



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!



## Contact us

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## SERIES 84R

### Rugged Keypad for Tough Environments

#### FEATURES

- Metal Keys and Housing
- Sealed for Use Outdoors
- Full Travel Keys Provide Positive Feedback
- Choice of Dome Contacts or Conductive Rubber Contacts
- Choice of Matrix Coding or Single Pole/Common Bus Coding
- Available with an Optional Locking Connector
- Custom Engraved Legends Available

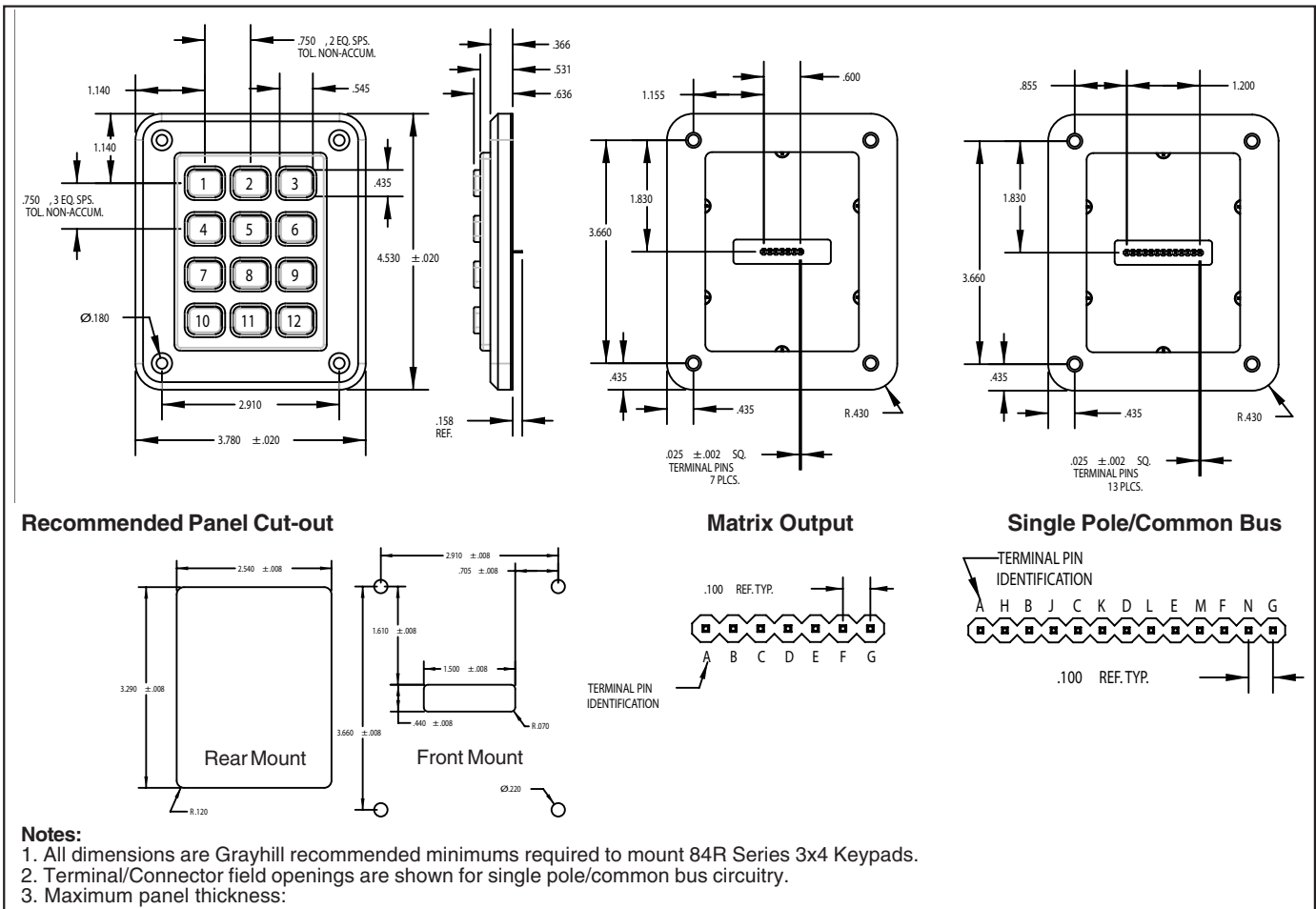
#### DESCRIPTION

Series 84R keypads work in harsh industrial environments where exposure to fine particulates compromises other keypads. The sealed openings and tough construction make this keypad perfect for outdoor use as well. Typical applications include security system code entry and product selection on outdoor terminals.

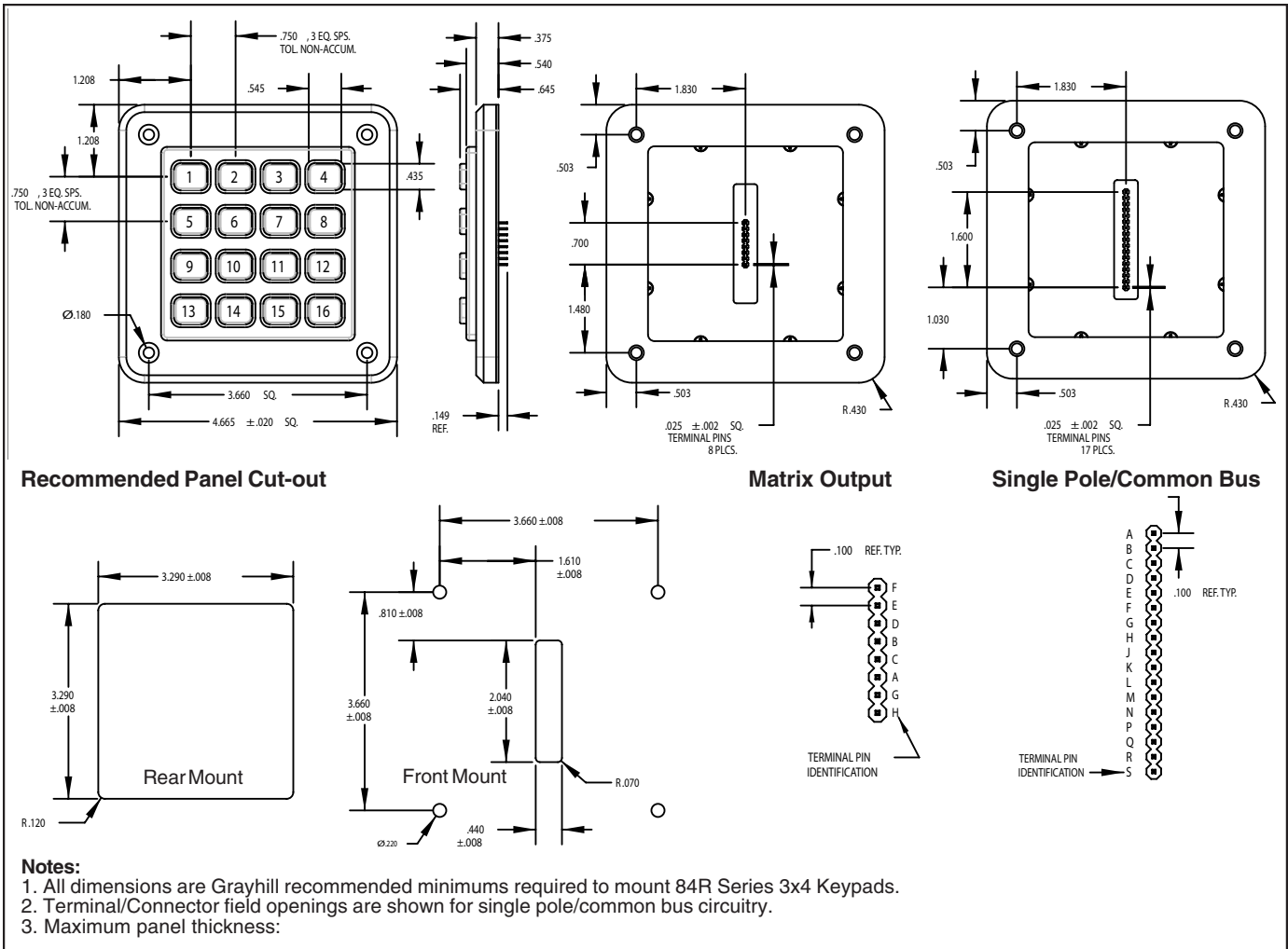


Keyboards and Keypads

#### 3 X 4 DIMENSIONS in inches (and millimeters)



**4 X 4 DIMENSIONS** in inches (and millimeters)



Keyboards and Keycaps

**CODE AND TRUTH TABLES**

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

**12 Button Keycaps**

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

**16 Button Keycaps**

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

**SPECIFICATIONS**

**Dome Contacts Rating Criteria**

**Rating at 24 Vdc:** 10 mA resistive (max)  
**Contact Bounce:** 4 milliseconds maximum at make; 10 milliseconds maximum at break  
**Contact Resistance:** 10 ohms maximum  
**Voltage Breakdown:** 250 V  
**Life Expectancy:** 3 million operations/button  
**Insulation Resistance:** 1000 MegOhms min.

**Rubber Contacts Rating Criteria**

**Rating at 24 Vdc:** 5 mA for .5 seconds  
**Contact Bounce:** less than 12 milliseconds  
**Contact Resistance:** less than 100 ohms initial  
**Voltage Breakdown:** 250 VAC between components  
**Life Expectancy:** 3 million operations/button  
**Insulation Resistance:** >10 Ohms @500 VDC

**Materials and Finishes**

**PC Board:** FR-4 Glass Cloth Epoxy  
**Dome Retainer/Rear Seal Sheet:** Polyester  
**Housing/Buttons:** Aluminum Alloy  
**Keypad/Gasket:** Black Fluorosilicone Rubber, 50 Durometer +5  
**Domes:** Stainless Steel  
**Connector/Header:** Glass Filled Polyester  
**Terminals:** Gold Plated, Phosphor Bronze

**Dome Contacts Operating Features**

**Pre-Travel:** 0.030" minimum  
**Operating Force:** 20 ±4 ounces  
**Operating Temperature:** -55°C to 85°C  
**Humidity:** 0 to 98% (no condensation)

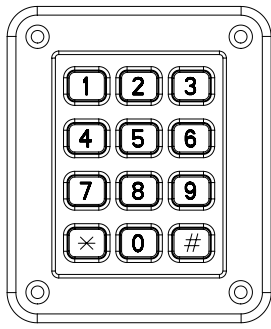
**Rubber Contacts Operating Features**

**Pre-Travel:** 0.050" minimum  
**Operating Force:** 175 ±40 grams  
**Operating Temperature:** -55°C to 85°C  
**Humidity:** 0 to 98% (no condensation)

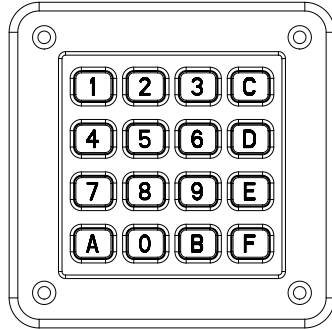
**STANDARD LEGENDS**

Available through Grayhill Distributors

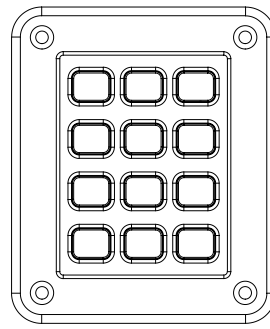
To order one of the configurations below, use the dash number shown here; select the keypad size and code, and order the part number with the appropriate legend dash number.



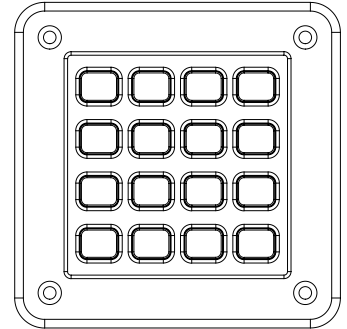
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**HEADER CONNECTORS**

Compatible with: Samtec, Inc. Header Series BCS, BSW, CES, ESW, ESQ, SLW, SSW, SSQ, IDSS and IDSD or equivalent.

**AVAILABILITY**

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

**CUSTOM LEGENDS**

Custom keytop graphics are available. Contact a local Sales Office or Grayhill directly to enquire about minimum requirements and costs.

**ORDERING INFORMATION**

