



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



SERIES 68B Hall Effect Rocker Switch

FEATURES

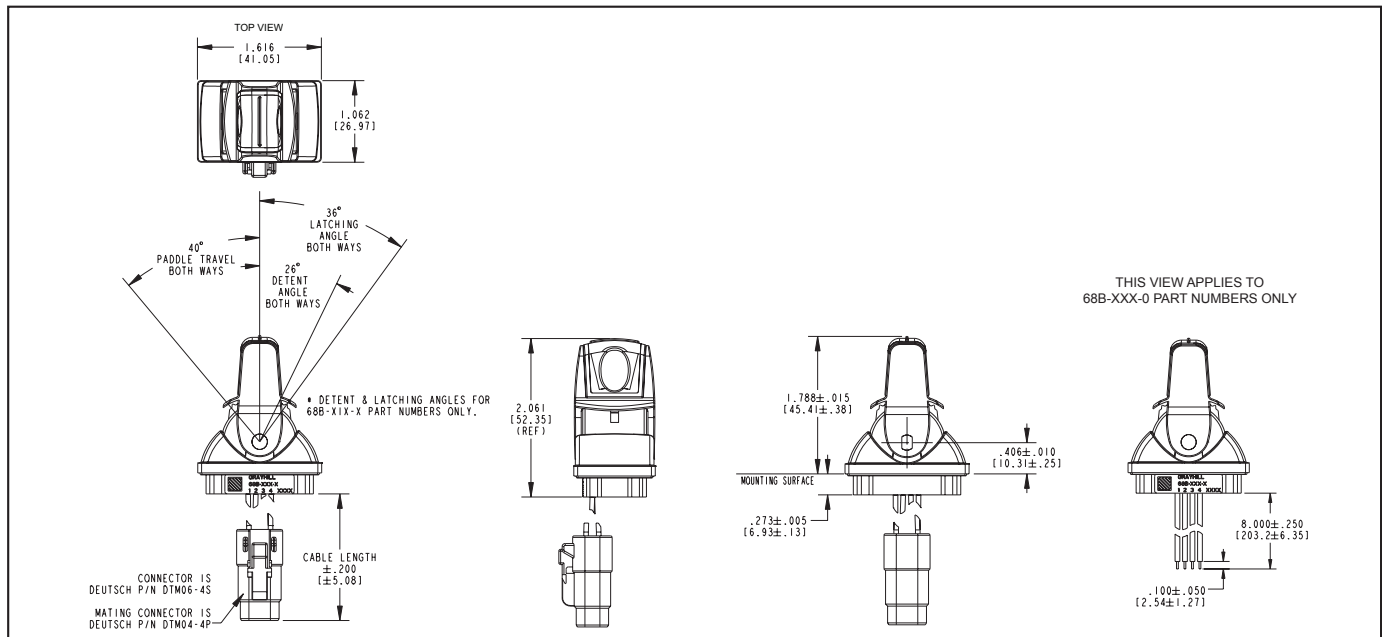
- Ratiometric analog output
- Sealed to IP67 dynamic - even during actuation
- Rugged industrial design suited for outdoor use
- Provides positive tactile feedback in any environment
- Long operational life
- Redundant output for safety
- Available with 26° detent and 36° latching, friction hold, or spring return (no detent)
- Choices of cable length
- Choices of accent color



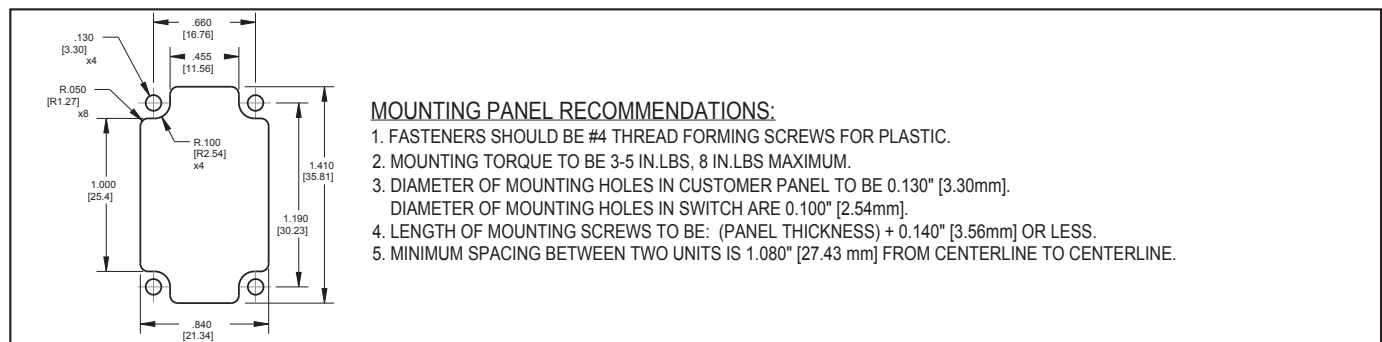
APPLICATIONS

- Dash-panel and armrest controls
- Hydraulic fluid flow control
- Engine speed control
- Heavy duty industrial equipment
- Remote control belly boxes

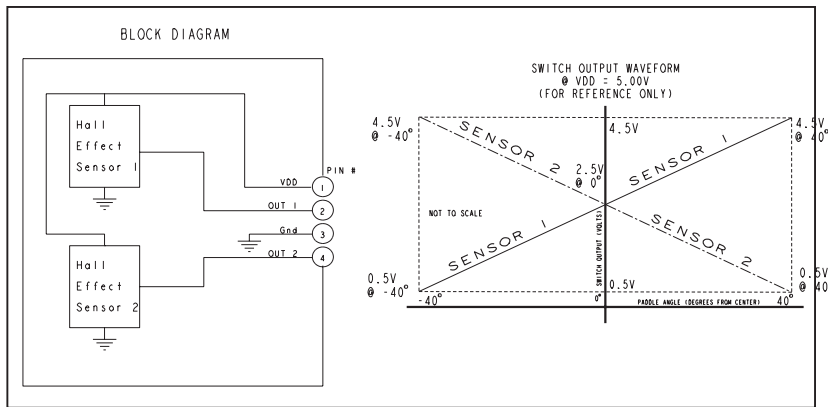
DIMENSIONS in inches, [mm]



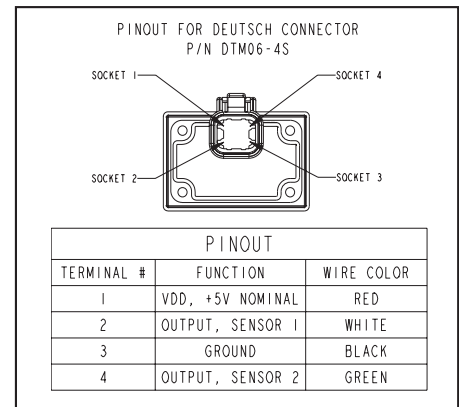
MOUNTING PANEL OPTIONS



BLOCK DIAGRAM & JOYSTICK OUTPUT WAVEFORM



PINOUT AND WIRE COLOR CHART



SPECIFICATIONS

Electrical Specifications

Operating Voltage on Pin 1 (VDD): 5.0V ± 0.5V

Absolute Maximum Voltage* on Pin 1 (VDD): -18 V min, +18 V max (t < 1 h)

Operating Current: 15 mA typ., 20 mA, max.

Output Voltage is Analog (Ratiometric to Operating Voltage)

Output at Center Position: 50% VDD

Output at Full Travel: 10% VDD or 90% VDD depending on configuration

Output Voltage Tolerance:

± 3% VDD at full travel

± 5% VDD at center position

Output Current: 1 mA, max.

Recommended Load: 10 K Ohm pull-down resistor.

Sensor Error: When a sensor error occurs, the output goes to < 4% of operating voltage (VDD)

*Exceeding the Absolute Maximum Voltage may result in permanent damage to the device. This is a stress rating only and functional operation of the device at those or any other conditions above those indicated in the operation listings of this specification is not implied.

Physical & Mechanical Ratings

Vibration: Random, meets MIL-STD-810G, Method 514.6, Procedure I

Mechanical Shock: Meets MIL-STD 202, Method 213B Test Condition A

Transit Drop: Meets MIL-STD-810G, Method 516.6, Procedure II

Terminal Strength: 10 lbs. minimum, tested per MIL-STD-202, Method 211A

Push-Out Force: 45 lbs. minimum

Pull-Out Force: 45 lbs. minimum

Paddle Impact: 0.5 lbs. weight dropped 3x

from height of 0.3m

Paddle Side-Load: 45 lbs. minimum

Mounting Torque: 3-5 in-lbs recommended, 8 in-lbs maximum

Return to Center Life: 2 million cycles minimum**

Detent Life: 200,000 cycles minimum

Latching Life: 200,000 cycles minimum

Friction Hold Life: 200,000 cycles minimum

** One cycle is defined as full travel from the center to the +40° direction, then full travel to the -40° direction, then return to the center

Environmental Ratings

Seal: IP67 as mounted

Altitude: Meets MIL-STD-810G, Method 500.4, Procedure I

Thermal Shock: Meets MIL-STD-810G, Method 503.4, Procedure I

Operating High Temperature: +85°C, Meets IEC 68-2-2, Test Aa

Operating Low Temperature: -40°C, Meets IEC 68-2-1, Test Aa

Storage High Temperature: +100°C, Meets IEC 68-2-2, Method Aa

Storage Low Temperature: -55°C, Meets IEC 68-2-1, Method Aa

Damp Heat Cycle: Meets IEC/EN 60068-2-38 Z/AD

Humidity, 85/85: Meets MIL-STD 202, Method 103B, 500 hours

Solar Radiation: Meets ISO 4892-2, Method A, Cycle 1, 1000 hours

Chemical Resistance: Meets IEC 60068-2-74

Salt Fog: Meets MIL STD 810G

Dielectric: Meets MIL-STD-202G, Method 301

Insulation Resistance: Meets MIL-STD-202G, Method 302

Materials and Finishes

Paddle: Thermoplastic with elastomer finger grip

Cable Assembly: 22AWG stranded, tin-coated copper wires in PVC insulation

Connector Body: Thermoplastic

Terminals: Nickel

RoHS Compliant

EMC Ratings

Radiated Immunity: At 3 orientations, meets ISO11452-5 (140 V/M, 10KHz-2MHz), ANSI/ASAE EP455 5.16 (100 V/M, 2-200MHz), ISO 11452-2 (140 V/M, 200MHz-1GHz), and ISO 11452-2 (50 V/M, 1GHz-2.7GHz).

Conducted Immunity: Bulk Current Injection Meets ISO11452-4, SAE J1113-4 (120 mA, 1MHz-400MHz)

Radiated Emissions: Meets CISPR25, Class 3 (150kHz - 54MHz), CISPR 16.2.3, Class B (30-1000 MHz) and ISO13766, level 6db (30MHz - 1GHz)

Conducted Emissions: Meets CISPR 25, Class 5

Electrostatic Discharge: Meets ANSI/ASAE EP455 5.12, Level 1

Power Frequency Magnetic Field: Meets IEC 61000-4-8, 30 A/m

ORDERING INFORMATION

ACCENT COLOR

- 1 = Black
- 2 = Blue
- 3 = Purple
- 4 = Yellow
- 5 = Green
- 6 = Red

68B-XXX-X

SUPPLY VOLTAGE*

5 = 5.0V

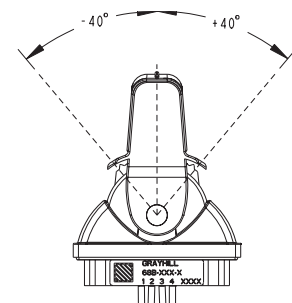
*Output is proportional to VDD

PADDLE FUNCTION

- 0 = No detent or latching
 - 1 = 26° detent + 36° latching
 - 2 = Friction hold
- (Custom options available, contact Grayhill)

TERMINATION

- 0 = No Connector; 8" wires with stripped ends
- 4 = 4.00" Cable with Deutsch Connector
- 6 = 6.00" Cable with Deutsch Connector
- 8 = 8.00" Cable with Deutsch Connector



For prices and custom configurations, contact a local sales office, an authorized distributor, or Grayhill's sales department.