HALL EFFECT LINEAR OUTPUT PUSHBUTTONS

10 MILLION LINEAR OUTPUT CYCLES USING CONTACTLESS HALL EFFECT TECHNOLOGY

The HPL Hall Effect Linear Output Pushbutton Switch is a revolutionary switch utilizing Hall effect technology to provide the user an output proportional to the travel of the button. The HPL delivers up to 10 million cycles. This rugged switch is ideal for applications where a simple on/off control is insufficient and a linear output is desired. Using the HPL, an operator can control the motion of a device as well as the speed of the movement. The HPL switch is an ideal control device for valves and variable speed drives, and can be used in industrial control, heavy equipment and material handling applications.

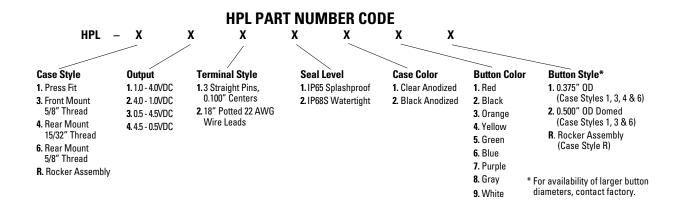
The HPL is offered as a stand-alone switch and in a dual HPL rocker assembly. As with all OTTO switches, a wide variety of case and button styles and colors are offered, along with various termination styles and two levels of sealing. OTTO can provide custom configurations as well as provide the HPL switches installed in a control grip.

Features:

- Programmable outputs of 0.5 to 4.5 volts
- 10 million cycles
- Hall effect for reliable contactless switching
- Watertight per IP68S available
- Front or behind panel mounting
- Choice of termination styles
- Rocker version available
- RoHS/WEEE/Reach compliant

HPL-R Hall Effect Rocker HPL-4 15/32" - 32 Thread Rear Mount Shown with Wire Leads

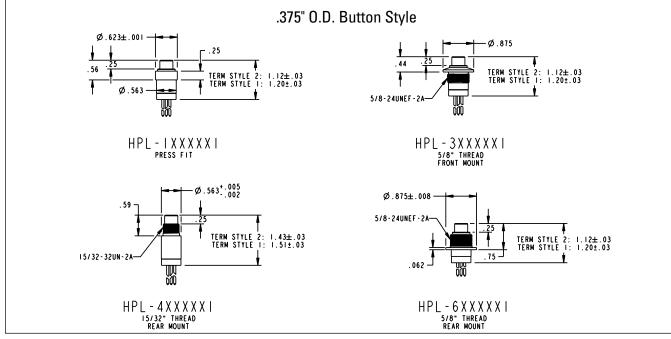




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Standard Characteristics/Ratings:

MECHANICAL:														
Mechanical Life:	1,000,000 cycles full stroke per button, IP68S rated 10,000,000 cycles full stroke per button, IP64 rated													
Button Travel:	0.135 inches min to 0.160 inches max													
Full Travel Force:	0.15 inches, 3.0 lbs. typical to 3.8 lbs. max @ 25°C													
Reset Force:	5 oz min @ 25°C													
Electrical Life:	10,000,000 cycles													
ELECTRICAL RATINGS: Rated at Vcc = 5V @ 25°C Load = 1mA (4.7KΩ)														
Electrical		1 - 4 Volts			4	4 - 1 Volts			0.5 - 4.5 Volts			4.5 - 0.5 Volts		
	Units	Min	Тур	Max	Min	Тур	Max	Min	Тур	Max	Min	Тур	Max	
Supply Voltage	VDC	4.5	5	5.5	4.5	5	5.5	4.5	5	5.5	4.5	5	5.5	
Output Voltage (Button Up)	VDC @ 5V Vcc	0.85	1	1.15	3.85	4	4.15	0.35	0.5	0.65	4.35	4.5	4.85	
Output Voltage (Button Down)	VDC @ 5V Vcc	3.85	4	4.15	0.85	1	1.15	4.35	4.5	4.65	0.35	0.5	0.65	
Supply Current	mA	N/A	8	10	N/A	8	10	N/A	8	10	N/A	8	10	
Continuous Output Current	mA	-1	N/A	1	-1	N/A	1	-1	N/A	1	-1	N/A	1	
Output Resistance (lo ≤ -2mA)	Ω	N/A	1	10	N/A	1	10	N/A	1	10	N/A	1	10	
ELECTRONICS:														
Seal Integrity:	IP65 or IP68S													
ENVIRONMENTAL:														
Operating Temp Range:	-40°C to +85°C													
Storage Temp Range:	-65°C to +105°C													
Humidity:	96% RH, 70°C, 96 hours													
MATERIALS:														
Housing:	Anodized Alumi	num alloy												
Button Cap:	Thermoplastic	Thermoplastic												
Mounting Hardware:	Lockwasher, he	x nut, wa	sher whe	en applicable										



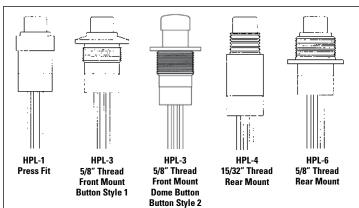
Specifications Subject To Change Without Notice

LINEAR OUTPUT PUSHBUTTONS

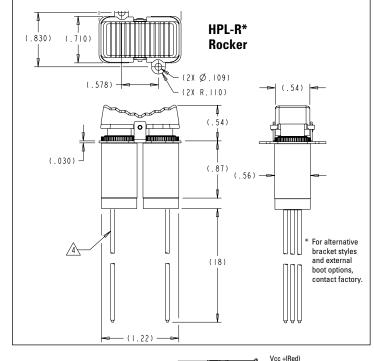
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Case Styles



HPL dimensions are equivalent to standard OTTO P1 Pushbutton dimensions as shown in the catalog except for overall length. Total button height is 0.25" on standard 0.375" OD buttons. Overall length from button top to rear of potting is 1.26" noninal, except for the HPL-4 and 0.500" OD button styles which measure 1.56". Panel mounting hardware is included, except with the HPL-1 which is meant to press fit into mounting hole in a control grip. Refer to the dimensions shown or consult OTTO to design the control grip to meet your specifications.



4700 nF

Schematic

 $18.1 \pm .6$

TERMINAL

4700 pF

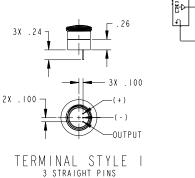
Output o(Yellow)

GND -(Black)

I8" POTTED 22 AWG, UL 1569 WIRE LEADS .18

STYLE 2

Terminal Styles



3 STRAIGHT PINS .100 CENTERS

