

# QUICK START GUIDE

## OJ-DV-HMI-35T



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A DRIVES PROGRAMME DEDICATED TO VENTILATION SOLUTIONS

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**OJ ELECTRONICS**

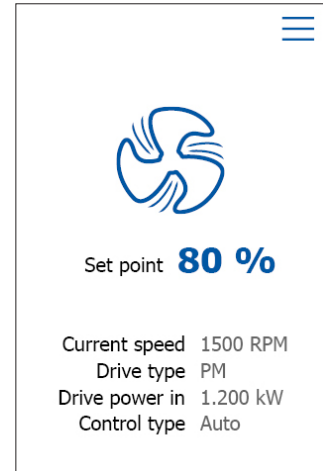
## Introduction

OJ-DV-HMI-35T is a touchscreen panel with a user-friendly graphical user interface, specially developed for operating the OJ DV. The panel communicates with the OJ DV via a Modbus interface, ensuring easy installation.

## General settings

This quick start guide only describes basic settings. If the screensaver is active, simply touch the screen once to open the home screen. The home screen provides access to basic functions such as fan speed, drive type, drive input power and control type. Any alarm or warning is shown at the top of the screen. An alarm bell will be visible if an alarm has been activated. A warning sign will be visible if there is an active warning. Press either the alarm bell or warning sign to navigate to the alarm/warning list. Press “Set point” or the setpoint value on the home screen to change the setpoint value.

The ventilator icon shows if the fan is running or if it has been stopped. Press the fan icon on the home screen to start or stop the fan motor.



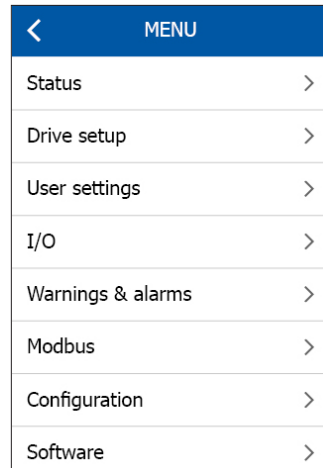
## Menu

Press the menu icon on the upper righthand corner of the home screen to access a settings menu in order to view or change the settings.

The OJ-DV-HMI-35T settings menu contains the following:

- Status: Readout of the operating parameters of the connected OJ DV
- Drive setup: Application parameter settings
- User settings: Setup of user settings
- I/O: Configuration of digital inputs and outputs
- Warnings and Alarms: Readout of the active warnings and alarms of the connected OJ DV
- Modbus: Modbus settings for the connected OJ DV
- Configuration: Configuration of motor and fan
- Software: Readout of software version

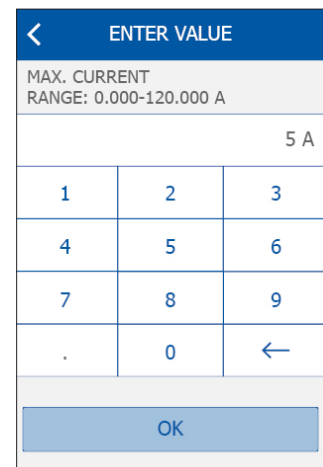
Note that a PIN code is required to change the settings in the “Configuration” menu and thus alter the configuration of the drive. Contact OJ Electronics to obtain this PIN code.



## Setpoint

This screen is used to change the different values and to enter a password. Use the displayed numeric keypad to select the value and press OK to confirm the new value.

The OJ-DV-HMI-35T communicates with the OJ DV via Modbus commands. Factory and user settings are stored in the OJ DV drive and the settings are retained even if the voltage supply or connection to the OJ-DV-HMI-35T is lost.



### Modbus communication

The OJ-DV-HMI-35T communicates with the DV drive using Modbus RTU with the following Modbus settings:

- Address = Auto scan for finding the address.
- Baud rate = 38.4 kbps
- Parity = None
- Stop bits = 1/2

The OJ DV has been designed with two Modbus settings: a default Modbus setting and an alternative Modbus setting.

The default Modbus setting is:

- Address 54, 55, 56 or 57. The address depends on the cable selected (see DV manual).
- Baud rate = 38.4 kbps
- Parity = None
- Stop bits = 1

The alternative Modbus setting is set at the factory and is:

- Address 0
- Baud rate = 115.2 kbps
- Parity = Even
- Stop bits = 1

It is possible to change the alternative Modbus setting using Modbus register.

The OJ DV automatically detects whether communication is via the default or alternative Modbus setting. After 10 seconds of no communication on the default setting, the DV will search for the alternative setting and vice versa.

### Change of Modbus address:

*Allow the system 10 seconds to store the settings before disconnecting the OJ-DV-HMI-35T.*

The DV will search for the default Modbus address for 10 seconds before changing and searching for the alternate Modbus address.

### Bumper cover

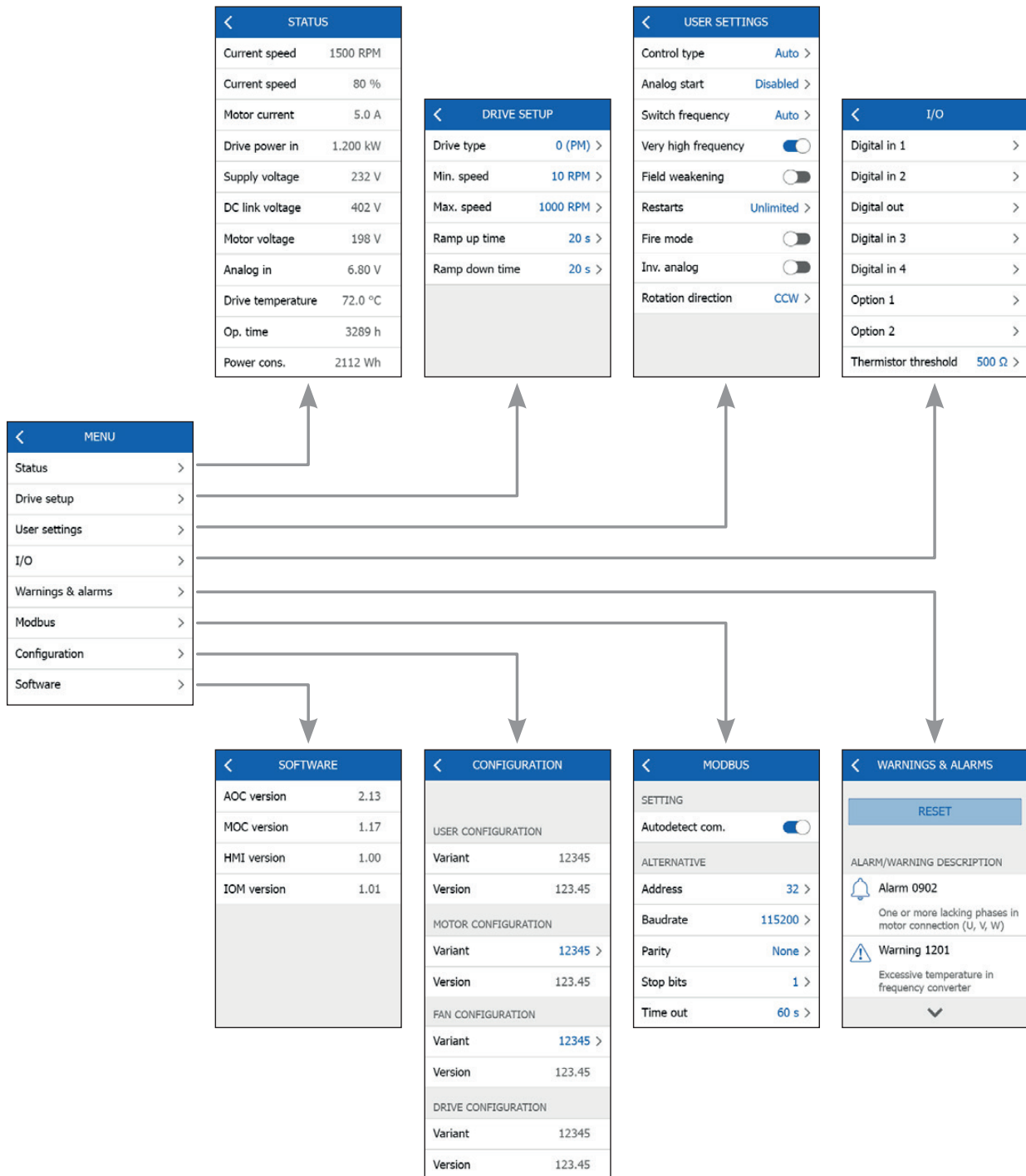
The OJ-DV-HMI-35T is supplied with a silicon bumper cover to protect it against bumps, oil and dirt.

MODBUS	
SETTING	
Autodetect com.	<input checked="" type="checkbox"/>
ALTERNATIVE	
Address	32 >
Baudrate	115200 >
Parity	None >
Stop bits	1 >
Time out	60 s >

## Menu tree

The top level menu tree of the OJ-DV-HMI-35T is shown below.

The main menu contain eight sub menus, and some of these have their own sub menus.



**Installation**

OJ-DV-HMI-35T can be fitted onto a flat surface using a screw or magnets where appropriate.

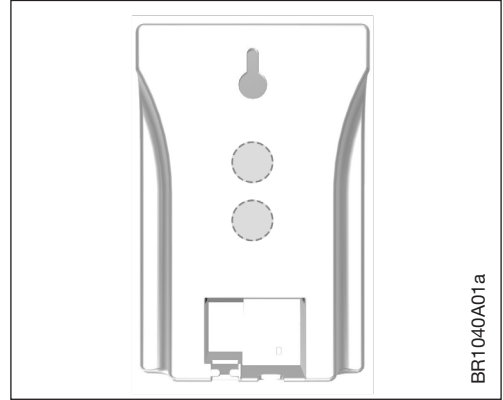
**Fitting onto a flat surface using a screw**

The rear of the HMI unit has a keyhole-shaped hole for hanging the unit on a screw that has been screwed into the flat surface (see Fig. 1.1). Use a screw with a diameter that is not greater than 3.5 mm and a length that is not longer than 9 mm.

**Fitting onto a flat metal surface using magnets**

The black bumper cover contains two magnets. The HMI can be fitted onto a vertical flat metal surface using the bumper cover (see Fig. 1.1).

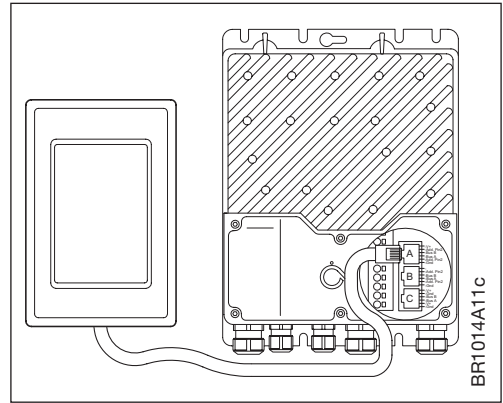
Figure 1.1  
Installation on flat surface



**Cable connection**

The OJ-DV-HMI-35T is connected to the OJ DV drive using a Modbus cable. The Modbus cable can be connected to the HMI-35-T via the RS485 port or via four single-wire screw terminals. The choice of either does not affect the unit's function or operation. See Figure 2.1.

Figure 2.1



**Modbus RS485 with use of RJ12**

The OJ-DV-HMI-35T must be connected to OJ DV Modbus port "A" (fig. 3.1) using a bus cable (cable type: 6-core, unshielded, 30 AWG/0.066 mm<sup>2</sup> telecommunications cable or similar ribbon cable) with RJ12/6 connectors on both ends (fig. 4.1).

Figure 3.1  
Connection Modbus via the RJ12 6P4C port

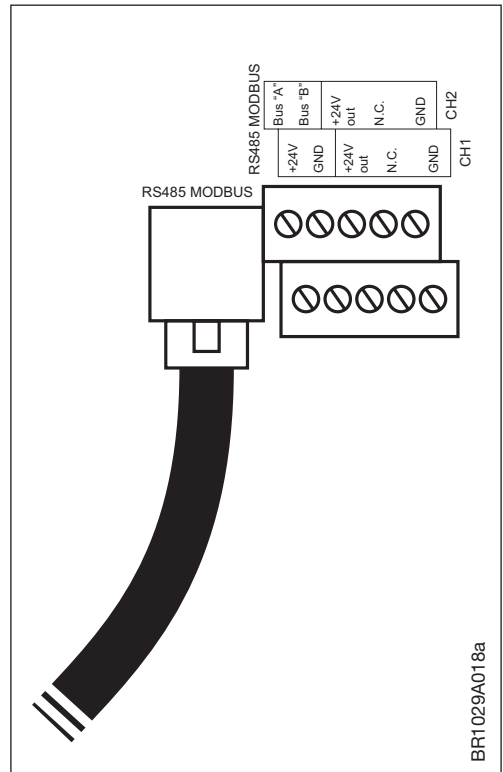
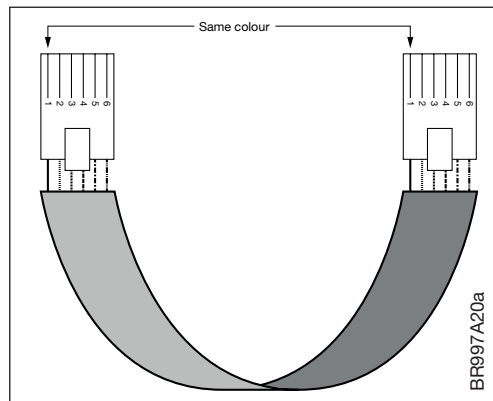


Figure 4.1  
Modbus cable connection



**Screw terminals**

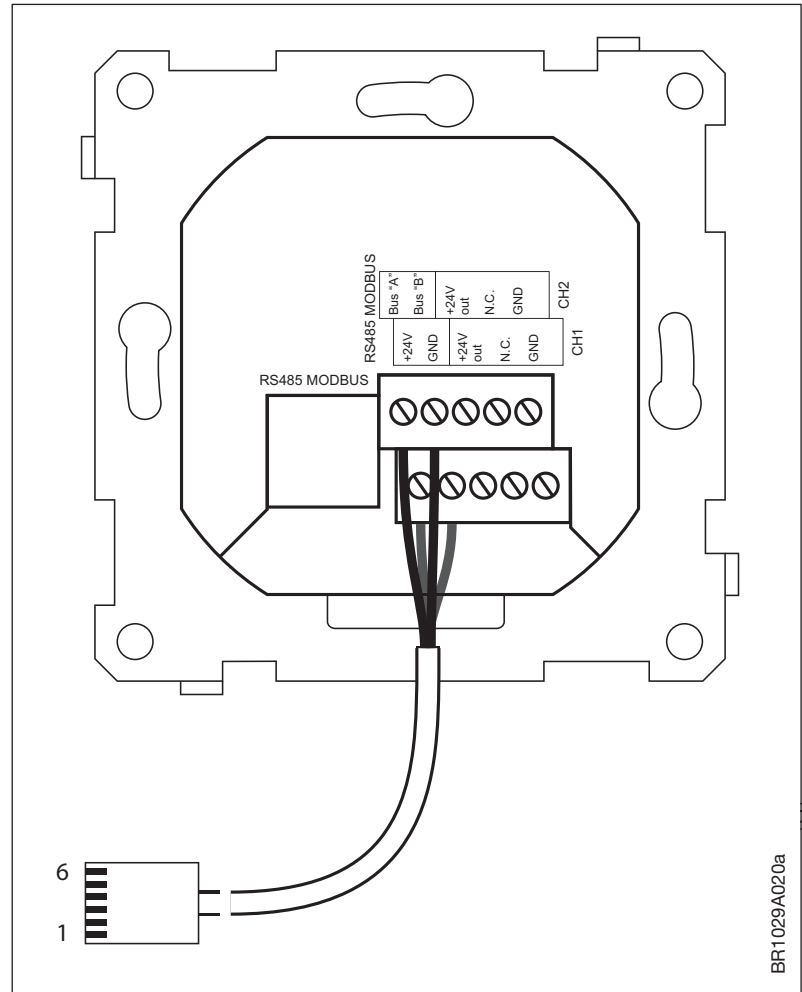
RS485

1. +24 V IN
2. GND
3. Bus "B"
4. Bus "A"
5. +24 V IN
6. GND

Future use

7. NA
8. NA
9. NA
10. NA

Figure 5.1  
Connecting Modbus via the screw terminals



**Technical data**

Supply voltage.....	24 VDC +/-10%
Cable dimensions.....	max. 0.75 mm <sup>2</sup>
Relative humidity .....	0–95% (non-condensing)
Operating temperature .....	–10°C to +40°C
Enclosure rating.....	IP21 (EN 60529)
Port.....	1 x RJ12 (RS485)
.....	10 x screw terminals
Dimensions (without bumper cover).....	80 x 121 x 42 mm
Dimensions with bumper cover.....	86.1 x 127.1 x 50.9 mm
Max. power consumption.....	900 mW

**Service and maintenance**

The OJ-DV-HMI-35T touch panel contains no parts that require service or maintenance. Contact your supplier in case of a problem.

### Disposal and environmental protection

Help protect the environment by disposing of the packaging and redundant products in an environmentally responsible manner.

Products marked with this symbol must not be disposed of with household waste, but must be delivered to a waste collection centre in accordance with current local regulations.



### CE marking

OJ Electronics A/S hereby declares under sole responsibility that the product complies with the following EU Directives:

EMC – Electromagnetic compatibility: 2014/35/EU

RoHS – Restriction of the use of certain hazardous substances in electrical and electronic equipment: 2011/65/EU

### Applied standards

EN 61000-6-2 and EN 61000-6-3 Electromagnetic compatibility (EMC)

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