APPLICATIONS

Marine vessel control:
Joystick maneuver, bow thruster

Industrial multi-axis control:
off-highway, mobile equipment, agriculture, forklifts

FEATURES

• Rugged electronic 3-axis joystick for 12VDC marine or industrial applications
• Dual redundant, non-contact hall effect sensors on each axis, six sensors total
• Dual CAN BUS outputs:
  High-speed CAN and fault tolerant CAN
• Dual redundant power supplies
• Designed for recreational and commercial boats and vehicles
• Ergonomic handle and base design for comfortable precision operation
• Guided feel for preferential primary axis control
• Flexible base lip seal
• Soft-touch elastomeric four-button keypad with blue LED's

The Optimus 360 Joystick is a non-contact, 3-axis vessel control module providing intelligent position control. It features redundancy for dual sensing inputs for the most demanding joystick control applications. Specially designed for the marine industry.

SPECIFICATIONS

Electrical
• Operating voltage: 9-16 VDC [SAE J1455]
• Dual CAN bus
  - CAN bus 1: High Speed CAN 250 kbps [SAE J1939]
  - CAN bus 2: Fault Tolerance CAN 125 kbps [ISO 11898-3]
• Protected from reverse polarity, power interruption.
• Power transient protection: Switching transient, starter motor disturbance, and load dump. [SAE J1113-11]
• Conducted Immunity: 10 Vrms, Criteria A [IEC 60945]
• Radiated Immunity: 10 V/m, Criteria A [IEC 60945]
• Electrostatic discharge protection: 6kV contact, 8 kV air [IACS E10]
• Compass safe distance: 50 cm, at 1° deflection [IEC 60945]

Mechanical for X, Y axes
• Mechanical angle of movement: +/- (18° +/- 2°)
• Actuator force: 1.0 +/- 0.2 lbf
• Typical current drawn: Less than 300mA
• Square limiting plate
• Guided feel for primary X, Y directions
• Durability: Minimum 500,000 cycles

Mechanical for Z axis
• Mechanical angle of movement: +/- 40 degree

Connection
• 2 x 6-Pin male, FCI Apex-2.8 connectors
• Built in CAN network tee for multi-station connection
• Connector tensile pull resistance: 60 lbf [ISO 10133]
FEATURES

- Take command bicolor blue and red LED for on-board diagnostic
- Adjustable LED light intensity
- Backlight for dark environment
- Meets or exceeds ABYC, ISO, SAE electrical and environmental requirements
- CE certified

OPTIMUS 360 JOYSTICK

Environmental

- Operating temperature: -18°C to +77°C [ISO 25197]
- Storage temperature: -40°C to +85°C [ISO 25197]
- Corrosion resistance: 1000 hours salt spay [ASTM B117]
- Water ingress protection: IPX7 [IEC 60529]

Shock & Vibration

- Random vibration: 0.0284 g²/Hz [ABYC P-27]
- Resonant vibration: 4 G zero-peak, 20-2000 Hz [ABYC P-27]
- Thermal shock: 100 cycles
- Mechanical shock: 50 G, 11 msec half-sine shape [ISO 25197]

TECHNICAL DATA

[Diagram with dimensions and components]