

OUMAN C203

Controller for three circuits

- 2 heating circuit control
- 1 domestic hot water control



Load user manual: <https://ouman.fi/en/documents/>

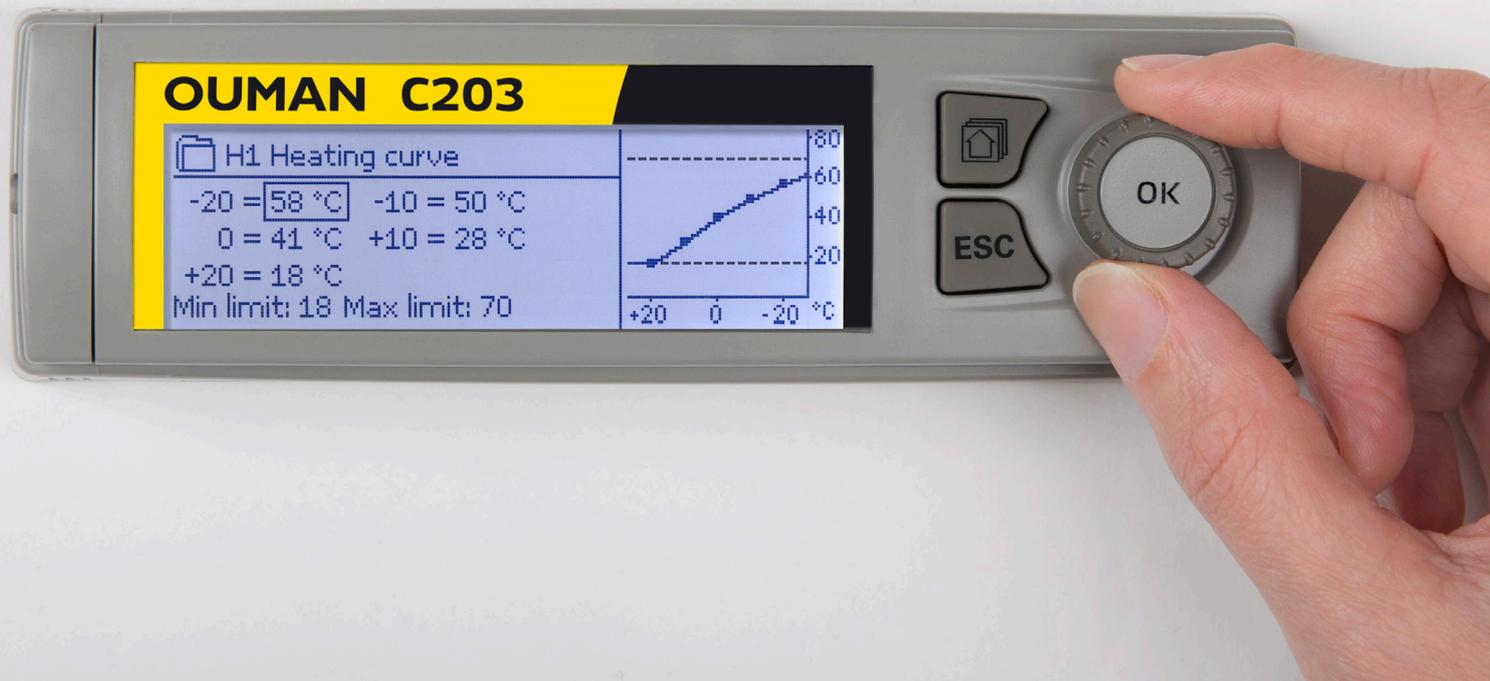
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YM0017: Version 1.5.3->

Saving energy, creating comfort

OUMAN

GSM / Web controlled heating controller



Ouman C203 is a new generation heating controller. Its versatility, intelligence and openness make it an ideal heating controller for all water circulation heating systems. Ouman C203 is really easy to use - informative display panel and GSM Control - feature enable reliable use anytime, anywhere! Ouman C203 can be connected to Ounet-service making the use of the controller over the internet easy and informative.

Advanced heating regulation technology

Ouman C203 represents a new advanced regulation technology. It has numerous features that improve the regulation and save energy. It also contains many useful automatic functions valued by automation professionals.

Types of heating systems:

- Radiator heating
- Floor heating
- Air conditioning preregulation
- Hot water regulation

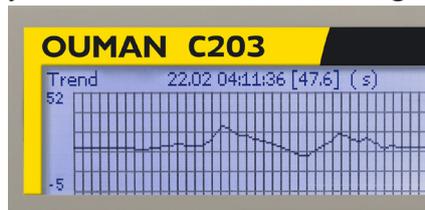
Types of heating production:

- District heating exchangers
- Boiler plants
- Accumulators
- District heating substations
- Ground heating systems

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Easy to take into use

A preprogrammed installation procedure guides you when you take control circuits into use and helps you to make the most important selections. Based on your selections, C203 proposes you the optimal settings for your configuration. In most cases the settings are suitable as such and you do not need to make further changes.



A graphic trend display makes tuning easier

Ouman C203 displays trends in supply water temperature changes graphically, so the regulation process is easier to perceive. The trend display especially makes tuning easier for the installer of the controller.

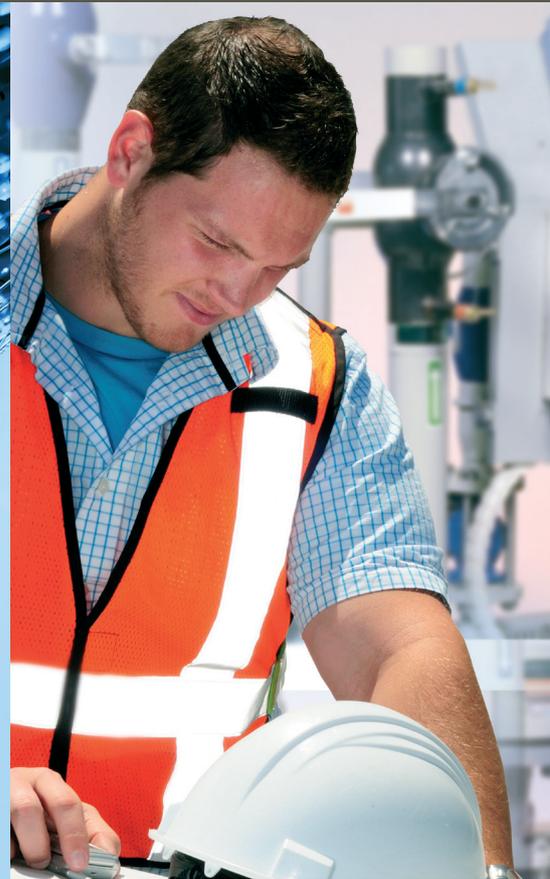


Remote use:

- Mobile control requires a GSM modem (optional) to connect to control.
- Online monitoring Ounet Internet-based on-line control room (additional) professional remote control and monitoring.

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Controller for three circuits



Informative heating curve

In order to have good heating regulation you need a right kind of regulation curve. You can select to use either a 5 point or 3 point heating curve. The controller prevents the usage of wrong kind of heating curve when you use 3 point heating curve. In this way an optimal heating regulation is guaranteed

Takes into account differences in facilities

An outdoor temperature measurement delaying function takes into account the structural differences between the properties. During quick outdoor temperature changes, the controller does not change the temperature of the supply water at the same pace, but instead, functions according to an average that it has measured for a longer period of time.

Two separate control circuits for heating

With C203 it is possible to control two separate heating control circuits independently. This means better energy efficiency and increased living comfort as well as protection of structures.

Control of domestic hot water

Ouman C203 has a highly developed domestic hot water saver algorithm, which guarantees you an enjoyable shower even under difficult regulating conditions. Anticipatory regulating and a quick run function improve regulation in situations when consumption changes quickly.

Circulation pump controls

- Summer time pump stop
- Manual control ON/OFF
- Double pump function: Backup pump/ alternate pump
- Pump run time counter

Supply water information

The supply water information is in the form of a table that informs its user of the factors that effect the supply water temperature at that moment. The supply water information also makes it easy to detect faulty settings.

The autumn drying function

The autumn drying function raises the supply water temperature for a certain period of time in the autumn. This decreases building dampness so it doesn't feel as chilly as it often does at the end of the summer.

Versatile measurements and digital inputs

- Configurable and fixed universal inputs and pulse inputs
- Measurement data can also be read from the channel



Versatile alarm functions

Internal alarms

- Sensor fault
- Danger of overheating
- Deviation alarm
- Danger of freezing

External alarms

- Network pressure alarm
- Domestic hot water network consumption alarm
- Alarm information about the pump's running mode
- Alarm information about the pump's overcurrent protection

For all size of facilities

Ouman C203 can be used in all kinds of facilities with central water heating from small buildings to large plants. C203 is open to different types of remote monitoring solutions. Facility heating can now be monitored and controlled from the display of a GSM-phone, PC, and from the controller. Alarm messages can be received as text message into a GSM-phone.

Ounet

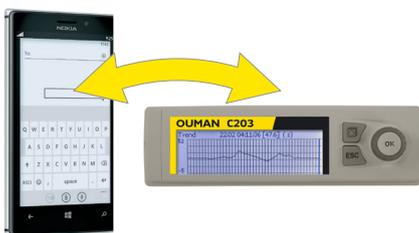
Quite large Ouman building automation systems can be easily controlled and monitored remotely using a web browser. To use a browser you must have a M-LINK adapter, Ounet account as well as a functioning network solution and sufficient data security.

Other monitoring systems

The C203 controller can be connected to other monitoring systems using a Modbus.

GSM control

When a GSM modem is connected to the controller, a GSM telephone can be used to communicate with the controller via text messages. Also alarms can be sent to five different numbers and can be reset by a text message.



More than a heating controller

Measurements, max 16 pcs

- Outdoor temperature
- H1 supply water temperature
- H1 room temperature
- H1 return water temperature
- H2 supply water temperature
- H2 return water temperature
- H2 room temperature
- Network pressure
- DHW circulation water temperature
- DHW supply water temperature
- DH Supply water temperature
- DH Return water temperature
- General temperature measurement

Selecting the curve type and parallel shift

- 5 point curve
- 3 point curve

Technical information

Protection class	IP 20
Operating temperature	0 °C...+40 °C
	0 °C...+50 °C under the following conditions:
	- 24 Vac outputs the maximum load: a total of 300 mA
	- 15 Vdc output maximum load: 100 mA
	- The relay and triac outputs, maximum load:
	230V/450 mA individual relay and triac outputs per
Storing temperature	-20 °C...+70 °C
Power supply	
- Operating voltage	230 Vac / 125 mA
	The internal 24 V power source, total load capacity of max. 0.4 A/10 VA continuously, temporary (60 s) 15 VA
- Backup input	12 Vdc
Measurement inputs:	
- Sensor measurements (inputs 1...13) Measurement channel accuracy:	
	Also sensor tolerances and the effect of cables must be considered when calculating total accuracy.
	- NTC10: +0.1 °C between -50 °C...+100 °C and +0.25 °C between 100 °C...+130 °C
	- NTC20: +0.1 °C between -20 °C...+130 °C and 0.5 °C between -50 °C...-20 °C
	- NTC1.8: +0.1 °C between -50 °C...+100 °C and -0.4 °C between 100 °C...+130 °C
	- NTC2.2: +0.1 °C between -50 °C...+100 °C and -0.6 °C between 100 °C...+130 °C
	- Ni1000LG: +0,2 °C between -50 °C...+130 °C
	- Ni1000DIN: +0,2 °C between -50 °C...+130 °C
	- Pt1000: +0,2 °C between -50 °C...+130 °C
- Milliampere signal (inputs 12-14) 0 - 20 mA current message, meas. accuracy 0.1 mA	
- Voltage measurement (inputs 4, 7, 12-14) 0...10 V voltage message, meas. accuracy 50 mV	
- Digital inputs (inputs 12-17)	Contact voltage 15 Vdc (input 17), contact voltage 5 Vdc (input 12-16)
	Switching current 1.5 mA (input 17), switching current 0.5 mA (input 12-16).
	Transfer resistance max. 500 Ω (closed), min. 11 k Ω (open).
- Counter inputs (17 and 18).....	Minimum pulse length 30 ms
Analog outputs	
(27, 30, 43, 46, 49, 50)	Output voltage range 0...10 V
	Output current max 10 mA /output
24 VAC voltage outputs	
(28, 41, 44, 47)	Output current max 1 A /output
	Without external power supply outputs current max. a total of 10 VA continuously, temporary (60 s) 15 VA.
Relay outputs	
- Change-over contact relay (71...76)..	2 pcs, 230 V, 1 A
Triac outputs	
- 230 Vac (77...80)	2 pcs, 230 V, max 1 A / output. Potential-free AC switch.
	DC controls require intermediate relay.
- 24 Vac (24, 25)	24 Vac. Output current max. a total of 1 A .
	Without external power supply outputs current max. a total of 10 VA continuously, temporary (60 s) 15 VA.
Data transfer connections	
- RS-485 bus (A1 and B1)	Galvanically isolated, supported protocols Modbus-RTU
Option	
- M-LINK	M-LINK adapter provides Modbus TCP / IP interface for C203 device.
- GSMMOD	By connecting the modem to the C203 controller, you can communicate with the regulator text messages and pass this information on alarms to your mobile via SMS. The modem is connected to either the device or the M-LINK adapter RJ-45 connector. GSMMOD is powered by the C203 (terminal 52 and 53).

APPROVALS:

- EMC-directive
- Interference tolerance
- Interference emissions.....



Digital inputs (on/off) max 4 pcs

- Information about the pump's running mode
- Alarm information about overload protection
- General alarm

Pulse measurement input

- Water volume
- Energy measurement

Lan/Internet connection 2 pcs

- Modbus RTU via connectors 21-23
- By using external M-LINK device Modbus TCP/IP connection is available.

Actuator control

- 2 pcs 3-point controlled 24VAC
- 6 pcs voltage controlled (0 ... 10V)

Attention! Voltage controlled 0...10V actuators can be connected to cascade control (2 pcs / circuit)

Alarm relay 1pc (Triac 2, if H2 actuator is not 3-point controlled)

Additional Control panel

- Max. 20 m CAT 5 cable (optional)

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