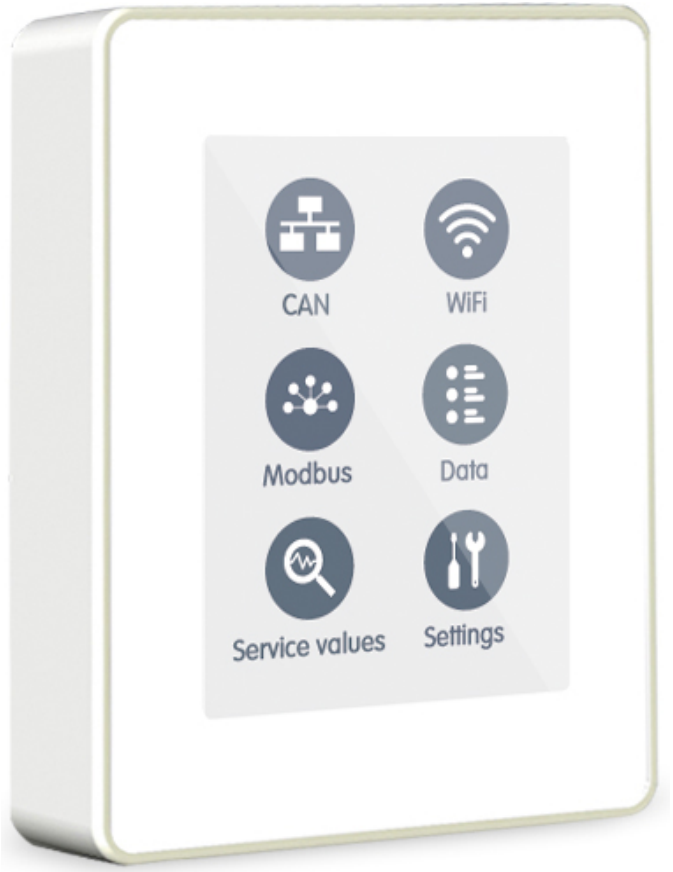
Installation and operating instruction

Multigateway



Read carefully before installation, commissioning and operation

CONTENT

Safety Instructions **3**

EG-Conformity 3
General Instructions 3
Changes to the Unit 3
Warranty and Liability 4
Disposal and Pollutants 4
Scope of Supply 4

Description Multigateway **5**

Technical Data 5

Installation **6**

Multigateway installation 6
Example CAN-Connection 7

Operation **7**

Main Menu 7
CAN 8
WiFi 9
Modbus 10
Data 10
Service Values 11
Settings 11
Notes 11

SAFETY INSTRUCTIONS

EG-Conformity

By affixing the CE mark to the unit the manufacturer declares that Multigateway conforms to the following relevant safety regulations:

- EU low voltage directive 2014/35/EU
- EU electromagnetic compatibility directive 2014/30/EU
- EU RoHS Directive 2011/65/EU
- EU WEEE Directive 2012/19/EU (Reg.nr. DE 23479719)

conforms. Conformity has been verified and the corresponding documentation and the EU declaration of conformity are kept on file by the manufacturer.

General Instructions

Please read carefully!
These installation and operating instructions contain basic instructions and important information regarding safety, installation, commissioning, maintenance and the optimal use of the unit. Therefore these instructions must be read and understood completely by the installation technician/specialist and by the system user before installation, commissioning and operation of the unit.

This unit is an automatic, electrical Data logger with GUI. Install the unit only in dry areas and under the ambient conditions described in “Specifications”.

In addition, observe the applicable accident prevention regulations, the regulations of the Association of Electrical Engineering, the local power supply utility, the applicable DIN-EN standards and the installation and operating instructions for the additional system components. Installation, electrical connection, commissioning and maintenance of the device may only be carried out by an appropriately trained specialist.
Users: Make sure that the specialist gives you detailed information on the function and operation of the unit. Always keep these instructions in the vicinity of the unit.

The manufacturer does not take over any liability for damage caused through improper usage or non-compliance of this manual!



Before working on the unit, switch off the power supply and secure it against being switched on again! Check that there is no power flowing! Electrical connections may only be made by a specialist and in compliance with the applicable regulations. The unit may not be put into operation if there is visible damage to the housing, e.g. cracks.

Changes to the Unit

- Changes, additions to or conversion of the unit are not permitted without written permission from the manufacturer.
- It is likewise forbidden to install additional components that have not been tested together with the unit.
- If it becomes clear that safe operation of the unit is no longer possible, for example because of damage to the housing, turn the Unit off immediately.
- Any parts of the unit or accessories that are not in perfect condition must be exchanged immediately.
- Use only original spare parts and accessories from the manufacturer.
- Markings made on the unit at the factory must not be altered, removed or made illegible.
- Only the settings described in these instructions may be set using the Unit.



Changes to the unit can compromise the safety and function of the unit or the entire system.

Warranty and Liability

The Unit has been manufactured and tested with regard to high quality and safety requirements. The warranty and liability shall not include, however, any injury to persons or material damage that is attributable to one or more of the following causes:

- Failure to observe these installation and operating instructions.
- Improper installation, commissioning, maintenance and operation.
- Improperly executed repairs.
- Unauthorised structural changes to the unit.
- Use of the device for other than its intended purpose.
- Operation above or below the limit values listed in the ‚Specifi cations‘ section.
- Force majeure.

Disposal and Pollutants

The unit conforms to the European RoHS 2011/65/EU for the restriction of the use of certain hazardous substances in electrical and electronic equipment.



For disposal, according to the WEEE Directive 2012/19/EU, the device does not belong in household waste under any circumstances. Dispose of the unit only at appropriate collection points or ship it back to the seller or manufacturer.

Scope of Supply

- Multigateway
- Multigateway installation guide
- Mounting frame for surface mounting
- 2 screws 3.5 x 35 mm and 2 wall plugs 6 mm for wall mounting of the surface mounting frame
- 2 screws 3 x 9 mm for connecting Multigateway with surface mounting frame
- 2 single wire connectors
- Operating tool
- CAN terminating resistor
- CAN adapter cable 50 mm
- 4 strain relief clamps
- 8 screws strain relief clamp 2.2 x 9.5 mm

DESCRIPTION MULTIGATEWAY

The Multigateway is a data logger with a graphical user interface.

There are two main functionalities (I and II):

I) The multigateway can communicate via Modbus with a "master" that can retrieve logged data.
The Multigateway receives data from controllers (TDC, HCC, FWC series) via CAN bus.

The data are:

1) Sensor data
2) Relay data

II) The multigateway can communicate with a "master" via Modbus to read and set parameters.
The Multigateway reads / sets the parameters of controllers (TDC, HCC, FWC series) via CAN bus.

Technical Data



	Housing	2-part, ABS plastic 75 mm x 95 mm x 19 mm Glass front
	Display	4 entry keys Fully graphical display, 240 x 320 dots 2.8 inches (7 cm) diagonal
1 2 3	**Operation**	Intuitive user guidance
	Language	Deutsch English

Electrical specifications:	
Power Supply	24 VDC +/-10 %
Power consumption	max. 2,5 W
Protection Class	IP 20
Protection class / overvoltage category	III / I

Interface	
Fieldbus	CAN
WiFi module	ESP32-WROOM-32E
Modbus RTU	RS485

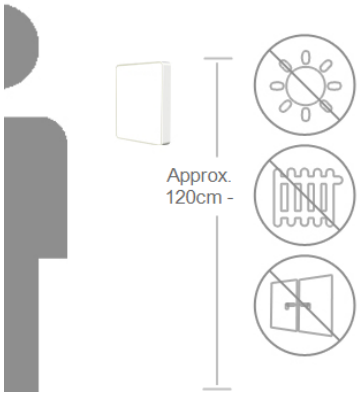
Max. Cable Length	
CAN	<3m, if the cable length is >=3m it is necessary to use a shielded twisted pair bus cable and connect the shield on one side to the protective conductor.

Permissible Ambient Conditions	
during operation	0 °C - 50 °C, no moisture condensation permitted
for transport / storage	0 °C - 60 °C, no moisture condensation permitted

Other Specifications	
Installation Methods	Surface wall mounting
Real Time Clock	RTC with 24 hour power reserve

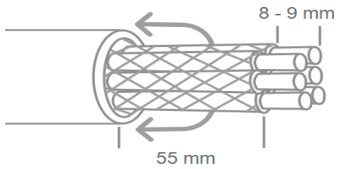
INSTALLATION

Multigateway installation



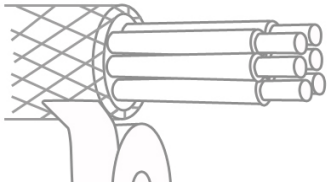
Mount the unit at a suitable location.

> ⚠ Pay attention to suitable environmental conditions. Direct sunlight, sources of heat and cold, e.g. radiators and windows must be avoided.



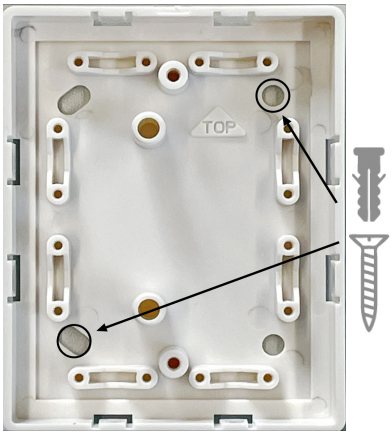
Recommended connection cable: twisted pair cable with shield, e.g. bus cable 3 × 2 × 0,22 mm². Strip cables, slip protective conductor over, and remove fill material as needed.

When wall mounting, make sure that the cables are kept as short as possible (max. 40 mm for direct wall mounting), as unnecessary vein loops in the Multigateway housing can lead to problems.



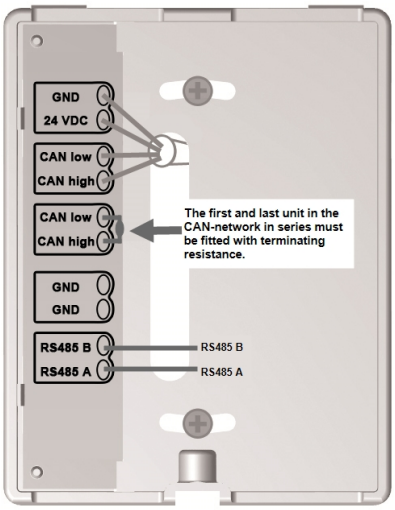
Strip the last 8 - 9 mm of the wires. Isolate shielding and connect it at a suitable location (controller or CAN-box) to the protective conductor.

> ⚠ Any contact between protective conductor and circuit board can cause serious damage.



Wall Installation

Hold the base at the selected position and mark 2 fixing holes diagonally. Make sure that the wall surface is as even as possible so that the housing does not become distorted when it is screwed on. Using a drill and drill holes at the points marked on the wall and push in the plugs. Insert screws and screw it in slightly. Align the base and tighten the screws.

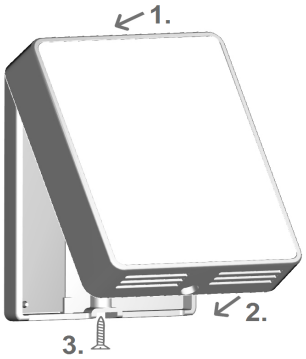


Open the connection terminals with the enclosed operating tool and make the electrical connection (GND, 24 VDC, CAN low und CAN high) as described.

> ⚠ The first and last unit in the CAN-network in series must be fitted with terminating resistance.



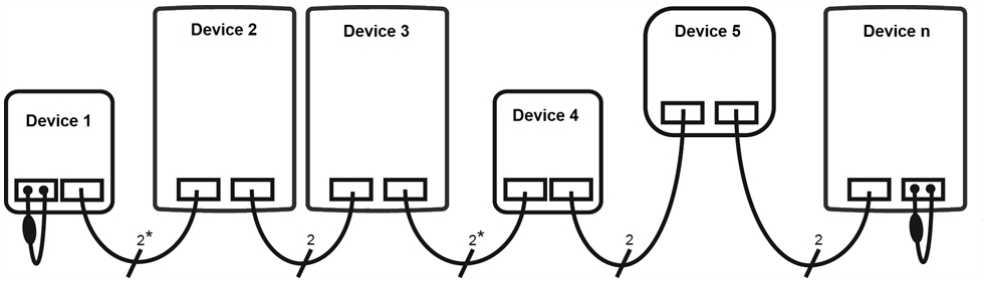
The connection of the opposite side (controller) can be found in the corresponding terminal diagram in the controller manual.



Place the control panel on the lower part of the housing as illustrated in the picture and fix it in place with the screw supplied.
Switch on the mains voltage and put the Multigateway into operation.

> ⚠ The setup wizard can be accessed at any time in Multigateway under the menu item 'Expert'.

Example CAN-Connection



*Only CAN in power supply from 4 cores of the regulator.

The order and the number of devices (max. 50) is arbitrary.

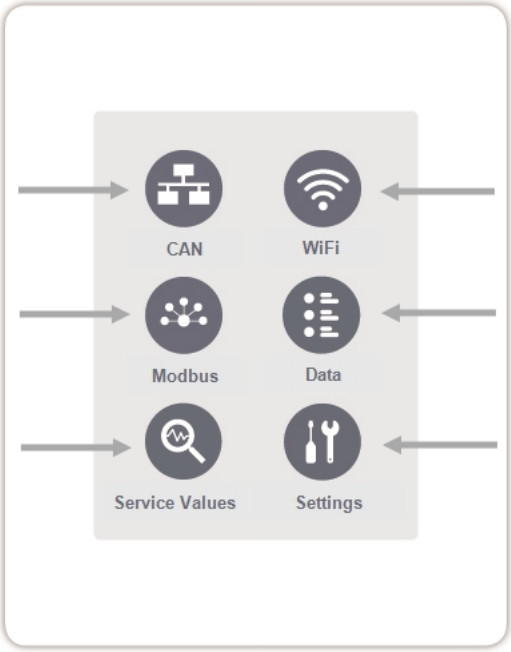
OPERATION

Main Menu

CAN
Add devices to the network

Modbus
Set baud rate and parity

Service Values
Messages and system-relevant data



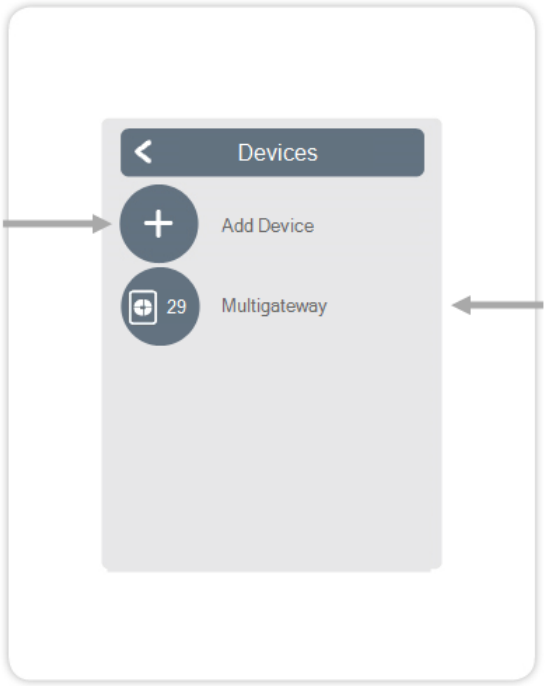
WiFi
WiFi settings

Data
Settings for storing data

Settings
Device-specific settings such as language, date and screen brightness.

Main menu > **CAN**

Add Device
Starts the search for new available devices in the network

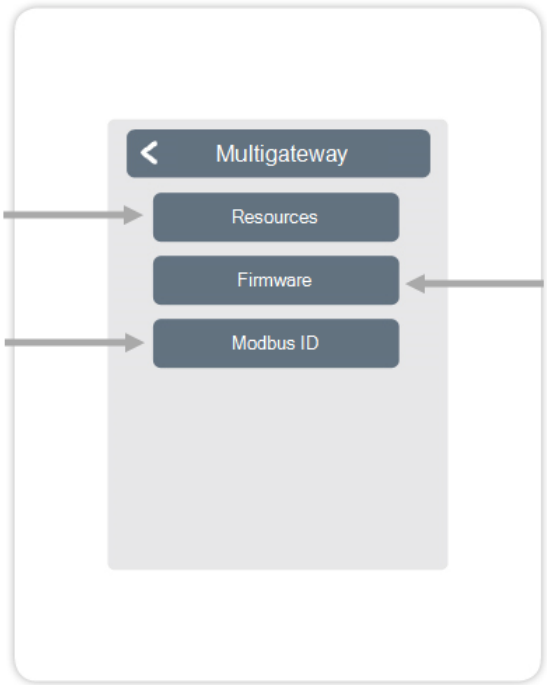


Description
Shows the detected type of the unit

Main menu > CAN > **Multigateway**

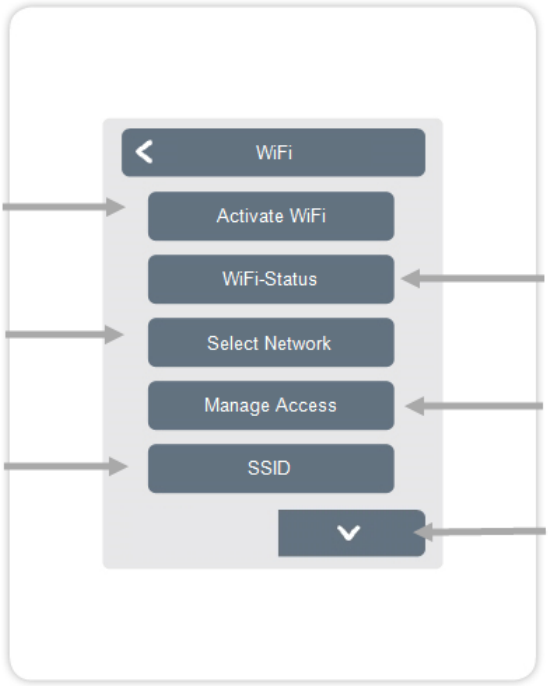
Resources
Displays all connections connected to the device

Modbus ID
Basic Modbus ID



Firmware
Display of the current firmware version and possibility to update the firmware.

Main menu > **WiFi**



Activate WiFi
Activate WiFi function

Select Network
Scan for available networks and select the network

SSID
Manually entering the WLAN name

WiFi status
Information about the WiFi status and the device address.

Manage Access
Allow up to 5 users to access the device by entering their e-mail addresses.

WiFi password
Entering the WiFi password

Activate DHCP
If auto-configuration is enabled, the device searches the network for a DHCP server that assigns it an IP address, subnet mask, gateway IP and DNS server IP. If you deactivate the auto configuration (DHCP), you will have to make the required network settings manually!

IP address
Entering the CCC IP address

Network mask
Entering the network mask

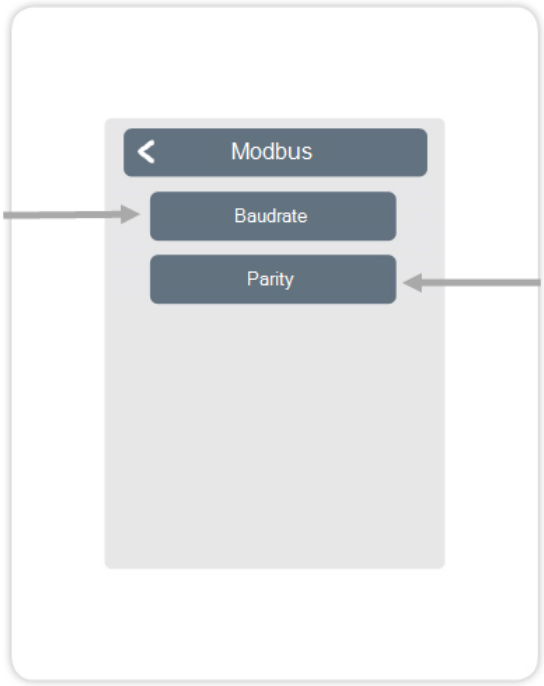
Gateway
Enter the gateway address

DNS/ DNS 2
Entering the DNS address

Modbus

Main menu > **Modbus**

Baudrate
Setting the transmission rate during a communication



Parity
Setting the parity of the Modbus RTU interface

none = 11 bits + stop bit
even = number of bits even
odd = number of bits odd

Data

Main menu > **Data**

Logging
Switching data storage on and off

Delete Data
Delete old log data



Log Data
Time and date of start and end storage plus the corresponding Unix timestamps.

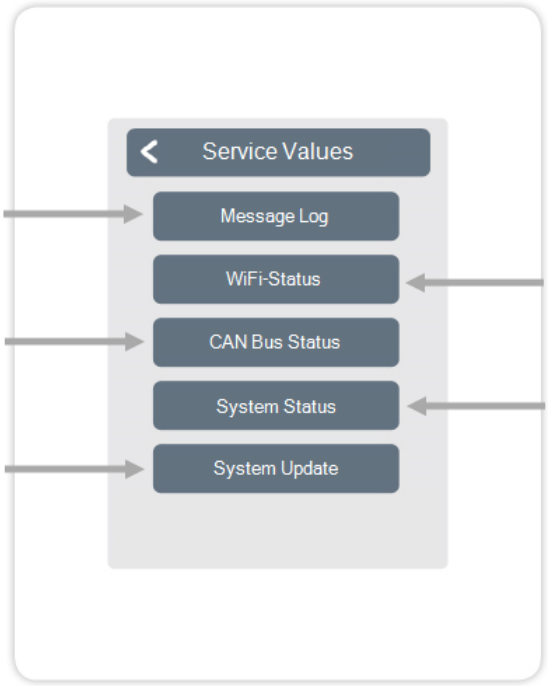
Service Values

Main menu > **Service values**

Message Log
Display of the error memory

CAN Bus Status
CAN bus status display

System Update
Enables an update of all devices interconnected in the private CAN network.



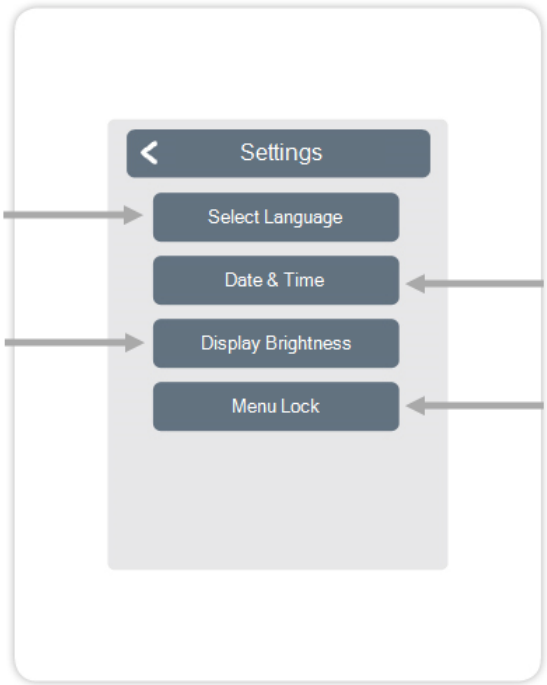
WiFi-Status
Display of the WiFi status

System Status
Display of the system status

Settings

Main menu > **Settings**

Select Language
Set the device language



Date & Time
Setting the time and date and automatic summertime/wintertime changeover

Menu Lock
Activate menu lock to protect settings with a password.

Notes

Final Declaration
Although these instructions have been created with the greatest possible care, the possibility of incorrect or incomplete information cannot be excluded. Subject as a basic principle to errors and technical changes.

Date and time of installation:

Name of installation company:

Space for notes:

Your specialist dealer:

Manufacturer:

SOREL GmbH Mikroelektronik
Reme-Str. 12
D - 58300 Wetter (Ruhr)

+49 (0)2335 682 77 0
+49 (0)2335 682 77 10

info@sorel.de
www.sorel.de

Version: 02.04.2024