

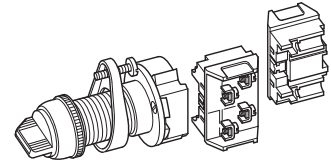
Hazardous Location Push Buttons

Product Selection

2-Position Selector Switch Units, Non-Illuminated

800 H – HP A 2 KB6 AXXX (Knob/Wing Lever)
 a b c d e f

800 H – HP 31 KB6 AXXX (Cylinder Lock)
 a b c₁ d₁ e f



a

Barrel Type	
Code	Description
H	Standard barrel length
HL	Long barrel

b

Number of Positions	
Code	Description
HP	2-position

c

Knob Insert Colors*	
Code	Color
Blank	White
X	Packet of colored inserts*
Metal Wing Lever Colors	
Code	Color
A	Red
Blank	Grey

c₁

Key Removal Position	
Maintained	
Code	Operator Function
31	Key removal — left
32	Key removal — right
33	Key removal — both
Spring Return From Left	
Code	Operator Function
42	Key removal — right†
Spring Return From Right	
Code	Operator Function
48	Key removal — left

d

Operator Type and Function	
Standard Knob	
Code	Operator Function
2	Maintained
4	Spring return from left†
5	Spring return from right
Knob Lever	
Code	Operator Function
17	Maintained
18	Spring return from left†
19	Spring return from right
Metal Wing Lever	
Code	Operator Function
11	Maintained
15	Spring return from left†
16	Spring return from right

d₁

Optional Keys			
Code	D Series Key No.	Code	T Series Key No.
Blank	D018 (std. key)	15	T112
03	D020	16	T115
04	D025	17	T324
05	D335	18	T382
06	D429	19	T404
07	D461	20	T171
08	D111	21	T484
09	D587	22	T547
10	D682	23	T569
11	D713	24	T692
12	D900	25	T752
13	D992	26	T178
14	D118	—	—

e

Cam Option	
Code	Description
KB6	Cam for maintained operators
KL8	Cam for spring return operators

f

Contact Block(s)			
Standard			
Code	Contact Configuration	Description	
		2-Position	
Blank	No contacts	—	—
DXXX	1 N.O.	O	X
EXXX	1 N.C.	X	O
MXXX	2 N.O.	O	X
		O	X
NXXX	2 N.C.	X	O
		X	O
AXXX	1 N.O. - 1 N.C.	O	X
		X	O
AAXX	2 N.O. - 2 N.C.	O	X
		X	O
		O	X
		X	O
PenTUFF (Low Voltage)			
Code	Contact Configuration	Description	
		2-Position	
HXXX	1 N.O.	O	X
UXXX	1 N.C.	X	O
FXXX	1 N.O. - 1 N.C.	O	X
		X	O
FFXX	2 N.O. - 2 N.C.	O	X
		X	O
		O	X
		X	O

Note: X = Closed/O = Open.

* Each standard and knob lever operator is factory assembled with a white insert. Other colors are available, factory assembled, if ordered in quantities of 10 or more.

* One insert of each color (blue, green, orange, red, and yellow).

† Target tables are reversed from those shown.

3-Position Selector Switch Units, Non-Illuminated



Standard Knob Operator
 Cat. No. 800H-JP2KB7AXXX



Knob Lever Operator
 Cat. No. 800H-JP17KB7AXXX



Metal Wing Lever Operator
 Cat. No. 800H-JP11KB7AXXX

Contact Type	Operator Position			M = Maintained S = Spring Return	Standard Knob	Knob Lever	Metal Wing Lever
					Cat. No.‡	Cat. No.‡	Cat. No.‡
No Contacts	—	—	—	M M M	800H-JP2KB7	800H-JP17KB7	800H-JP11KB7
				S→M M	800H-JP4KB7	800H-JP18KB7	800H-JP15KB7
				M M←S	800H-JP5KB7	800H-JP19KB7	800H-JP16KB7
				S→M←S	800H-JP91KB7	800H-JP20KB7	800H-JP141KB7
	O X	O O	X O	M M M	800H-JP2KB7AXXX	800H-JP17KB7AXXX	800H-JP11KB7AXXX
				S→M M	800H-JP4KB7AXXX	800H-JP18KB7AXXX	800H-JP15KB7AXXX
				M M←S	800H-JP5KB7AXXX	800H-JP19KB7AXXX	800H-JP16KB7AXXX
				S→M←S	800H-JP91KB7AXXX	800H-JP20KB7AXXX	800H-JP141KB7AXXX
	O X O X	O O O O	X O X O	M M M	800H-JP2KB7AAXX	800H-JP17KB7AAXX	800H-JP11KB7AAXX
				S→M M	800H-JP4KB7AAXX	800H-JP18KB7AAXX	800H-JP15KB7AAXX
				M M←S	800H-JP5KB7AAXX	800H-JP19KB7AAXX	800H-JP16KB7AAXX
				S→M←S	800H-JP91KB7AAXX	800H-JP20KB7AAXX	800H-JP141KB7AAXX

Note: X = Closed/O = Open



3-Position Cylinder Lock Operator
 Cat. No. 800H-JP42KB7AXXX

Contact Type	Operator Position			M = Maintained S = Spring Return	Cylinder Lock		
					Key Removal Left	Key Removal Center	Key Removal All*
No Contacts	O	X	X	M M M	800H-JP41KB7	800H-JP42KB7	800H-JP44KB7
				S→M*	—	800H-JP50KB7	800H-JP51KB7
				M←S	800H-HP5KL8DXXX	800H-JP38KB7	800H-JP73KB7
				M M	—	800H-JP631KB7	—
	O X	O O	X O	M M M*	800H-JP41KB7AXXX	800H-JP42KB7AXXX	800H-JP44KB7AXXX
				M←S	—	800H-JP50KB7AXXX	800H-JP51KB7AXXX
				M M←S	800H-JP69KB7AXXX	800H-JP38KB7AXXX	800H-JP73KB7AXXX
				S→M←S	—	800H-JP631KB7AXXX	—

Note: X = Closed/O = Open

* Key removable in maintained positions only.

‡ For long barrel versions, add an **L** to the cat. no. **Example:** Cat. No. 800HL-JP41KB7.

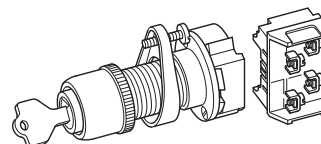
Hazardous Location Push Buttons

Product Selection

3-Position Selector Switch Units, Non-Illuminated

800 H JP 2 KB7 AAXX (Knob/Wing Lever)
 a b c d e f

800 H JP 41 KB7 AAXX (Cylinder Lock)
 a b c₁ d₁ e f



Barrel Type	
Code	Description
H	Standard barrel length
HL	Long barrel

b

Number of Positions	
Code	Description
JP	3-position

c

Knob Insert Colors*	
Code	Color
Blank	White knob insert or cylinder lock operator
X	Packet of colored inserts*
Metal Wing Lever Colors	
Code	Color
A	Red
Blank	Grey

Cylinder Lock Operators	
Maintained Position	
Code	Locking Position
41	Left
42	Center
43	Right
44	All
45	Left and center
46	Right and left
47	Right and center
Spring Return from Left	
Code	Locking Position
50	Center
52	Right
51	Right and center
Spring Return from Right	
Code	Locking Position
69	Left
38	Center
73	Left and center
Spring Return from Both	
Code	Locking Position
631	Center

Knob/Lever Type Operators	
Standard Knob	
Code	Operator Function
2	Maintained
4	Spring return from left
5	Spring return from right
91	Spring return from both
Knob Lever	
Code	Operator Function
17	Maintained
18	Spring return from left
19	Spring return from right
20	Spring return from both
Metal Wing Lever§	
Code	Operator Function
11	Maintained
15	Spring return from left
16	Spring return from right
141	Spring return from both

d₁

Operator Type/Function‡	
Standard Knob	
Code	Key No.
Blank	D018 (standard key)
Note: Refer to page 10-164 for additional key option codes.	

Cam Option	
Code	Description
KB7	Standard cam KB7
KA1	Cam KA1
KA7	Cam KA7
Note: For additional Cam descriptions, see Table 5.	

f

Contact Block Option	
Code	Description
Blank	No contacts
AXXX	Two contact targets for a given cam as shown in the W (white side) column of Table 5.
AAXX	Two contact targets for a given cam as shown in the W (white side) column of Table 1 and 2 contact targets for the same cam as shown in the B (black side) column of Table 5. (One Cat. No. 800T-XA contact block per side. Two contact blocks total.)
AAAA	Four contact targets for a given cam as shown in the W (white side) column of Table 5 and 4 contact targets for the same cam as shown in the B (black side) column of Table 5. (Two Cat. No. 800T-XA contact blocks per side. Four contact blocks total.)

Table 5. Cam and Contact Block Functionality Table

Contact Block Suffix Code	Contact Block Side	Circuits	Cam Codes															
			KB7 (Std.)	KA1	KA7	KC1	KC7	KD7	KE7	KQ1	KQ7	KR1	KR7	KT1	KT7	KU7		
	White	A	X	O	O	X	O	O	O	X	O	O	X	X	O	O	X	X
		B	O	O	X	O	X	O	O	X	O	O	X	O	O	X	O	X
	Black	A	X	O	O	X	O	O	O	X	O	O	X	O	O	X	O	X
		B	O	O	X	O	X	O	X	O	O	X	O	O	X	X	X	X
	White	A	X	O	O	X	O	O	O	X	O	O	X	X	O	O	X	O
		B	O	O	X	O	X	O	O	X	O	O	X	O	O	X	O	X
	Black	A	X	O	O	X	O	O	O	X	O	O	X	X	O	O	X	O
		B	O	O	X	O	X	O	X	O	O	X	O	X	X	X	X	X

Note: X = Closed/O = Open

* Each standard and knob lever operator is factory assembled with a white insert. Other colors available, factory assembled, if ordered in quantities of 10 or more.

* One insert of each color (blue, green, orange, red, and yellow).

‡ For additional keys, see page 10-164.

§ Wing levers are not suitable with KE7 cam code.

Specifications*

Electrical Ratings	
Contact Ratings	Refer to the contact ratings tables below.
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 7 & 9 Explosion Proof (Type 3 and Type 4 ratings available with accessories)
Mechanical Design Life Cycles	
Push Buttons	250 000 minimum
Potentiometers	100 000 minimum
All other devices	200 000 minimum
Contact Operation	Shallow and mini contact blocks: slow double make and break Logic Reed & sealed switch contact blocks: snap-action
Wire Gauge/Terminal Screw Torque	# 18...12 AWG/6...8 lb•in
Typical Operating Forces	
Operators without contact blocks:	Flush, extended, standard mushroom, jumbo mushroom: 2.9 lb max. Jumbo and extended aluminum mushroom head: 3.95 lb maximum Maintained selector switch: 4.0 in•lb maximum
Spring Return Selector Switches:	5 in•lb to stop, 0.2 in•lb to return
Illuminated Push Buttons and Push-to-Test Pilot Lights	5.6 lb maximum
2-Position Push-Pull	9 lb maximum push or pull
3-Position Push-Pull	12 lb maximum push to in position or pull to center position (15 lb maximum pull to out position)
Contact Blocks:	
800T-XA	1 lb
Logic Reed	1 lb maximum
Sealed Switch	3 lb maximum at 0.205 in. plunger travel
Stackable Sealed Switch	1 lb maximum
Environment	
Temperature Range	Operating: -4...+13 °F (-20...+55 °C) Storage: -40...+185 °F (-40...+85 °C)
Note: Operating temperatures below freezing are based on the absence of freezing moisture and liquids.	
Humidity	50% at +104 °F (+40 °C)

* Performance Data — See page Important-3.

* External thread major diameter: 1.034 in. max., 1.024 in. min. Internal thread minor diameter: 0.958 in. min., 0.970 in. max.

Standard Contact Ratings

Maximum thermal continuous current I_{th} 10 A AC/2.5 A DC.
 Bulletin 800H Type 7 & 9 units with 800T-XA contacts have ratings as follows:

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

* For applications below 24V and 24 mA, PenTUFF™, Logic Reed or stackable sealed switch contacts are recommended.

Sealed Switch Contact Ratings

Maximum continuous current I_{th} 5 A.

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

Stackable Sealed Switch Contact Ratings

Maximum continuous current I_{th} 3 A. Bulletin 800T units have control circuit ratings with sealed switch contact blocks as follows:

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

Logic Reed Contact Ratings

Maximum: 150V AC, 0.15 A, 8 VA and 30V DC, 0.06 A, 1.8 VA.

Should only be used with resistive loads.

PenTUFF™ (Low Voltage) Contact Ratings

Minimum DC: 5V, 1 mA

Maximum thermal continuous current I_{th} 2.5 A AC/1.0 A DC.

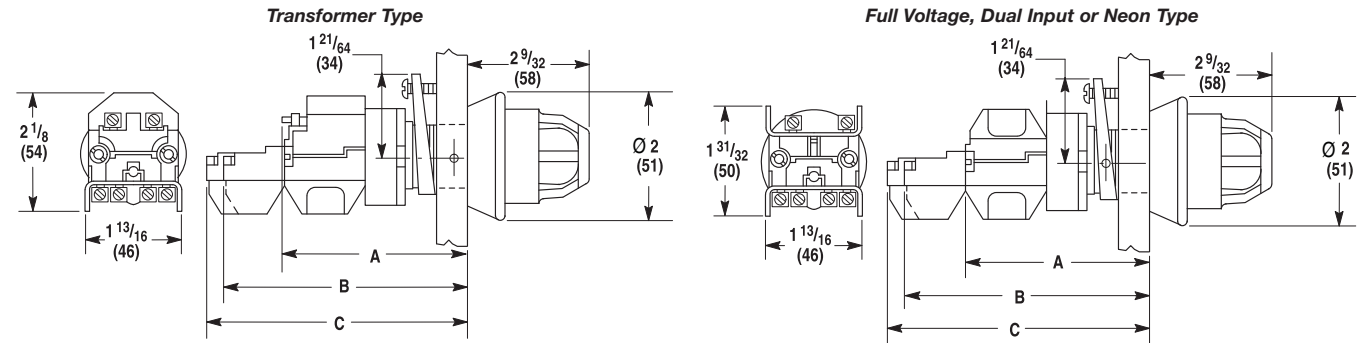
Bulletin 800H units with 800T-XAV contacts have ratings as follows:

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

Approximate Dimensions and Shipping Weights, Continued

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

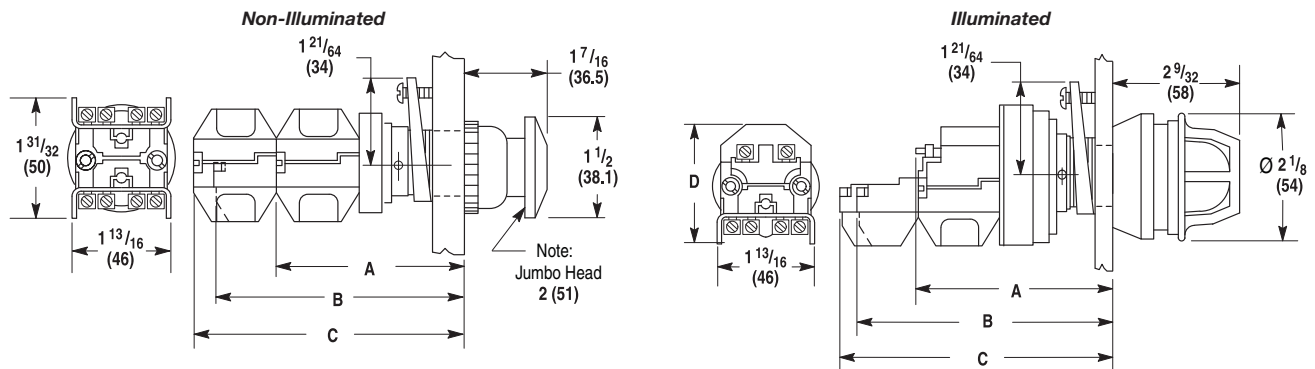
Illuminated Push Buttons or Push-to-Test Pilot Lights



Illuminated Push Buttons, Push-to-Test Pilot Lights

Description	Style	A *	B	C	Ship. Wt. [oz (kg)]
Transformer Type	Standard Barrel	3-5/32 (80.2)	3-29/32 (99)	4-1/8 (105)	14 (0.40)
	Long Barrel	5-1/16 (128.6)	5-13/16 (147.6)	6-1/16 (154)	16-3/16 (0.45)
Full Voltage Dual Input or Neon Type	Standard Barrel	3-1/32 (77)	3-29/32 (99)	4-1/8 (105)	11-5/8 (0.33)
	Long Barrel	4-15/16 (125.4)	5-13/16 (147.6)	6-1/16 (154)	13-7/16 (0.38)

Push-Pull Units



Push-Pull Units

Description	Style	A *	B	C	D	Ship. Wt. [oz (kg)]
Illuminated Transformer Type	Standard Barrel	3-9/16 (90.5)	4-9/16 (115.9)	4-5/8 (117.5)	2-1/8 (54)	15-1/2 (0.44)
	Long Barrel	4-21/32 (118.3)	5-13/32 (137)	5-21/32 (143.7)	2-1/8 (54)	17-7/16 (0.49)
Illuminated Full Voltage Type	Standard Barrel	3-7/16 (87.3)	4-9/16 (115.9)	4-5/8 (117.5)	1-31/32 (50)	12-13/16 (0.33)
	Long Barrel	4-17/32 (115.1)	5-13/32 (137)	5-21/32 (143.7)	1-31/32 (50)	14-3/4 (0.41)
Non-Illuminated Push-Pull Units	Standard Barrel	3-1/2 (88.9)	4-3/8 (111.1)	4-5/8 (117.5)	—	11-1/8 (0.32)
	Long Barrel	4-17/32 (115.1)	5-13/32 (137)	5-21/32 (143.7)	—	12-5/16 (0.34)

* When using sealed switch contact block add 7/8 in. (22.2 mm) to the listed dimension.