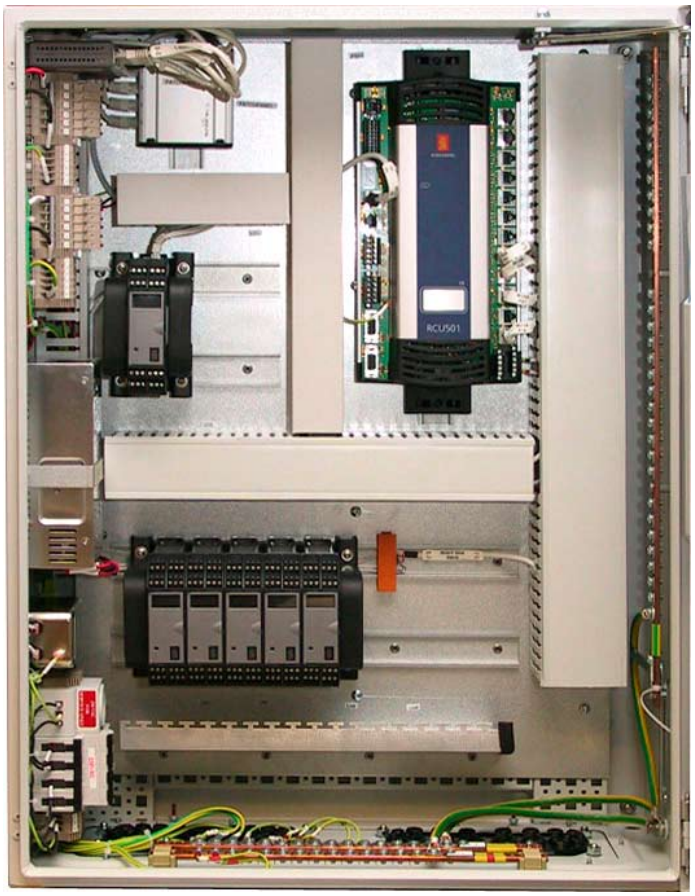
cC-1

KONGSBERG

Compact Dynamic Positioning or Joystick Controller

The cC-1 Dynamic Positioning Controller is used in the Kongsberg K-Pos compact Dynamic Positioning and Joystick systems (cPos/cJoy). When used in a cPos system it can be configured to suit DP class 1. This controller performs all closed loop control, and interprets operator commands and information from the various sensors to provide the correct control signals for the vessel's propulsion and thruster system.



Features

- Compact design
- Meets IMO Equipment, Class 1 requirements
- Bulkhead/wall mounted cabinet to save space
- Small number of flexible hardware units
- Snap-on, rail-mounted, I/O modules with built-in power and RBUS (high speed serial I/O bus)
- Built-in galvanic isolation and loop monitoring
- RCU501 controller with Power PC host processor, remote I/O bus driver and digital signal processor
- Up to 12 serial I/O lines (RS232, RS422/RS423, RS485 and NMEA 0183) with full segregation
- Up to 72 discrete analogue/digital I/O signals
- Full segregation of thrusters and propulsion units (one I/O module per thruster or propulsion unit)
- Local Area Network (LAN) communication with Operator Terminal/Station
- 115 VAC, 230 VAC or 24 VDC supply
- All service access via front doors
- Simple preventive maintenance requirements

Description

The cC-1 is designed for use in compact Dynamic Positioning (cPos) and Joystick (cJoy) systems where conventional signal cables are used for communication and interfacing to the propulsion and power systems. This controller is based on the Kongsberg system technology with a control computer and I/O modules that focus on fault tolerance through decoupling and segregation.

Technical Specifications

Standards Applied

The equipment is designed to conform to the following standards:

- EN 50081-2 Electromagnetic capability - Generic emission standard, Part 2: Industrial environment.
- EN 50082-2 Electromagnetic capability - Generic immunity standard, Part 2: Industrial environment.
- EN 60204 Safety of machinery - Electrical equipment of machines, Part 1: General requirements.
- EN 60945 Marine navigation and radio communication equipment and systems - General requirements: Methods of testing and required tests.
- IACS E10 Unified environmental test specification for testing procedures for electrical, control and instrumentation equipment, marine computers and peripherals covered by classification.

CE Marking

The equipment conforms to the relevant EU directives.

Type Approval

The cC-1 is type-approved by:

- Det Norske Veritas (DNV)

Dimensions

Height:	800 mm
Width:	600 mm
Depth:	250 mm
Weight:	40 kg

Electrical

Input voltage:	115/230 VAC (+10 %, -15 %) or 24 VDC (+30 %, -25 %)
Frequency:	50 to 60 Hz
Power consumption:	maximum 285 W typical 140 W
Loop power:	maximum 175 W typical 70W

Article Numbers

cC-1 (115 or 230 VAC)	300078
cC-1 (24 VDC)	301207

Environmental Specifications

Note:

Exposing the electronics to the limits of its environmental specification will affect the equipment's expected lifetime.

Ambient temperature	
operational:	-15 °C to 55 °C
storage:	-25 °C to 70 °C
Ambient humidity	
operational:	up to 100% relative humidity (non condensing)
storage:	up to 100% relative humidity (non condensing)
Heat dissipation:	maximum 110 W typical 70 W
Acoustic noise:	<40 dB (A) at 1 m

Cabinet Specification

Material:	steel
Protection standard:	IP44
Electromagnetic Control (EMC):	non-shielded cabinet
Colour:	grey, RAL7035

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