

# OPTIMUS ELECTRONIC POWER STEERING HELM

## APPLICATIONS

Marine steering helm:

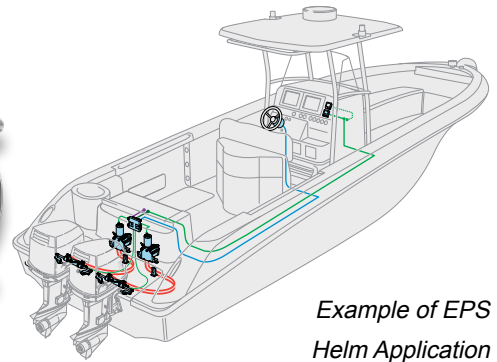
EPS steer-by-wire, single or multiple stations

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.



*Example of EPS Helm Application*

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

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