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JHM Heavy Duty Multi-Axis Hall Effect Joystick (joystick base only)

Features

The JHM joystick controller has been designed for use in Mobile and Industrial Field applications. The use of the Hall Effect sensor, which eliminates any contact between moving electrical parts, improves overall resolution, precision and life. A complete line of built-in electronic drivers, generating On-Off, proportional and CANbus control signals, guarantees the highest controllability of any type of electro-hydraulic system.

When coupled with an ergonomic multi-function handle of the M range, up to 5 proportional axes and 9 on-off push buttons can be integrated in the same joystick. As further option, the JHM is also available with a magnetic position detent on the Y- or X-axis.

Available Joystick Movements

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<thead>
<tr>
<th>Option</th>
<th>Movement</th>
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<tbody>
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</tr>
<tr>
<td>L4C</td>
<td>Cross axis control / Bi-directional</td>
</tr>
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<td>L4D</td>
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</tr>
</tbody>
</table>

Mechanical Specifications

- Main body material: aluminium
- Boot material: NBR / Shore 50 - UV proof
- Lever deflection angle: +/-23° +/- 1°
- Electrical angle: +/-23° +/- 1°
- Operating temperature range: -25°C to +80°C
- Protection class (above panel): up to IP 67, depending on grip
- Life: > 5 million cycles

Electrical Specifications

- Sensor: Hall Effect contactless technology
- Supply voltage: ANL version = 5V +/-5% other versions = 8 - 32V
- Current consumption @ rest: 25 mA (sensor only)
- Output Signal configuration: see next pages for all versions
- Electronic Seal: Potting Electronics Deutsch HD14-6-16P other type available on request
- Protections: overvoltage and reverse voltage

Ordering Information: see page 19
Available grips: see page 34
Complete joystick examples: see page 31

* Shown with MS grip

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JOYSTICKS

JHM Heavy Duty Multi-Axis Hall Effect Joystick (joystick base only)

Output Signal Control Characteristics

ANL & ANH versions (basic version)

- Supply voltage: ANL - Version = 5 Vdc +/-5%, ANH - Version = 8-32 Vdc
- Current consumption @ rest: 20 mA (sensor only)
- Signal output @ rest: 2.5 Vdc +/-0.1 V
- Output signal range: 0.5 - 4.5 V +/-0.2V (see graph)
- Rated output current: 1 mA

AVS version (center tap output signal with digital directional signals)

- Supply voltage (Vin): 8 - 32 Vdc
- Current consumption @ rest: 250 mA
- Signal output @ rest: 0 Vdc
- Output signal range: 0.5 - 4.5 V +/-0.2V (see graph)
- Rated output current: 1 mA
- Digital directional outputs on both axes: 0 / Vin (0.7 A max)

TCN version (1 PWM output in combination with up to 7 on/off outputs)

- Supply voltage: 8 - 32 Vdc
- Current consumption @ rest: 250 mA
- PWM output: 1 x single prop. solenoid valves
- Current output range (PWM): 100 to 3000 mA
- Dither frequency: 75 to 250 Hz (factory preset)
- Adjustments: via RS 232 serial line

Application example (shown with MG grip)

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**JHM Heavy Duty Multi-Axis Hall Effect Joystick** (joystick base only)

### PWM version (2 PWM channels)
- Supply voltage: 8 - 32 Vdc
- Current consumption @ rest: 200 mA
- PWM output: 2 x dual prop. solenoid valves
- Current output range (PWM): 100 to 3000 mA
- Dither frequency: 75 to 250 Hz (factory preset)
- Adjustable ramp time: 0.05 to 5 s
- Power digital outputs: 2 (3.5 A)
- Adjustments: via RS 232 serial line

Note: more PWM output channels are available using the FPR - PWM roller switches

### MLT version (output adjustable signal for closed loop prop. actuators)
- Supply voltage: 8 - 32 Vdc
- Current consumption @ rest: 200 mA
- Analog outputs: 4
- Output signal range: linear signal 0.9 - 4.1 V
- Rated output current: 1 mA
- Power digital outputs: 4 (0.7 A)
- Digital inputs available: 2
- Adjustments: via RS 232 serial line

### CANbus version (with interface for CANbus line)
- Supply voltage: 8 - 32 Vdc
- Current consumption @ rest: 200 mA
- Physical layer: ISO 11898 (CAN 2.0 B), 250 kbit/s
- Protocol: J1939

With Canbus link, following signals can be managed on the multifunctional grip:
- 4 digital outputs 0.7 A (LEDs, detent coils, buzzers, etc.)
- 6 analog voltage input 0-5 V (prop. rollers and mini-joysticks)
- 6 digital inputs (push buttons, toggles, etc.)

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JOYSTICKS

JHM Heavy Duty Multi-Axis Hall Effect Joystick

JHM joystick with grips - configuration examples with overall dimensions

JHM base with IL handle.
Complete code : JHM-L4D/ANH-IL 0000

JHM base with IC handle.
Complete code : JHM-L4D/ANH-IC 0200

JHM base with IE type handle.
Complete code : JHM-L4D/ANH-IE A4P9 0000

JMF base with IE type handle.
Complete code : JHM-L4D/ANH-IE A1P9 1PRS

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JHM Heavy Duty Multi-Axis Hall Effect Joystick

JHM joystick with grips - configuration examples with overall dimensions

JHM base with MS type handle.
Complete code: JHM L4D/ANH-MS A6P9 R3P9

JHM base with MS type handle.
Complete code: JHM L4D/ANH-MS A2P9 2FPR R1P9

JHM base with MG type handle.
Complete code: JHM L4D/ANH-MG A4P9 R1P9

JHM base with MG type handle.
Complete code: JHM L4D/ANH-MG A2P9 1FPR 000

JHM base with MS type handle.
Complete code: JHM L4D/ANH-MS A6P9 R3P9

JHM base with MS type handle.
Complete code: JHM L4D/ANH-MS A2P9 2FPR R1P9

JHM base with MG type handle.
Complete code: JHM L4D/ANH-MG A4P9 R1P9

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