

Data sheet

# ECA 35

## Input / output extension module for ECL Comfort 310 / 310B

Designed in Denmark

### Description

ECA 35



The ECA 35 module extends the ECL Comfort 310/310B with a number of inputs and outputs.

ECA 35 is to be placed in the base part for ECL Comfort 310 / 310B.

ECA 35 is used in ECL Comfort 310 related applications where the demand for extra inputs / outputs is present.

The connection between the ECL Comfort 310 / 310B and ECA 35 is a 10-pole (2 x 5) connector.

ECA 35 offers:

A similar module, ECA 32, exists. The ECL Comfort 310 / 310B works with either one ECA 32 or one ECA 35.

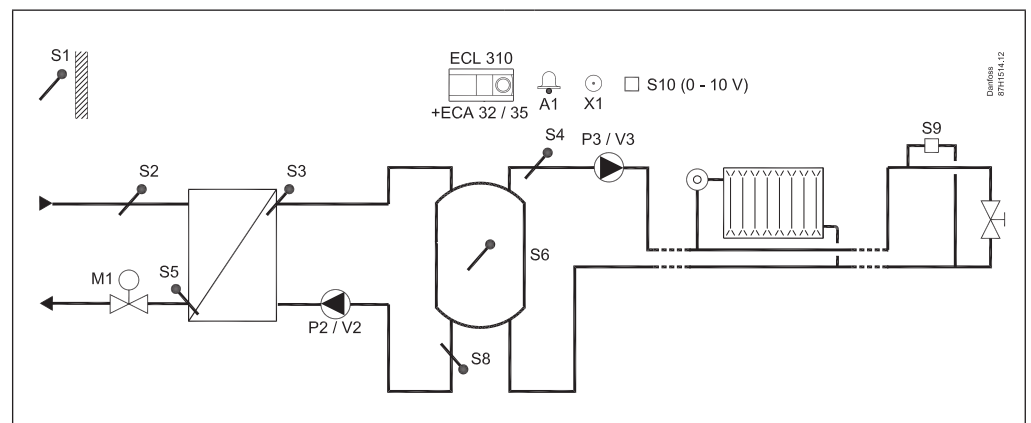
- 4 outputs, PWM\*
- 3 outputs, 0 - 10 Volt
- 4 relay outputs
- 2 inputs (Pt 1000, digital or 0 - 10 Volt)
- 2 pulse inputs

The connection is automatically established when the ECL Comfort 310 / 310B is placed on the base part.

\* PWM = Pulse Width Modulation

The PWM control principle can be used for speed control of for example circulation pumps.

### Application example



The example shows an advanced buffer control for heating: A319.

The charging pump P2 / V2 and the circulation pump P3 / V3 can be speed controlled in two different ways: With 0 - 10 Volt (ECA 32 or ECA 35) or PWM controlled (ECA 35).

The shown diagram is a fundamental example and does not contain all components that are necessary in a system.

All named components are connected to the ECL Comfort 310 and ECA 32 / 35.

## ECA 35 input / output extension module for ECL Comfort 310 / 310B

### Ordering

| Type  | Designation  | Code no. |
|---|--|----------|
| ECA 35  | Internal module for ECL Comfort 310 / 310B.<br>Mounting guide (no text) is included                          | 087H3205 |
| Base part for ECL Comfort 310 / 310B (space for ECA 35) | For mounting on wall or DIN rail (35 mm). Mounting guide (no text) and cable inlet accessories are included. | 087H3230 |

### Operation

ECA 35 is controlled from ECL Comfort 310 / 310B.

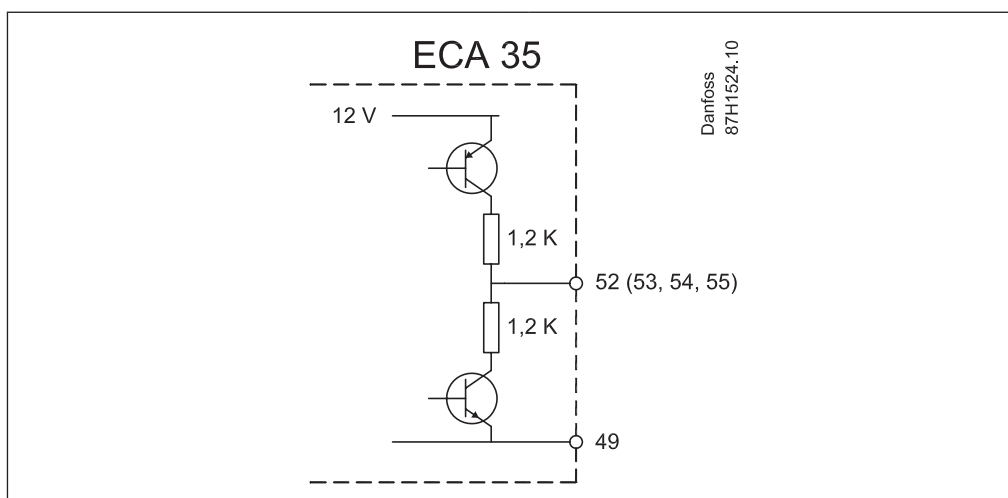
### Communication

ECA 35 has a 10-pole female connector which automatically connects to the ECL Comfort 310 / 310B.

### General data

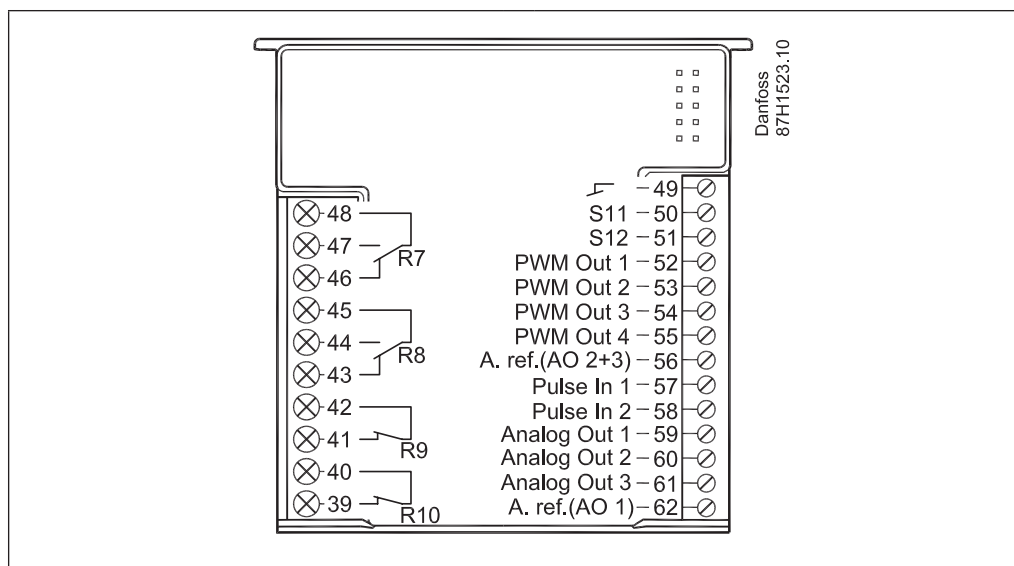
|   |  |
|---|--|
| Ambient temperature                       | 0 - 55 °C  |
| Storage and transportation temperature    | -40 - 70 °C  |
| Mounting                                  | In ECL Comfort 310's base part   |
| Power supply                              | From ECL Comfort 310 / 310B via 10-pole female connector   |
| Number of configurable inputs             | 2 (S11 and S12)  |
| Configurable input types                  | Each input is configured at application upload as Pt 1000, 0-10 V or digital input.<br>If an input is not configured at application upload, the default setting is "Pt 1000".<br>Configuration can also be done by using the ECL Portal or ECL Tool. |
| Number of PWM outputs                     | 4 (PWM Out 1 - 4)  |
| PWM output frequency                      | 200 Hz   |
| PWM output                                | Push-pull, pull-up to 12 Volt. See PWM output, principle sketch  |
| PWM range                                 | 0 - 100 %  |
| Max. load on each PWM output              | 10 mA  |
| Number of relays                          | 2 x SPST<br>2 x SPDT   |
| Max. load on relay outputs                | 4 (2) A (4 A for ohmic load, 2 A for inductive load)   |
| Number of pulse counter inputs            | 2  |
| Max. frequency of pulse counter input     | 200 Hz   |
| Number of analogue outputs (0 -10 V)      | 3  |
| Max. load on analogue output              | 2 mA each (min. resistance 5 K $\Omega$ )  |
| Compatibility with ECL Comfort 310 / 310B | From version 1.20 and up   |

### PWM output, principle sketch

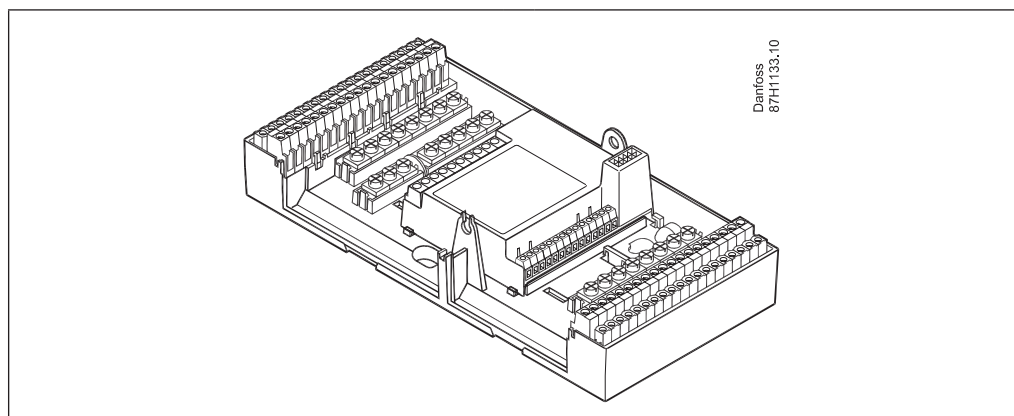


## ECA 35 input / output extension module for ECL Comfort 310 / 310B

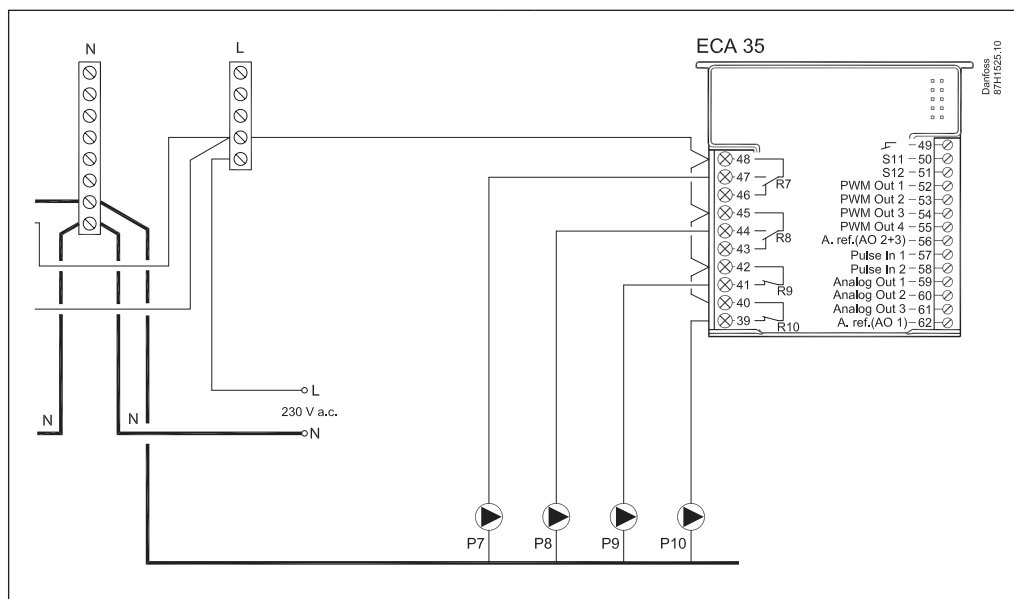
### Connection terminals



### Position in base part

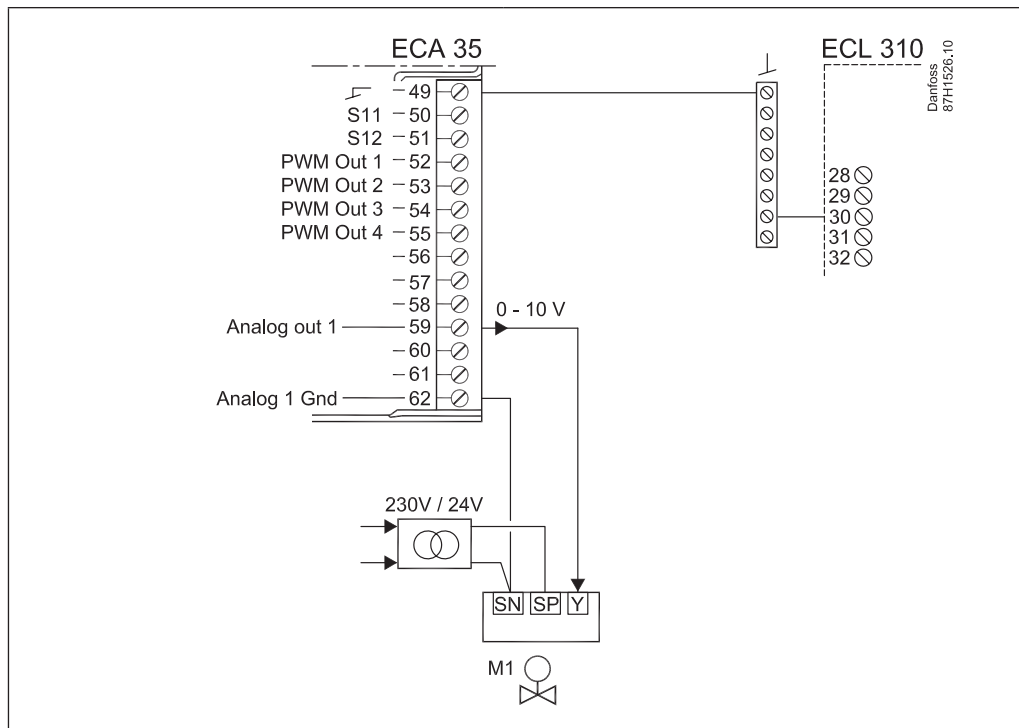


### Wiring example, relay outputs

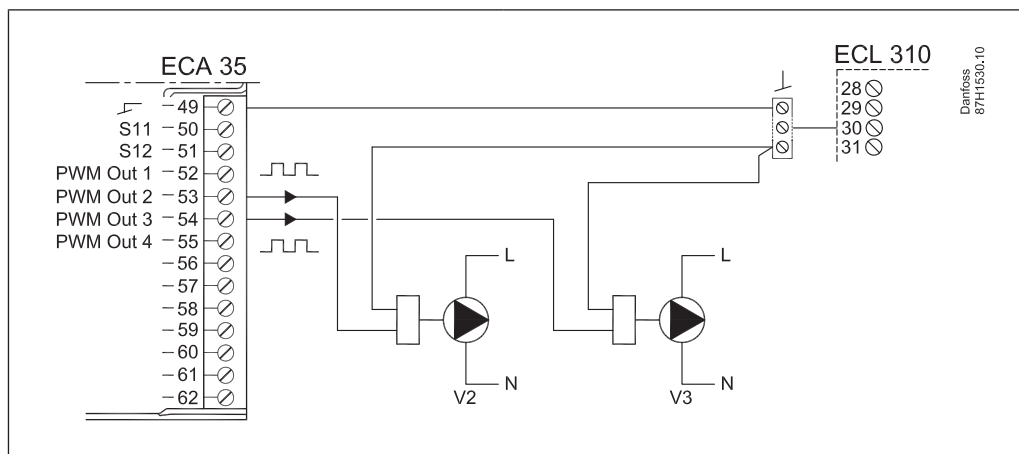


## ECA 35 input / output extension module for ECL Comfort 310 / 310B

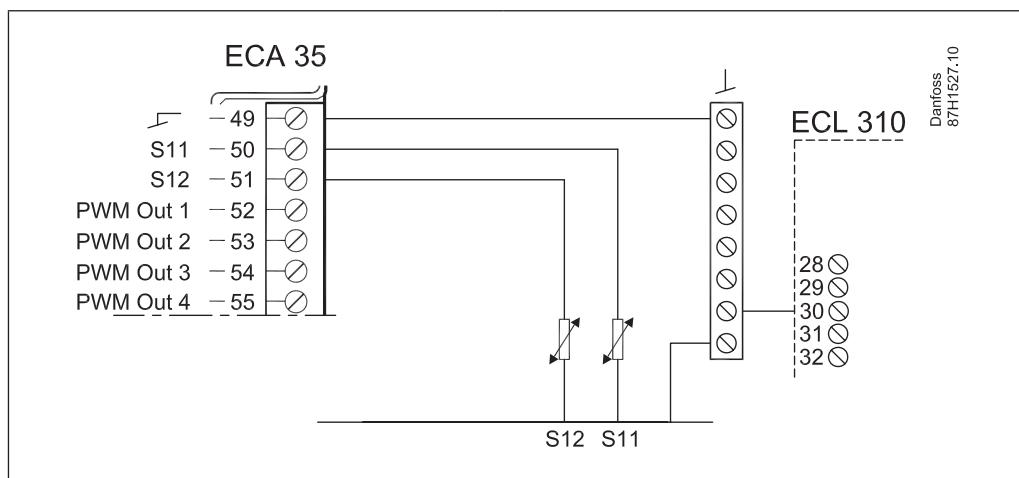
### Wiring example, 0 - 10 V output



### Wiring example, PWM output

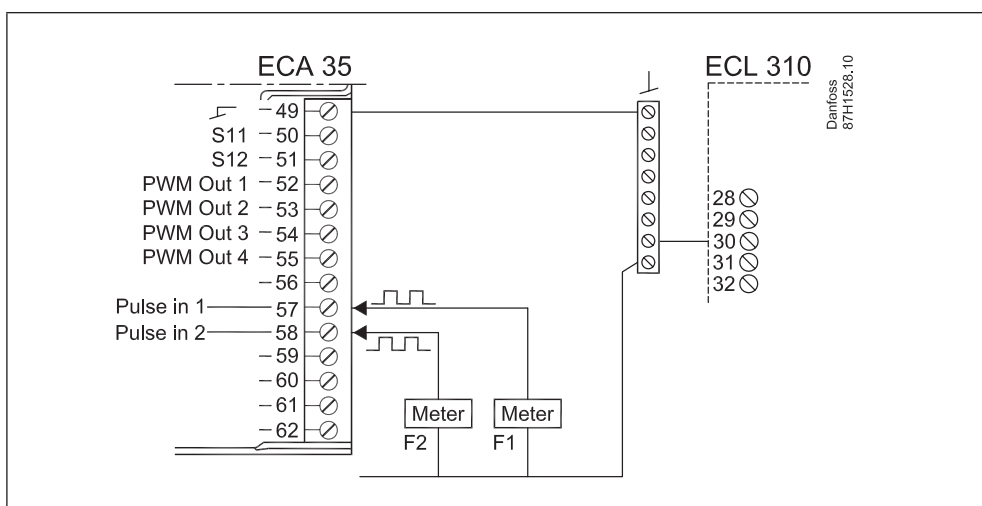


### Wiring example, Pt 1000 temperature sensor inputs

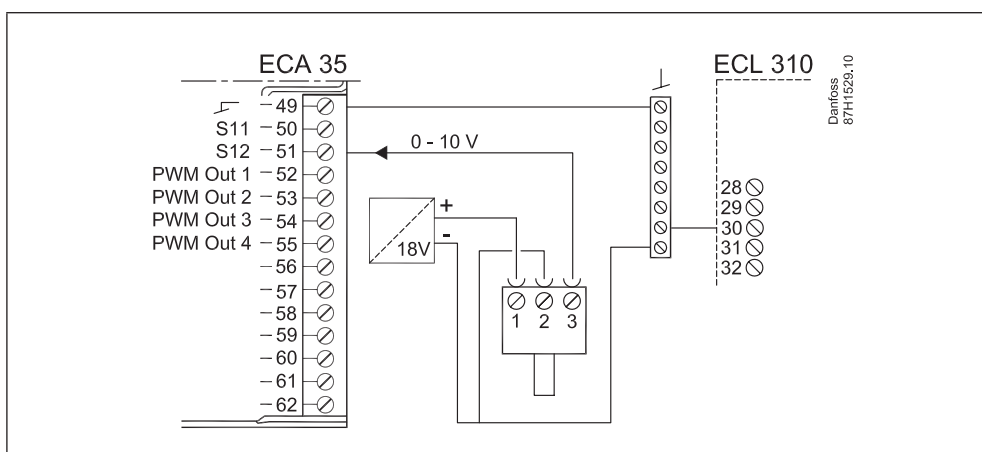


## ECA 35 input / output extension module for ECL Comfort 310 / 310B

### Wiring example, pulse inputs



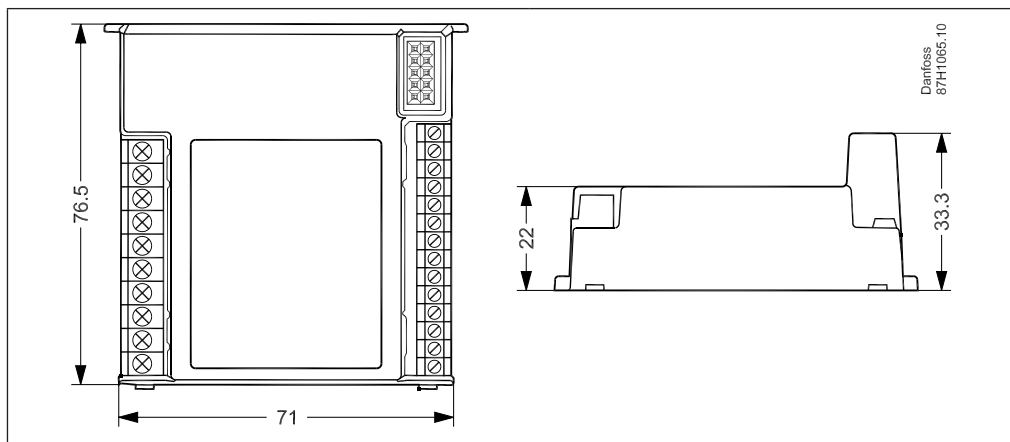
### Wiring example, pressure transmitter input



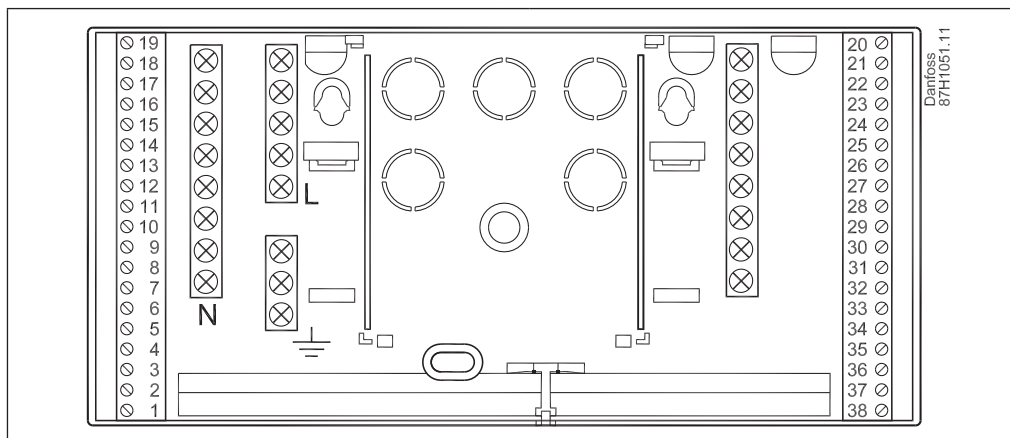
## ECA 35 input / output extension module for ECL Comfort 310 / 310B

### Dimensions (in mm)

#### ECA 35



#### Base part for ECL Comfort 310 / 310B



L x H (mm) = 210 x 100





**ECA 35 input / output extension module for ECL Comfort 310 / 310B**

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Additional documentation for ECL Comfort controllers, modules and accessories is available on <http://heating.danfoss.com/>

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Heating Segment • [heating.danfoss.com](http://heating.danfoss.com) • +45 7488 2222 • E-Mail: [heating@danfoss.com](mailto:heating@danfoss.com)

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