CANOVATE®

Data Collection Terminal
User Manual

Version **3.1.4**

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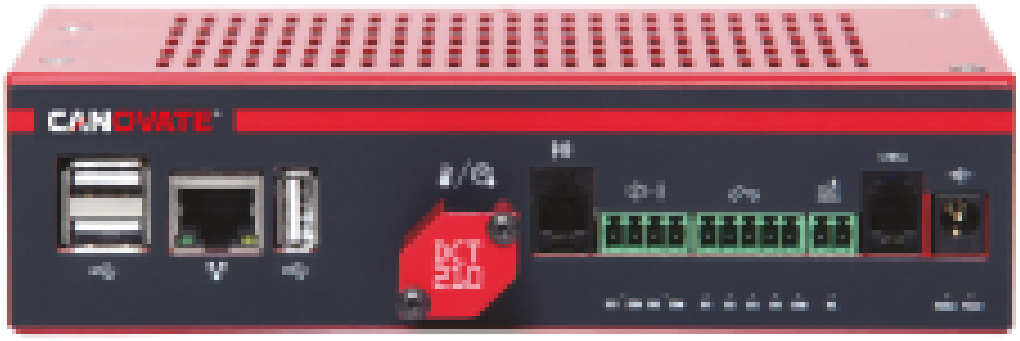
General Information 1.0



Canovate DCT210 is a device used to measure, monitor, record and control environmental variables such as temperature, humidity, smoke, air flow, etc.

DCT210 does not need any Computer/Server connection and can work on its own. DCT210 is compatible with industrial standard sensors and provides reliable service.

DCT210 can include reputable industrial communicationstandards and other industrial infrastructure equipment in the Canovate EMS system such as UPS, Generator, Air Conditioning Equipment etc.

You can extend the coverage of your EMS system with the sensor multiplexer HUB, which will connect to the sensor port. LAN Ethernet is standard in the DCT210 so, you can easily incorporate your DCT210 into your local network. You can also connect with 3G modem via USB port. (3G modem sold separately).

You can activate or deactivate other electrical devices connected to the DCT210 Digital Output (DO1, DO2). (Air conditioning, Ventilation Fan etc.) With Canovate EMS, you can remotely monitor with secure.

Web access from anywhere in the world. You will be immediately notified with alarm notifications such as e-mail, SMS, Voice Call and SNMP trap.

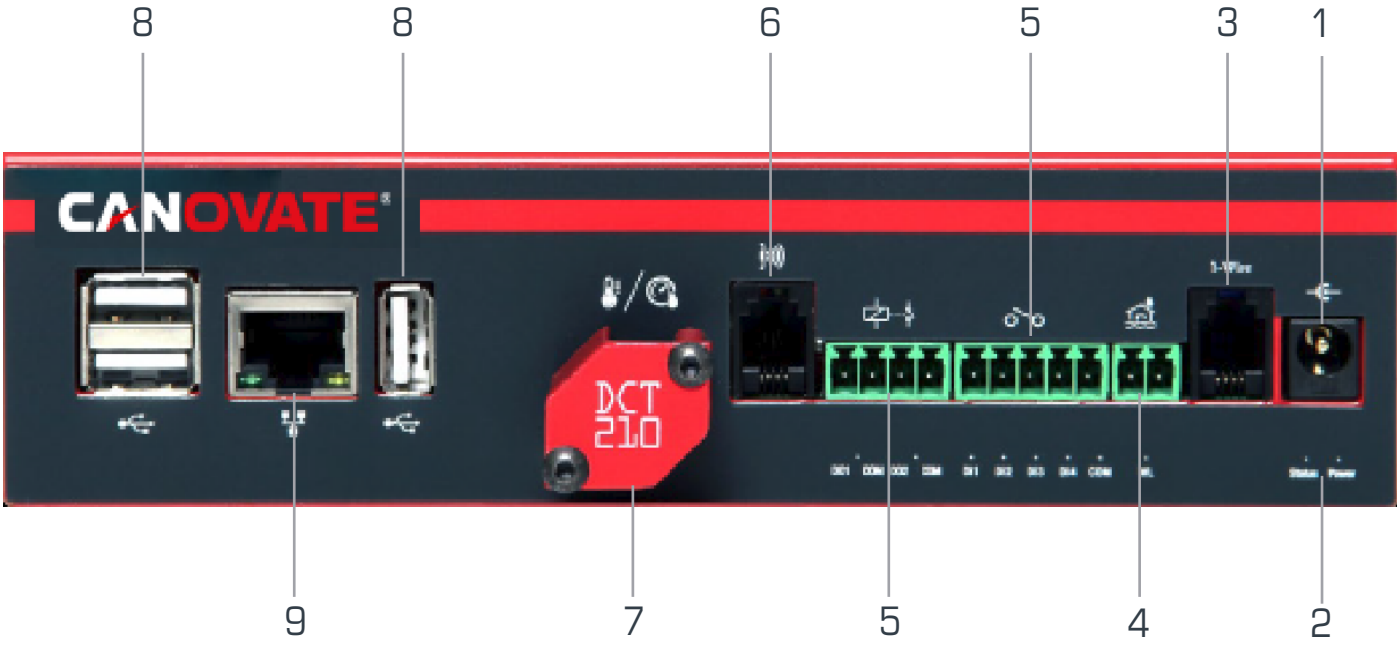
All data collected from sensors can be saved, used for reporting and analysis.

The data collected with DCT210 and the connection established with the user are secured with advanced encryption algorithms. By connecting IP Camera or USB Web Camera to DCT210, you can monitor live from the distance.

You can send a photo to an e-mail address that you specify.

TECHNICAL SPECIFICATIONS 2.0

Onboard Temperature and Humidity Sensor	1
Onboard Integrated Temperature Sensor Measuring Range	-55/+125 °C
Onboard Temperature Sensor Sensitivity	Sensitivity < %0.5
Onboard Humidity Sensor Measuring Range	Relative Humidity 0 - 100
Onboard Humidity Sensor Sensitivity	Sensitivity < %3
Onboard Water Leak Sensor	1
RJ9-Digital Sensor Port (1-Wire)	1 (Max. 16 pieces 1-Wire Sensor)
Max. 1-Wire Sensor Distance	50 m
Digital Input	4 (5 - 24 VDC)
Digital Output	2 (Max. 250 VAC/ 30 VDC)
USB 2.0 Port	3 Pieces
HDMI Çıkış	1 Piece
Audio Output	1 piece
Integrated IR Port (Climate Control)	With **Canovate** IR Module
External HDD, Keyboard, Mouse Connection	USB
Micro SD Card Slot	1 Piece
10/100 Ethernet	1 Piece
Supply Voltage	5,8 V (DC) 3 A
Power Consumption	10 w
Operating Temperature Range	0-60 °C
Operating Humidity Range	%10-%90 (Non-Condensing)
Physical Dimensions	170mm x 94,5mm x 44.4mm
Weight	515,8 gr
EMC Certificate	61000-6-4 / 61000-6-2
Product Warranty	2 Years
Network Protocols	HTTP, SNMP Traps, TCP Socket IO, MQTT, Modbus TCP, Modbus RTU, WEIGAND (Lock Settings), FTP, SSH, TELNET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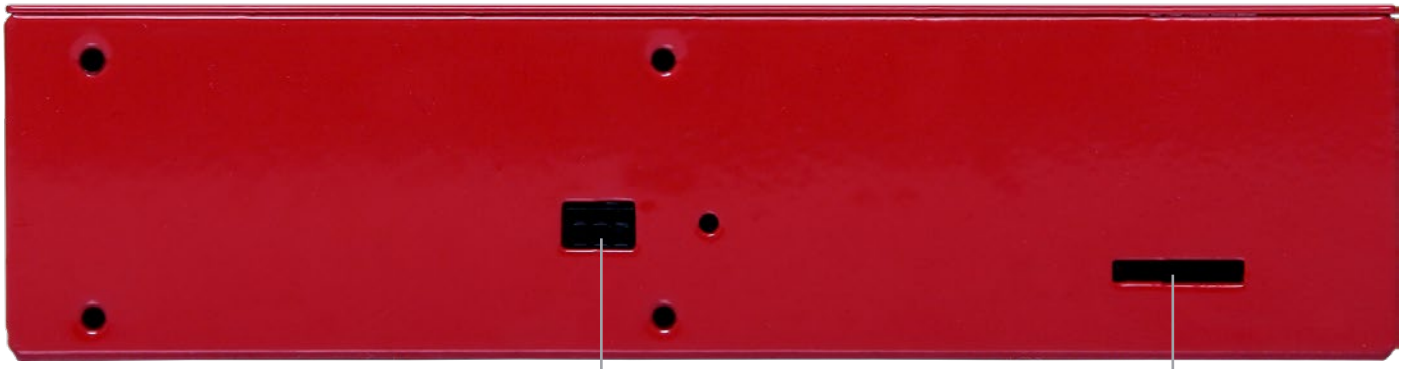
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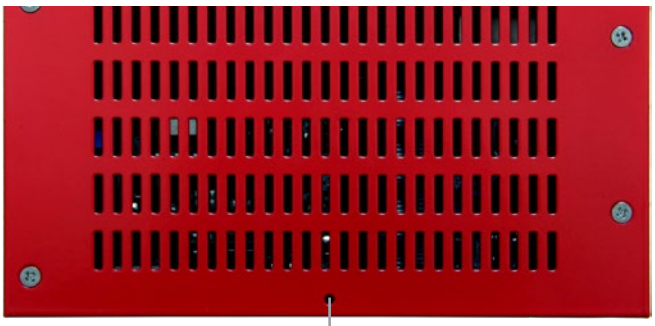
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1- DC Power Connection

For the power connection of the DCT-210, you can connect the 5.8 V/3A (Input: 176V-264V 50/60 Hz.) power supply that comes out of the box here.

2- Power and Status LED

The green light on the right just below the power connection is the Power LED, which indicates that the terminal is energized. Just to the left of the Power LED is the Status LED and is active when the terminal is ready for use.

About 90 seconds after the power is connected, the Status light turns on and the terminal become ready for use. This time may be extended up to 10 minutes if the terminal performs an automatic data check.

3- 1-Wire Sensor Connection

The RJ9 form connector is used for 1-Wire sensors connections. With the 1-Wire Multiplexer Hub connected here, you can include a total of 16 1-Wire sensors in the system. Depending on the structure of the 1-Wire sensor used, the sensor cable length (with 1-Wire Repeater) can be up to 150m. Standard 1-Wire sensor cable length should be no more than 50m.

4- Integrated Water Leak Sensor

In order to use the water leak sensor on the terminal, the water leak sensor probe must be connected to the water leak sensor port. While defining the alarm, the water leak sensor has a predefined numerical value of 1.

When water reaches the water leak probe, this value becomes 0 and the system generates an alarm. For efficient operation, it is important that the surface on which the probe is fixed, is a flat and clean surface.

5- Digital Input Output Connection

The terminal has 4 digital input and 2 digital output connections. You can connect the digital outputs of your other infrastructure devices (Generator, UPS, Air Conditioning devices, etc.) or your sensors that have digital/dry contact outputs to these digital inputs. The default value of digital inputs is 0. You can use digital output connections to activate or deactivate your electrical devices in your facility. The electrical device can have a maximum power consumption of 220V/2A. You can use one of the digital output connections (DO1/DO2) for the sound/light siren connection.

6- Infrared Connection

You can control the air conditioner remotely with the infrared sensor that you will connect to the infrared sensor connection on the Data Collection Terminal. The terminal reads and records the IR signals of your controller and allows you to remotely control your air conditioner using these signals. You can mount this sensor in front of the air conditioner receiver and you can remotely turn the air conditioner on/off, set the heating or cooling limits.

7- Integrated Temperature and Humidity Sensor

The temperature sensor can measure in the temperature range of 0C- - 55C, and the humidity sensor can measure in the range of 0-100% humidity. In order to save the data collected from the sensors, it can be determined in advance how much of a change in the read data will be required. This value is found in the “Tolerance” section of the Tag Editor window in the software. For the temperature sensor, this value can be

8-USB Connection

You can increase the capabilities of the terminal with USB devices that you can connect to the USB 2.0 ports on the terminal. Some of them are Usb Keyboard/Mouse, Rs485/422/232 Modbus Rtu/Tcp Converter, Usb 3G/GSM Modem, USB Camera. The highest current that can be drawn from 3 USB 2.0 ports in total is 1.2 A.

9- Ethernet Connection

Terminals ethernet connection is in the form of Rj45. You can log your terminal in your network using UTP (Unshielded Twisted Pair) or STP (Shielded Twisted Pair). It supports 10/100 Mb/Sec standard Internet connection speed.

Default IP adress is 10.10.10.1 and network mask is 255.255.255.0.

10- Micro SD Card Slot

Micro SD Card Slot supports up to 64 GB.

11- Terminal Backup Battery Connection

The battery used to backup the terminal's power supply is connected here.

12- HDMI Video Output

Maximum resolution that can be provided from terminal's HDMI video output is 1080p (1920*1080) 30 Hz. Every monitors and TVs that support these standards are compatible.

13- Audio Output

Terminal has a 3.5mm standard jack socket for audio output.

14- Terminal Factory Reset Button

Factory reset button has 2 different functions;

Factory reset for Username/Password and IP number

Make the power connection of the terminal and wait until Status light, which is in front of the device, is on.

Press and hold the factory reset button for 5 seconds and release the button after Status light blinks 5 times.

The device will reboot and reset to the following factory settings:

Username: Admin
Password: admin
IP Address: 10.10.10.1 / 255.255.255.0

Reset to factory settings by resetting all definitions and data of the device

In case of a factory reset, all data and definitions stored in the device will be deleted and these definitions and data will no longer be accessible. You can use the **Canovate** EMS Export/Import Configuration tool to back up the data and other information saved on the device and restore them whenever you want. (Settings>System> Export/Import Configuration)

Press and hold the factory reset button, in the meantime power up the terminal and wait, release the button after Status light blinks 5 times. The device will reboot itself and reset to the factory settings:

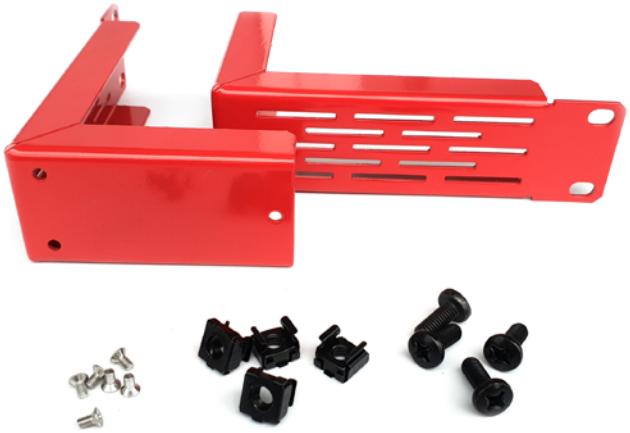
Username: Admin
Password: admin
IP Address: 10.10.10.1 / 255.255.255.0

MOUNTING OF DATA COLLECTION TERMINAL

Two different mounting parts and screws come out of the box of the data collection terminal:

Cabin assembly parts

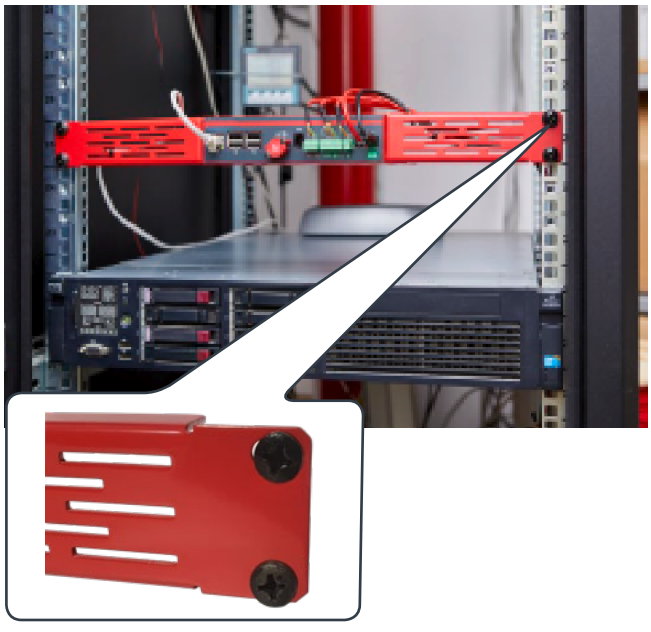
Wall Mount Parts



Cabin Mounting

1. Mount these parts on the right and left sides of the terminal using the rack cabinet mounting parts and screws that came from the terminal box.

2. Mount the device to a suitable space of 1U width in the cabinet using the cabinet screws provided in the box.



Wall Mounting

1- Firstly, install the wall mounts on the terminal to mount the terminal on the wall.

2- Place the terminal where you want to mount it on the wall and drill a hole of the appropriate width and depth.

Mount the terminal to the holes you drilled in the wall using screws and dowels.

SENSOR AND OTHER EQUIPMENT THAT CAN BE USED WITH THE TERMINAL

1-Wire Sensors

The 1-Wire sensors you can use by connecting to the 1-Wire port on the data collection terminal are listed below:

CHTS-01
Combo Temperature + Humidity Sensor (Sensor Type)

CHTS-02
Combo Temperature + Humidity Sensor

TS-01
Temperature Sensor

TS-02
Immersion Type Temperature Sensor

TS-03
Temperature Sensor (Sensor Type)

LHT-01
Light Sensor

SNDS-01
Sound Sensor

CONP-01
PT100 –> 1-Wire Converter

CONM-02
0-20 mA –> 1-Wire Converter

WLS-02
Water Leak Sensor and Water Leak Probe

ACS-01
Carbon Monoxide Sensor

ACS-02
Air Quality Sensor

ACS-03
Oxygen Sensor

Dry Contact Sensors

Some of the sensors you can use with the 4 Digital Inputs on the terminal are listed below:

VSK-01
1-Phase Voltage Sensor

AF-01
Fan Type Air Flow Sensor

AF-02
Air Flow Sensor with Thermal Effect

DS-01
Magnetic Door Sensor

MS-01
Motion sensor

SHC-01
Impact Sensor

SS-01
Smoke Sensor

Smoke Sensor

WLC-02
Water Leak Probe

WLC-03
Water Leakage Probe (Rope type)

WLS-01
Water Leak Sensor and Water Leak Probe

WLS-03
Water Leakage Sensor and Water Leakage Probe (Rope type)

Other Hardware

The hardware and components you can use with the data collection terminal are listed below;

- *IR Climate Control Sensor (Digital IR connection) IRS-01*
- *Wiegand RFID Door/Access Control System (DI/DO)*
- *USB Modbus Converter (Rs485/Rs232*
- Alarm Siren Sound-Light
- Alarm Siren Sound-Light
- 3G/GSM USB Stick Modem
- IP Camera
- USB Camera
- USB Keyboard
- USB Mouse
- HDMI Monitor / TV

3G/GSM USB Stick Modem

Alarm Siren