

# Distributed Processing Units

## Remote Analogue Output (RAo-8xe)



KONGSBERG



### Description

This analogue output module is a multi purpose flexible device that covers the most common analogue output signal types in a marine automation system. It covers voltage and current in different ranges and an almost free scaling in technical units.

It has 8 analogue output channels. Each channel is selectable for voltage or current output in different ranges and almost free technical units scaling. This module is suited to drive analogue indicators. By placing the module close to instruments, long cables can be avoided.

The module requires 24VDC input power and provides over redundant CAN Open 4.0 high speed field bus, sensor data processed and time stamped.

### Functions

- 8 analogue output channels
- $\pm 10$  VDC /  $\pm 20$  mA
- Scaled in technical units
- Time stamping
- Self checking
- CAN net status, error handling

### Features

- All parameters are stored in the module
- Remote configuration
- No trimmers or jumpers
- No serviceable parts inside module
- All connections are pluggable
- Suitable for direct mounting on the main engine
- Module includes status LED's for: Watchdog, running, general information, initialized module and power polarity.



## Technical Specifications

### Supply voltage

- 18 - 32 VDC

### Power 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)

### Connections, plugable 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 range:  $\pm 1/5/10$  [Volt] min. 5k load
- Current range:  $\pm 5/10/20$  [mA] max. 550R load
- Technical units: free range
- Resolution: 16 bit
- Accuracy:  $\pm 0.5$  [%]
- Bandwidth: 10 [Hz]

### Communication interfaces

- 2 CAN ports for communication with host.

### Isolation

- Power: Isolated/floating from module chassis.
- I/O: No isolation between channels. Chassis used as 0 Volt reference.
- CAN: Individually isolated.

### BIST (Built In Self Test)

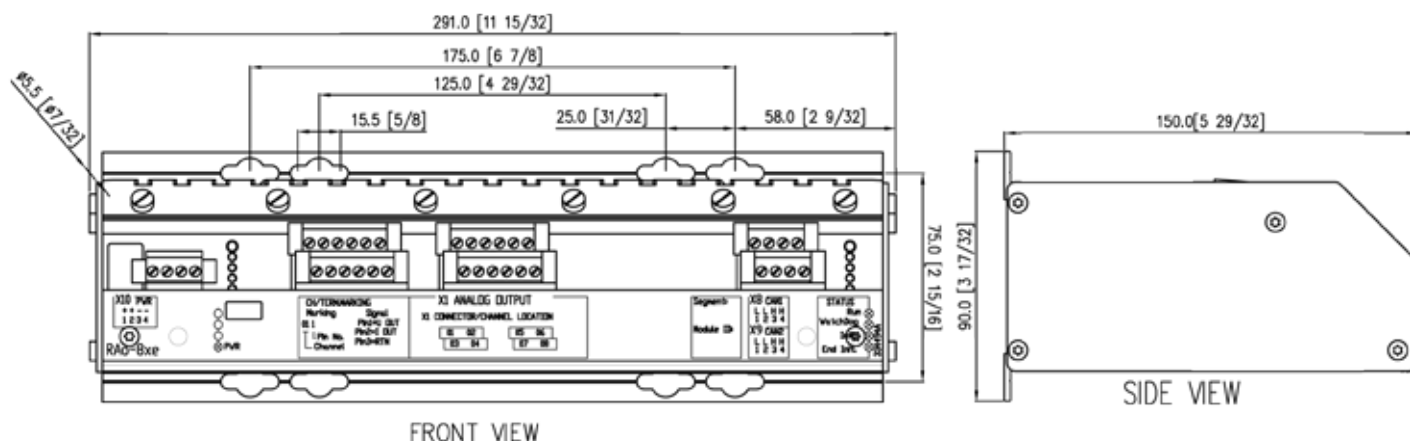
- Module temperature and power.

### Type Approval

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

### Part number

- 333505



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