

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** **OUTDOOR**

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

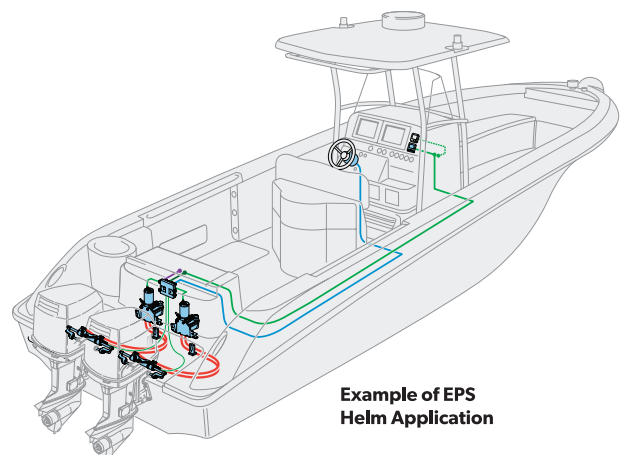
- Operating voltage: 9-16 VDC [SAE J1455]
- Max current drawn: 2 Amps, at maximum brake force.
- Typical current drawn: Less than 300mA
- Protected from reverse polarity, power interruption
- Power transient protection: Switching transient, starter motor disturbance, and load dump [SAE J1113-11]
- Conducted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

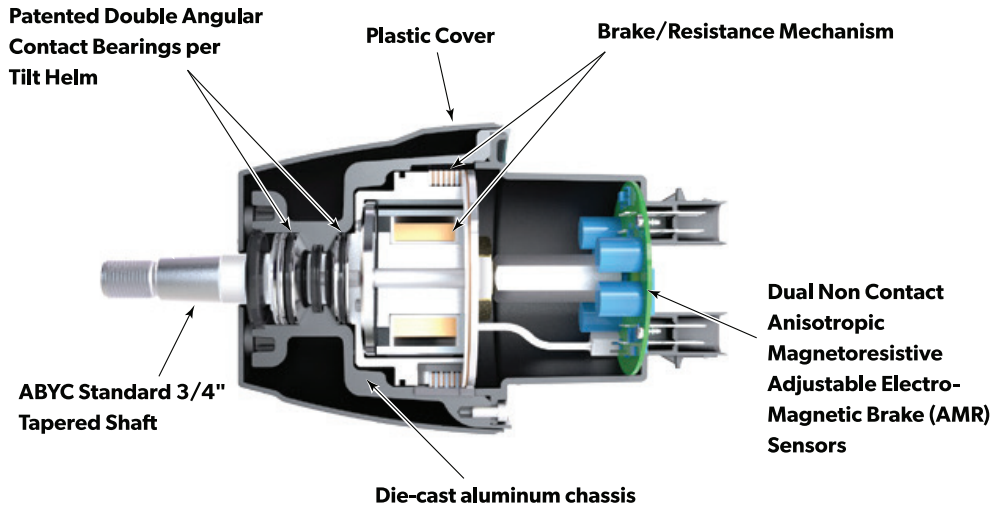
ENVIRONMENTAL

- 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 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]



Example of EPS Helm Application

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



HELM OPTIONS

FIXED HELM OPTIONS

TILT HELM OPTIONS



FRONT MOUNT



REAR MOUNT

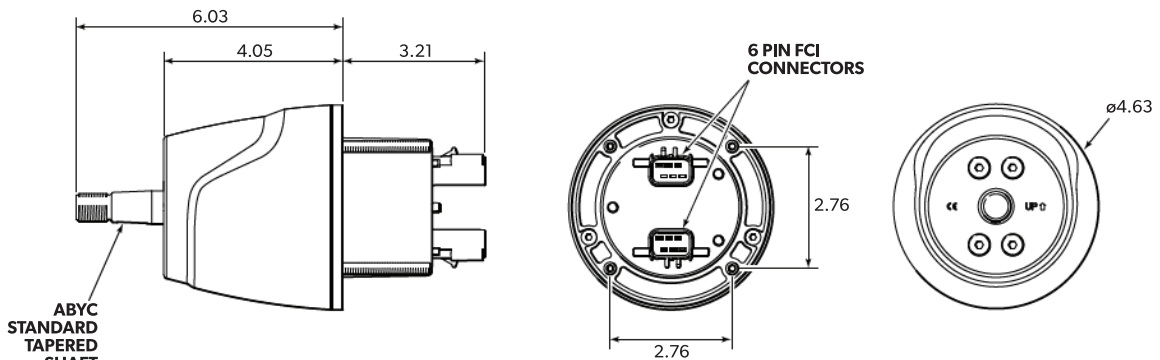


SPORT PLUS TILT



CLASSIC TILT

Technical Data (Front Mount Model)



NOTE: 3.25" DASH HOLE CUT OUT