



## Joysticks

### HTL

- Two-way, four-way or omnidirectional
- Designed for grip, armrest & panel mounting
- Programmable sensors with built-in temperature compensation
- Outstanding EMI/RFI immunity
- Available up to IP68S sealed
- Variety of button styles
- 1,000,000 cycles



\* Castle Style Button Shown

### JHT

- Miniature joystick
- Compact design excellent for armrest and panel mounting
- Available up to IP68S sealed
- Single axis or various omni-directional options
- Pushbutton switch available
- EMI/RFI withstand per SAE J1113 specifications
- 5,000,000 cycles



\* JHT with Pushbutton Shown

### JH

- Large joystick
- Available up to IP68S sealed
- Adapts to a wide variety of shaft styles
- 300 lbs. static load strength at grip reference point (GRP)
- CANopen®, CAN J1939, USB, serial and analog output configurations available
- EMI/RFI immunity up to 100V/M
- Single, dual and Z-axis available
- Variety of grip and switch options
- Redundant outputs available
- 15,000,000 cycles



\*JH Joystick shown with small universal grip incorporating Hall Effect Pushbutton Switches (HP7's) and a Hall Effect Thumbwheel Switch (HTW).

### JHM

- Medium joystick
- Designed for armrest & panel mounting
- CANopen®, CAN J1939, USB, serial and analog output configurations available
- Variety of grip and switch options
- Available up to IP68S sealed
- Redundant outputs available
- 10,000,000 cycles



\* JHM with Hall Effect Rocker Shown

### JHT Z-Axis

- Miniature joystick with z-axis
- 60° rotational movement of the knob at the top of the joystick
- Z-Axis options include detent, friction hold or spring return to center
- Available up to IP68S sealed
- Optional pushbutton switch(es) available
- Various gating options available
- 5,000,000 cycles (joystick)



\* JHT Z-Axis with Pushbuttons Shown

### JHS-F

- Single axis, friction hold joystick
- Rugged compact design
- Available up to IP68S sealed
- Outstanding EMI/RFI immunity
- Redundant output available
- 500,000 cycles

### JHS-RC

- Single axis, smooth spring return to center joystick
- Rugged compact design
- Available up to IP68S sealed
- Outstanding EMI/RFI immunity
- Redundant output available
- 4,000,000 cycles





## Thumbwheels

### HTW

- Proportional output thumbwheel
- Spring return to center single axis actuator
- 3,000,000 cycles



### HTWF

- Friction hold thumbwheel
- Maintained position single axis actuator
- 250,000 cycles



### HTWM

- Mini proportional output thumbwheel
- Spring return to center single axis actuator
- Short behind panel depth
- 3,000,000 cycles

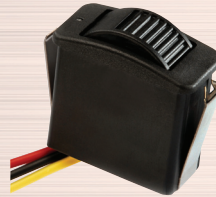


### - SHARED ATTRIBUTES

- Electronics sealed to IP68S
- Outstanding EMI/RFI immunity
- 8 output options
- Knurled or paddle wheel style actuator options
- Wire or pinned termination options
- Variety of bezel and thumbwheel colors

### HTWE

- Proportional output thumbwheel
- Spring return to end single axis actuator
- 8 output options



### HTWME

- Mini proportional output thumbwheel
- Return to end single axis actuator
- Short behind panel depth
- 6 output options
- Easy snap-in panel mounting



### - SHARED ATTRIBUTES

- Electronics sealed to IP68S
- Outstanding EMI/RFI immunity
- Knurled or paddle wheel style actuator options
- Wire or pinned termination options
- Variety of bezel and thumbwheel colors
- 1,000,000 cycles

## Miscellaneous

### HFNR

- Forward/Neutral/Reverse rocker
- 2V to 24V LED backlighting options
- Electronics sealed to IP68S
- Outstanding EMI/RFI immunity
- Easy snap-in panel mounting
- Variety of colors
- 3,000,000 cycles



### HJFC

- Unidirectional or Bidirectional foot pedal
- Heavy gauge, corrosion resistant metal
- Electronics sealed to IP68S
- Pedal pivot point sealed against large debris
- Programmable pretravel and overtravel
- Programmable minimum and maximum output
- Reverse polarity protection available
- CANopen®, CAN J1939, USB, serial and analog output configurations available
- 9,000,000 cycles



## Pushbuttons

### HP7

- Momentary action pushbutton
- Choice of termination styles
- IP64 or IP68S sealed
- Mechanical detent available for tactile feedback
- 9 button color choices
- For applications requiring high actuation rates
- 10,000,000 cycles (without detent option)



### HPW

- Single axis paddle
- Self-centering actuator
- Electronics watertight per IP68S
- For grip, armrest and panel mounting
- Outstanding EMI/RFI immunity
- 8 output options
- Lever or paddle style actuator options
- 1,000,000 cycles



## OPERATOR CONTROL MODULE



with Hall Effect Controls

### HPL

- Linear output pushbutton
- Choice of termination styles
- IP65 or IP68S sealed options
- Rocker version available
- Front or behind panel mounting
- 10,000,000 cycles



### U2-452

- Proportional output rocker
- For use in panels and in grips
- Electronics sealed to IP68S
- Outstanding EMI/RFI immunity
- Black button and housing
- 2,500,000 cycles

