1 FGT004

Field module for building technology solutions

1.1 Front view

Fig. 1: Front view

1.2 Features

- Inputs and outputs
  - Constant output 0...10V
  - PWM output 0…10V
  - 1 x Analogue input 0...10V / 4...20mA
  - 1 x Analogue input 4...20mA
  - 3 x digital input 24V=
  - 4 x temperature sensor (TRK277, DGF980)
  - 3 x relay (2 x NC contact, 1 x NO contact)
- Connection of an external display
- Emergency program in case of bus errors
- No parameters to be set on the device
- Bus connection by patch cable and screw terminals (4-pin)
- Connection to master module via Wurm CAN field bus (F-bus)

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	The **FGT004** is a field module for building technology solutions.

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.

Version and validity of the documentation

Version	Date	
V4.2.0 and higher	2023-02	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 diagram

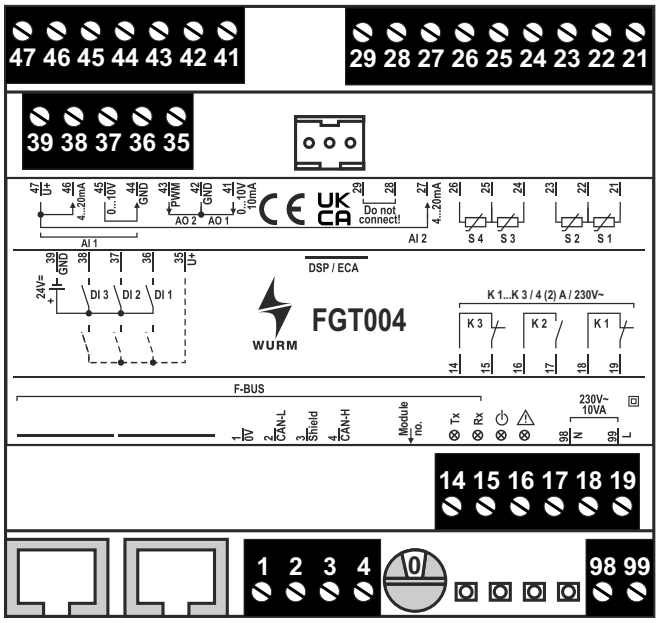

Fig. 2: Connection diagram

1.5 Installing the device

This device is designed for top-hat rail installation. The housing has standard DIN 43880 dimensions and is suitable for installation in fuse boxes, distribution cabinets, or the load sections of refrigeration units.

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. Always remove both power plugs (L and N).

✓ 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.

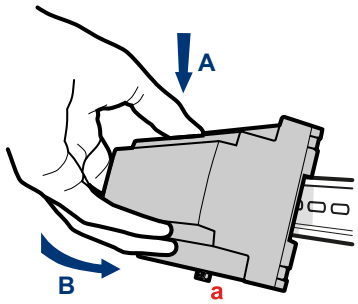

Fig. 3: Top-hat rail installation

1.6 CAN bus address setting

To correctly register the FGT004 on the CAN bus, you must assign it a unique CAN bus address using a coding switch. This is a requirement for functioning communication with the master module.

You can set CAN bus addresses 0-F with the coding switch. You can thus connect 16 field modules to the CAN bus.

Fig. 4: Coding switch

1.7 Technical data

Power supply	230V~, +10% / -15%, max. 10VA
Display	1 x green LED, operating voltage 2 x green LED, CAN bus data traffic (CAN Tx, CAN Rx) 1 x red LED, flashes in case of fault
Communication	3-wire CAN bus interface, shielded, galvanically isolated, screw terminals or RJ45 socket (2 x)
Temperature sensor	4 x TRK277 / DGF980
Analogue input	1 x 4…20mA or 0…10V=, 22V= supply voltage 1 x 4...20mA, 22V= supply voltage
Digital inputs	24V=, +20% / -10%, approx. 5mA per input
Output relay	2 x NC contact, 230V~, 4(2)A 1 x normally open contact, 230V~, 4(2)A
Display/circuit breaker connection	1 x socket for assembled line to display DSP002, DSP100, DSP-LCD, DSP-Booster or for controlling an ECA970 circuit breaker
Analogue output	1 x 0...10V=, non-floating, max. load 10mA
PWM output	1 x 0...10V=, non-floating, max. load 10mA
Dimensions	(W x H x D) 106 x 90 x 58mm (DIN 43880)
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 275g
Conformities	- 2014/30/EU (EMC Directive) - 2014/35/EU (Low Voltage Directive)
	RoHS II