

# HALL EFFECT PUSHBUTTON SWITCHES

**HP7**  
HALL EFFECT  
PUSHBUTTONS

10 MILLION CYCLES, CONTACTLESS HALL EFFECT TECHNOLOGY

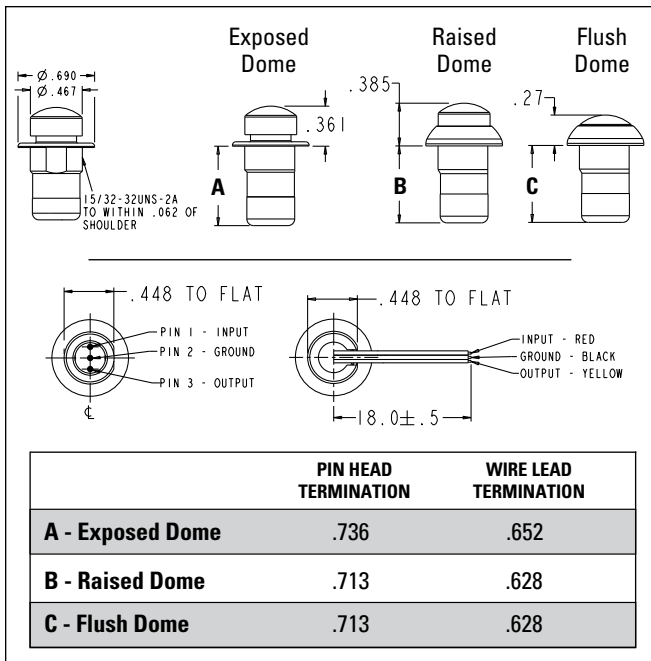
HP7 series momentary pushbuttons utilize Hall effect sensor technology and last up to 10 million cycles. These rugged pushbuttons withstand harsh environments and are available dusttight and moistureproof to IP64 or watertight to IP68S.

Exposed, raised and flush dome buttons come in nine color options. A mechanical detent option is available for tactile feedback. Case and bezel are precision-machined aluminum alloy with a black or clear coat anodized finish. PC pins or wire leads are standard; value-added connectors are available.

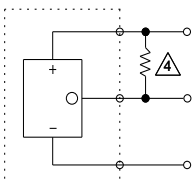
Prime applications are those requiring repeated "jogging" and other continuous operation. Examples include material handling equipment, such as loaders, lift trucks, bucket and shovel and other applications where positioning of the load is critical.

## Features:

- Up to 10 million cycles
- Electronics sealed to IP64 or watertight to IP68S
- Three dome button styles in nine color options
- Momentary action
- Choice of termination styles
- Digital programmable output
- Supply voltage 4.5-24V
- Mechanical detent available for tactile feedback
- RoHS compliant



## TYPICAL APPLICATION



⚠ EXTERNAL PULL-UP RESISTOR NOT INCLUDED WITH SWITCH (10KΩ TYPICAL)

Normally High option: Output is at supply voltage at rest. On actuation, output voltage goes to nearly ground and allows current to flow between ground and output wire.

Normally Low option: Output voltage goes to nearly ground and allows current to flow between ground and output wire. On actuation, output switches to supply voltage.



## Standard Characteristics/Ratings:

### MECHANICAL:

<b>Mechanical Life:</b>	10,000,000 cycles without detent
<b>Button Travel:</b>	0.080 inches max
<b>Overtravel:</b>	0.010 inches min
<b>Operating Force:</b>	Without detent: 16 oz +/- 8 oz With detent: 28 oz +/- 8 oz
<b>Operating Point:</b>	0.040 inches +/- 0.010
<b>Electrical Life:</b>	10,000,000 cycles

### ELECTRICAL RATINGS: Rated at Vcc = 5V @ 25°C Load = 1mA (4.7KΩ)

Electrical	Units	Min	Max
Supply Voltage	VDC	3.0	24
Reverse Output Voltage	VDC	N/A	0.5
Supply Current	mA	N/A	9
Continuous Output Current	mA	N/A	18
Reverse Battery Protection	VDC	N/A	-15

### ELECTRONICS:

**Seal:** IP64 or IP68S

### ENVIRONMENTAL:

**Operating Temp Range:** -40°C to +85°C

**Storage Temp Range:** -60°C to +105°C

### MATERIALS:

**Button:** Thermoplastic

**Case:** Aluminum alloy

**Mounting Hardware:** Hex nut & lockwasher

## HP7 PART NUMBER CODE

HP7	-	X	X	X	X	X
Dome Style	Action	Terminal Style	Seal Level	Case Color	Button Color	
DE. Exposed Dome	1. Normally High Momentary	3. 3 Pin Header	2. Dusttight	1. Clear	1. Red	
DF. Flush Dome	2. Normally High Momentary with Detent	5. 18" Potted 26 AWG Wire Leads	3. Watertight	2. Black	2. Black	
DR. Raised Dome	3. Normally Low Momentary				3. Orange	
	4. Normally Low Momentary with Detent				4. Yellow	
					5. Green	
					6. Blue	
					7. Purple	
					8. Gray	
					9. White	