# HALL EFFECT LINEAR OUTPUT PUSHBUTTONS



PROVIDES 10 MILLION LINEAR OUTPUT CYCLES USING CONTACTLESS HALL EFFECT TECHNOLOGY

The HPL Series is a revolutionary new switch utilizing Hall Effect technology to provide the user an output proportional to the travel of the button. Available IP68 with seal, the HPL delivers 10,000,000 actuations. 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 also provide custom configurations as well as provide the HPL switches installed in a control grip.




## Quality Features:

- **Programmable outputs of .5 to 4.5 volts**
- **10 million cycle performance**
- **Hall Effect for reliable contactless switching**
- **Can be sealed watertight per IP68**
- **Front or behind panel mounting**
- **Choice of termination styles**
- **Rocker version available**

**Rocker Assembly Using 2 HPL's**



### HPL Part Number Code

**HPL- X X X X X X X**

**Case Style**
1. Press Fit
3. Front Mount 5/8" Thread
4. Rear Mount 15/32" Thread
6. Rear Mount 5/8" Thread
R. Rocker Assembly

**Output**
1. 1-4V
2. 4-1V
3. .5-4.5V
4. 4.5-.5V

**Terminal Style**
1. 3 Pin .025 SQ Pins, .100 Centers
2. 18" Potted 22AWG Wire Leads

**Seal Level**
1. IP68 Watertight

**Case Color**
1. Clear Anodize
2. Black Anodize

**Button Color**
1. Red
2. Black
3. Orange
4. Yellow
5. Green
6. Blue
7. Purple
8. Grey
9. White

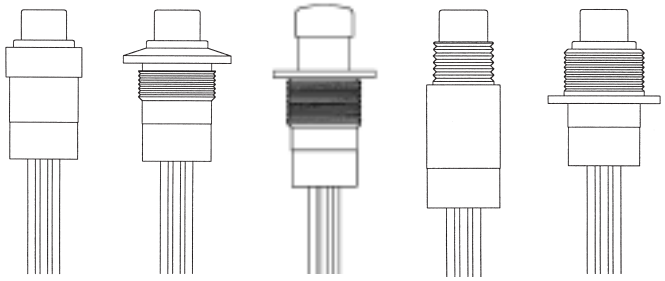
**Button Style**
1. .375" OD (Case Styles 1, 3, 4, & 6)
2. .500" OD Domed (Case Styles 1, 3, & 6)
R. Rocker Assembly (Case Style R)

Consult factory for availablity of larger button diameters.

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## Case Styles



**HPL-1**
**Press Fit**

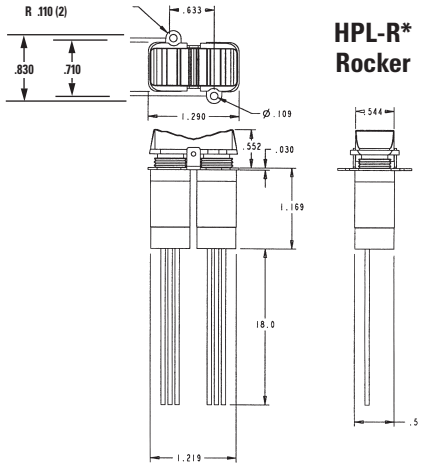
**HPL-3**
**5/8" Thread**
**Front Mount**
**Button Style 1**

**HPL-3**
**5/8" Thread**
**Front Mount**
**Dome Button**
**Button Style 2**

**HPL-4**
**15/32" Thread**
**Rear Mount**

**HPL-6**
**5/8" Thread**
**Rear Mount**

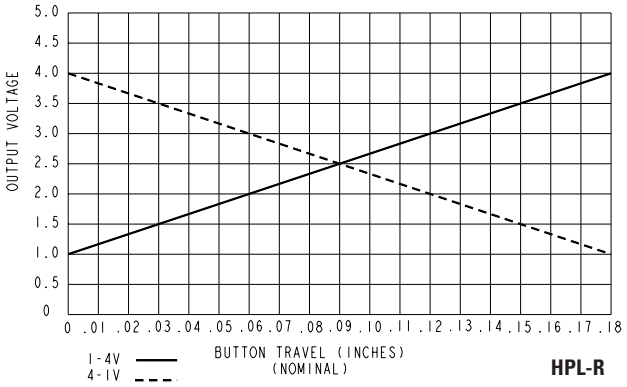
HPL dimensions are equivalent to standard OTTO P1 pushbutton dimensions as shown in the catalog except for overall length. Total button height is .25" on standard .375" O.D. buttons. Overall length from button top to rear of potting is 1.26" nominal, except for the HPL-4 and .500 O.D. button styles which measures 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.



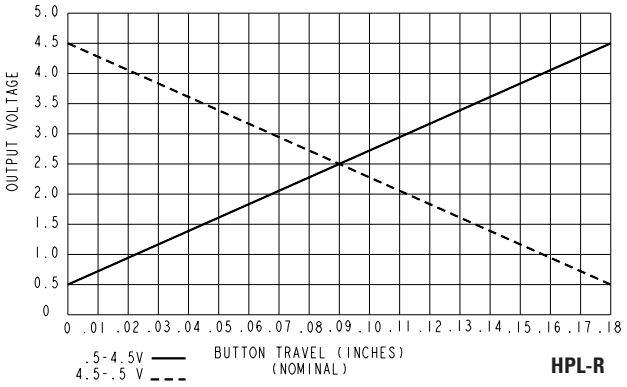

**HPL-R***
**Rocker**

* Contact Factory For Alternative Bracket Styles & External Boot Options.

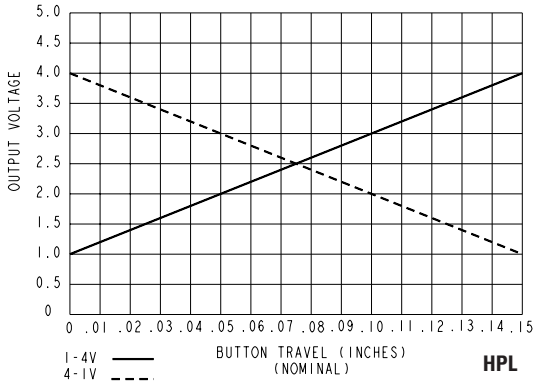
## Linear Output Graphs (Vcc=5V@20°C)



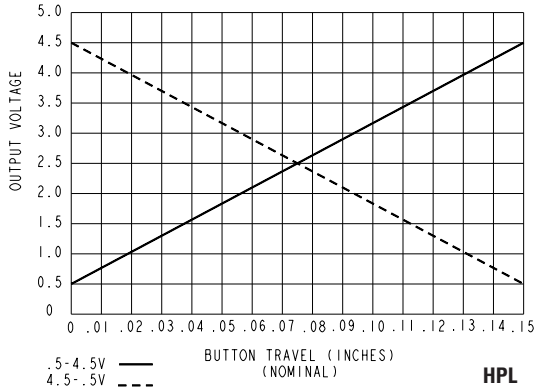

**HPL-R**




**HPL-R**

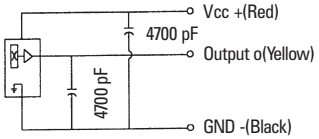



**HPL**




**HPL**

| Standard Characteristics/Ratings: | |
|---|---|
| **OPERATIONAL:** | |
| **Mechanical Life:** | 10,000,000 cycles |
| **Seal Options:** | IP64 & IP68 |
| **Temperature Range:** | -40°C to +85°C |
| **Button Travel:** | .14 to .16 inches |
| **Operating Force:** | 2.0 ± .0.2 lbs. |
| **MATERIALS:** | |
| **Button:** | Thermoplastic |
| **Case:** | Black anodized aluminum alloy |
| **ELECTRICAL:** | |
| **Supply Voltage:** | 4.5VDC to 5.5 VDC max. |
| **Supply Current:** | 10 mA max. |
| **Continuous Current Output:** | 1 mA max. |
| **Reverse Voltage Protection:** | -5V max. |




**Schematic**



Specifications Subject To Change Without Notice