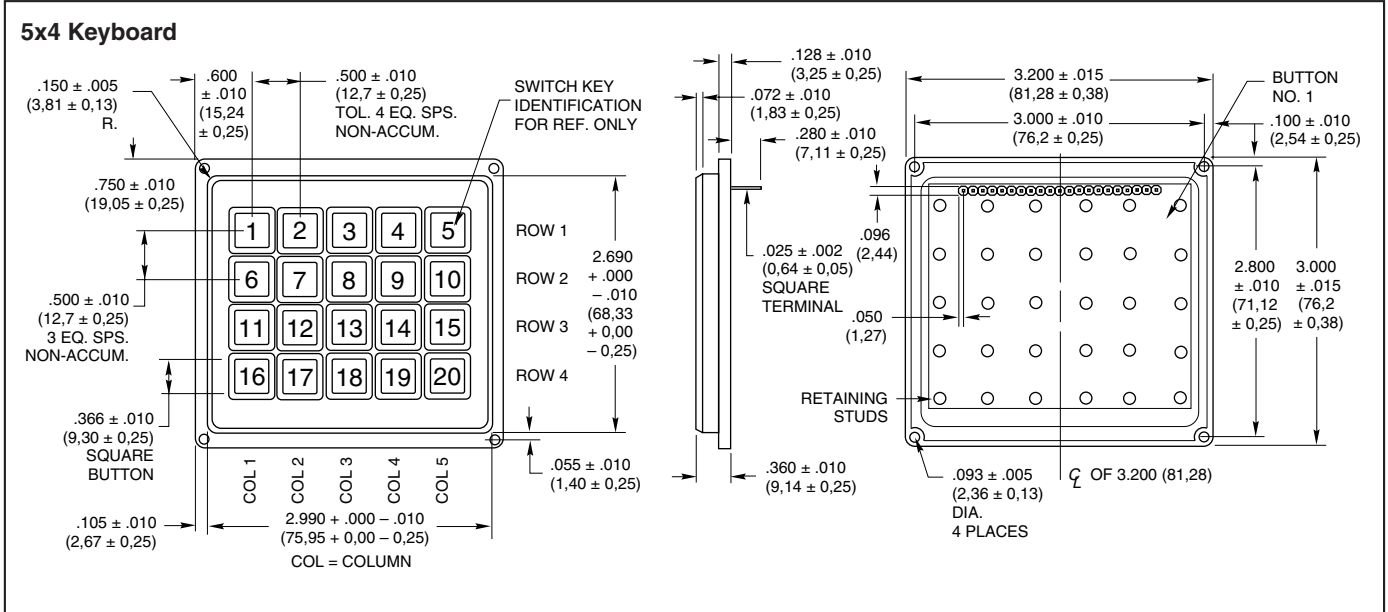
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Unsealed, .500" Centers,
Flange Mounted

FEATURES

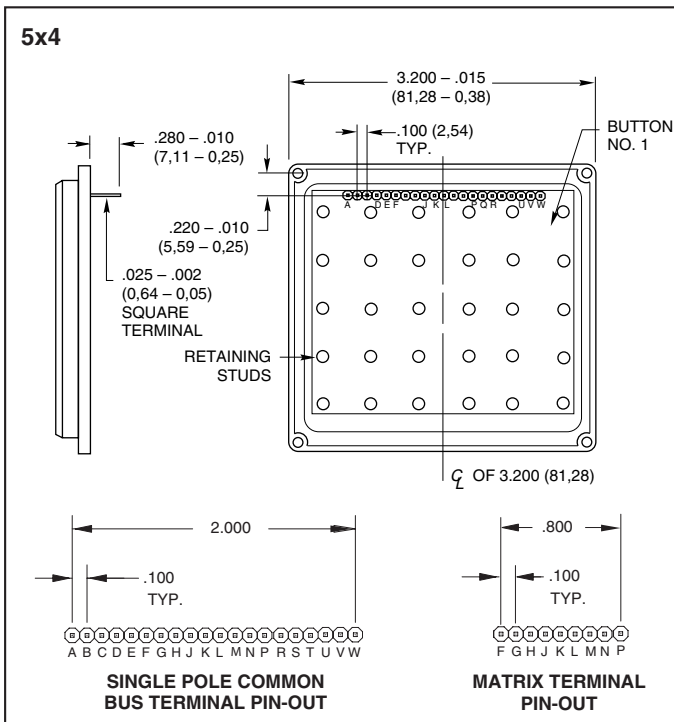
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DIMENSIONS in inches (and millimeters)



Termination in inches (and millimeters)



Code and Truth Table

Dots in the chart indicate connected terminals when switch is closed. Terminals are identified on the keyboard.

5x4	CODES	
	Matrix	Single Pole/Common Bus
1	•	•
2	•	•
3	•	•
4	•	•
5	•	•
6	•	•
7	•	•
8	•	•
9	•	•
10	•	•
11	•	•
12	•	•
13	•	•
14	•	•
15	•	•
16	•	•
17	•	•
18	•	•
19	•	•
20	•	•
	P N K G F J L M H	T P M H D U Q L G C V R K F B W S J E A N
	TERMINAL LOCATION	

SPECIFICATIONS

Rating Criteria

Rating at 24 Vdc: 10 milliamps, resistive
Contact Resistance: Compatible with MOS, TTL and DTL (10 ohms maximum)
Voltage Breakdown: 250Vac between mutually insulated parts
Life Expectancy: 3,000,000 operations per button

Contact Bounce: Less than 4 milliseconds at make, 10 milliseconds at break
Operating Temperature: -40°C to +80°C

Contact Dome: Stainless steel, selectively gold-plated
Terminals: Phosphor bronze

Materials and Finishes

Housing: ABS polycarbonate, black
Buttons: ABS plastic, white. Legends are black.
Snap-On-Cap: Clear polycarbonate

Operating Features

Button Travel: 0.015" nominal total travel
Typical Operating Force: 350 grams

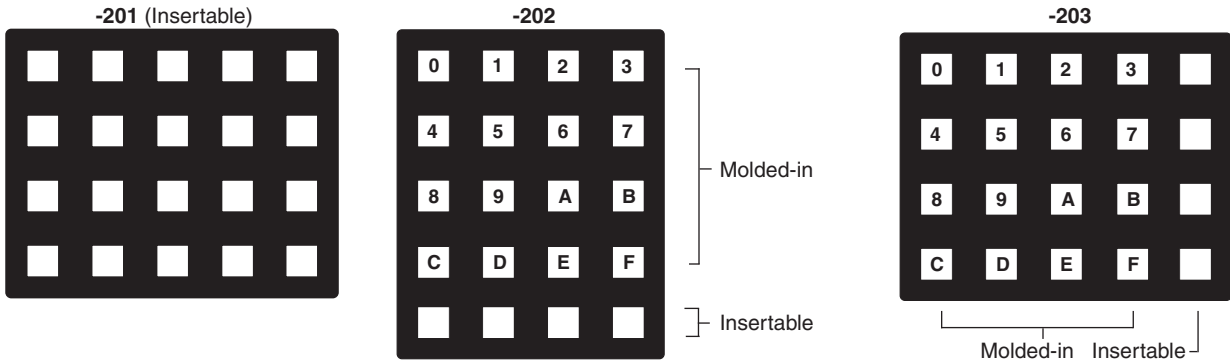
STANDARD LEGENDS

Insertable legend version (legend numbers -101, -001, -201 and row or column indicated in -202 and -203) has a removable cap. The revealed button surface can be legended by an insert or a dry transfer of a blank legend

insert. This surface can also be ink stamped by Grayhill in higher volume quantities. When the cap is replaced, the assembly extends approximately .015" (0,38 mm) above the surface. The legend sheet information follows

the legend presentation. All other legends incorporate molded-in (two shot) legends with the exception of legend numbers -202 and -203. The blank legends or spaces in legends -202 and -203 are insertable legends, others are molded-in.

5x4: Shown below



INSERTABLE LEGENDS

For use with -101, -001, -201, -202 and -203 legend options. Legends are die cut to fit button surface when cap is removed. Dry transfer legends offer some flexibility to customize the blank inserts included on the sheet of popular legend letters, words and symbols provided or on the insertable legends sheet.

Description	Part No.
Sheet of Legend Inserts	87AC2046
Dry Transfer Lettering, Small	87-DT-2096-088
Dry Transfer Lettering, Medium	87-DT-2096-125
Dry Transfer Lettering, Large	87-DT-2096-187

ORDERING INFORMATION

Grayhill Series Number

Size Option
 A = 3x4
 B = 4x4
 J = 5x4

Circuitry Option
 B2 = Matrix code
 C2 = Single pole/common bus

Standard Legend Choices
 3x4 Size: -101, -102 or -103
 4x4 Size: -001, -002, -003, -004, -005 or -006
 5x4 Size: -201, -202, or -203

86AB2-103

Available from your local Grayhill Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.