

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.

The OJ-DV-HMI-35T can be used, both as an active + passive modbus connection.

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.

Active & passive connection

The OJ-DV-HMI-35T comes with a Modbus cable with two RJ12/6 plugs on each end, used to connect to the OJ-DV. See fig 2.1.



When connected to the OJ-DV's Modbus port "A", the OJ-DV-HMI-35T will function as a Modbus Master. Other forms of Modbus Masters, such as OJ Air2 or BMS controls cannot be connected at the same time.

Passive mode

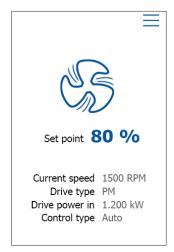
Connected to Modbus OJ DV's port "C", the OJ-DV-HMI-35T will become a Modbus Slave. The hand terminal can now be used in conjunction with other Modbus communications using the OJ-DV's ports "A", "B" or the spring terminals A, B and GND.

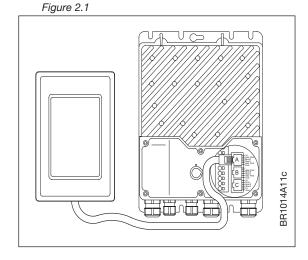
The OJ-DV-HMI-35T will then work as a "passive" display for the OJ-DV, from which actual status and values can be

read, while the OJ-DV's operation is controlled from the Modbus Master connected to ports "A", "B" or the spring terminals A, B and GND.

If, whilst connected to port "C", there is a Modbus Timeout, to ports "A", "B" or the spring terminals A, B and GND, the OJ-DV-HMI-35T will automatically switch from a "passive" to "active" controller of the OJ-DV.

If the Modbus communication is reestablished to ports "A", "B" or the spring terminals A, B and GND, the OJ-DV-HMI-35T will automatically switch back from an "active" to a "passive" controller.





From the "User settings" menu, the OJ-DV-HMI-35T's "passive" and "active" mode can be manually selected with the "Manual override" switch. When "active" is selected the OJ-DV-HMI-35T will then

override the settings of the Modbus communications to the OJ-DV's ports "A", "B" or the spring terminals A,B and GND.

After a power cycle of the OJ-DV or the OJ-DV-HMI-35T, the OJ-DV-HMI-35T will always start up in "passive" mode by default.

When the OJ-DV is controlled in "analog" ("0-10V") mode, it is recommended to connect the

OJ-DV-HMI-35T to port "A".

Switch frequency Field weakening Retries 5 > Fire mode Rotation direction Manual override

USER SETTINGS

Modbus >

Control type

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 fanSoftware: Readout of software version

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Status	>
Drive setup	>
User settings	>
I/O	>
Warnings & alarr	ns >
Modbus	>
Configuration	>
Software	>

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.

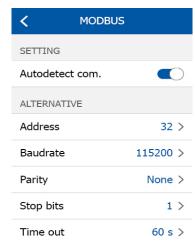
Change of Modbus address:

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.

Protective cover

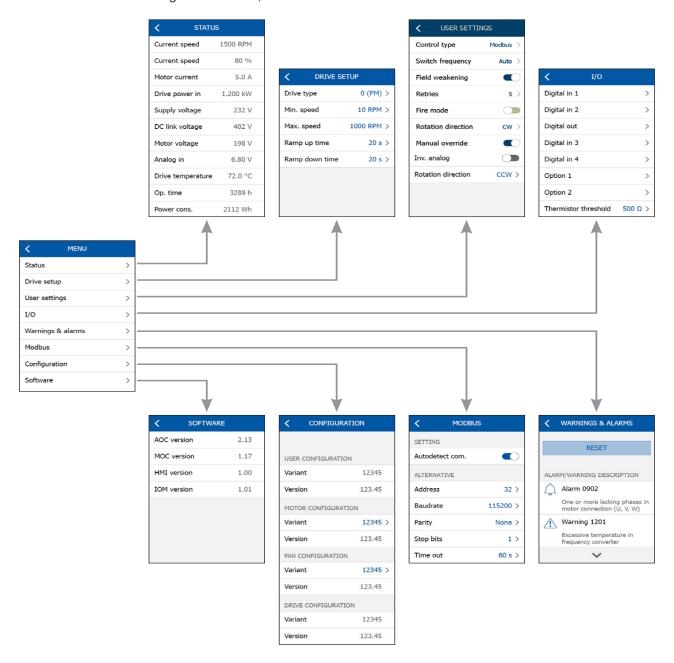
The OJ-DV-HMI-35T is supplied with a silicon protective cover to protect it against knocks, oil and dirt.



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.

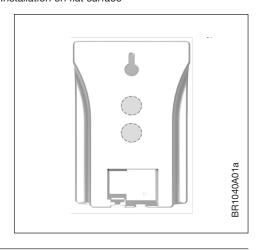
Fitting onto a flat surface using a screw

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 protective 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



Technical data

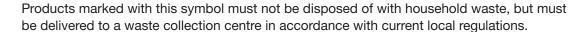
Supply voltage	24 VDC +/-10%
Cable dimensions	max. 0.75 mm ²
Relative humidity	
Operating temperature	
Enclosure rating	IP21 (EN 60529)
Port	1 x RJ12 (RS485)
	10 x screw terminals
Dimensions (without bumper cover)	80 x 121 x 42 mm
Dimensions with bumper cover	86.1 x 127.1 x 50.9 mm
Max. power consumption	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.





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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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