

SERIES 86
Unsealed, .500" Centers,
Flange Mounted

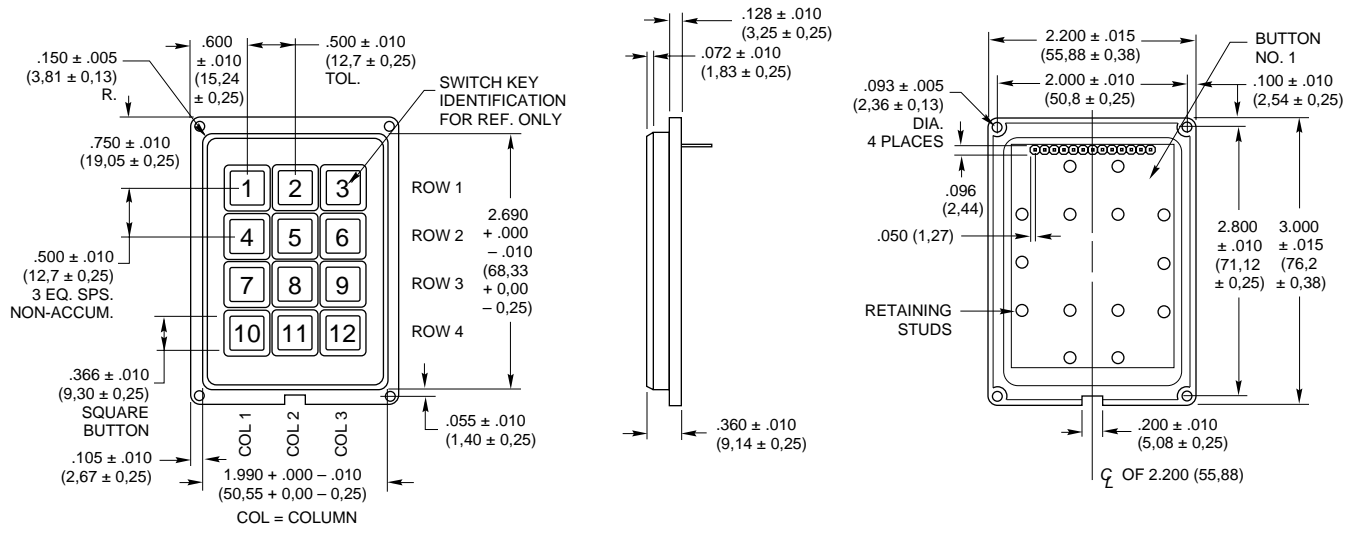


FEATURES

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

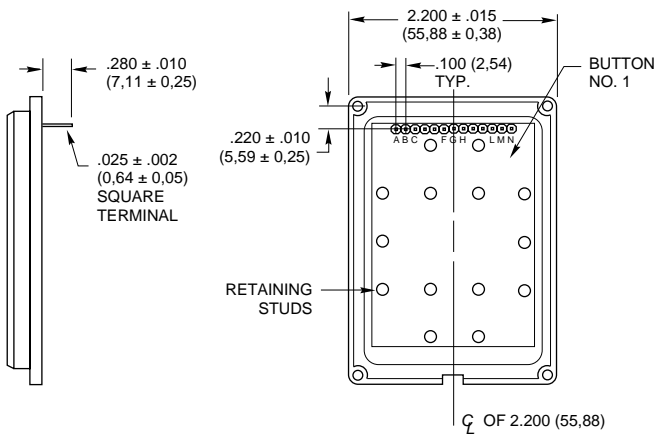
DIMENSIONS In inches (and millimeters)

3x4 Keyboard



Termination In inches (and millimeters)

3x4



Code and Truth Table

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	J	E	A	K	F	B	L	G	C	M	H	D	N			
		TERMINAL LOCATION																							

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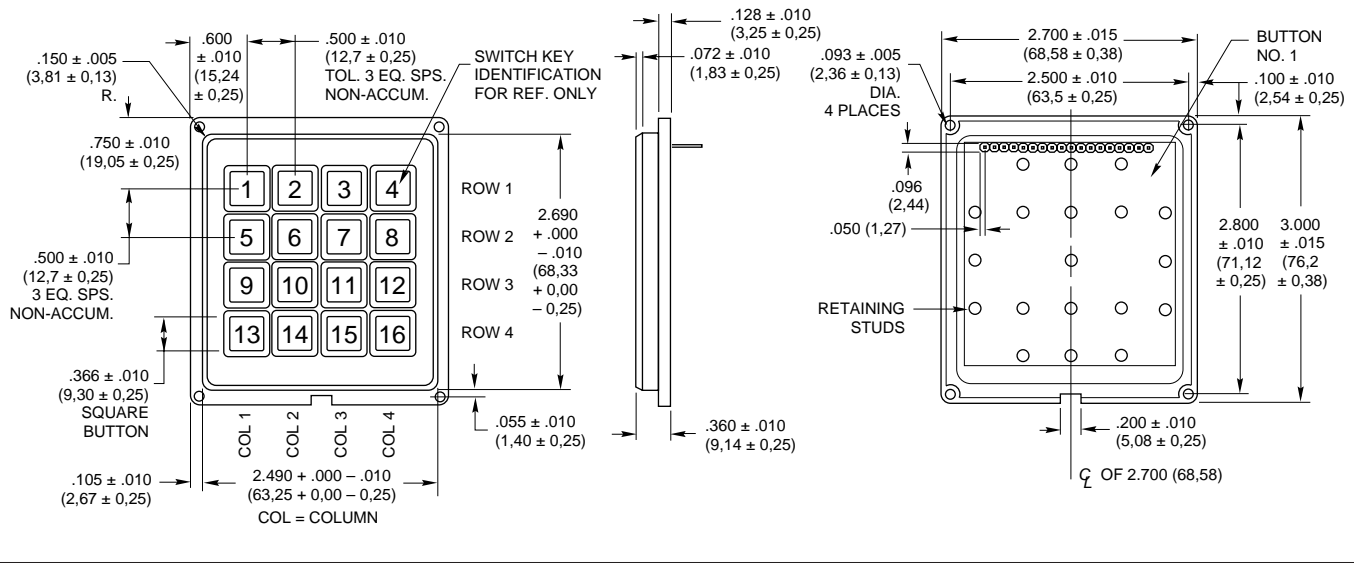


FEATURES

- 1/2" Button Centers
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- Top Surface or Sub Surface Mounting
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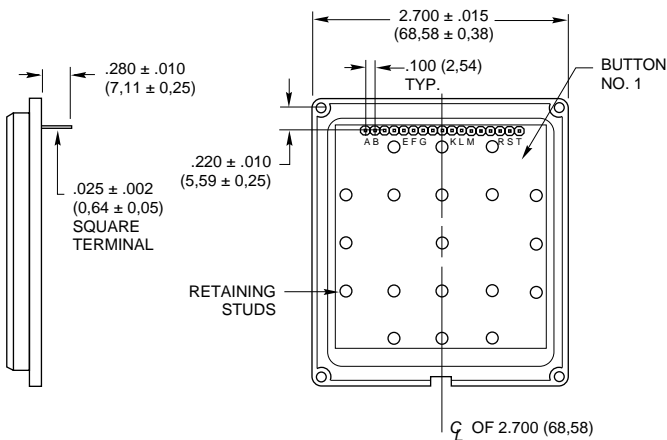
DIMENSIONS In inches (and millimeters)

4x4 Keyboard



Termination In inches (and millimeters)

4x4



Code and Truth Table

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

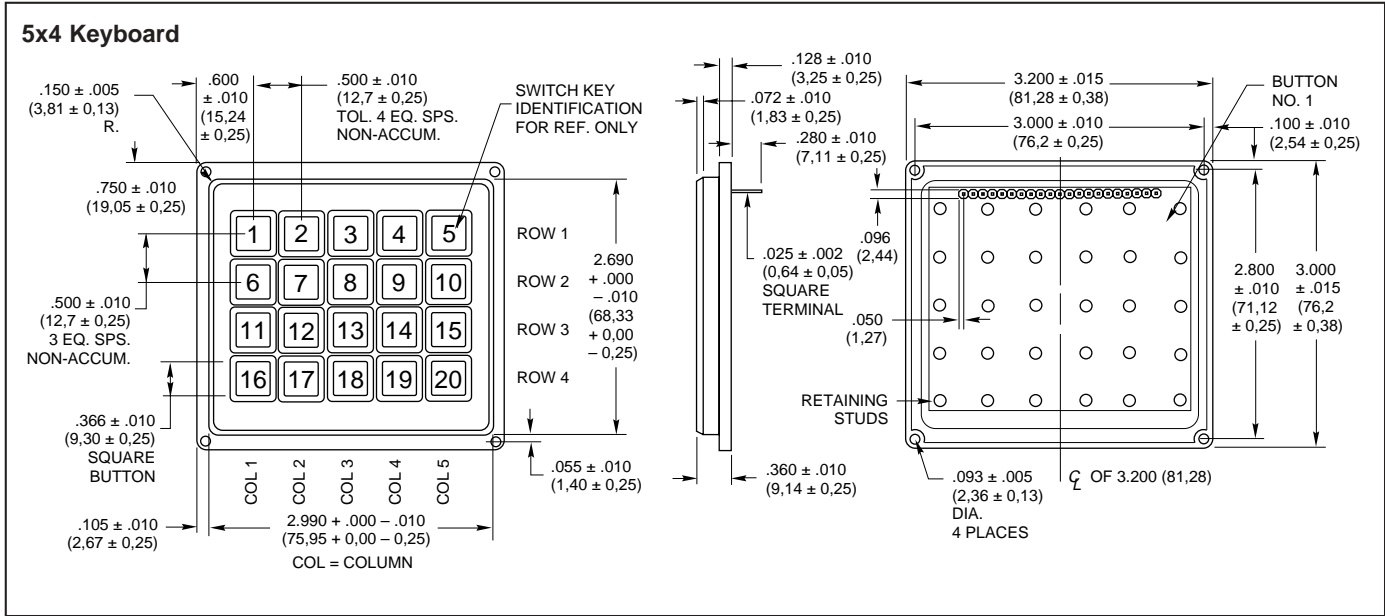
4x4	CODES	
	Matrix	Single Pole/Common Bus
1	•	•
2	•	•
3	•	•
4	•	•
5	•	•
6	•	•
7	•	•
8	•	•
9	•	•
10	•	•
11	•	•
12	•	•
13	•	•
14	•	•
15	•	•
16	•	•
	H G F E M L K J	P J E A R L F B S M H C T N G D K
	TERMINAL LOCATION	

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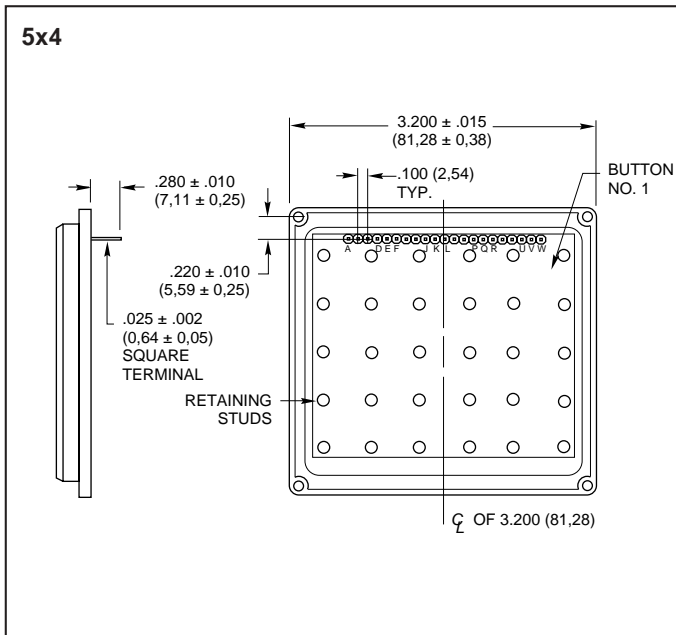
- FEATURES**
- 1/2" Button Centers
 - Flange Mounted
 - Top Surface or Sub Surface Mounting
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DIMENSIONS In inches (and millimeters)



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: 250 Vac 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

Materials and Finishes

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

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

Operating Features

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

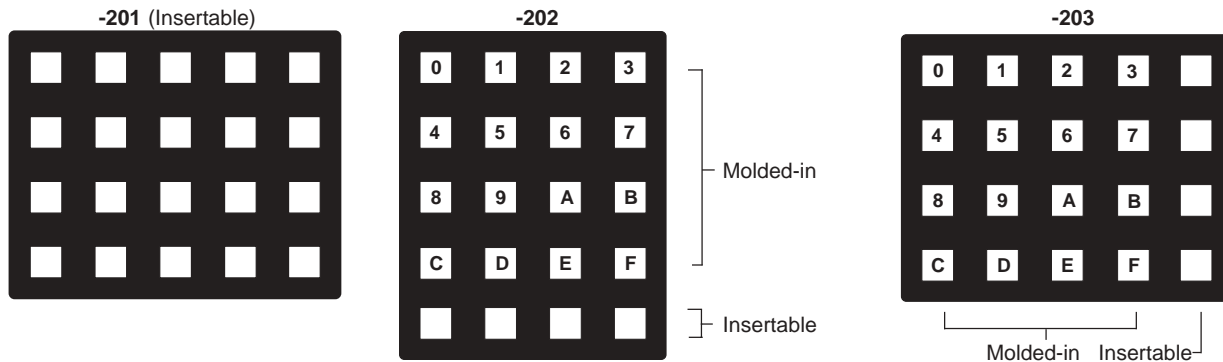
STANDARD LEGENDS

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.

3x4 : -101, -102, -103, -001 As seen on pages D-18
4x4 : -002, -003, -004, -005, -006 As seen on pages D-18
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

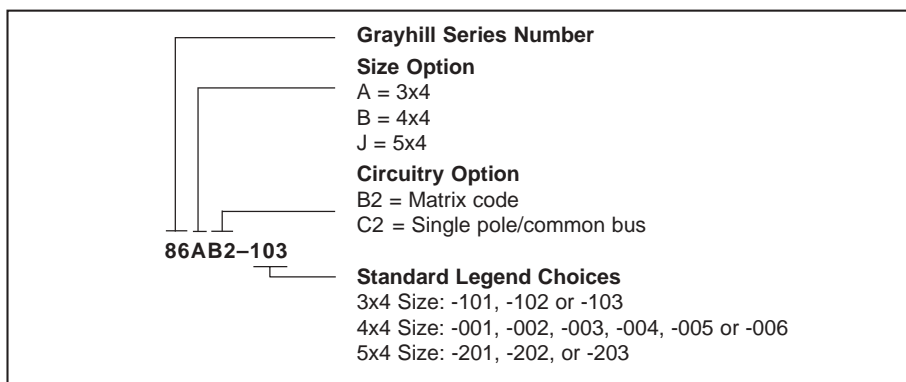
PRINTED LEGENDS

Refer to page D-19 or D-23.

Ordering Information—Special Legends

See page D-19 or D-23.

ORDERING INFORMATION



Available from your local Grayhill Distributor.

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