

## Front View



### Master module for cold locations



## Features

- Connection of a maximum of 8 cold location field modules
- Adaptive control process *Frigotaktplus*
- Intelligent EC-defrosting
- Regulation of cold locations according to representative product temperature
- Hardware with high-performance controller and large internal memory for complex control and management tasks
- Bus connections for patch cables
- Integrated relay outputs
- Fastening in the module frame, or individual mounting without frame also possible
- 4-line, blue-lit plain text display with 8-button control panel
- Multilingual menu prompting (DE/EN/FR/NL)
- Simple start-up through parameter setting of the cold locations with presettings from the expert database.
- Connection to the Wurm system over a CAN-bus connection and Frigodata XP

### Writing conventions

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

### For your safety

For safe operation and to avoid personal injury and equipment damage through operational error, always read these instructions, become familiar with the device, and implement all of the safety instructions on the product and in these instructions 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 when 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 technician" personnel.
<b>Intended purpose</b>	The HKS-G3 is a main module for a maximum of 8 cold locations.



#### **WARNING!**

##### **Danger of death from electric shock!**

- Switch off the power to the entire system when installing, wiring or removing! Otherwise a mains 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!
- 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!



#### **CAUTION!**

##### **Danger of fire if there is overloading of the connections!**

- Ensure the maximum loads on all connections!

##### **Faults are caused by electromagnetic interference!**

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

##### **Damage to device if handled incorrectly!**

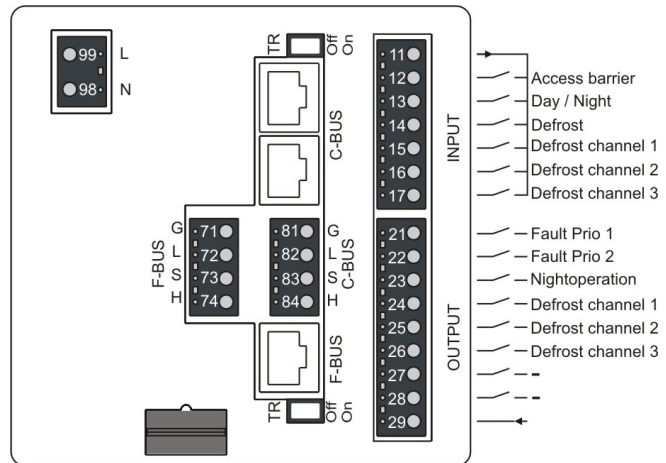
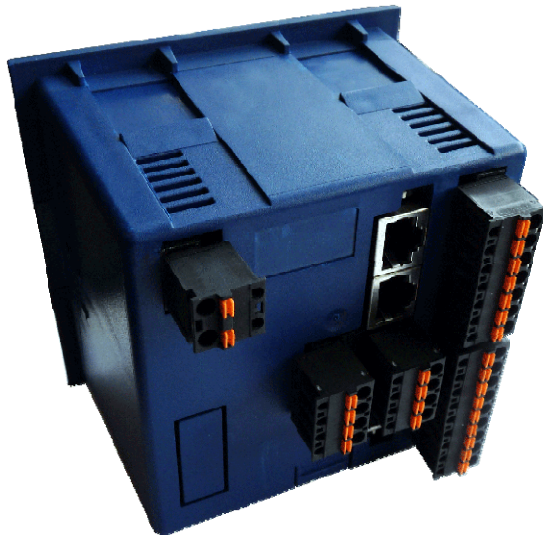
- Do not open the device.
- Do not repair the device yourself! If required, send it in for repair with an exact description of the fault!

### Software revisions and validity of documentation

Software version	Functional upgrade	Page
V7.10	2012-04	Basis of documentation

Any software versions not listed are special solutions for individual projects and are not documented in detail in this description. This document automatically ceases to be valid if a new technical description is issued. **Manufacturer:** Wurm GmbH & Co. KG Elektronische Systeme. For further information, see our website at [www.wurm.de](http://www.wurm.de)

### Circuit diagram



### Mounting



#### WARNING! Danger of death from electric shock!

- Switch off the power to the entire system before installing! Otherwise, external voltage can be present even when control voltage is shut off.



Installation in the MGR

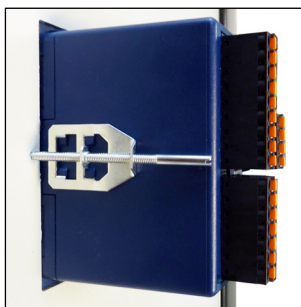
#### Installation in the mounting frame MGR130/140

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



#### Note!

- Please observe the product information for the MGR130/140 module frame.

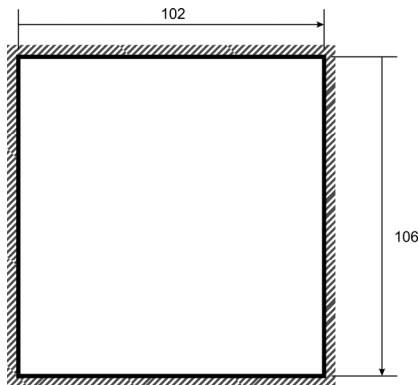


Installation with ZEM

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

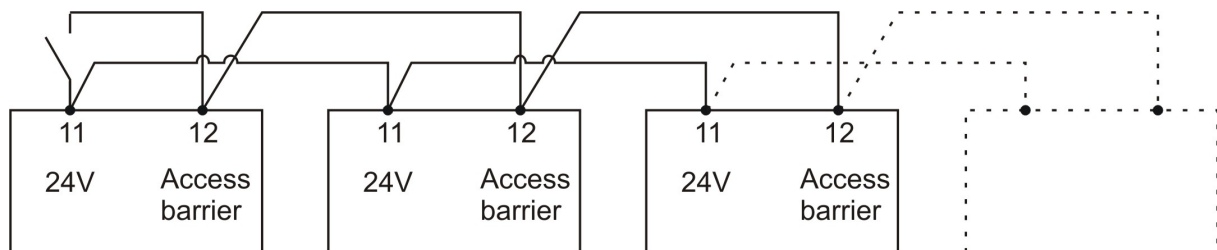
Insert the device up to the stop in a section of a switching cabinet door. Then fix the device with screw clamps of the ZEM type to the switching cabinet door.

## Product information



Installation section for individual installation

### Wiring and connection of several main modules



### Technical data

Supply voltage	230V~, +10% / -15%, 50Hz., max. 13VA
Displays	4-line clear text display with background lighting 4 x yellow LED menu selection 1 x red LED, flashing in case of fault 1 x yellow LED for operating status of communication bus 1 x yellow LED for operating status of field bus
Field bus	3-wire CAN-bus interface, shielded, electrically isolated Push-in terminals 2.5mm <sup>2</sup> or RJ-45 socket
Communication bus	3-wire CAN-bus interface, shielded, electrically isolated Push-in terminals 2.5mm <sup>2</sup> or RJ-45 socket
Digital inputs	6 x 24V=, self-supplied, approx. 5mA per input, push-in terminals, 2.5mm <sup>2</sup>
Digital outputs	8 x closing contact with common supply, 1A, rated voltage 230V~, push-in terminals 2.5mm <sup>2</sup>
Dimensions	(WxHxD) 109 x 109 x 92mm
Front plate	Plastic, foil
Mounting	In the module frame / individual mounting
Ambient temperature	0...+50°C operation / -25...+70°C storage
Weight	About 650g
CE conformity	EC conformity according to - 2004/108/EC (EMC Directive) - 2006/95/EC (Low Voltage Directive)
	RoHS
Valid from	Version 7.0