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

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

Relay Output - Maximum DC Load breaking capacity

Relay Output - Electrical endurance
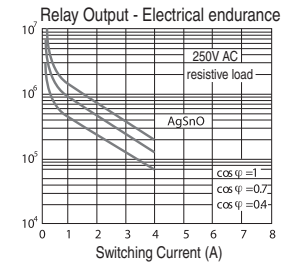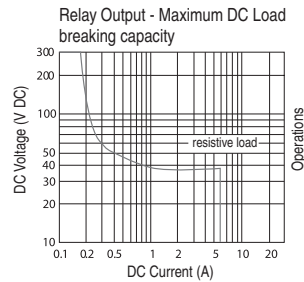
Load Life Curves for Heavy Industrial Line

Relay Output - Maximum load breaking capacity

Relay Output - Electrical endurance
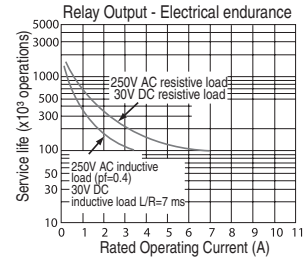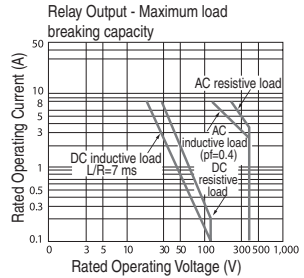
Applications Detail

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.

10

www.ab.com/catalogs   Preferred availability cat. nos. are **bold**.

Publication A117-CA001A-EN-P

Allen-Bradley

Accessories — General Purpose

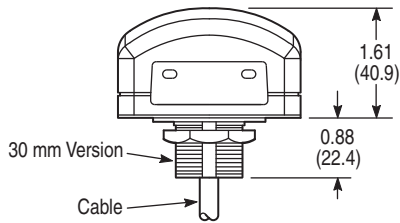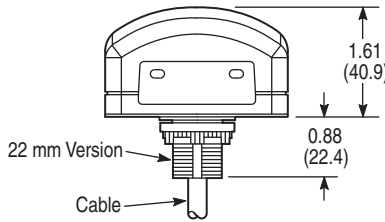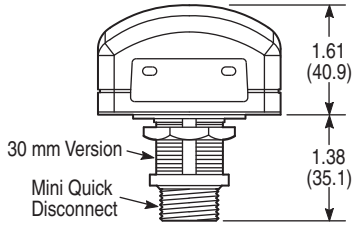|	Description		Cat. No.
Guards These guards help protect against accidental activation of the touch button surface and protect it from damage. Can be used for both the 22.5 mm and 30.5 mm mounted products.		Yellow Plastic	**800Z-G3AG1**
		Black Plastic	**800Z-G3AG2**
Mounting Ring Nut for 22.5 mm Holes Used on 22.5 mm devices.			**800Z-G2AH1**
Mounting Ring Nut for 30.5 mm Hole Used on 30.5 mm devices.			800Z-G3AH1
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.		2.25 in. (57 mm)	**60-2681**
		1.15 in. (29 mm)	**60-2439**
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.		Metal	**800F-AHA1**
		Black Metal	**800E-AHA2**

Image captions (left column):

Cat. No. 800Z-G3AG1 *Cat. No. 800Z-G3AG2*

Plastic Mounting Kit Cat. No. 800Z-G2AH1

Plastic Mounting Kit Cat. No. 800Z-G3AH1

Swivel Assembly Cat. No. 60-2439

Cat. No. 800E-AHA1
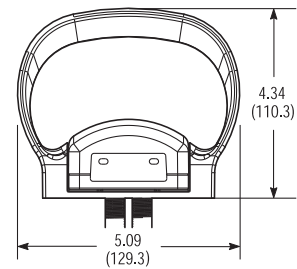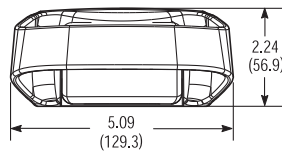
10

Approximate Dimensions

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

General Purpose

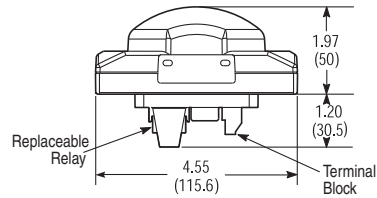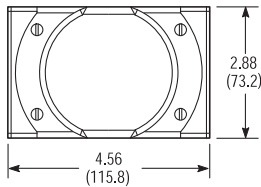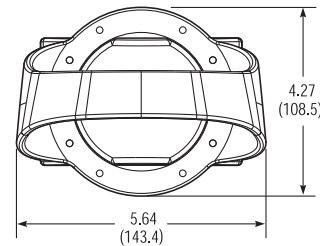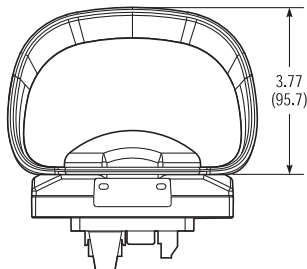1.90 (48.3)

2.75 (69.9)

1.61 (40.9)

1.38 (35.1)

22 mm Version

Micro Quick Disconnect

1.61 (40.9)

1.38 (35.1)

30 mm Version

Mini Quick Disconnect

1.61 (40.9)

0.88 (22.4)

22 mm Version

Cable

1.61 (40.9)

0.88 (22.4)

30 mm Version

Cable
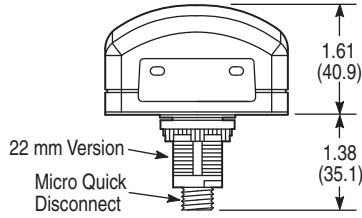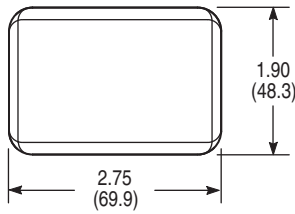
General Purpose With Guard

2.24 (56.9)

5.09 (129.3)

4.34 (110.3)

5.09 (129.3)

Heavy Industrial

2.88 (73.2)

4.56 (115.8)

1.97 (50)

1.20 (30.5)

Replaceable Relay

4.55 (115.6)

Terminal Block

Heavy Industrial With Guard

3.77 (95.7)

4.27 (108.5)

5.64 (143.4)

Cutout and Mounting Screw Locations for a Flush Mounted Cover

2 1/8 (54.0)

3 1/4 (82.6)

Cut out

2 7/8 (73.0)

4 Holes for #6-32 Screw

1 7/8 (47.6)

www.ab.com/catalogs   Preferred availability cat. nos. are **bold**.

Publication A117-CA001A-EN-P

Allen-Bradley