

# PROPULSION CONTROL ASSISTANCE SYSTEM ETNP-10

POWERFUL TOOL FOR PROPULSION SYSTEM PERFORMANCE EVALUATION



- **Measurement: Torque and RPM.**
- **Calculation: Power, Slip, Theoretical Fuel Consumption, Propulsion Efficiency.**
- **System provides good protection of the propulsion system against overload alarm.**
- **Main Engine preliminary diagnostics integrated (avoiding unplanned downtime).**

Propulsion Control Assistance System (ETNP-10) is a powerful tool providing insight to ship propulsion performance based on measurement of ME torque and revolutions. Recording and visualization mechanism offers access to current data and possibility to backup and check history values of key parameters up to 360 past days.

ETNP-10 allows for accurate propulsion control. The possibility of continuous viewing of propulsion parameters in real time allows the crew for necessary adjustments to optimize propulsion efficiency and thus, to reduce excessive fuel consumption. Information about engine revolutions, torque and vessel speed can be transformed into present hull and propeller condition. Performance overview helps to make operational decisions (e.g. speed or trim adjustment) and maintenance planning (hull or propeller cleaning).

ETNP-10 is also used as an engineering tool providing collection and assessment of data used in ME diagnostics.

Specific construction of toothed ring (patented solution) requires only one optical measuring head - additional shaft RPM transmitter is not necessary.

## FUNCTIONALITY

- Very high accuracy - optical measuring head and fast microchip.
- Heavy-duty construction and Reliability - long work without malfunctions.
- Continuous propulsion performance assessment.
- Preliminary engine diagnostic and indication of propulsion's malfunctions in real time.
- Instant fuel consumption evaluation of decisions taken on board.

Worth to try:

- Change vessel trim/draught and online observe shaft power or fuel consumption and speed;
- Check results of using trim optimizer (trim by bow, trim by aft);
- Compare mean shaft power before and after hull cleaning/ME parameters settings;
- Adjust autopilot settings (max rudder angle) etc.

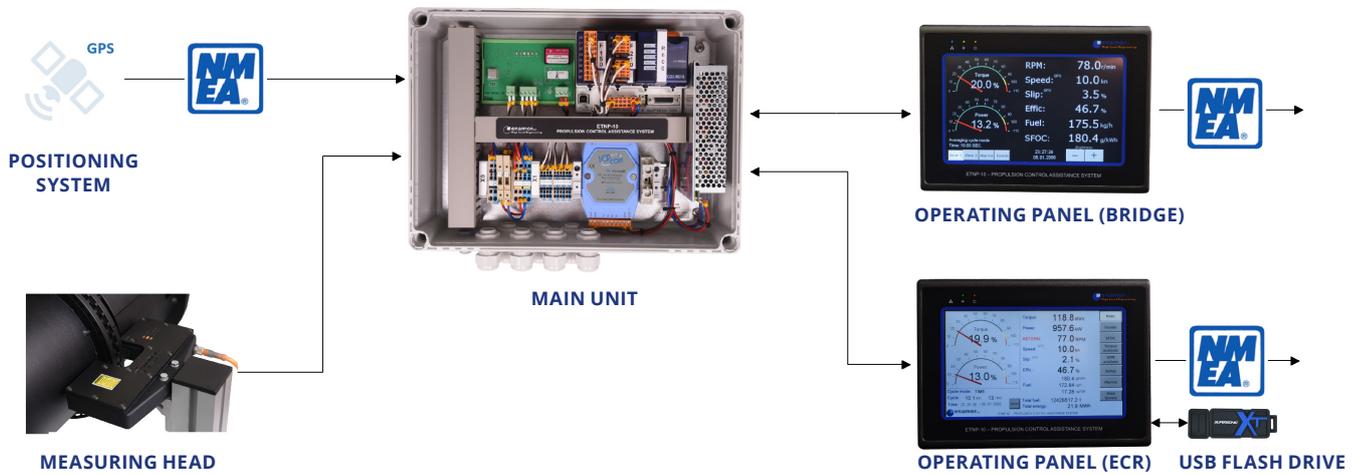


## TECHNICAL SPECIFICATION

- Power supply: 24 VDC
- Power consumption: 50 W
- Ambient temperature: 0 - 50°C
- Toothed rings space needed: ~500mm
- Data displaying: LCD Color Touch Panel
- Shaft speed range: 10 - 1000 [min-1]
- Measuring head laser safety: Class 1

# PROPULSION CONTROL ASSISTANCE SYSTEM ETNP-10

POWERFUL TOOL WHICH ALLOWS TO MEASURE TORQUE AND POWER TRANSFERRED FROM THE VESSEL'S MAIN ENGINE TO THE PROPELLER



## Additional Information

Storage of calculated data from last measuring periods and information about fuel consumption gives a possibility to evaluate real technical condition of power transmission of a system "hull - main engine - propeller". Observation of calculated fuel consumption gives immediate information of effects of recent navigation decisions and helps to find optimal course according to present situation.

**ETNP-10 can be integrated in SEEMP-Set for the purpose of ship overall performance optimization.**

