

## 30 Mm

### Bulletin 800T/800H 30.5 mm Push Buttons

Build a Catalog Number

- 30.5 mm mounting hole
- Type 4/13 watertight/oiltight (Bul. 800T)
- Type 4/4X/13 corrosion-resistant/watertight/oiltight (Bul. 800H)
- Heavy industrial stations and operators



### Description

The AllenBradley Bulletin 800T and 800H 30.5 mm push button product lines are in a class by themselves. They are designed and constructed to perform in the most demanding industrial environments. In terms of sealing and switching performance, you will not find a more dependable push button offering. AllenBradley delivers more styles and options of operator types and contact blocks, offering flexibility to meet the most demanding specifications in the world's toughest industrial environments.

Design innovation is key to the performance advantage provided in the Bulletin 800T and 800H offerings. New in this catalog are the **Trigger Action E-Stop** operators, the new standard bearer in a tamper-resistant design. Also new is the **Universal LED Illumination** option that accepts a wide 12...130V AC/DC voltage input. This is compatible with all illuminated operator types, allows retrofitting in existing installations, and incorporates super bright LED technology.

### Standards Compliance

UL 508

CCC

### Certifications

UL Listed

(File No. E14840, E10314)

Guide No. NKCR, NOIV, NISD)

CSA Certified

(File No. LR1234, LR11924)

CSA C22.2, No. 14

CE Marked (EN/IEC 60947-1, EN/IEC 60947-5, EN ISO 13850)

### Specifications★

Electrical Ratings		
Contact ratings		Refer to the contact ratings tables on <b>Standard Contact Ratings</b> .
Dielectric strength		2200V for one minute, 1300V for one minute (Logic Reed)
Electrical design life cycles		1,000,000 at max. rated load, 200,000 at max. rated load (Logic Reed)
Mechanical Ratings		
Vibration		10...2000 Hz, 1.52 mm displacement (peak-to-peak) max. / 10 G max. (except Logic Reed)
Shock		1/2 cycle sine wave for 11 ms $\geq$ 25 G (contact fragility) and no damage at 100 G
Degree of protection		Type 1/4/12/13 (800T); Type 1/4/4X/12/13 (800H); EN/IEC 60529 IP66/65
Mechanical design life cycles		
Push buttons	(Momentary, non-illuminated, flush and extended head)	10,000,000 min.
	(Momentary, illuminated)	250,000 min.
	(Push-pull/twist-to-release)	250,000 min. ‡
Selector switches	(Non-illuminated)	1,000,000 min.
	(Illuminated, key-operated)	200,000 min.
Potentiometers		25,000 min.
All other devices		200,000 min.
Contact operation		Shallow, mini, and low-voltage contact blocks: Slow, double make and break Logic Reed and sealed switch contact blocks: Single break magnetic
Wire gauge/Terminal screw torque		#18...14 AWG (#18...10 Max Duty) / 6...8 lb•in
Typical operating forces		
Operators without contact blocks		Flush, extended button, standard mushroom, jumbo plastic mushroom: 2 lbs max. Jumbo and extended aluminum mushroom head: 3.95 lbs max. Maintained selector switch: 3.6 in•lb max.
Spring return selector switches		3.6 in•lb to stop, 0.2 in•lb to return
Illuminated push buttons and push-to-test pilot lights		5 lb max.
2-position push-pull		8.0 lb max. push or pull
3-position push-pull		8 lb max. push to in position or pull to center position (15 lb max. pull to out position)
Twist-to-release or push-pull		9 lbs max. push or pull 30 in•oz max. twist, 6 in•oz minimum return
Potentiometer		Rotational torque 3...12 in•oz; stopping torque 12 in•lb (minimum)
Contact blocks	Standard	1 lb
	Logic Reed	1 lb max.
	Sealed switch	3 lb max. at 0.205 in. plunger travel
	Stackable sealed switch	1 lb max.
	MaxDuty	1.4 lb max.
	PenTUFF	1.4 lb max.
	Self Monitoring	1.6 lb
Environment		
Temperature range	Operating	-40...+131 °F (-40...+55 °C)
	Storage	-40...+185 °F (-40...+85 °C)
<b>Note:</b> Operating temperatures below freezing are based on the absence of moisture and liquids. Consult your local Rockwell Automation sales office or Allen-Bradley distributor for use in lower temperature applications.		
Humidity		50...95% RH from 77...140 °F (25...60 °C) per Procedure IV of MIL-STD-810C, Method 507.1 cycling test

\* Performance Data – See [Performance Data](#).

‡ Illuminated Trigger Action E-stops are rated for 150,000 min. mechanical operations when using Cat. No. 800TC-XD4S Self-Monitoring Contact Blocks (SMCBs).

## Standard Contact Ratings

Minimum: 24V, 24 mA

Maximum thermal continuous current  $I_{th}$  10 A AC/2.5 A DC. Bulletin 800T units with 800T-XA contacts have ratings as follows:

Max. Operntl. Volts $U_e$	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts $U_e$	Make	Break
AC 600	AC-15	A600	120...600 72...120 24...72	7200VA 60 A 60 A	720VA 720VA 10 A
DC 600	DC-13	Q600	28...600 24...28*	69VA 2.5 A	

\* For applications below 24V/24 mA, PenTUFF or Logic Reed contacts are recommended.

## Sealed Switch Contact Ratings

Minimum: 5V, 1 mA

Maximum continuous current  $I_{th}$  5 A. Bulletin 800T units have control circuit ratings with sealed switch contact blocks as follows:

Max. Operntl. Volts $U_e$	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts $U_e$	Make	Break
AC 600	AC-15	B600	120...600 0...120	3600VA 30 A	360VA 3 A
DC 300	DC-13	P300	24...300 0...24	138VA 5.0 A	

## Stackable Sealed Switch Contact Ratings

Minimum: 5V, 10 mA (digital); 24V, 1 mA (analog)

Maximum continuous current  $I_{th}$  2.5 A. Bulletin 800T units have control circuit ratings with sealed switch contact blocks as follows:

Max. Operntl. Volts $U_e$	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts $U_e$	Make	Break
AC 300	AC-15	C300	120...300 0...120	1800VA 15 A	180VA 1.5 A
DC 150	DC-13	Q150	24...150 0...24	69VA 2.5 A	

## Logic Reed Contact Ratings

Minimum – DC: 5V, 1 mA

Maximum – DC: 30V, 0.06 A, AC: 150V, 0.15 A

Should only be used with resistive loads.

### **Materials Used in 800H Type 4X Operators** **Thermoplastic Polyester (Fiberglass Reinforced)**

- Bushings
- Mounting Rings
- Sockets

### **Thermoplastic Polyester**

- Non-illuminated button caps

### **Transparent Amorphous Nylon**

- Pilot light lens cap
- Illuminated button caps

### **Glass Filled Crystalline Nylon**

- Thrust washer

### **Mineral Filled Nylon**

- Trim washer

## Nitrile (Synthetic Rubber)

- Gaskets and internal seals

## PenTUFF™ (Low Voltage) Contact Ratings

Minimum DC: 5V, 1 mA

Maximum thermal continuous current  $I_{th}$  2.5 A AC/1.0 A DC. Bulletin 800T units with 800T-XAV contacts have ratings as follows:

Max. Operntl. Volts $U_e$	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts $U_e$	Make	Break
AC 300	AC-15	C300	120...300 0...120	1800VA 15 A	180VA 1.5 A
DC 150	DC-13	R150	24...150 0...24	28VA 1.0 A	

## Snap Action Contact Ratings

Max. Operntl. Volts $U_e$	Contact Rating Designation	Rated Operational Currents		
		Volts $U_e$	Make	Break
AC 300	A300	120...300 24...72	7200VA 60 A	720VA 10 A
DC 250	—	230...250 115...125	0.2 A 0.4 A	

## MaxDuty Contact Rating

Maximum thermal continuous current  $I_{th}$  24 A.

Pilot Duty — 120V AC, 12 A; 24V DC, 10 A

Motor Ratings — 120V AC, 1.5 Hp; 240V AC, 3 Hp; 24V DC, 10 A FLA/60 A LRA

## Time Delay Contacts

Max. Operntl. Volts $U_e$	Contact Rating Designation	Rated Operational Currents		
		Volts $U_e$	Make	Break
AC 120	B150	120	3600VA	360VA

**Note:** This device is not rated for DC applications.

Adjustment range: 0.5...15 s  $\pm$  25%  $I_{th}$  = 5 A

## Custom-Built Stations & Enclosures

### Custom-Built Stations



This table (Assembled Stations) lists the most commonly used Bulletin 800T/800H push button stations. Stations not listed in this table may be ordered as custom-built stations.

### Cat. No.






The cat. no. used to identify custom-built Bulletin 800T push button stations will be cat. no. listed for enclosure only. The letter **Z** will be substituted for the letter **W** and a station serial no. will be added.

## Request for Quote

Please submit your request for quote of a custom-built station to [racustomer@ra.rockwell.com](mailto:racustomer@ra.rockwell.com), including the following information:

1. Cat. no. of the enclosure.
2. Cat. no. of the control units.
3. Cat. no. of legend plates. Indicate text if custom marking is required.
4. Cat. no. of accessories (e.g., guards or locking attachments)
5. Specify vertical/horizontal mounting.
6. Specify desired operator mounting sequence. Inclusion of a sketch is recommended. If no information is given, standard configurations will be used.

## Enclosures

No. of Operator Openings	Surface Mount <sup>Δ</sup>		Flush Mount	Pendant Type	
	Die Cast <sup>*</sup> (Type 4/13)	Sheet Metal (Type 13)	Die Cast Face Plate (Type 4/13)	One Hole in Bottom (Type 13)	Openings in Cover (Type 13)
					
	Cat. No. 800T <sup>‡</sup> 2TZ	Cat. No. 800T <sup>‡</sup> 6TJZ	Cat. No. 800T <sup>‡</sup> 2ZT	Cat. No. 800T <sup>‡</sup> 2PZ	Cat. No. 800T <sup>‡</sup> 2PY
	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
1	800T-1TZ <sup>‡</sup>	—	800T-1ZT	—	—
2	800T-2TZ <sup>‡</sup>	—	800T-2ZT	800T-2PZ	800T-2PY
3	800T-3TZ <sup>‡</sup>	—	800T-3ZT	800T-3PZ	800T-3PY
4	800T-4TZ <sup>‡</sup>	—	800T-4ZT	800T-4PZ	800T-4PY
5	—	—	—	800T-5PZ	800T-5PY
6 <sup>§</sup>	800T-6TZ <sup>‡</sup>	—	800T-6ZT	800T-6PZ	800T-6PY
6 <sup>♣</sup>	800T-6THZ <sup>‡</sup>	800T-6TJZ	800T-6ZTH	—	—
7	—	—	—	800T-7PZ	800T-7PY
8	—	—	—	800T-8PZ	800T-8PY
9	800T-9TZ	800T-9TJZ	800T-9ZT	800T-9PZ	800T-9PY
10	—	—	—	800T-10PZ	800T-10PY
12	800T-12TZ	800T-12TJZ	800T-12ZT	—	—
16	800T-16TZ	800T-16TJZ	800T-16ZT	—	—
20	—	800T-20TJZ	—	—	—
25	—	800T-25TJZ	—	—	—

**Note:** Specialty enclosures available. Please refer to KB Q69259778.

**Note:** Enclosure and conduit dimensions are detailed on **Die Cast Enclosures (Bul. 800T Only)**.

<sup>Δ</sup> Bottom conduit entry. Grounding provision provided.

<sup>\*</sup> Enclosure depth will accommodate one shallow and one mini-contact block stacked.

<sup>‡</sup> Add suffix **Y** to the cat. no. for yellow painted enclosure. Example: **Cat. No. 800T-1TZY**.

<sup>§</sup> One vertical row.

<sup>♣</sup> Two vertical rows of three holes.

## Custom-Built Stations (800H only)



**Cat. No.**

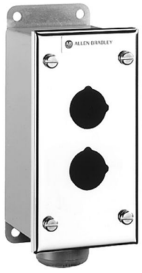
The cat. no. used to identify custom-built Bulletin 800H push button stations will be cat. no. listed for enclosure only. The letter **W** is substituted for the letter **Z** and a station serial no. will be added.

### Request for Quote

Please submit your request for quote of a custom-built station to [racustomer@ra.rockwell.com](mailto:racustomer@ra.rockwell.com), including the following information:

1. Cat. no. of the enclosure.
2. Cat. no. of the control units.
3. Cat. no. of legend plates. Indicate text if custom marking is required.
4. Cat. no. of accessories (e.g., guards or locking attachments)
5. Specify vertical/horizontal mounting.
6. Specify desired operator mounting sequence. Inclusion of a sketch is recommended. If no information is given, standard configurations will be used.

### Enclosures (800H only)



**Stainless Steel**  
Cat. No. 800H-2HZ4



**Rosite Glass Polyester**  
Cat. No. 800H-2HZ4R



**Fiberglass**  
Cat. No. 800H-2HZ4Y



**Thermoplastic Polyester**  
Cat. No. 800H-2HZ4C

No. of Operator Openings	Conduit Hubs		Stainless Steel (#304) Type 4/4X/13*	Rosite Glass Polyester Type 4/4X/13	No. of Operator Openings	Conduit Openings		Fiberglass‡ Type 4/4X/13	Thermoplastic PolyesterΔ ♦ Type 4/4X
	No.	Dia. [in.]	Cat. No.	Cat. No.		No.	Dia. [in.]§	Cat. No.	Cat. No.
♣	1	3/4	800H-0HZ4	—	1	1	3/4	800H-1HZ4Y	800H-1HZ4C
1	1	3/4	800H-1HZ4	800H-1HZ4R	2	1	1	800H-2HZ4Y	800H-2HZ4C
1	2	3/4	—	800H-1HZ4RM1	3	1	1	800H-3HZ4Y	800H-3HZ4C
1	1	1	—	800H-1HZ4RM2	4	—	—	—	800H-4HZ4C
2	1	3/4	800H-2HZ4	800H-2HZ4R	—	—	—	—	—
2	2	3/4	800H-2HZ4M1	800H-2HZ4RM1	—	—	—	—	—
2	1	1	800H-2HZ4M2	800H-2HZ4RM2	—	—	—	—	—
3	1	3/4	800H-3HZ4	800H-3HZ4R	—	—	—	—	—
3	2	3/4	800H-3HZ4M1	800H-3HZ4RM1	—	—	—	—	—
4	1	3/4	800H-4HZ4	800H-4HZ4R	—	—	—	—	—
4	2	3/4	800H-4HZ4M1	800H-4HZ4RM1	—	—	—	—	—
5	1	1	800H-5HZ4	—	—	—	—	—	—
6	1	1	800H-6HZ4	800H-6HZ4R	—	—	—	—	—
7	1	1	800H-7HZ4	—	—	—	—	—	—
8	1	1	800H-8HZ4	—	—	—	—	—	—

**Note:** Other combinations of conduit hub sizes are available upon request. Enclosure and conduit dimensions are detailed on **Die Cast Enclosures (Bul. 800T Only)**.

\* Grounding screw provided with stainless steel enclosure.

‡ Extra deep. Accommodates two levels of stackable sealed switch contact blocks.

§ Conduit hubs must be ordered separately. For 3/4 in. hub, order **Cat. No. 1490-N9**. For 1 in. hub, order **Cat. No. 1490-N10**.

♣ Identical to **Cat. No. 800H-1HZ4** but without mounting holes.

Δ No conduit openings provided.

♦ Yellow thermoplastic enclosures may be ordered by adding a **Y** to the cat. no. Example: **Cat. No. 800H-1HZ4C** becomes **Cat. No. 800H-1HZ4CY**.