

# E-TORQUE METER – ETM

ROBUST TORQUE MEASUREMENT FOR MAIN ENGINE LOAD MONITORING



- Main Engine load by Torque and RPM measurement.
- High accuracy due to optical measurement principle.
- Non-invasive assembly on propeller shaft, no electronics on the rotating shaft, easy installation.
- No need for periodic re-calibration.
- 2 + 1 years of warranty. Full remote support. Flying crew when needed.



ETM is a robust and precise ME power meter (based on torque and revolutions measurement). It has been built on optical measurement method hence is very stable in time and does not require regular recalibration. It consists of rotating mechanical parts (measuring wheels), stationary measuring laser head and post-processing visualisation unit installed in ECR. Additional bridge repeater can be connected via ship LAN or dedicated cable. ETM can be easily integrated with parent performance monitoring systems, eg. ESOS.

## 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

## FUNCTIONALITY

- Measurement: Torque, RPM, power on the shaft
- Overload alert & warning
- Scale in relative and absolute units
- Both: digital and analogue presentation of measured parameters

### Additional Information

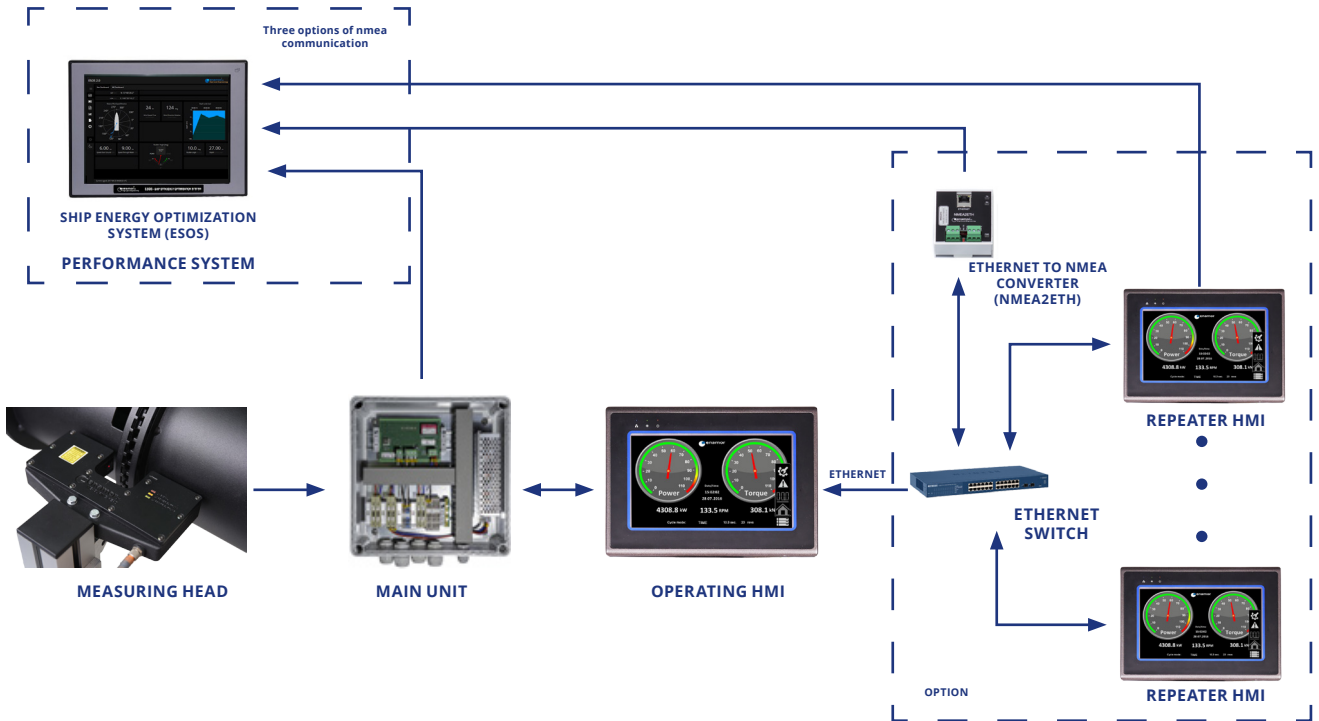


Selecting an icon displays an alarm list. The alarm list stores up to 100 events recorded since the panel was started (First In First Out list).

ALARM LIST				Time: 15:03:04 / 28.07.2016
alarm time	ack	out	name	
28.07.16 15:02		15:02	Module communication fault	
28.07.16 15:02		15:02	Power overload = 118.5 %	
28.07.16 15:02		15:02	Torque overload = 104.1 %	
28.07.16 15:01		15:01	Module communication fault	
28.07.16 15:00	15:00	15:01	Torque overload = 790.9 %	
28.07.16 15:00		15:00	Module communication fault	
28.07.16 15:00	15:00	15:00	Torque overload = 790.9 %	
28.07.16 15:00		15:00	Module communication fault	
28.07.16 14:42	14:42	15:00	Torque overload = 788.6 %	

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## Additional Information



The system enables presentation of data in digital form.

As with the analog display, the nominal values (kNm, kW) can be displayed as relative, in MCR percentages.

This change is made by clicking on the displayed value.



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