

1 C2C-EB-AHT-MOD

Coupling module for connecting plug-in refrigeration units with third party controller to the Wurm-C-BUS

1.1 Front view



Fig. 1: Front view

1.2 Features

- Coupling module for 30 chests
- Transparent representation of individual chests in FRIGODATA XP
- Selectable address offset for C-BUS addresses (Wurm CAN communication bus)
- Automatic identification of connected chests
- Monitoring of connected chests
- Alarms by bus and alarm relay
- Alarm suppression for switched-off chests (when status is "OFF")
- Large data memory for temperature list per chest
- Integrated real-time clock for correct time assignment of history data
- Event list per chest
- Installation on top-hat rail in the control cabinet

1.3 Safety instructions

Writing conventions

WARNING



- Avoid the described hazard: otherwise, **electric voltage** represents a danger that could lead to **fatal** or **serious** bodily injury.

CAUTION



- Avoid the described hazard: otherwise, **minor** or **intermediate** physical injury or damage to property will result.

For your safety

For safe operation and to avoid personal injury and equipment damage through operator error, always read these instructions, become familiar with the device, and follow all safety instructions on the product and in this document, as well as the safety guidelines of Wurm GmbH & Co. KG Elektronische Systeme. Keep these instructions ready to hand for quick reference and pass them on with the device if the product is sold.

Wurm GmbH & Co. KG Elektronische Systeme accepts no liability in the case of improper use or use for purposes other than the intended purpose.

Target group	This manual is intended for "service technician" personnel.
Intended use	C2C-EB-AHT-MOD is a coupling module for connecting plug-in refrigeration units with third party controller to the Wurm-C-BUS.

WARNING



DANGER TO LIFE FROM ELECTRIC SHOCK AND/OR FIRE!

- Switch off the power to the entire plant when carrying out installation, wiring or disassembly work! Otherwise, mains voltage and/or external voltage may still be present, even if the control voltage is switched off! Always remove both power plugs (L and N).
- The wiring of the device must be carried out only by qualified electricians!
- Use the correct tools for any work!
- Check the entire wiring after connection!
- Observe the maximum loads for all connections!
- Never expose the device to moisture, for example due to condensation or cleaning agents.
- Stop operating the device if it is faulty or damaged and its safe operation is compromised!
- Do not open the device.
- Do not repair the device yourself! If the device requires repairs, send it in with an exact description of the fault!

CAUTION



ELECTROMAGNETIC INTERFERENCE MAY CAUSE FAULTS!

- Always use shielded data cables and place them far away from power lines.



Wurm Infocenter



paperless info



Version and validity of the documentation

Version	Date	
V4.7.0 and higher	2023-11	Documentation status

Any versions not listed are special solutions for individual projects and are not described in detail in this document. This document will automatically cease to be valid if a new technical description is issued.

Manufacturer: Wurm GmbH & Co. KG Elektronische Systeme, Morsbachtalstraße 30, D-42857 Remscheid. You can find more information on our website at www.wurm.de.

1.4 Connection

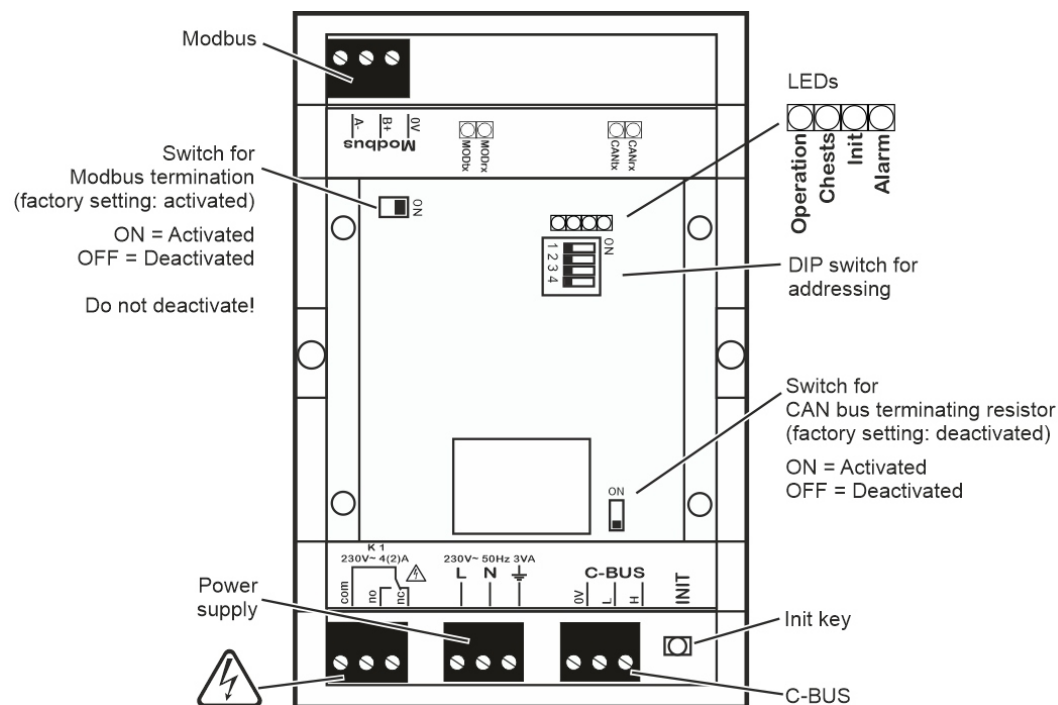


Fig. 2: Connection diagram without housing cover

- The Modbus termination is activated ex works and may not be deactivated!
- From the factory, the CAN bus terminating resistor is deactivated and can be activated depending on the integration of the coupling module in the C-BUS.
- Establish the bus system connections carefully.
- Unused wires in the network cable must be insulated, as they carry signals.
- The controller types that can be used and their compatibility with older versions of C2C-EB-AHT-MOD can be found in the product manual.
- Please also refer to the documentation on controllers and plug-in refrigeration units from the respective manufacturers.

NOTICE



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1. Assemble the desired chest block following manufacturer's installation instructions.
2. Connect the chests in the block to each other using the cable assemblies.
3. Install a bus connection box and connect it to the first chest of the assembled block. Please ensure that line lengths are as short as possible.

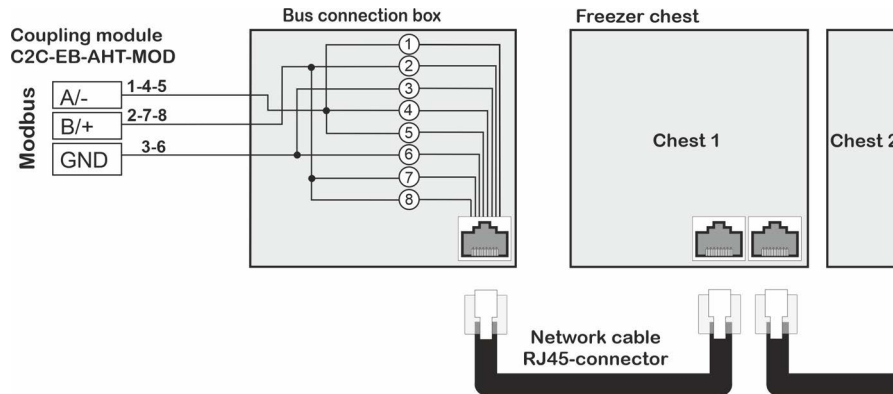


Fig. 3: Connection on the C2C-EB-AHT-MOD

4. Connect a bus terminating resistor for the last chest.

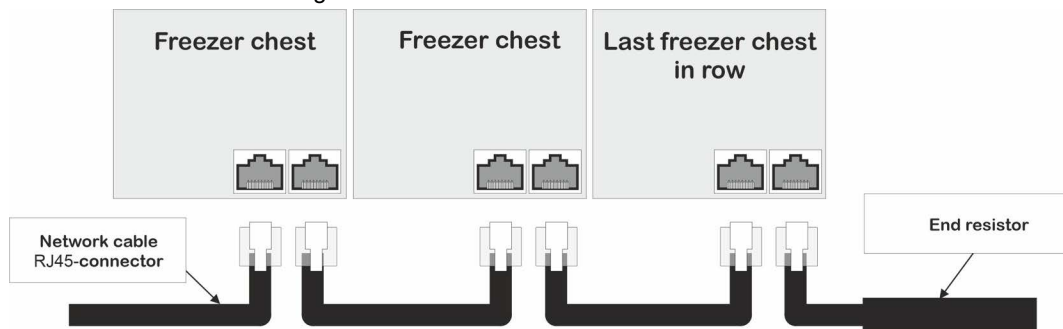


Fig. 4: Terminating resistor

1.5 Technical data

Power supply	230V~, +10%/-20%, about 3VA
Alarm relays	Change-over contact, 230V~, 4(2)A
Display	1 x green LED, operation 1 x green LED, chests 1 x orange LED, Init 1 x red LED, alarm 4 x green LED, Modbus data traffic and C-BUS data traffic
C-BUS communication	3-conductor CAN bus interface, galvanically isolated, switchable terminating resistor
Modbus communication	3-wire Modbus interface, galvanically isolated, fully switchable termination
Housing	Plastic
Dimensions	(W x H x D) 90 x 127 x 50mm
Fastening	Top-hat rail TH 35-15 or TH 35-7.5 (DIN EN 60715)
Ambient temperature	Operation: 0...+55°C, storage: -25...+70°C
Weight	About 350g
CE conformity	2014/30/EU (EMC Directive) 2014/35/EU (Low Voltage Directive)
	RoHS II

