

# Distributed Processing Units

## Remote Torque Interface (RTi-2xeL)



KONGSBERG



### Description

The RTi-2xeL is used for measuring shaft Torque and shaft RPM on rotating shafts. In addition the unit calculates shaft power.

The system is calibrated and commissioned based on the following design parameters:

- Shaft maximum RPM
- Shaft outer diameter
- Shaft inner diameter
- Maximum power output
- Shaft steel properties

The RTi-2xeL has 4 analogue output channels for presenting Torque, RPM and Power (1 spare channel). It also supports two CAN multimaster communication networks for sensor data. The serial RS422 output can be used for transmitting sensor data to an external display if required.

### Functions

- Shaft torque
- Shaft power
- Shaft RPM measurement
- 4 analog output channels
- $\pm 10\text{VDC} / \pm 20\text{mA}$
- Self checking
- CAN net status, error handling
- Dual channel torque measuring system for rotating shafts
- Serial output RS422
- Fiber optic signal cables
- Laser transmitter.

### Features

- All parameters are stored in the module
- Remote configuration
- No trimmers or jumpers
- No serviceable parts
- All connections are pluggable
- Suitable for direct mounting on the main engine in a suitable cabinet
- Module includes status LED's for: Watchdog, running, general information and power.
- Sensor signals immune to electrical noise.
- Service spare parts for MPU.

## Supply voltage

- 18-32VDC nominal.
- Galvanically isolated.

## Module consumption

- 6W (+ 300mW pr. channel with current output)

## Operating temperature

- -15°C to + 70°C

## Storage temperature

- - 25°C to + 70°C

## Max. rel. humidity

- 96% non-condensing.

## IP Code

- IP20

## ENV properties

- IACS E10
- IEC 60945

## Vibration

- 4 G

## Weight of unit

- 1.5 kg

## Mounting

- Screws (4 pcs M5) in cabinet.

## Connections, pluggable screw terminals

- I/O 3 terminals 2.5 mm<sup>2</sup>
- Power 4 terminals 2.5 mm<sup>2</sup>
- CAN bus 4 terminals 2.5 mm<sup>2</sup>

## Signal Types

- Voltage Scaling:  $\pm 1/5/10$  [Volt] min. 5k load
- Current Scaling:  $\pm 5/10/20$  [mA] max. 550R load
- Technical units: free range
- Torque on two shafts [kNm]
- Shaft RPM
- Accuracy:  $\pm 0.5$  [%]

## Communication interfaces

- 2 x CAN ports for communication.
- RS-422/RS-485 with host.

## Isolation

- Power: Completely isolated (DC/DC converter)
- I/O: No isolation between channels. Chassis used as 0 Volt reference.
- CAN: Completely isolated (opto coupler).

## BIST (Built In Self Test)

- Module temperature, power.

## Type Approval

- (Pending) - DNV, LRS, BV, GL, RINA, NK, ABS, KR, RMR, CCS (allows direct mounting on engines, compressors, etc. in suitable cabinets).

## Part number

- 345304

