

# DCU 305 R2 Control Unit

## DCU 305 R2

The DCU 305 R2 is an electronic control unit for control and monitoring of diesel engines used as propulsion engines or gensets.

Switches and senders from the engines are connected to the control unit on the wire terminal card RK-66 R2.

Each project is unique, which is why the DCU 305 R2 is customized using a configuration tool for Windows®, the Rudolf R2 software.

Different expansion cards exist to further enhance the possibilities and flexibility.

## Configuration

Configuration is easily done by the project engineer with a user-friendly and intuitive windows program; the Rudolf R2. With a click on the mouse, the configuration is downloaded into flash memory in the control unit.

All channels have their own attributes of warning, alarm or shutdown depending on the requirements. Further, the DCU 305 A R2 can be set to operate in three different modes: Emergency, Auxiliary or Combined.

The DCU 305 P R2 is the Propulsion mode unit. Instead of the Standby/Manual button it has a power-on keyswitch.

## Expandable

Two sizes of extra relay cards can be connected; one 6-channel and one 14-channel card. All relay channels are configurable from a pool of available signals and functions.

For analogue expansion, one 6-channel card exists. This increases the number of analogue channels from the 5 standard, to 11 channels altogether.

The built-in communication port is ready for use and can be connected to the E1071 Remote Panel, or a printer for output of all alarms and events. The remote panel can communicate with numerous DCU 305 R2 units.



## Installation

The DCU 305 R2 consists of three basic items: The control panel itself, the terminal card RK-66 R2 and the two cables that connect these units. These cables come in two standard lengths.

The control panel is slim enough to be mounted in the smallest of enclosures, and the terminal card fits on a standard 35mm DIN rail.

## Features

- Flexible and configurable diesel engine control unit
- Certified by major classification societies
- Graphical and backlit display for user interaction
- Built-in backup of shutdown channels
- 12 switch inputs
- 5 analog inputs, 4-20mA (ch. 1 can be configured as 0-10V)
- Remote operation possible
- Supports 0-2 pickup speed sensors
- RS-232C communication port
- Log of all events
- Optional CAN interface
- Multi-language support
- 4 speed relays
- Start battery voltage monitoring and alarm setpoint
- RPM monitoring and overspeed setpoint
- 2 configurable inputs
- 2 configurable relay outputs; can be expanded with 6 or 14 relays

## Ordering Info

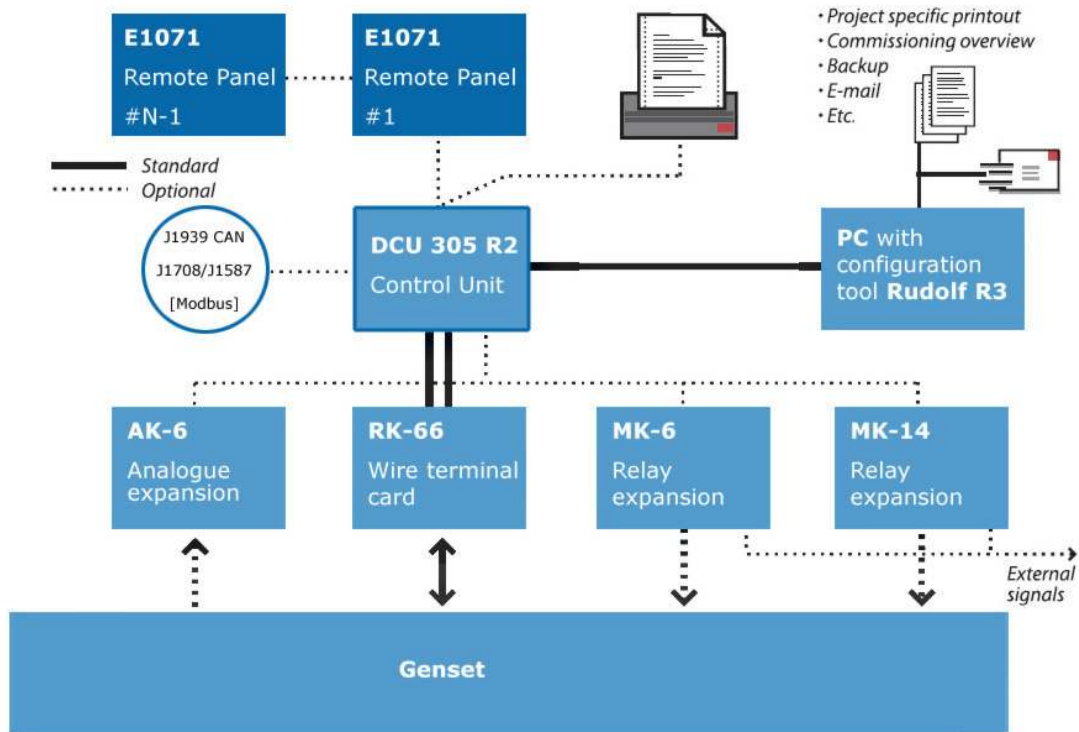
| Item                     | Article # |
|--------------------------|-----------|
| DCU 305 A R2 incl. RK-66 | 06400     |
| AK-6 Analog Expansion    | 75268     |
| MK-6 Relay Expansion     | 75262     |
| MK-14 Relay Expansion    | 75263     |
| E1071 Remote Panel       | 75294     |
| RSP 305 Remote Panel     | 06500     |



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# System overview



| Technical Specification |  |                            |
|-------------------------|--|----------------------------|
| Item                    | Particulars  |                            |
| Overall dimensions      | 160 x 250 x 35 mm ( 6.3 x 9.8 x 1.4" ) [ H x W x D ] |                            |
| Cut-out dimensions      | 146 x 230 mm ( 5.8 x 9.1" ) [ H x W ]                |                            |
| Supply voltage          | 24 V smoothed, ( 18 – 32 V DC)                       |                            |
| Power consumption       | Typical:   | 500 mA @ 24 V DC           |
|                         | Maximum:   | 700 mA @ 24 V DC           |
| Weight                  | Control unit:  | 1250 g ( 2.75 pounds )     |
| Protection level        | Front panel:   | IP54                       |
|                         | Back panel:  | IP30                       |
| Ambient temperature     | Operation:   | 0 – 70 °C ( 32 – 158 F )   |
|                         | Storage:   | -20 – 70 °C ( -4 – 158 F ) |
| Air humidity            | Operation:   | < 90 %                     |
|                         | Storage:   | Dry                        |
| RK-66 relays            | 120 V AC   | 0.5 A                      |
|                         | 60 V DC  | 0.3 A                      |
|                         | 24 V DC  | 1 A                        |
| EMC                     | IACS   | E10, No. 19                |
|                         | EN   | 60945, 9.3                 |
|                         | EN   | 50081-2                    |
|                         | CISPR  | 16-1, 16-2                 |
|                         | IEC  | 60533, 1977/Rev.           |



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