



Bulletin 800Z — Zero-Force Touch Buttons™

- Internationally rated ergonomic touch buttons
- Zero force to operate
- EMC protection
- Diagnostic LEDs
- Replaceable relays (heavy industrial design)

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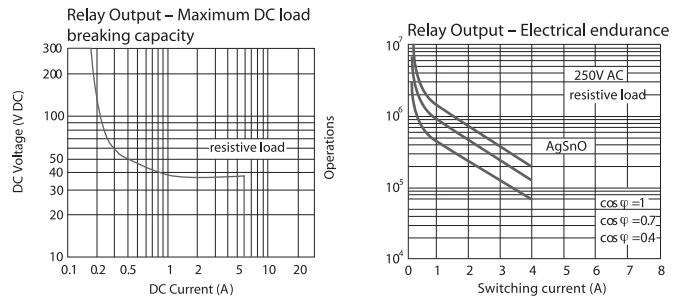
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Specifications

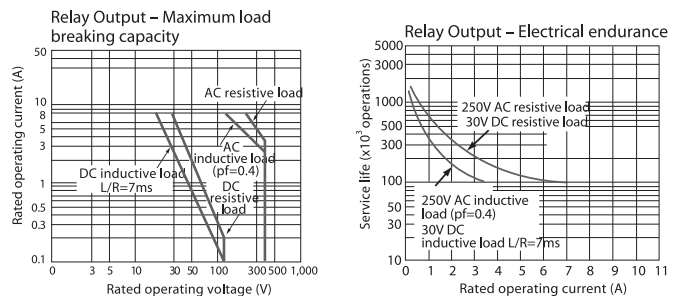
Mechanical Ratings

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): 85...264V AC	
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 (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



General Purpose Line — Momentary Touch Buttons



General Purpose
 Cat. No. 800Z-GF2Q5



General Purpose
 Cat. No. 800Z-GL3Q5B

Mounting Hole Size	Input Voltage	Output Type	Electrical Connection	No Guard	Black Guard
				Cat. No.	Cat. No.
30.5 mm	85...264V AC	Relay Output	5-Pin QD	800Z-GF3Q5	800Z-GF3Q5B
			6 ft Cabled — 5-Wire	800Z-GF3Q65	800Z-GF3Q65B
	10...40V DC and 20...30V AC	Relay Output	5-Pin QD	800Z-GL3Q5	800Z-GL3Q5B
			6 ft Cabled — 5-Wire	800Z-GL3Q65	800Z-GL3Q65B
22.5 mm	85...264V AC	Relay Output	5-Pin QD	800Z-GF2Q5	800Z-GF2Q5B
			6 ft Cabled — 5-Wire	800Z-GF2Q65	800Z-GF2Q65B
	10...40V DC and 20...30V AC	Relay Output	5-Pin QD	800Z-GL2Q5	800Z-GL2Q5B
			6 ft Cabled — 5-Wire	800Z-GL2Q65	800Z-GL2Q65B
Recommended standard cordset, 2 m (6.5 ft). See <i>Safety Catalog</i> for additional lengths.			Mini-Plus Style QD Cordset, 5-Pin	889N-F5AE-6F	889D-F5AC-2

Use the configurator below to build a Bulletin 800Z touch button to suit your application.

800Z - G **L** **3** **065** **B** -

a b c d e

Input Voltage and Output Type	
Code	Description
Relay Output	
L	Input: 10...40V DC and 20...30V AC Output: Relay
F	Input: 85...264V AC Output: Relay
Transistor Output	
N	10...30V DC NPN (Sinking) Output
P	10...30V DC PNP (Sourcing) Output

Mounting Hole Size §	
Code	Description
2	22.5 mm
3	30.5 mm

Electrical Connection	
Code	Description
Sinking/Sourcing Output *	
Q4	4-Pin QD
064	6 ft (1.8 m) Cabled
124	12 ft (3.6 m) Cabled
244	24 ft (7.2 m) Cabled
Relay Output †	
Q5	5-Pin QD
065	6 ft (1.8 m) Cabled
125	12 ft (3.6 m) Cabled
245	24 ft (7.2 m) Cabled

Guard Option	
Code	Description
Blank	No Guard
B	Black Guard
Y	Yellow Guard

Kit Option ‡	
Code	Description
Blank	No Kit
K1	24V DC Relay Kit
K2	120V AC Relay Kit
K3	240V AC Relay Kit

* These devices are transistor outputs.
 † These devices have separate N.O. and N.C. output relays with a shared common.
 ‡ Safety relays should be used in 2-hand control applications. Kits not available for solid-state (transistor output) devices. Kits include 2 identical touch buttons and a safety relay. Safety relay 440R-D23171 for 24V, 440R-D23169 for 120V, 440R-D23168 for 240V.
 § 22.5 mm touch buttons use micro connector, 30.5 mm touch buttons use mini connector.

Bulletin 800Z
Zero-Force Touch Buttons™
 Product Selection, Continued

Heavy Industrial Line — Momentary Touch Buttons



Heavy Industrial
 Cat. No. 800Z-HF1



Heavy Industrial
 Cat. No. 800Z-HL1Y

Button Type	Input Voltage	Output Type	Electrical Connection	No Guard	Yellow Guard
				Cat. No.	Cat. No.
Flush Mount	10...40V DC and 20...30V AC	Relay Output	Terminal Block	800Z-HL1	800Z-HL1Y
	85...264V AC	Relay Output	Terminal Block	800Z-HF1	800Z-HF1Y

Use the configurator below to build a Bulletin 800Z touch button to suit your application.

800Z - H L 1 Y -
a b c d

a

Voltage	
Code	Description
L	Input: 10...40V DC and 20...30V AC Output: Relay
F	Input: 85...264V AC Output: Relay

b

Mounting Type *	
Code	Description
1	Flush Mounting

d

Kit Option *	
Code	Description
Blank	No Kit
K1	24V DC Relay Kit
K2	120V AC Relay Kit
K3	240V AC Relay Kit

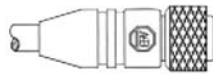
c

Guard Option	
Code	Description
Blank	No Guard
Y	Yellow Guard

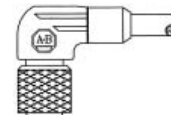
* Heavy industrial devices have an 8-position terminal block connection. See wiring diagrams on page 10-199 for details.

* Safety relays should be used in 2-hand control applications. Kits include 2 identical touch buttons and a safety relay. Safety relay 440R-D3171 for 24V, 440R-D23169 for 120V, 440R-D23168 for 240V.

Quick Disconnect Cables



PD



PD

889 D - F 4A C-2
a b c d

a

Mounting Hole Size	
Code	Description
D	22.5 mm (Micro)
N	30.5 mm (Mini)

b

QD Type	
Code	Description
F	Straight QD Cable
R	Right Angle QD Cable

d






Cable Length/Type	
Code	Description
C-2	2 m (Micro)
C-5	5 m (Micro)
C-10	10 m (Micro)
E-6F	6 ft. (Mini)
E-12F	12 ft. (Mini)
E-20F	20 ft. (Mini)

c

Pin Style	
Code	Description
4A	4 Pin
5A	5 Pin ‡






‡ No right angle QD cable (micro) for 5-PIN (Cat. No. 889D-R5A_).

Accessories — General Purpose

	Description		Cat. No.
 <p>Cat. No. 800Z-G3AG1 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>Plastic Mounting Kit Cat. No. 800Z-G2AH1</p>	<p>Mounting Ring Nut for 22.5 mm Holes Used on 22.5 mm devices.</p>		800Z-G2AH1
 <p>Plastic Mounting Kit Cat. No. 800Z-G3AH1</p>	<p>Mounting Ring Nut for 30.5 mm Hole Used on 30.5 mm devices.</p>		800Z-G3AH1
 <p>Swivel Assembly 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

Bulletin 800Z
Zero-Force Touch Buttons™
 Accessories, Continued

Accessories — Heavy Industrial

	Description		Cat. No.
 Cat. No. 800Z-HAG1	Guard This guard helps protect against accidental activation of the touch surface and protects it from damage. Mounting screws are included.	Yellow Plastic	800Z-HAG1
 Single Hub Base Cat. No. 800P-B1 Double Hub Base Cat. No. 800P-B2	Mounting Bases The heavy industrial line products mount directly on these bases. The conduit hub(s) come with a 3/4 inch opening.	Single Hub	800P-B1
		Double Hub	800P-B2
 Cat. No. 800P-N150	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.		800P-N150
 Cat. No. 800Z-N12	Replacement Relay Note: Package quantity of 2.	10...264V	800Z-N12
 Cat. No. 800Z-HAH1	Replacement Screws	Guard-to-Base Mounting Note: package quantity of 4	800Z-HAH1
		Base Mounting Note: package quantity of 4	800Z-HAH2

Wiring Diagrams — Touch Button Terminations

General Purpose Line

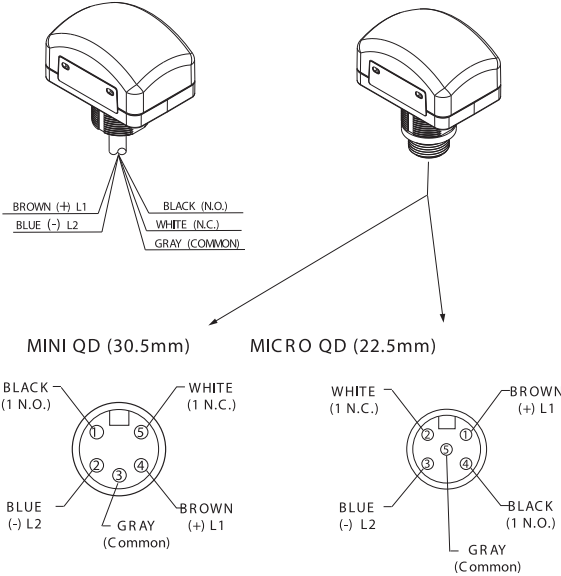
Electrical Connections: 10...40V DC and 20...30V AC Input Voltage (Relay Output); 85...264V AC Input Voltage (Relay Output)

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

5-Conductor Cabled (Relay Output)

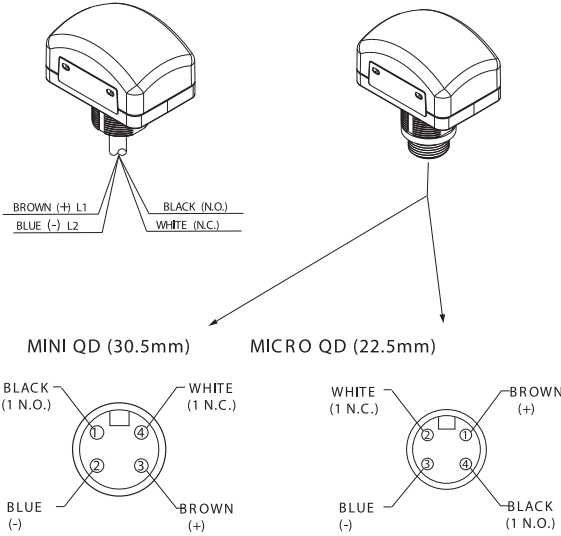
For 800Z-GL _ _ _

For 800Z-GF _ _ _

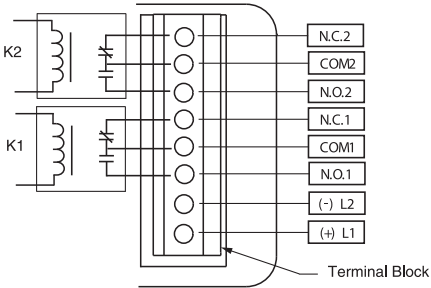


Electrical Connections: 10...30V DC Input Voltage (Transistor Output); 150 mA Max. per Circuit Output

4-Conductor Cabled



Heavy Industrial Line



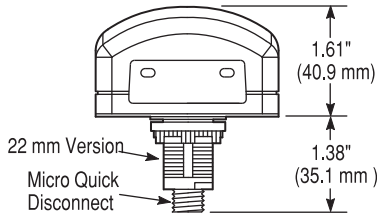
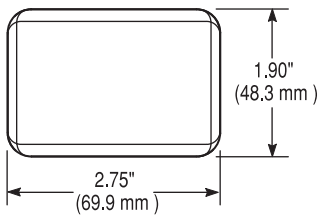
Zero-Force Touch Buttons™

Approximate Dimensions

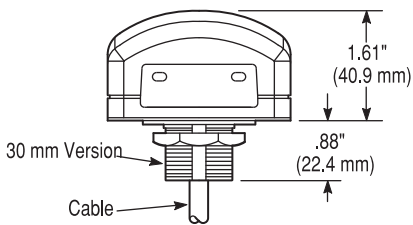
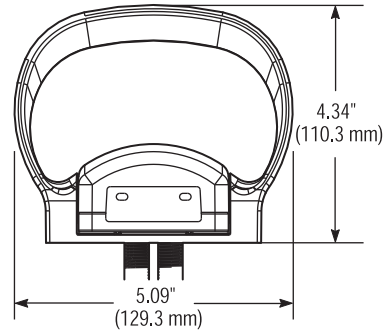
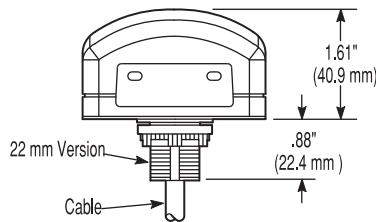
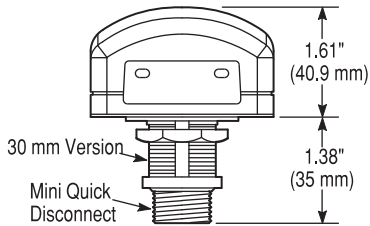
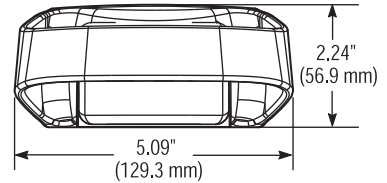
Approximate Dimensions

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

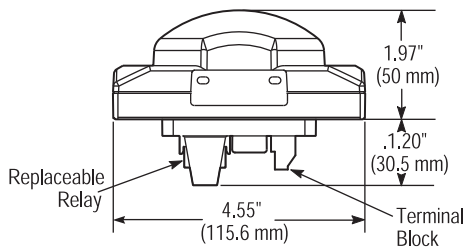
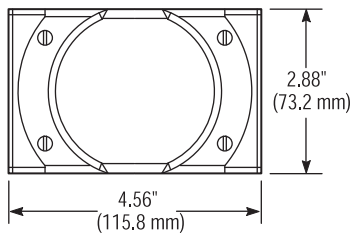
General Purpose



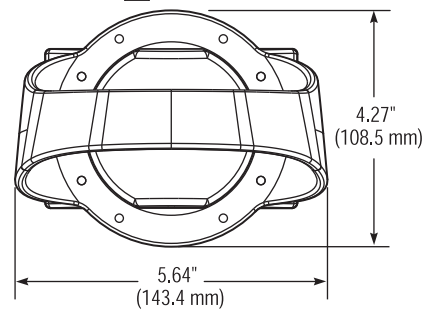
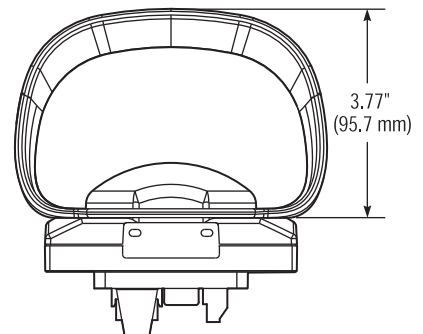
General Purpose With Guard



Heavy Industrial



Heavy Industrial With Guard



Cutout and Mounting Screw Locations for a Flush Mounted Cover

