

Distributed Processing Units

Remote Torque Interface (RTixe)



KONGSBERG



Description

The RTixe 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 RTixe 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 analogue output channels.
- ± 10 VDC / ± 20 mA
- Self checking
- CAN net status, error handling
- Dual channel torque measuring system for rotating shafts
- Serial output RS422

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.
- Lens cleaning alarms.

Supply voltage

- 18-32 VDC 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 mm²
- Power 4 terminals 2.5 mm²
- CAN bus 4 terminals 2.5 mm²

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

Communication interfaces

- 2 x CAN.
- RS-422/RS-485

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

- 351792

