1 CAN-Bridge

For galvanic isolation of 2 bus segments

1.1 Front view

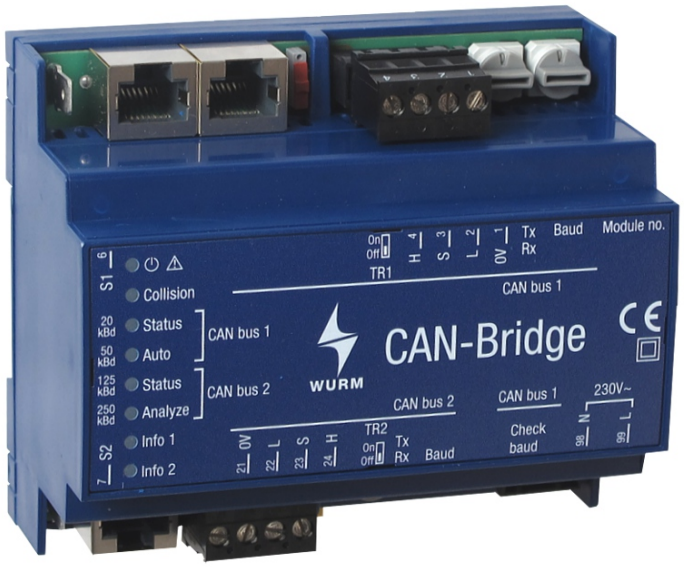

Fig. 1: CAN-Bridge front view

1.2 Features

- Integrated 230V power supply
- Electrical isolation of two CAN bus segments
- Active suppression of incomplete telegrams
- Extends the number of possible CAN bus topologies
- Extends the total maximum possible CAN bus length
- Integrated switchable CAN bus terminating resistors
- Smart data filter
- Different baud rates possible on both CAN bus segments
- Physical CAN bus measurement to detect level errors and wiring errors
- Diagnostics mode for plug-in refrigeration units
- Simple handling
- Connection to the Wurm system via Wurm CAN communication bus (C-BUS) and FRIGODATA XP

1.3 Scope of supply

- 1 x product information
- 3 x screw terminal socket
- 1 x terminal strip with end cover plate
- 2 x short PE connection leads
- 1 x adapter ZCB-ADP/CB-PI
- 1 x RJ45 patch cable

1.4 Safety instructions

Writing conventions

WARNING

- Avoid the described hazard: Otherwise there is danger from **electric voltage** that can lead to death or **serious** bodily injury.

CAUTION

- Avoid the described hazard: Otherwise **minor** or **medium** bodily injury or property damage 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	The CAN-Bridge is used for the electrical isolation of two CAN bus segments.

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!
- 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

FAULTS CAN OCCUR IF THERE IS ELECTROMAGNETIC INTERFERENCE!

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

Version and validity of the documentation

Version	Date	Functional upgrade
V1.1.3	2023-05	Documentation status

Any software 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
For further information, see our website at www.wurm.de

1.5 Installing the device

The device is intended for top-hat rail installation and is suitable for operation in fuse boxes and distribution cabinets. The device can be positioned immediately adjacent to another device without gaps.

DANGER TO LIFE FROM ELECTRIC SHOCK AND/OR FIRE! **WARNING**

- Switch off the power to the entire plant before installing. Otherwise, mains voltage and/or external voltage may still be present, even if the control voltage is switched off!
- Observe the maximum loads for all connections!

✓ The entire plant must be free of voltage.

1. **(A)** Place the device with the leading edge at an acute angle to the top-hat rail.

2. **(B)** Push the device downwards onto the top-hat rail.
   ▶ The device snaps into place with the fastening safety catch **(a)** on the top-hat rail.
   ▶ You can now connect the device.

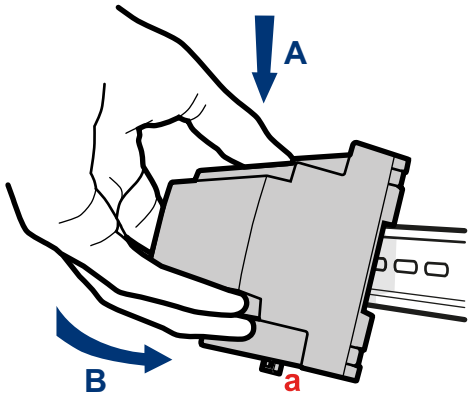

Fig. 2: Top-hat rail installation

1.6 Connection diagram

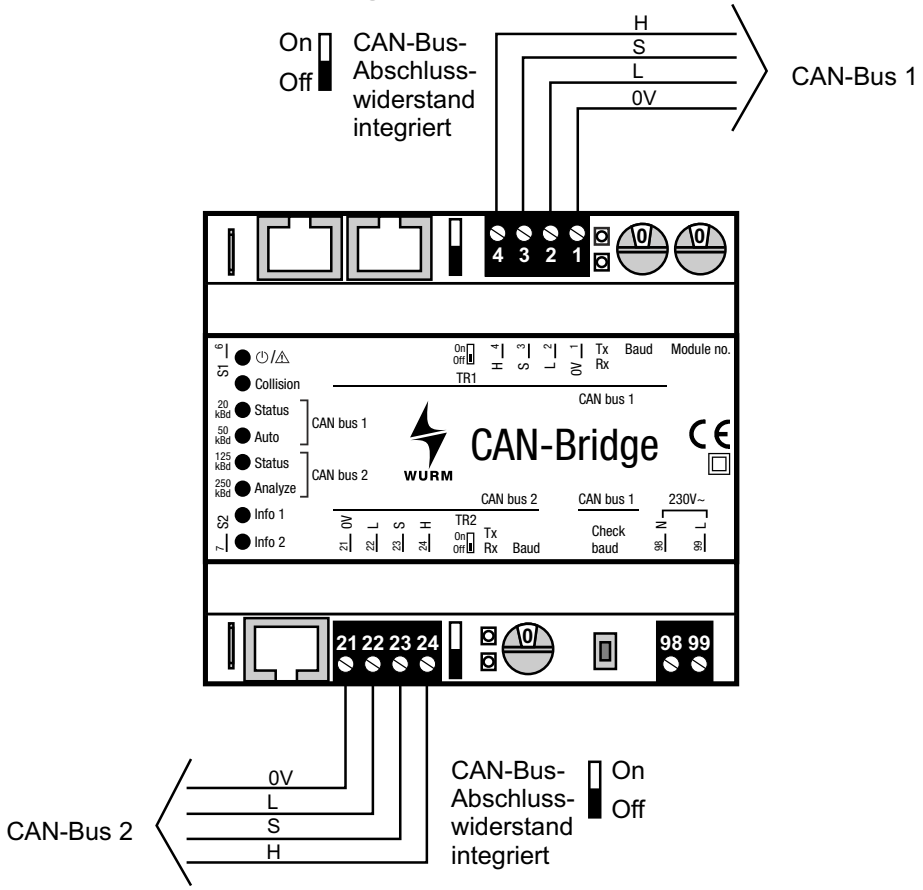

Fig. 3: Connection diagram

NOTICE

- The assignment of the Wurm CAN bus is different from the CAN bus assignment for plug-in refrigeration units. Adapter ZCB-ADP/CB-PI is available for connecting plug-in refrigeration units. More details about the adapter can be found in the related product information.

1.7 Technical data

Power supply	230V~, +10% / -15%, 50 / 60Hz, 4.5VA
Communication CAN bus 1	3-conductor CAN bus interface, galvanically isolated, screw terminals 2.5mm² / 2 x RJ45 socket and switchable terminating resistor
Communication CAN bus 2	3-conductor CAN bus interface, screw terminals 2.5mm² / RJ45 socket and switchable terminating resistor
Housing	Plastic
Dimensions	(WxHxD) 106 x 89 x 56mm (DIN 43880)
Fastening	Top-hat rail TH 35-15 or TH 35-7.5 (DIN EN 60715)
Ambient temperature	Operation: -20...+55°C, storage: -25...+70°C
Degree of protection	IP20
Weight	About 364g
CE conformity	EU conformity as defined in - 2014/30/EU (EMC Directive) - 2014/35/EU (Low Voltage Directive)
	RoHS II