

## Front view



### Master module for cold locations



## Features

- Controller with high-performance controller and large internal memory for complex control and management tasks
- Simple start-up through parameter setting of cold locations with presettings from the expert database
- Connection of 8 cold location field modules
- Frigotakt+ adaptive control process
- Intelligent EC defrosting
- Intelligent EEV control with Smartflow+
- Control according to representative wares temperature or temperature range
- Differentiation of unused sensors and faulty sensors
- Integrated relay outputs
- Multilingual menu prompting (DE/EN/FR/NL)
- Wurm G4 operating concept
- Innovative user interface with Sticky Keys
- Graphical display with backlighting, plain text, 6 operating keys, and 1 Info key
- Context-sensitive Help with links to Wurm paperless info App
- Direct navigation by Quicklink
- Interchangeable with FRIGOLINK-G3
- CAN bus connection via patch cable and push-in terminals
- Fastening in the installation frame, or individual installation without frame
- Connection to the Wurm system through a Wurm CAN communication bus (C-BUS) and FRIGODATA XP
- High level of safety thanks to the galvanically isolated Wurm CAN field bus (F-BUS) used to connect the field modules

### Writing conventions

Symbol	Meaning
 <b>CAUTION!</b>	Avoid the described hazard: otherwise <b>minor</b> or <b>medium</b> physical injury or damage to property will result.
 <b>WARNING!</b>	Avoid the described hazard: otherwise there is danger from <b>electric voltage</b> that could lead to death or <b>serious</b> physical injury.

### For your safety

For safe operation and to avoid personal injury and equipment damage through operating 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 case of improper use or use for other than the intended purpose.

<b>Target group</b>	These instructions are intended for "service technicians".
<b>Intended use</b>	The HKS-G4 is a master module for 8 cold locations.



#### **WARNING!**

##### **Danger to life from electric shock and/or fire!**

- Switch off the power to the entire plant when installing, wiring or removing! Otherwise a mains voltage and/or external voltage may still be present even if the control voltage is switched off!
- The wiring of the device should be carried out only by a qualified electrician!
- Use only the correct tools for all work!
- Check all wiring after connection!
- Take note of the maximum loads on all connections!
- Never expose the device to moisture, for example due to condensation or cleaning agents!
- Take the device out of operation if it is faulty or damaged and is therefore compromising safe operation!
- Do not open the device!
- Do not repair the device yourself! If required, send it in for repair with an exact description of the fault!



#### **CAUTION!**

##### **Electromagnetic interference can cause faults!**

- Use only shielded data lines and place them far away from power lines!

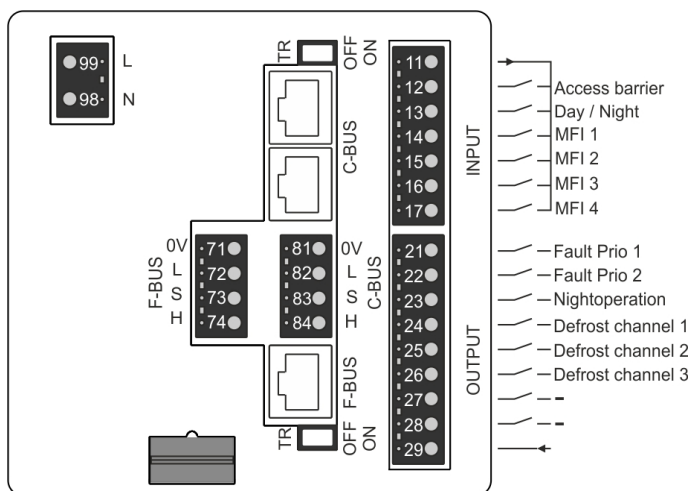
### Software revision and validity of documentation

Software version		Documentation status
V9.0.0	2018-01	

Any software versions not listed are special solutions for individual projects and are not described in detail in this document. This document automatically ceases 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](http://www.wurm.de)

### Circuit diagram



### Installing



#### WARNING! Danger to life from electric shock and/or fire!

- Switch off the power to the entire plant before installing! Otherwise a mains voltage and/or external voltage may still be present even if the control voltage is switched off!



Installation in the MGR

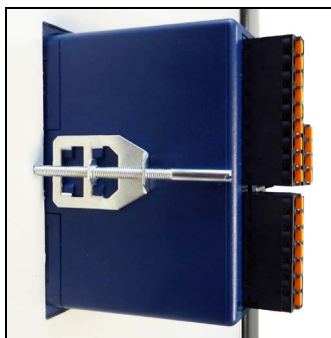
#### Installation in the installation frame MGR131/141 and MGR231/241

Push the device in the installation frame to the stop until it locks between the spring clips.



#### Note!

- Please note the product information for the installation frame MGR131/141 and MGR231/241.

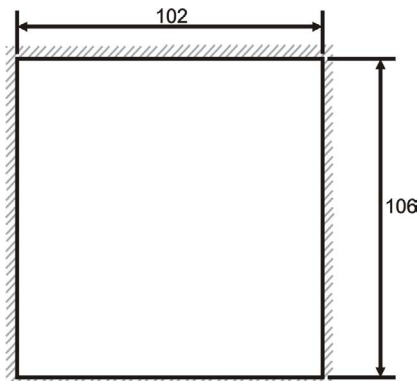


Installation with ZEM

#### Individual installation with screw clamps of the ZEM type

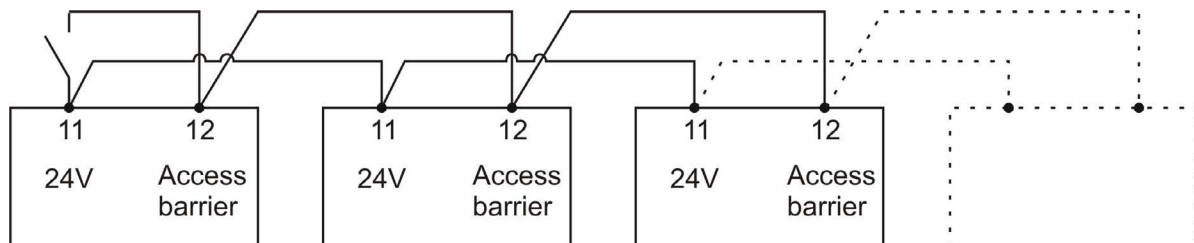
Insert the device up to the stop in a section of a switching cabinet door. Then fix the device with screw clamps of the ZEM type to the switching cabinet door.

## Product information



Installation section for individual installation

### Wiring and connection of several master modules



### Technical data

<b>Power supply</b>	230V~, +10% / -15%, 50Hz, max. 13VA	
<b>Display</b>	Graphical display with backlighting 1 x red LED, flashing in case of fault 1 x green LED, for parameter adjustment 1 x yellow LED, for operating status of C-BUS 1 x yellow LED, for operating status of F-BUS	
<b>Communication C-BUS</b>	3-wire CAN bus interface, shielded, galvanically isolated, push-in terminals 2.5mm <sup>2</sup> / RJ45 socket and switchable terminating resistor for communication with system devices	
<b>Communication F-BUS</b>	3-wire CAN bus interface, shielded, galvanically isolated, push-in terminals 2.5mm <sup>2</sup> / RJ45 socket and switchable terminating resistor for communication with field modules	
<b>Digital inputs</b>	6 x 24V=, self-powered, approx. 5mA per input, push-in terminals 2.5mm <sup>2</sup>	
<b>Digital outputs</b>	8 x normally open contact with common supply, 1A, rated voltage 230V~, push-in terminals 2.5mm <sup>2</sup>	
<b>Dimensions</b>	(WxHxD) 109 x 109 x 92mm	
<b>Housing</b>	Plastic, foil	
<b>Fastening</b>	In MGR installation frame, individual installation with ZEM	
<b>Ambient temperature</b>	Operation: 0...+55°C, storage: -25...+70°C	
<b>Weight</b>	About 650g	
<b>CE conformity</b>	- 2014/30/EU (EMC Directive) - 2014/35/EU (Low Voltage Directive)	CE
<b>EAC conformity</b>	- TR CU 004/2011 - TR CU 020/2011	EAC
	RoHS II	
<b>Valid from</b>	Version 9.0.0	