HT800 30mm Pushbuttons Specifications

The HT800 family of 30.5 mm pushbutton devices includes momentary, illuminated and mushroom-head pushbuttons, selector switches, indicating lights and push-pull switches.

Features

- Anodized aluminum mounting rings
- Watertight double V-gasket seals
- Extended height bulbs
- Transparent housing contact blocks
- Color-coded contact blocks
- Gold-plated contacts (on low voltage contact block)
- Reliability ridge on movable contact
- Stackable screw-mounted contact blocks
- Contact blocks can be mounted in left/right or top/bottom positions
- Standard N.C. contact opens before N.O. contact closes (break before make operation)
- Bright and long lasting LED indicating lights in six colors
- Field convertible maintained selector switches from two-position to three-position and vice versa
- Field selectable knob/lever mounting positions – at any 22.5° increment

Benefits

- Corrosion resistant NEMA 4X finish
- Watertight and oil-tight NEMA 4, 13 ingress protection
- Increased side illumination of indicating lights and illuminated pushbuttons
- Easy visual inspection of contact conditions
- Easily identifiable N.O. (white) or N.C. black) contact blocks
- Gold-plated contacts suitable for logic level circuits
- Reliability ridge penetrates contamination buildup on stationary contacts
- Left/right or top/bottom mounted contact blocks allow correct positioning in retrofit applications
- All-purpose selector switches are convertible and can rotate in 22.5° increments to suit panel layouts

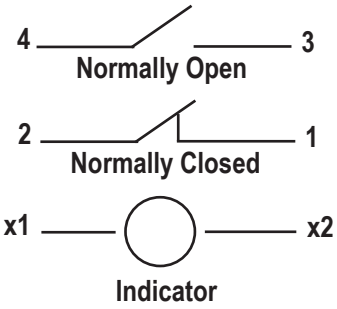
Standards and Certifications

- UL508, File No. E131568
- CSA C22.2 No. 14, File No. LR68551

Ingress Protection

- UL (NEMA) 1, 2, 3, 3R, 4, 4X, 12 and 13 when mounted in similarly rated enclosures

Typical Wiring



HT800 30mm Pushbuttons Specifications

HT800 — Specifications	
Mechanical Ratings	
Frequency of Operation	
Pushbuttons	6,000 Operations per hour
Selector Switches	3,000 Operations per hour
Push-Pull Operators	3,000 Operations per hour
Mechanical Endurance/Life	
Pushbuttons	10 x 10^6 Operations 6K Ops/Hr with 6 N.O. on left and 6 N.C. on right
Selector Switches	250 x 10^3 Operations 3K Ops/Hr with 2 N.O. on left and 2 N.C. on right
Push-Pull Operators	250 x 10^3 Operations 3K Ops/Hr with 6 N.O. on left and 6 N.C. on right
Environmental Specifications	
Operating Temperature	10° to 140°F (-12° to 60°C)
Storage Temperature	-40° to 176°F (-40° to 80°C)
Altitude	6,562 ft. (2,000m)
Humidity	95% RH @ 60°C
Terminals	
Contact Blocks	#6-32 posi-drive saddle clamp type, 1 x 16 AWG to 2 x 14 AWG, 12 in-lbs max.
Light Units	#6-32 posi-drive saddle clamp type, 1 x 22 AWG to 2 x 14 AWG, 7 in-lbs max.

HT800 Standard Contact Blocks UL (NEMA) Rating				
Electrical Ratings Description/Function	***Contact Type***	***Catalog Number***	***AC***	***DC***
Standard Normally Open contact	N.O.	***HT8A***	A600	P600
Standard Normally Closed contact	N.C.	***HT8B***	A600	P600
Normally Open Early Make Contact will make circuit before standard N.O. contact. DC ratings do not apply.	N.O.E.M.	***HT8C***	A600	—
Normally Closed Late Break contact will open after standard N.C. contact. DC ratings do not apply.	N.C.L.B.	***HT8D***	A600	—
Logic level, low voltage N.O .contact. Gold plated contacts.	N.O.	***HT8E***	5V 1mA (minimum) 28V 500mA (maximum)	

UL (NEMA) A600 and P600 Ratings							
Description	***Volts AC 50/60 Hz***				***Volts DC [1]***		
	120	***240***	***480***	***600***	***125***	***250***	***600***
Make and Emerg. Interrupting Capacity (Amp)	60	30	15	12	1.1	0.55	0.2
Normal Load Break (Amp)	6	3	1.5	1.2	1.1	0.55	0.2
Thermal Current (Amp)	10	10	10	10	5	5	5
Voltamperes							
Make and Emerg. Interrupting Capacity	7200	7200	7200	7200	138[2]	138[2]	138[2]
Normal Load Break	720	720	720	720	138	138	138

Note: 1: DC ratings do not apply to N.O.E.M. (Normally Open Early Make) and N.C.L.B. (Normally Closed Late Break) contact blocks HT8C and HT8D.
2: Maximum make or break volt-amperes at 300V or less

HT800 30mm Momentary Pushbuttons

Flush

HT8AAG

Extended

HT8ABR

Mushroom

HT8AEH

HT800 30mm Momentary Pushbuttons							
Contact Type	*Button Color*	*Flush Head Momentary*		*Extended Head Momentary*		*Mushroom Head Momentary*	
		Catalog Number	*Price*	*Catalog Number*	*Price*	*Catalog Number*	*Price*
Operator Only, No Contacts	Black	*HT8AAH*		*HT8ABH*		*HT8AEH*	
	Red	*HT8AAR*		*HT8ABR*		*HT8AER*	
	Green	*HT8AAG*		*HT8ABG*		*HT8AEG*	
1 N.O.	Black	*HT8AAHA*		**HT8ABHA*		**HT8AEHA*	
	Red	**HT8AARA*		**HT8ABRA*		**HT8AERA*	
	Green	**HT8AAGA*		**HT8ABGA*		**HT8AEGA*	
1 N.C.	Black	**HT8AAHB*		**HT8ABHB*		**HT8AEHB*	
	Red	**HT8AARB*		**HT8ABRB*		**HT8AERB*	
	Green	**HT8AAGB*		**HT8ABGB*		**HT8AEGB*	
1 N.O. and 1 N.C.	Black	**HT8AAHAB*		**HT8ABHAB*		**HT8AEHAB*	
	Red	**HT8AARAB*		**HT8ABRAB*		**HT8AERAB*	
	Green	**HT8AAGAB*		**HT8ABGAB*		**HT8AEGAB*	
2 N.O. and 2 N.C.	Black	**HT8AAHF1Q1*		**HT8ABHF1Q1*		**HT8AEHF1Q1*	
	Red	**HT8AARF1Q1*		**HT8ABRF1Q1*		**HT8AERF1Q1*	
	Green	**HT8AAGF1Q1*		**HT8ABGF1Q1*		**HT8AEGF1Q1*	

Notes: A grounding kit is included with each operator or switch assembly.
Part numbers with an * are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer.

30.5 mm Pushbutton Installation and Mounting Instructions - inches (mm)

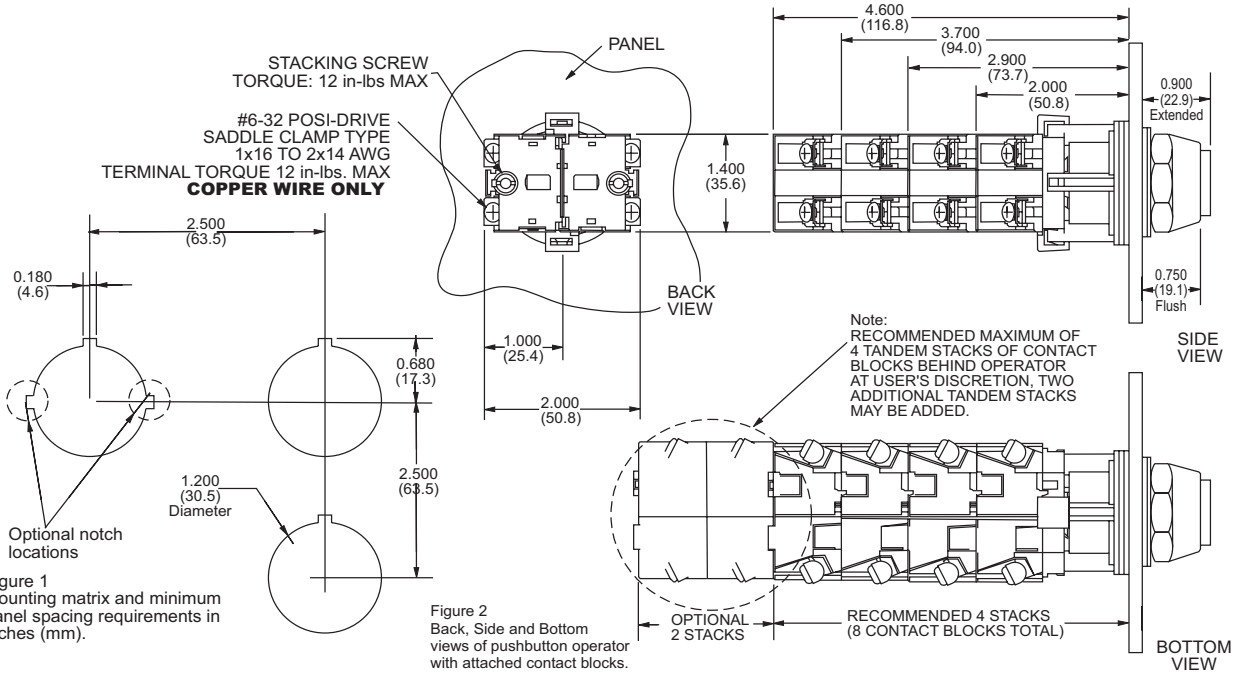


Figure 1
Mounting matrix and minimum panel spacing requirements in inches (mm).

Figure 2
Back, Side and Bottom views of pushbutton operator with attached contact blocks.

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	n NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27-3.43)	4
7-9	0.150 - 0.179 (3.81-4.55)	3
5-6	0.194 - 0.210 (4.93-5.33)	2
2-4	0.224 - 0.315 (5.67-8.00)	1

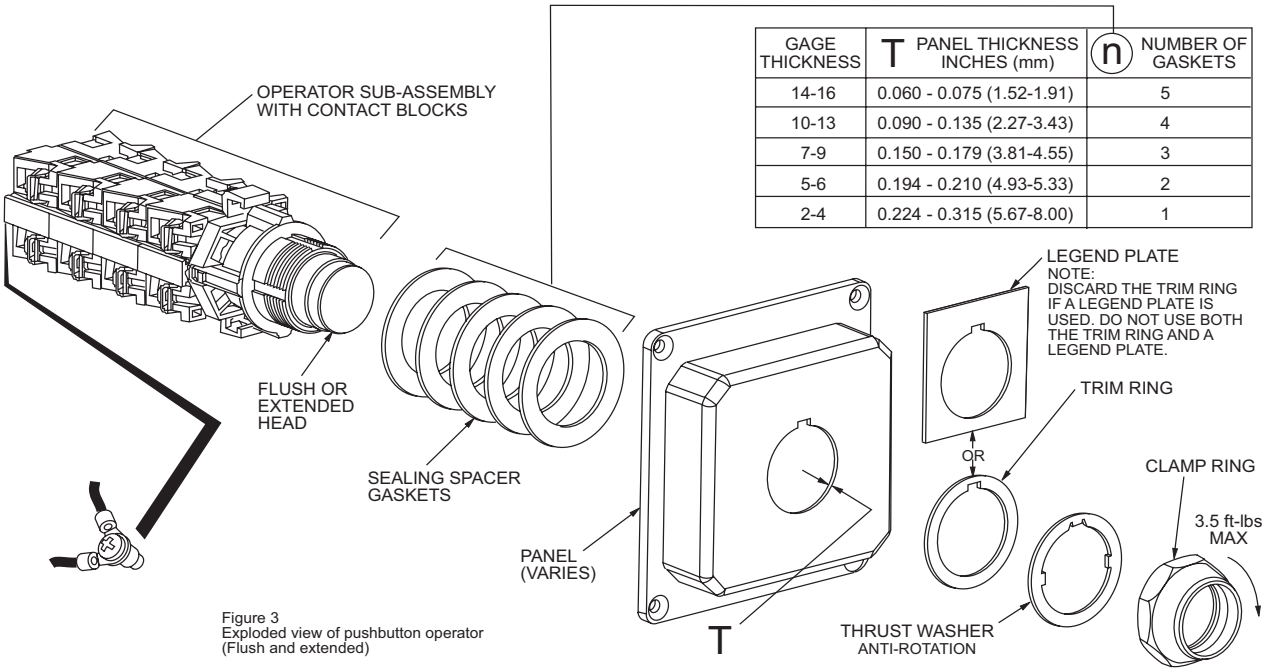
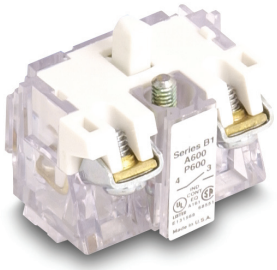


Figure 3
Exploded view of pushbutton operator (Flush and extended)

HT800 30mm Contact Blocks & Accessories

Contact blocks



HT8A

HT8B

HT8 Series Contact Blocks		
Part Number	**Description**	**Price**
HT8A	Normally open contact block for HT8 series switches. NEMA Rated A600, P6001	
HT8B	Normally closed contact block for HT8 series switches. NEMA Rated A600, P6001	
HT8C	Early closing normally open contact block for HT8 series switches. NEMA Rated A6001	
HT8D	Late opening normally closed contact block for HT8 series switches. NEMA Rated A6001	
HT8E	Logic level normally open contact block for HT8 series switches. Gold plated contacts for reliable low energy switching. Power Rating: Min 1mA @ 5V; Max 500mA 28V.	

Notes
1. **See HT800 specifications in this section for typical contact wiring diagram.**
2. **NEMA ICS 5-2000. For more information, refer to HT800 technical specifications and control circuit contact electrical ratings at the beginning of this section.**

Spare parts and tools

HT8WRENCH

HT8LAMPTOOL

109305

HT8BULBV3

HT8LEDYF3

HT8 Series Spare Parts and Tools		
Part Number	**Description**	**Price**
HT8WRENCH	Installation wrench for Cutler-Hammer HT8 series and E22 series pushbuttons, switches, and indicators	
HT8LAMPTOOL	Bulb extraction tool for removing bulbs from switches, indicators and stacklights	
109305	Knockout punch hole cutting tool for 30.5 mm mounting hole. Includes punch, die and draw stud	
HT8X1	Spare anti-rotation ring for HT8 series. Included with each HT8 device. (not shown)	
HT8X2	Spare trim ring for HT8 series. Included with each HT8 device. (not shown)	
HT8X3	Spare sealing/spacing ring for HT8 series. Included with each HT8 device. (not shown)	
HT8GR1	Spare grounding kit for HT8 series devices except non-PTT indicators. Included with each HT8 device. (not shown)	
HT8GR2	Spare grounding kit for HT8 series non-PTT indicators. Included with each HT8 device. (not shown)	
HT8BULBV3	24 volt incandescent bulb for HT8 illuminated devices. This is an extended bulb for enhanced illumination with HT8 devices. 50mA at 24 volts.	
HT8BULBV7	120 volt incandescent bulb for HT8 illuminated devices. This is an extended bulb for enhanced illumination with HT8 devices. 19mA at 120 volts.	
HT8LEDRF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Red	
HT8LEDYF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Yellow	
HT8LEDGF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Green	
HT8LEDBF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Blue	
HT8LEDWF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: White	
HT8LEDAF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Amber	
HT8LEDRF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Red	
HT8LEDYF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Yellow	
HT8LEDGF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Green	
HT8LEDBF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Blue	
HT8LEDWF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: White	
HT8LEDAF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Amber	

NOTE: LED modules have very low current draw and should not be used with triac output devices like PLC triac output modules.

30mm Legend Plates

Cutler-Hammer

For Pushbutton Operators and Indicating Lights

Legend	Color of Field	Catalog Number	Price
Clamp	Black	HT8SP90	
Close	Black	HT8SP73	
Down	Black	HT8SP74	
Emergency Stop	Red	HT8SP13	
Fast	Black	HT8SP75	
Faster	Black	HT8SP87	
Feeder On	Black	HT8SP94	
Feeder Off	Black	HT8SP95	
Forward	Black	HT8SP15	
High	Black	HT8SP16	
In	Black	HT8SP17	
Inch	Black	HT8SP18	
Jog	Black	HT8SP19	
Jog Forward	Black	HT8SP20	
Jog Reverse	Black	HT8SP21	
Low	Black	HT8SP22	
Lower	Black	HT8SP23	
Lube-fail	Black	HT8SP92	
Motor Run	Black	HT8SP81	
Motor Stop	Black	HT8SP82	
Off	Red	HT8SP24	
On	Black	HT8SP25	
Open	Black	HT8SP26	
Out	Black	HT8SP27	
Power On	Black	HT8SP80	
Raise	Black	HT8SP28	
Ready	Black	HT8SP86	
Reset	Black	HT8SP29	
Reverse	Black	HT8SP30	
Run	Black	HT8SP31	
Safe	Black	HT8SP85	
Slow	Black	HT8SP32	
Slower	Black	HT8SP88	
Start	Black	HT8SP33	
Stop	Red	HT8SP34	
Test	Black	HT8SP83	
Transfer	Black	HT8SP93	
Trip	Black	HT8SP84	
Unclamp	Black	HT8SP91	
Up	Black	HT8SP35	

*Note: Dimensions: 1.77" (45mm) x1.77" (45mm)

For Selector Switch Operators/ Two-Position

Legend	Color of Field	Catalog Number	Price
Forward Reverse	Black	HT8SP38	
Hand Auto	Black	HT8SP39	
High Low	Black	HT8SP40	
Jog Run	Black	HT8SP41	
Manual Auto	Black	HT8SP67	
Off On	Black	HT8SP42	
Open Close	Black	HT8SP43	
Run Jog	Black	HT8SP44	
Safe Run	Black	HT8SP45	
Start Jog	Black	HT8SP46	
Start Stop	Black	HT8SP47	
Up Down	Black	HT8SP48	

For Selector Switch Operators/ Three-Position

Legend	Color of Field	Catalog Number	Price
Auto Off Hand	Black	HT8SP49	
For. Off Rev	Black	HT8SP50	
For. Safe Rev.	Black	HT8SP69	
Hand Off Auto	Black	HT8SP51	
Man. Off Auto	Black	HT8SP68	
Open Off Close	Black	HT8SP53	
Run Safe Jog	Black	HT8SP70	
Up Off Down	Black	HT8SP54	
On Stop Safe	Black	HT8SP71	

For PUSH/PULL Units

Legend 3/32" lettering	Color of Field	Catalog Number	Price
ON/OFF	Black	HT8PP5	
OPEN/CLOSE	Black	HT8PP8	
UP/DOWN	Black	HT8PP11	

Square Blank Plastic Legend Plates

Lettering	Color of Field	Catalog Number	Price
Black	White/Silver	HT8SP76	
White	Red/Black	HT8SP77	

Round Plastic Legend Plates

Legend	Color of Field	Catalog Number	Price
ESTOP	Yellow	HT8RP79	

NOTE: 70 mm / 2-3/4" diameter

NOTE: All 30 mm legend plates are plastic.