

3-POSITION ANALOG OUTPUT SNAP-IN ROCKER WITH BACKLIGHTING



The HFNR is compact, robust and reliable, ideal for grip or panel mount applications. This 3-position switch provides operator comfort by reducing the movement required to change direction or switch gears. Backlighting provides enhanced visibility; making them easy to see in poor lighting or nighttime operation. The electronics are sealed to IP68S, the switch has excellent EMI/RFI immunity, and a mechanical life of three million cycles.

## Features:

- 3 million cycle life, full forward to full backward
- Hall effect contactless sensing technology
- Choice of bezel and button colors
- 2V to 24V LED backlighting options
- Electronics sealed to IP68S
- Outstanding EMI/RFI immunity
- Snap-in panel mounting—accepts multiple panel thicknesses
- RoHS compliant

Your official representative



**ALDERS**<sup>®</sup>  
Indicate. Control. Connect.

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**Standard Characteristics/Ratings:**

**MECHANICAL:**

**Mechanical Life:** 3,000,000 full forward to full back

**Angle of Throw Between Adjacent Positions:** 10 degrees typical

**Max Allowable Radial Load:** 30.0 lbs.

**ELECTRICAL RATINGS:**

| Electrical                               | Units        | Min   | Typ | Max   |
|--|--------------|-------|-----|-------|
| Supply Voltage                           | VDC          | 4.5   | 5   | 5.5   |
| Output Voltage, Tolerance at Center      | VDC @ 5V Vcc | -0.35 | N/A | +0.35 |
| Output Voltage, Tolerance at Full Travel | VDC @ 5V Vcc | -0.35 | N/A | +0.35 |
| Supply Current Per Sensor                | mA           | N/A   | N/A | 10    |

**ELECTRONICS:**

**Seal:** Electronics sealed to IP68S

**ENVIRONMENTAL:**

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

**Humidity:** 96% RH, 70°C, 96 hours

**Vibration:** Per MIL-810F minimum integrity

**EMI:** Withstand per SAE J1113 (contact factory for details)

**RFI:** Withstand per SAE J1113 (contact factory for details)

**MATERIALS:**

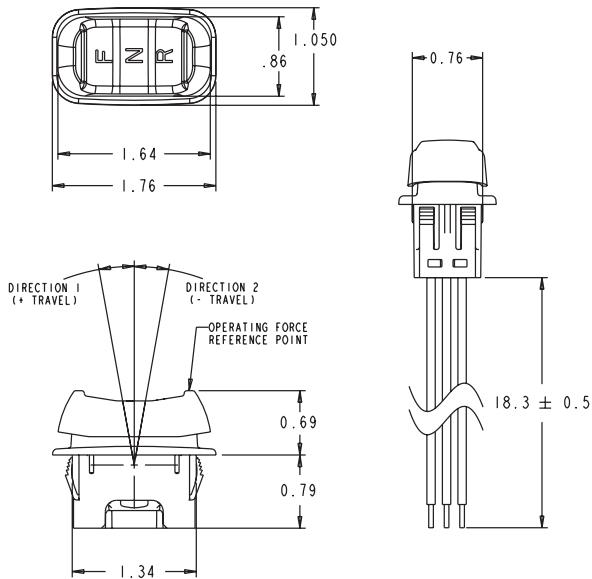
**Button:** Thermoplastic

**Bezel:** Thermoplastic

**Mounting Hardware:** None provided

# HALL EFFECT FORWARD/NEUTRAL/REVERSE ROCKER

## 3-POSITION ANALOG OUTPUT SNAP-IN ROCKER WITH BACKLIGHTING

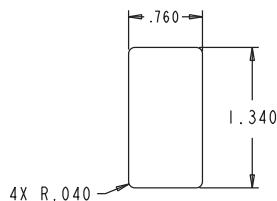


### MOUNTING:

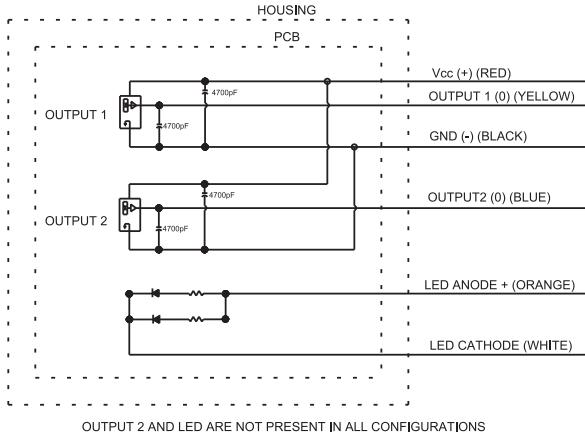
RECOMMENDED PANEL THICKNESS: 0.112 OPTIMUM THICKNESS  
(0.040 MIN. - 0.205 MAX.)

RECOMMENDED PANEL OPENING: 0.760 X 1.340 OPTIMUM  
(0.760/.770 X 1.335/1.345)

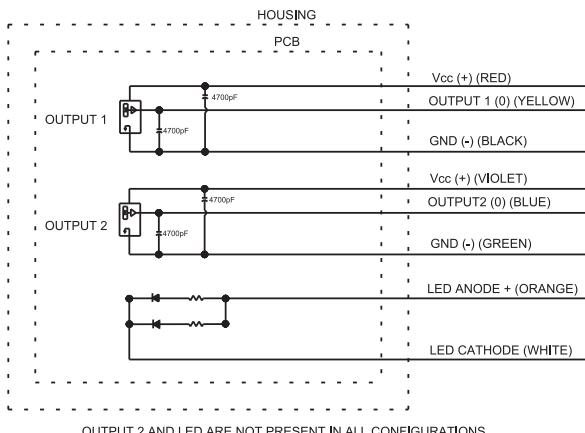
RECOMMENDED PANEL RADII: 0.040 OPTIMUM  
(0.070 MAX.)



### WIRING OPTION 1 COMMON POWER AND GROUND



### WIRING OPTION 2 SEPARATE POWER AND GROUND



### HFNR PART NUMBER CODE

| HFNR             | -                 | X              | X                            | X  | X            | X  | X   | X   | X   | X                         | FNR<br>Legend |
|------------------|-------------------|----------------|------------------------------|--|--------------|--|---|---|---|---------------------------|---------------|
| Light Source ①   | Output 1 ②        | Output 2       | Wiring Option                | Operating Force<br>Direction 1 & 2 to Center/<br>Center to Direction 1 & 2 | Button Style | Termination  | Bezel Color ③   | Button Color ③  |   |                           |               |
| A. NONE          | A. 4.5/2.5/0.5VDC | NONE ④         | 1. Common Power and Ground ④ | 1. 2.6/3.6 lbs.  | 1. Rocker    | A. 20 AWG Wires 18.3" Long, Stripped and Tinned Ends | 1. Red<br>2. Black<br>4. Yellow<br>6. Blue<br>8. Gray | 1. Red<br>2. Black ①<br>3. Orange<br>4. Yellow<br>5. Green<br>6. Blue<br>7. Violet<br>8. Gray<br>9. White | 1. Red<br>2. Black ①<br>3. Orange<br>4. Yellow<br>5. Green<br>6. Blue<br>7. Violet<br>8. Gray<br>9. White | A. NONE<br>B. FNR/White ① |               |
| B. 2V Green LED  | B. 4.5/2.5/0.5VDC | 4.5/2.5/0.5VDC | 2. Separate Power and Ground |  |              |  |   |   |   |                           |               |
| C. 2V Amber LED  | C. 4.5/2.5/0.5VDC | 0.5/2.5/4.5VDC |                              |  |              |  |   |   |   |                           |               |
| D. 5V Green LED  | D. 4.0/2.5/1.0VDC | NONE ④         |                              |  |              |  |   |   |   |                           |               |
| E. 5V Amber LED  | E. 4.0/2.5/1.0VDC | 4.0/2.5/1.0VDC |                              |  |              |  |   |   |   |                           |               |
| F. 12V Green LED | F. 4.0/2.5/1.0VDC | 1.0/2.5/4.0VDC |                              |  |              |  |   |   |   |                           |               |
| G. 12V Amber LED | G. 1.0/2.5/4.0VDC | 4.0/2.5/1.0VDC |                              |  |              |  |   |   |   |                           |               |
| H. 24V Green LED | H. 1.0/1.0/4.0VDC | 4.0/1.0/1.0VDC |                              |  |              |  |   |   |   |                           |               |
| J. 24V Amber LED |                   |                |                              |  |              |  |   |   |   |                           |               |

① Only button color black is available on backlit version; only legend color translucent white is available on backlit version.

② Outputs are when switch is in detented position.

③ Minimum lot charges may apply for certain color options.

④ For single output switches, wiring option 1 should be selected.