cC-1 Taut Wire Controller

Raw measurements from the taut wire position-reference system are subjected to a series of computational algorithms to compensate for distortions of the wire. The TWC cC-1 simulates the behaviour of the wire in the water using a physical model, the TWC cC-1 measurements (angle, tension and length) and the vessel's pitch, roll and heading information. Two effects are estimated in the physical model:

- Drag forces acting on the wire as the vessel moves
- Wire sag at large deviations from the vertical

These effects are particularly strong when working in deep water, so the use of the TWC cC-1 is highly recommended when the DP operations are being conducted in sea-depts exceeding 150 metres.

Features

- Application software runs on an RCU
- Position accuracy improved to 1% of the water depth compared to 2% or 3% for raw measurements
- Stability of positional data enhanced by reducing oscilliating effects
- Wall-mounted cabinet
- Dual LAN communications with DP controller
- Analog interfaces to LTW
- NMEA interface to LTW
- All service access from front door
- Built-in Test (BIT) facilities and error reporting system on the operator stations

APPLICATION

Improves the accuracy of the positional information from a Light weight Taut Wire (LTW) position reference system transmitted to a Dynamic Positioning system (DP).
TECHNICAL DATA

Standard applied: The equipment is designed to conform to the IEC 60945 standard

CE Marking: All equipment satisfies the relevant EU directives

Accuracy: Typically, the positional accuracy is better than 1% of the water depth, assuming negligible sea currents

Dimensions:
- Height: 800 mm
- Width: 600 mm
- Depth: 250 mm
- Weight: 40 kg

Electrical:
- Input voltage: 115/230 VAC (+10% to -15%) or 24 VDC (+30% to -25%).
- Frequency: 50 to 60 Hz
- Power consump.: 140 VA
  - max. 285 W
  - typical 140 W
- Loop power:
  - max. 175 W
  - typical 70 W

Environmental spec.
- Ambient temp. operational: -15 deg C to 55 deg. C
  - storage: -25 deg. C to 70 deg. C
- Ambient humidity:
  - operational: up to 100% rel. humidity (non-condensing)
  - storage: up to 100% rel. humidity (non-condensing)
- Heat dissipation:
  - Maximum: 110W
  - Typical: 70 W
- Acoustic noise: <40 dB (A) at 1 m

Model:
- Unit name: TWC cC-1
- Article no.: 319821 cC-1 Taut Wire Controller