



Bulletin 800Z — Zero-Force Touch Buttons™

Bulletin 800Z Zero-Force Touch Buttons are ideally suited for use in two-hand machine control systems and highly repetitive applications.

Ergonomic Design — The contour shape fits the palm of the hand for ease of operation and helps deter attempts to defeat two-hand control.

Zero Force to Operate — The electronic design with two interlinked capacitive sensors in offset planes provides increased sensitivity and good ability for distinguishing between a person's hand, even through most industrial gloves, versus most foreign objects.



ATTENTION: Not recommended for use in applications where there is high probability for exposure to liquid (e.g., cutting fluid) on the sensing surface area.

Table of Contents

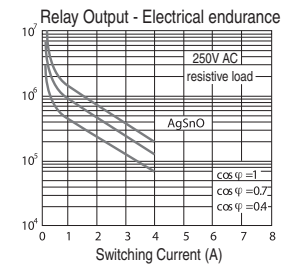
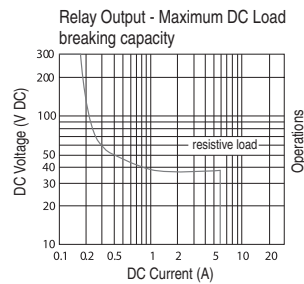
Specifications..... this page
 General Purpose Line 10-215
 Heavy Industrial Line 10-216
 Quick Disconnect
 Cables 10-216
 Accessories..... 10-217
 Wiring Diagram 10-219
 Approximate Dimensions..... 10-220

Specifications

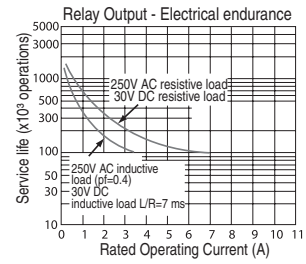
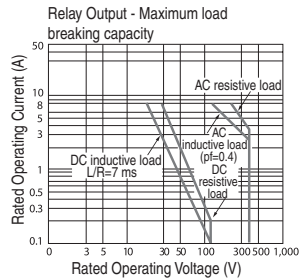
Mechanical Ratings

| Description | General Purpose Line (800Z-G) | Heavy Industrial Line (800Z-H) |
|-------------------------------------|---|--|
| Mechanical Ratings | | |
| Vibration Endurance | Tested @ 10 G, 1.52 mm displacement | |
| Mechanical Shock | Tested @ 100 G (mechanical durability) | |
| Degree of Protection | Type 4/4X/13 IP66 1200 psi Washdown | Type 4/13 IP66 |
| Operating Force | Zero | |
| Electrical Ratings | | |
| Input Voltage (Relay type) | Low Voltage: 10...40V DC, 20...30V AC Full Voltage (800Z-GF): 100...240V AC (+10%, -15%) | |
| Input Voltage (Solid-State type) | Low Voltage (800Z-GN/GP): 10...30V DC | |
| Electrical Design Life (Relay type) | Relay output 200 000 Operations @ 2 A inductive 4 A resistive | Relay output 150 000 Operations @ 5 A inductive 2.5 A resistive |
| Degree of Protection | IP2X | |
| Wire Range | #22...12 AWG (0.5...4 mm ²) | |
| Tightening Torque | 9 lb•in (1 N•m) | |
| On-delay/Off-delay | Off 60 ms max. On 76 ms max. | |
| Current Draw (Solid-State type) | 100 mA at 24V DC = 2.23 W (no external load) | |
| Environmental | | |
| Temperature Range (Operating) | -25...+55 °C (-13...+131 °F) | |
| Temperature Range (Storage) | -40...+85 °C (-40...+185 °F) | |
| Humidity | 95% RH from 25...50 °C (77...122 °F) (full operation) | |
| Materials | | |
| Housing/Guard | Valox 357 | |
| Gasket | BUNA-N | 1/16 in. Cork-BUNA-N |
| Connector | Insulator material (micro connector) = nylon Insulator material (mini connector) = PVC | |
| Standards and Certifications | | |
| Certifications | cULus, CE, C-TICK, CSA | |
| Standards Conformity | UL 508, CSA 22.2 No. 14, EN/IEC 60947-5-1, EN50081-2, EN61000-6-2, EN60954-1, EN60204-1 | |

Load Life Curves for General Purpose Product Line



Load Life Curves for Heavy Industrial Line








Applications Detail




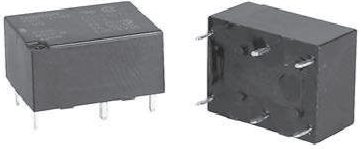

| LED Blink Rate | Diagnostic | Description |
|----------------|------------------|---|
| ** ** * | Power Up | Device touched during power up. Device will resume 10 seconds after removal of hand. |
| *** ** * | Noise Detection | Device detected an unacceptable level of noise (>20 V/m). Device will resume once noise subsides. |
| **** ** * | Margin Detection | A conductive film is building up on the sensing surface. Device will resume once cleared. |



Accessories — General Purpose

| | Description | | Cat. No. |
|---|--|-------------------|-------------------|
|  <p>Cat. No. 800Z-G3AG1</p> <p>Cat. No. 800Z-G3AG2</p> | <p>Guards These guards help protect against accidental activation of the touch button surface and protect it from damage. Can be used for both the 22.5 mm and 30.5 mm mounted products.</p> | Yellow Plastic | 800Z-G3AG1 |
| | | Black Plastic | 800Z-G3AG2 |
|  <p><i>Plastic Mounting Kit</i> Cat. No. 800Z-G2AH1</p> | <p>Mounting Ring Nut for 22.5 mm Holes Used on 22.5 mm devices.</p> | 800Z-G2AH1 | |
|  <p><i>Plastic Mounting Kit</i> Cat. No. 800Z-G3AH1</p> | <p>Mounting Ring Nut for 30.5 mm Hole Used on 30.5 mm devices.</p> | 800Z-G3AH1 | |
|  <p><i>Swivel Assembly</i> Cat. No. 60-2439</p> | <p>30.5 mm Swivel/Tilt Mounting Assembly This bracket allows you to orient the touch button in any position. It can be mounted on any vertical or horizontal surface. Compatible with 30.5 mm mounting only.</p> | 2.25 in. (57 mm) | 60-2681 |
| | | 1.15 in. (29 mm) | 60-2439 |
|  <p>Cat. No. 800E-AHA1</p> | <p>30.5 mm to 22.5 mm Hole Size Adapter This adapter allows a 22.5 mm push button operator to be installed in a panel with existing 30.5 mm mounting holes.</p> | Metal | 800F-AHA1 |
| | | Black Metal | 800E-AHA2 |

Accessories — Heavy Industrial

| | Description | | Cat. No. |
|---|--|--|-------------------------|
|  <p>Cat. No. 800Z-HAG1</p> | <p>Guard This guard helps protect against accidental activation of the touch surface and protects it from damage. Mounting screws are included.</p> | <p>Yellow Plastic</p> | <p>800Z-HAG1</p> |
|  <p><i>Single Hub Base</i> Cat. No. 800P-B1</p> <p><i>Double Hub Base</i> Cat. No. 800P-B2</p> | <p>Mounting Bases The heavy industrial line products mount directly on these bases. The conduit hub(s) come with a 3/4 inch opening.</p> | <p>1</p> | <p>800P-B1</p> |
| | | <p>2</p> | <p>800P-B2</p> |
|  <p>Cat. No. 800P-N150</p> | <p>Adapter This adapter is used if mounting touch button onto a 4-1/2 in. x 2-3/8 in. (114.3 x 60.3 mm) enclosure pattern.</p> | | <p>800P-N150</p> |
|  <p>Cat. No. 800Z-N12</p> | <p>Replacement Relay Note: Package quantity of 2.</p> | <p>10...264V</p> | <p>800Z-N12</p> |
|  <p>Cat. No. 800Z-HAH1</p> | <p>Replacement Screws</p> | <p>Guard-to-Base Mounting Note: package quantity of 4</p> | <p>800Z-HAH1</p> |
| | | <p>Base Mounting Note: package quantity of 4</p> | <p>800Z-HAH2</p> |

Wiring Diagrams — Touch Button Terminations

General Purpose Line

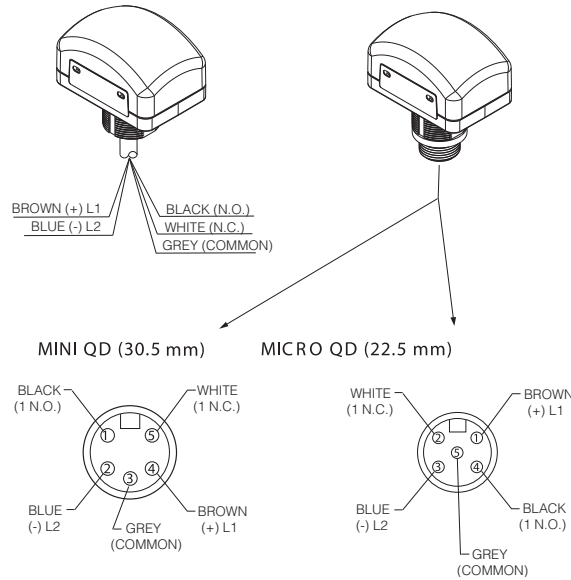
Electrical Connections: 10...40V DC and 20...30V AC Input Voltage (Relay Output); 100...240V AC Input Voltage (Relay Output)

Note: Separate N.O. and N.C. output relays with shared common.

5-Conductor Cabled (Relay Output)

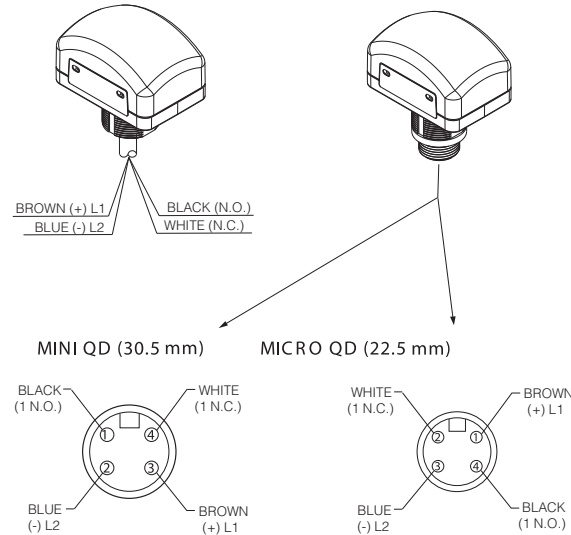
For 800Z-GL _ _ _

For 800Z-GF _ _ _

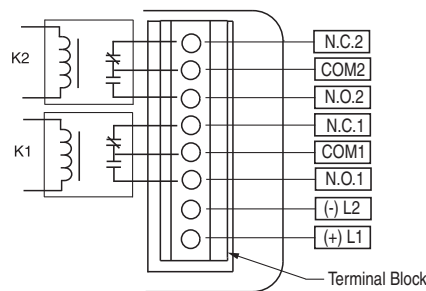


Electrical Connections: 10...30V DC Input Voltage (Transistor Output); 150 mA Max. per Circuit Output

4-Conductor Cabled



Heavy Industrial Line



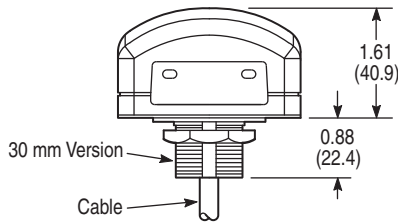
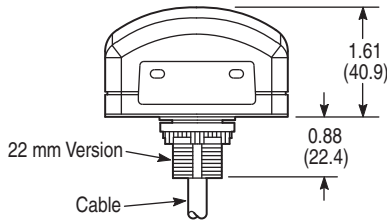
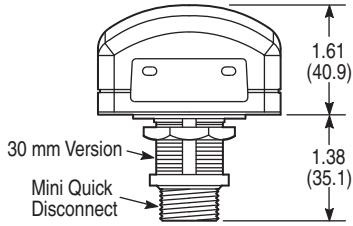
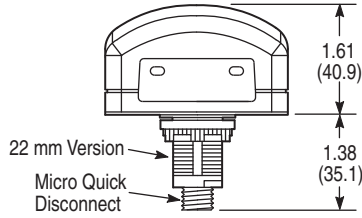
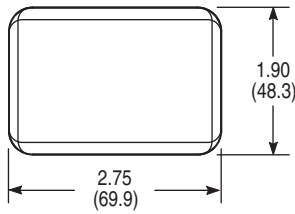
Zero-Force Touch Buttons™

Approximate Dimensions

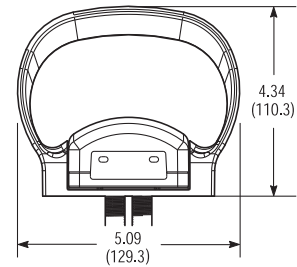
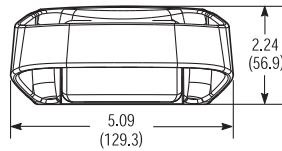
Approximate Dimensions

Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

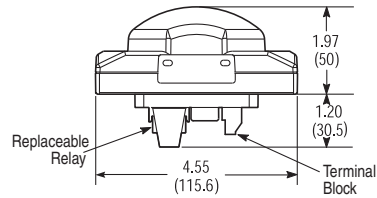
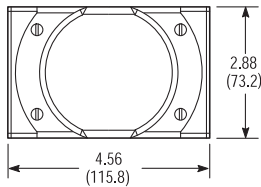
General Purpose



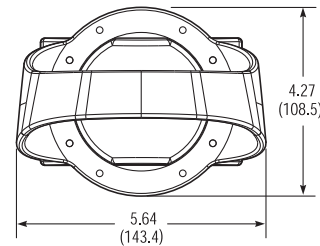
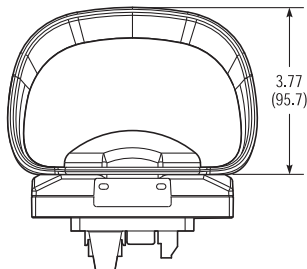
General Purpose With Guard



Heavy Industrial



Heavy Industrial With Guard



Cutout and Mounting Screw Locations for a Flush Mounted Cover

