

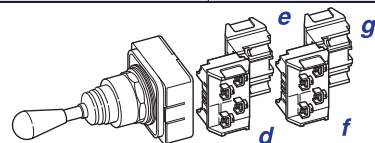
Bulletin 800T/H
30.5 mm Push Buttons
Specialty Operators

1-, 2-, 3-, 4-Way Toggle Switches (Bul. 800T only)

Switch Type	Lever Movement	Handle Position					Type 4/13	
							Spring Return Operation	Maintained Operation
		 Up	 Left	 Center	 Right	 Down	Cat. No.	Cat. No.
2 Way		X	—	O	—	O	800T-T2H3EEXX	800T-T2H1EEXX
		O	—	O	—	X		
		—	X	O	O	—	800T-T2F3DDXX	800T-T2F1DDXX
		—	O	O	X	—		
4 Way		X	O	O	O	O	800T-T4T8AAXX	800T-T4R1AAXX
		O	X	O	O	O		
		O	O	O	X	O		
		O	O	O	O	X		

Note: X = Closed/O = Open

800T **—** **T2** **H2** **E** **E** **X** **X**
a *b* *c* *d* *e* *f* *g*
Right Left Right Left



a

Finger-Safe Guards	
Code	Description
Blank	No guards
C	Guards on terminals

b

Operator Type	
Code	Description
T1	1-way toggle
T2	2-way toggle
T3	3-way toggle
T4	4-way toggle

Table 1. Contact Block Code

Contact Block Substitution	
Combination	Code
Standard	
D + E	A
D + D	* M
E + E	N
J + D	B
J + E	C

Table 2. 1-2-3-4 Way Toggle Switch Cam Targets

Contact Configuration					Suffix Code	
Position					Contact/Side	
Up	Left	Center	Right	Down	Right Side	Left Side
O	X	O	O	O	D, H, V, R, 5	—
O	O	O	O	X	E, U, W, S, 6	—
X	O	X	X	X	J, Q	—
X	X	X	X	O	G, I	—
X	O	O	O	O	—	E, U, W, S, 6
O	O	O	X	O	—	D, H, V, R, 5
O	X	X	X	X	—	G, I
X	X	X	O	X	—	J, Q

c

Lever Movement and Function	
Type	Function Code
1-Way	↑ A
	← B
	→ C
	↓ D
2-Way	↕ E
	↔ F
	↗ G
	↖ H
2-Way	↗ J
	↖ K

c (cont'd)

Lever Movement and Function	
Type	Function Code
3-Way	↕ L
	↔ N
	↗ P
	↖ Q
4-Way	↗ R
	↖ T

d, e, f, g

Contact Blocks	
Code	Description
Blank (all pos.)	No contacts
Standard	
D	1 N.O.
E	1 N.C.
G	1 N.O.E.M.
J	1 N.C.L.B.
A	1 N.O. - 1 N.C.
X	No contacts in this position
PenTUFF (Low Voltage)	
H	1 N.O.
U	1 N.C.
I	1 N.O.E.M.
Q	1 N.C.L.B.
F	1 N.O. - 1 N.C.
Class 1, Div. 2/Zone 2	
Logic Reed	
V	1 N.O.
W	1 N.C.
T	1 N.O. - 1 N.C.
Sealed Switch	
R	1 N.O.
S	1 N.C.
P	1 N.O. - 1 N.C.
Stackable Sealed Switch	
5	1 N.O.
6	1 N.C.
7	1 N.O. - 1 N.C.

Note: M = Maintained,
S = Spring Return
* XA2 and XA2R contact blocks cannot be stacked upon, but they can stack on other contact blocks.

Specifications*

Electrical Ratings		
Contact ratings	Refer to the contact ratings tables on page 10-4.	
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 ≥ 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)	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)
Note: 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	

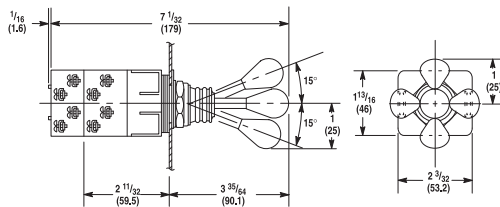
* Performance Data — See Important- 3.

30.5 mm Push Buttons

Approximate Dimensions

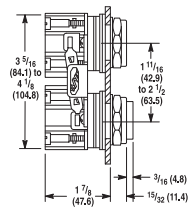
Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

Push Buttons and Switches (Bul. 800T Only)



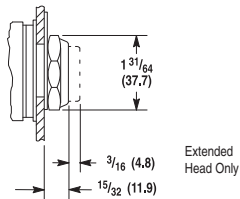
2-3-4 Way Switch

Shipping Wt. with 2 Contact Blocks 6 oz (0.17 kg)
Shipping Wt. with 4 Contact Blocks 8-1/2 oz (0.24 kg)



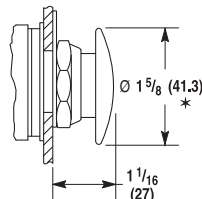
Mechanically Interlocked
Maintained Contact Push Button
Shipping Wt. 1 lb (0.45 kg)

Push Buttons and Pilot Lights

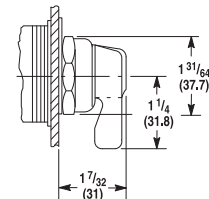


Flush and Extended
Head Push Button

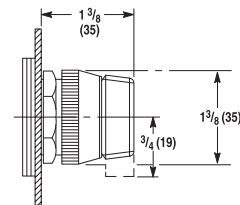
Shipping Wt. 5-1/2 oz (0.15 kg)



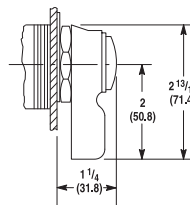
Mushroom Head Push Button
Shipping Wt. 7-1/2 oz (0.21 kg)



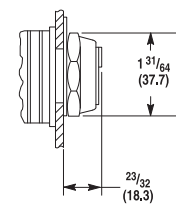
Non-Illuminated Knob Lever and
Standard Knob Selector Switch
Shipping Wt. 6 oz (0.17 kg)



Illuminated Knob Lever and
Standard Knob Selector Switch
Shipping Wt. 6 oz (0.17 kg)



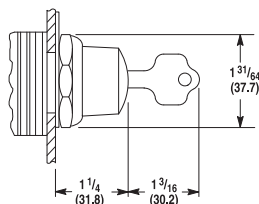
Wing Lever Selector Switch
Shipping Wt. 8 oz (0.22 kg)



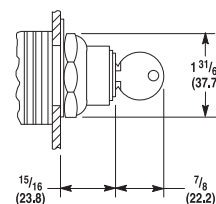
Coin Slot Selector Switch
Shipping Wt. 6 oz (0.17 kg)

* Except jumbo which is 2-1/4 (57.2).

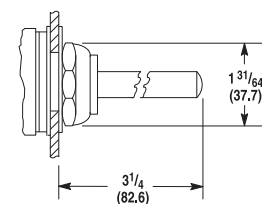
Operator Extension in Front of Panel (Bul. 800T Only)



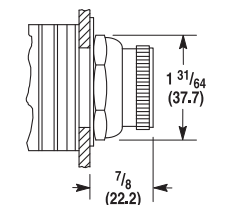
Key Operated Selector Switch
Shipping Wt. 12 oz (0.34 kg)



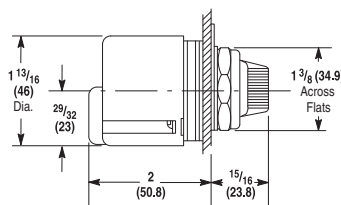
Push Button with Cylinder Lock
Shipping Wt. 12 oz (0.34 kg)



Wobble Stick
Shipping Wt. 9 oz (0.25 kg)



Selector Push Button
Shipping Wt. 6 oz (0.17 kg)



Type J Potentiometer Unit
Shipping Wt. 4 oz (0.11 kg)

