

SERIES 84R

Rugged Keypad for Tough Environments

FEATURES

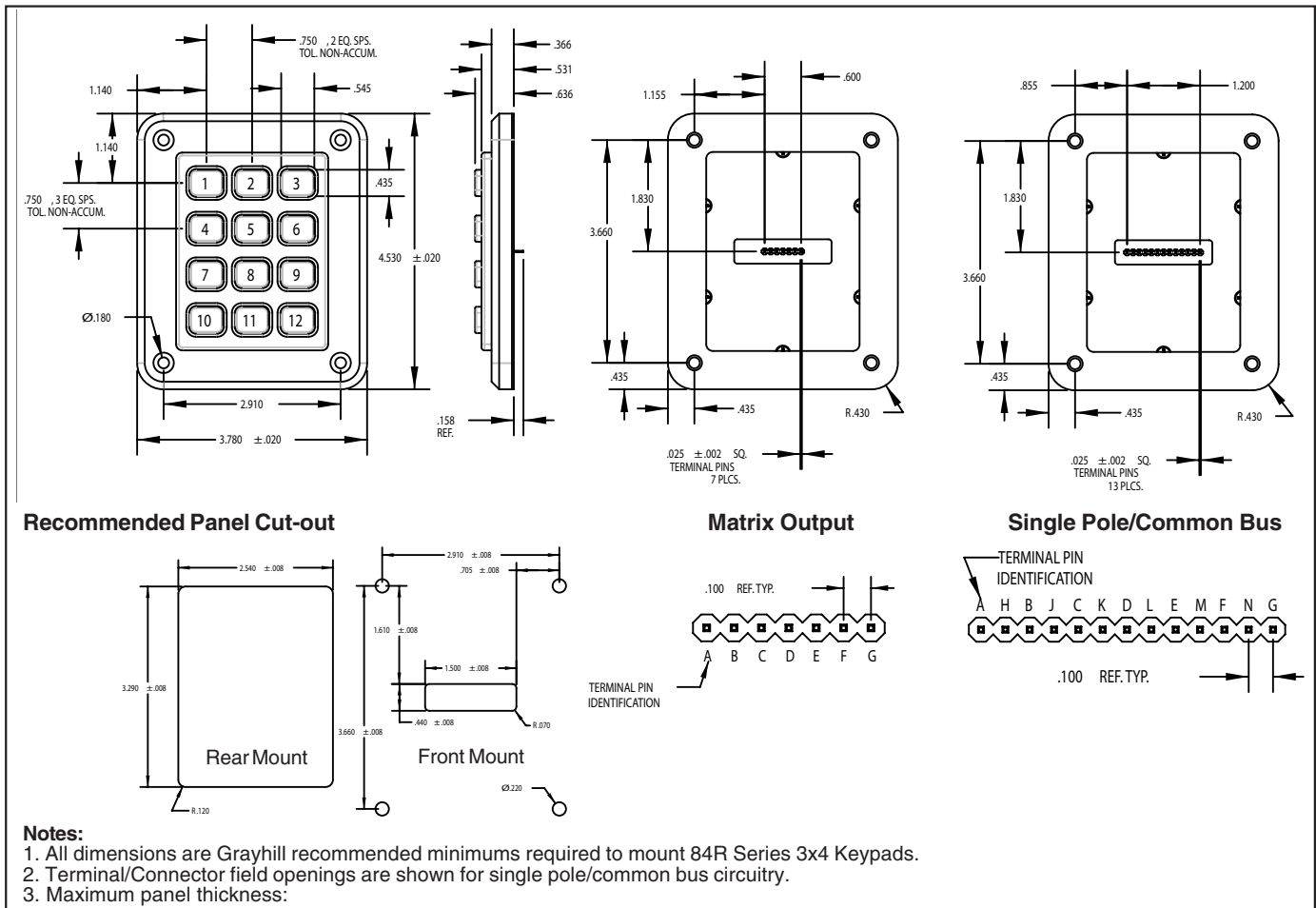
- Metal Keys and Housing
- Sealed for Use Outdoors
- Full Travel Keys Provide Positive Feedback
- Choice of Dome Contacts or Conductive Rubber Contacts
- Choice of Matrix Coding or Single Pole/Common Bus Coding
- Available with an Optional Locking Connector
- Custom Engraved Legends Available

DESCRIPTION

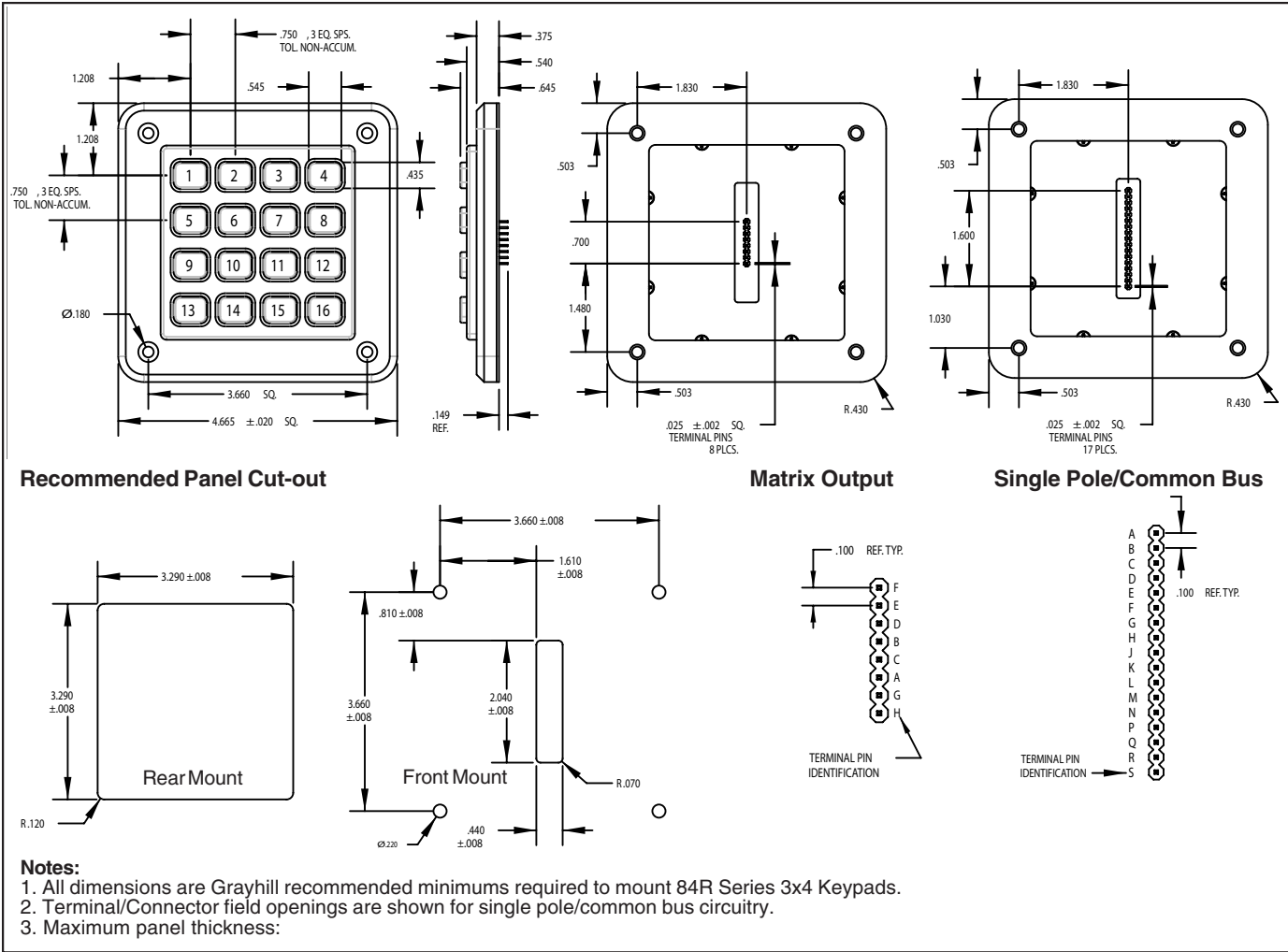
Series 84R keypads work in harsh industrial environments where exposure to fine particulates compromises other keypads. The sealed openings and tough construction make this keypad perfect for outdoor use as well. Typical applications include security system code entry and product selection on outdoor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



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 | R | 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)

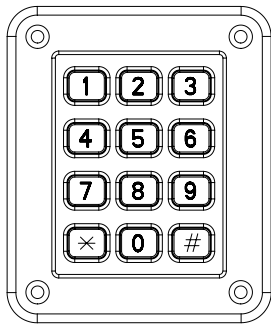
Rubber Contacts Operating Features

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

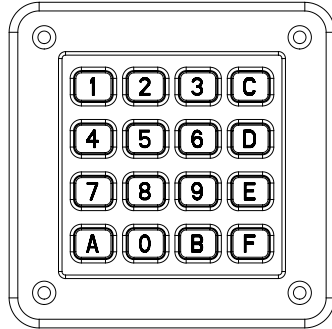
STANDARD LEGENDS

Available through Grayhill Distributors

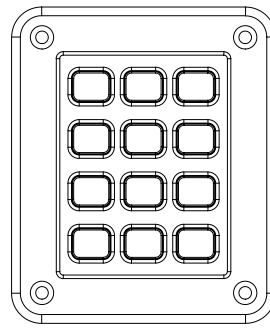
To order one of the configurations below, use the dash number shown here; select the keypad size and code, and order the part number with the appropriate legend dash number.



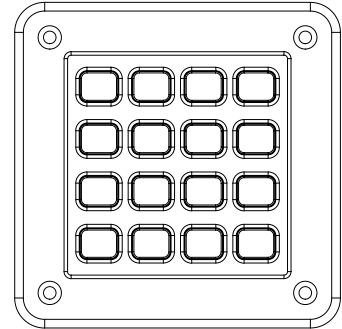
-112



-014



-000



-000

HEADER CONNECTORS

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

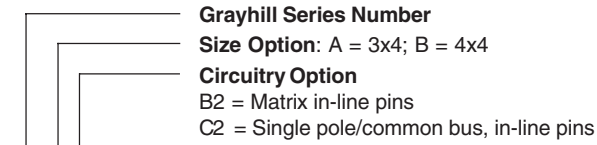
AVAILABILITY

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



84R-AB2-112-PD

- Grayhill Series Number**
- Size Option:** A = 3x4; B = 4x4
- Circuitry Option**
- B2 = Matrix in-line pins
- C2 = Single pole/common bus, in-line pins
- Key Contact Option**
- D = Metal Domes; R = Conductive Rubber
- Connector Option**
- P = Terminal Pins; C = Locking Connector
- Standard Legend Choices**
- 3x4 Size = -112; 4x4 Size = -014; Blank = -000

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