domat
MEMBER OF CEZ ESCO

domat IDE

order number
HT300
HT310
HT315

Touchscreen operator panel

Summary

HT3xx are operator panels with capacitive touchscreen for monitoring and control of multiple PLC controllers with Domat runtime. They have two Ethernet interface ports.

Application

- **Control panel for free-programmable control units for HVAC systems or other technologies**
- **Terminal for receptions and rough environments – overview and control of remote technologies**

Function

The terminals allow you to display text and graphic definitions from the Domat IDE in the Domat Visual application. HT3xx can only communicate with the same controller types (Domat or SoftPLC). Therefore, it is not possible to load values from Domat and SoftPLC controller into one menu at the same time.

Controllers with SoftPLC runtime can be controlled only by textual definition. Graphical definition is available only for controllers with Domat runtime.

Terminal contains Linux OS which runs Domat Visual application. For communication with controllers two Ethernet ports are used. Both are set as switch.

The menu definition is created in Domat IDE (for the controllers with Domat runtime), or RcWare HMI Editor (controllers with SoftPLC runtime). Objects such as Value setting, Alarm, and Time schedule have predefined functionality, and thus it is only necessary to set addresses, assign data points, and complete user texts for the configuration. The application displays 9 rows at a time. The display text length on row is variable according to used symbols. As it is mentioned

before, controllers with Domat runtime can be controlled by textual menu, graphical menu or combination of both of them.
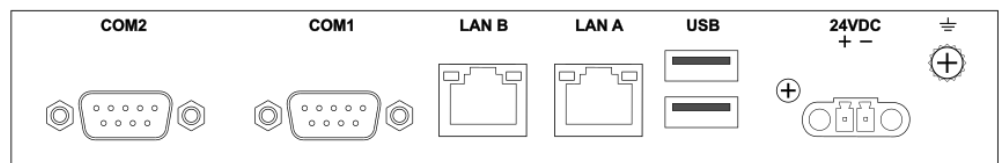
The device is installed using four metal clamps into an aperture in panel door or any suitable box. On the back of the cover, the terminal is equipped with VESA 100 × 100 mm mounting holes.

Technical data

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Power	24 V ± 20 % ss
	HT300: 9 W (max.)
	HT310: 12 W (max.)
	HT315: 16 W (max.)
Communication	2× RJ45 Ethernet 10/100/1000 BaseT
	2x RS-485 (unused)
	2x USB 2.0 (unused)
	1x Micro SD (unused)
	1x M.2 Key-E 2230 (unused)
LCD display	touch screen LCD display, LED backlight capacitive
	display 7", 1024×600 px (HT300)
	display 10", 1280×800 px (HT310)
	display 15", 1920×1080 px (HT315)
Number of connections	max. 10 connections to controllers
HW	ARM Cortex A53 i.MX 8M 1.6 GHz, 16 GB eMMC onboard, 2 GB DDR4 RAM
SW	Domat IDE
Dimensions	204 × 147 × 52 mm (HT300); see schema below
	283,1 × 202,3 × 52 mm (HT310)
	419,7 × 269 × 52 mm (HT315)
Aperture dimensions	192.5 × 139 mm (HT300); see schema below
	274.2 × 193.4 mm (HT310)
	412 × 261.3 mm (HT315)
Weight	1.23 kg (HT300)
	2.22 kg (HT310)
	4.09 kg (HT315)
Protection degree	IP66 (EN 60529)
Recommended wire diameter	0.35…1.5 mm^2
Ambient temperature	-20…60 °C; 10…90 % relative humidity; non-condensing gases and chemically non-aggressive conditions
Storage conditions	-30…70 °C; 10…90 % relative humidity; non-condensing gases and chemically non-aggressive conditions
Vibration resistence	2 G$_{rms}$ (5…500 Hz); peak acceleration 10 G (duration max. 11 ms)

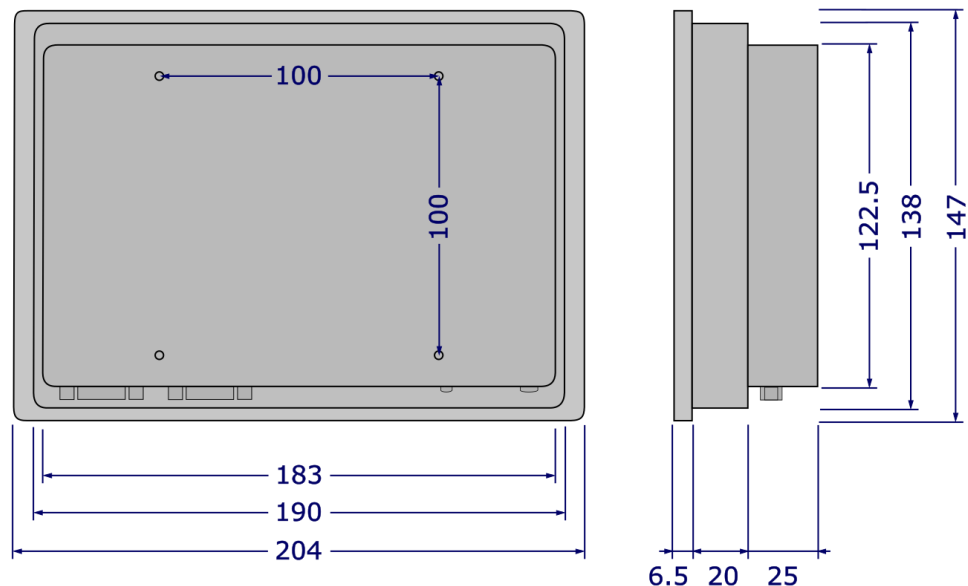|	
Manufacturer marking	HT300: Advantech TPC-107W-N31YB
	HT310: Advantech TPC-110W-N31YB
	HT315: Advantech TPC-115W-N31YB
Standards conformity	EMC EN 55011:2016+A2:2021 Class A Group 1
	CISPR 11:2015+AMD1:2016+AMD2:2019 Ed. 6.2 Class A Group 1
	EN 55032:2015+A1:2020 Class A / CISPR 32:2015+AMD1:2019 Class A
	EN IEC 61000-6-4:2019 / EN 55035:2017+A11:2020 / EN IEC 61000-6-2:2019
	EN 61000-4-2:2009 / EN IEC 61000-4-3:2020 / EN 61000-4-4:2012
	EN 61000-4-5:2014+A1:2017 / EN 61000-4-6:2014+AC:2015 / EN 61000-4-8:2010
	electrical safety EN 62368-1:2018
	RoHS EN IEC 63000:2018

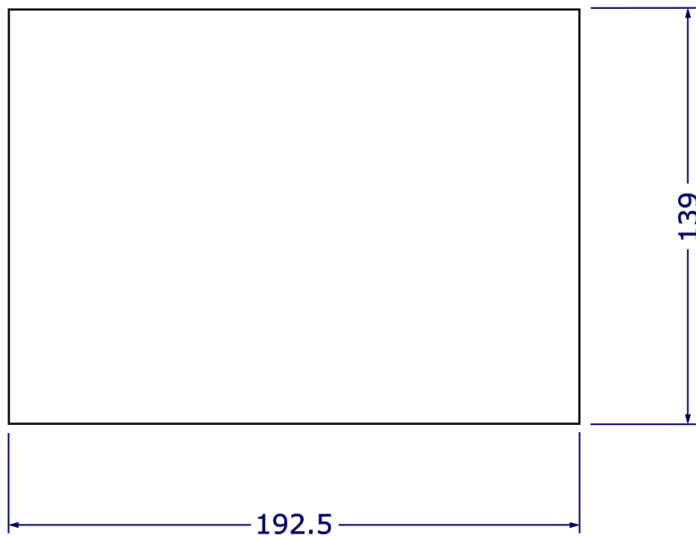**Terminals**

Terminals and connectors

+	Power supply 24 V +
-	Power supply 24 V -
⏚	Technical ground
COM1, COM2	RS-485 (unused)
LAN A, LAN B	Network interface
USB	unused

Dimensions
(HT300)

Installation aperture

Dimensions are in *mm*.

Configuration The Domat Visual definition is uploaded in terminal through Domat IDE / RcWare HMI Editor (by web interface) or through web interface. Other settings could be configured through service web. The access to the service menu is possible from display or remotely over a web browser.
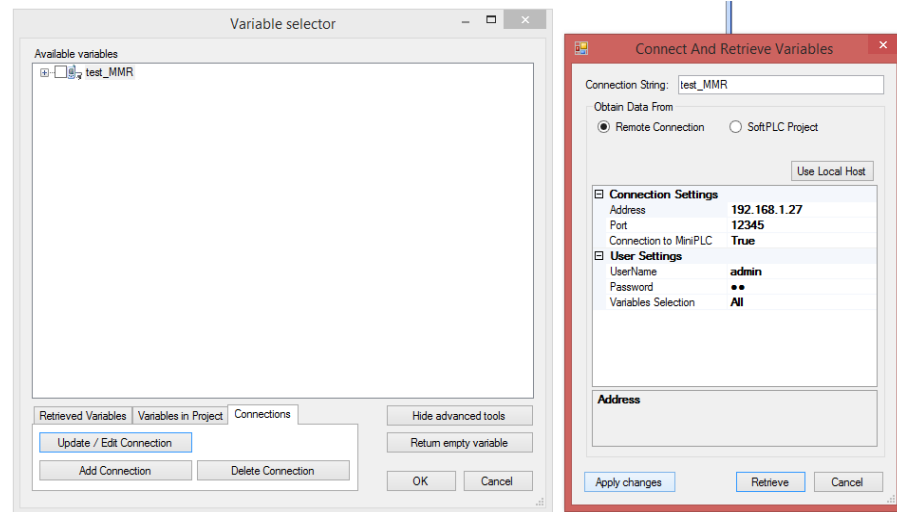
RcWare HMI Editor

Create the HT101 menu definition. The principles of creation menu are described in the LCD menu manual: http://domat-int.com/en/downloads/technical-documentation , RcWare SoftPLC Touch Screen Editor.

Note:
The connection parameters to a particular PLC must be correctly set. The terminal needs to know from which PLC the variables should be read. The connection settings is defined in File -> Variables Manager -> select a connection and Show advanced tools -> Connections -> Update / Edit Connection. After uploading the list of variables in the HMI project, the connection must be set as Remote Connection and correct communication parameters must be entered. The changes must be confirmed by the Apply changes button.

Example:

The whole definition can be finally uploaded through File -> Export menu definition to HT100/101. The editor creates a .txt definition file. It could be uploaded it to the device using service web page. After uploading menu definition the device must be restarted for the changes to apply.

Domat IDE

The process of creation a menu and uploading menu definition are described in Domat IDE help page in chapter HMI.

Service web

The HT3xx service web can be accessed over a web browser on the device IP address (the browser PC must be in the same network). Service menu is accessible directly through the display. For access from display, swipe from right side of the monitor and after login select the settings icon. The menu is browsed by swiping up and down. Only the user with administrator rights can access this menu. User rights are set in definition file. Default username/password combination is admin/rw.

To access the service web, enter the password (see below). The password can be changed in Device management. In Settings there is network and language configuration. It is possible to upload/download the menu definition and upload new version of HT3xx application from web browser only.

Communication

The default network settings are:

IP address: 192.168.1.99
subnet mask: 255.255.255.0
default gateway: 192.168.1.1

Password for service web: rw

Ethernet ports are set as switch.

Graphic and Text template:
User policy is determined by definition file.
Default user for service menu: Admin
Default password for service menu: admin

User for SSCP: admin
Password for SSCP: rw

Notice: Do not forget to note the new network settings after change!

WEEE notice   The device contains a non-rechargeable battery which backups the real-time clock and part of the memory. After the device is not operable, please return it to the manufacturer or dispose of it in compliance with local regulations.

Safety note   The device is designed for monitoring and control of heating, ventilation, and air conditioning systems. It must not be used for protection of persons against health risks or death, as a safety element, or in applications where its failure could lead to physical or property damage or environmental damage. All risks related to device operation must be considered together with design, installation, and operation of the entire control system which the device is part of.

Cyber security note
The product may influence the information and cyber security (ICS) of the control system. It is supplied in default settings. Implementation and continuous compliance with the ICS rules (e.g. creating and upload of certificates and keys, their updates and management, protection against misuse, etc.) are fully the responsibility of the control system operator. The manufacturer is not responsible for damages which originated or may originate due of wrong or insufficient implementation of ICS rules when using the device. In case of questions, please contact Domat Control System technical support.

Changes in versions	09/2024 – First datasheet version. 02/2025 – Product weight added.