

OPTIMUS ELECTRONIC POWER STEERING HELM

APPLICATIONS

Marine steering helm: EPS steer-by-wire, single or multiple stations

Industrial steering wheel units: Off-highway, mobile equipment, agriculture, forklifts

FEATURES

- Rugged electronic steering unit for 12VDC marine or industrial applications.
- Four mounting options: Front Mount, Back Mount, Sport Plus Tilt, Classic Tilt.
- Programmable number of turns lock-to-lock
- Adjustable end stops and steering resistance with speed.
- Dual redundant , non-contact magneto-resistive rotary sensing inputs
- Standard Fault-Tolerant CAN BUS output. Optional proprietary protocol upon customer request.
- Double angular contact bearings for greater side loading capabilities.
- Meets or exceeds ABYC, ISO and SAE electrical and environmental requirements.

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The first Electronic Power Steering Helm designed specifically for the marine environment. This new patented SeaStar Solutions electronic helm seamlessly fits any dashboard.

- It is fully plug and play with CAN compliant vessel control systems.
- Fully customizable software maximises comfort and performance for each installation.

SPECIFICATIONS

Connection

- 2x FCI 6-Pin Male, Apex-2.8
- Built in CAN network tee for multi-station connection

Mechanical

- · Adjustable end stop brake torque: 15-200 in-lbs [1-20Nm]
- Adjustable background steering resistance: 15-27 in-lbs [1-3Nm]
- Zero Drift, low deadband (less than 3.5°)
- Steering angle sensor resolution:
- 0.05° helm angle
- Steering torque variability, relative, both directions: +/- 20%
- Brake deactivation movement: 0.25° helm angle
- Side load resistance: 100 lbf [ABYC P-21]
- Durability: 100,000 steering cycles lock-to-lock [ABYC P-27]
- Flammability rating: V0 [UL-94]
- · Connector tensile pull resistance: 60 lbf [ISO 10133]

Electrical

- Operating voltage: 9-16 VDC [SAE J1455]
- Max current drawn:
- 2 Amps, at maximum brake force.
- Typical current drawn: Less than 300mA
- · 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: 30V/m, Criteria A [IEC 60945]
- Electrostatic discharge protection: 6kV contact, 8kV air [IACS E10]
- Compass safe distance: 61 cm, at 1° [IEC 60945]

CAN Bus Communications

 HS-CAN: High speed CAN 2.0B 250 kbps [SAE J-1939]

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• FT-CAN: Fault tolerant CAN 125 kbps [ISO 11898-3]

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FEATURES

- CE certified.
- Meets IACS E10 classification requirements

Environmental

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

- 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]



HELM OPTIONS



TECHNICAL DATA - Front mount model



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