

POWER & CONTROL

# OPTIMUS EPS HELM

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

**FULLY CUSTOMIZABLE**  
SOFTWARE

**FOUR MOUNTING OPTIONS**  
FRONT, BACK, SPORT PLUS TILT,  
CLASSIC TILT

**PLUG AND PLAY**  
CAN COMPLIANT



Mobile living made easy.

 **DOMETIC**

# DESIGNED SPECIFICALLY FOR THE MARINE ENVIRONMENT.

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.

## Features

- Rugged electronic steering unit for 12VDC marine or industrial applications.
- On demand hydraulic steering pump minimizing power consumption.
- 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.
- CE certified.
- Meets IACS E10 classification requirements.

## 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]

### MECHANICAL (CONT.)

- Flammability rating: V0 [UL-94]• Connector tensile pull resistance: 60 lbf [ISO 10133]

### ELECTRICAL

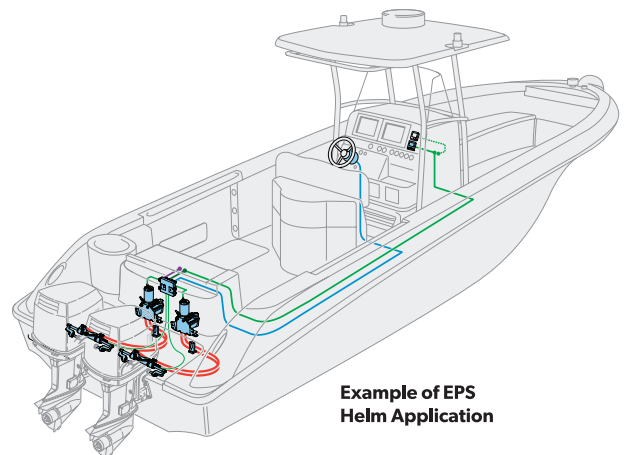
- Operating voltage: 9-16 VDC [SAE J1455]
- Max current drawn: 2 Amps, at maximum brake force.
- Typical current drawn: Less than 300mA
- Protected from reverse polarity, power interruption
- Power transient protection: Switching transient, starter motor disturbance, and load dump [SAE J1113-11]
- Conducted 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

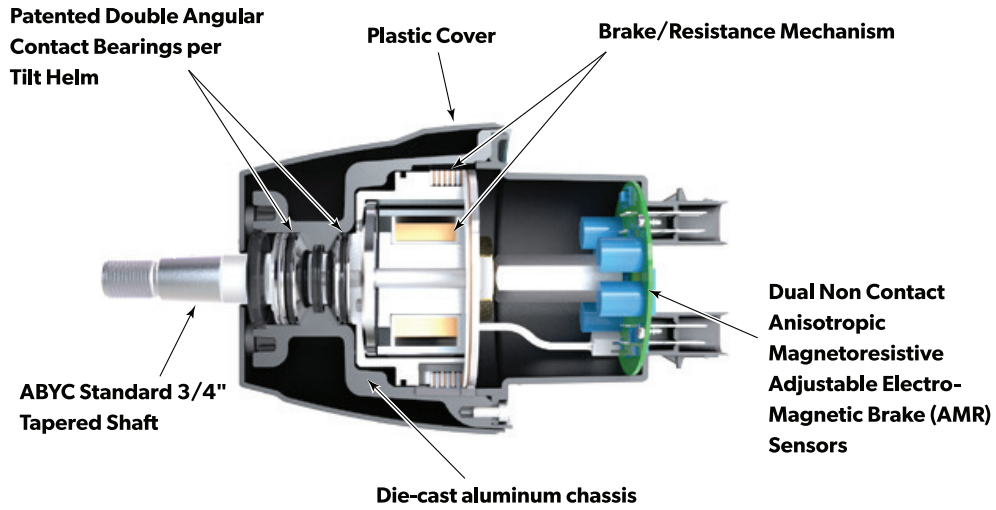
- HS-CAN: High speed CAN 2.0B 250 kbps [SAE J-1939]
- FT-CAN: Fault tolerant CAN 125 kbps [ISO 11898-3]

### ENVIRONMENTAL

- Operating temperature: -18°C to +77°C [ISO 25197]
- Storage temperature: -40°C to +85°C [ISO 25197]
- Corrosion resistance: 300 hours salt spray [ASTM B117]
- Water ingress protection: IPX7 [IEC 60529]
- Random vibration: 0.0284 g<sup>2</sup>/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]



# EPS STEER-BY-WIRE, SINGLE OR MULTIPLE STATIONS.



## HELM OPTIONS

### FIXED HELM OPTIONS

### TILT HELM OPTIONS



FRONT MOUNT



REAR MOUNT

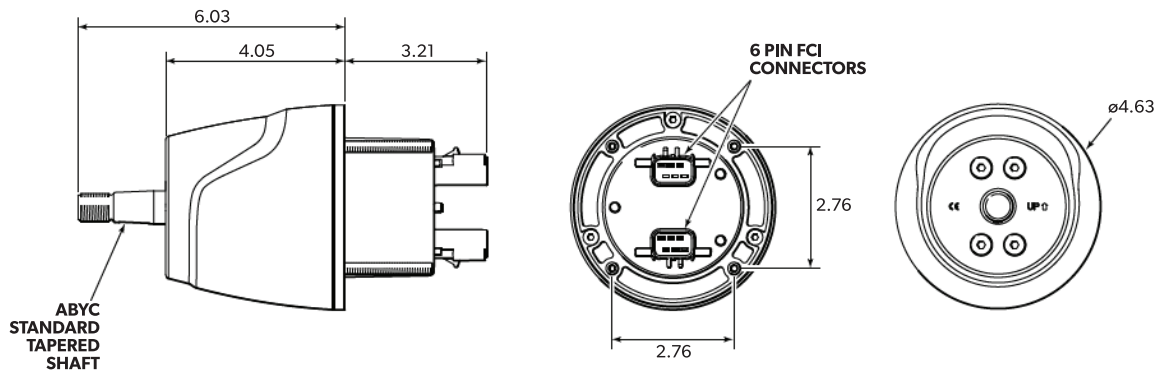


SPORT PLUS TILT



CLASSIC TILT

## Technical Data (Front Mount Model)



NOTE: 3.25" DASH HOLE CUT OUT