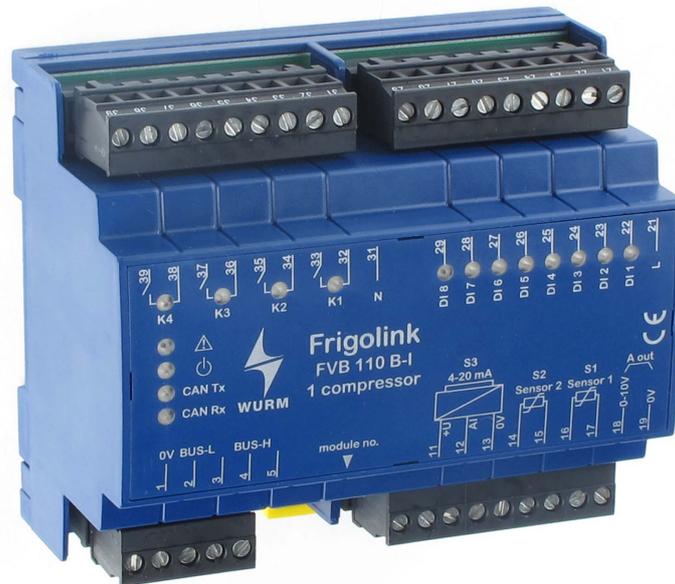


Front view

Field module for switching and monitoring 1 compressor



Features

- 4 relay switch outputs 230V~ for 1 compressor
- 230V~ inputs for operation acknowledgements and detailed alarm routing monitoring
- Emergency program in case of bus errors
- No parameters need to be set on the device
- Control of a screw-type compressor via ASV001 and HVI-G3/G4
- Control of a reciprocating compressor via ASV101 and HVB-G3/G4, HVI-G3/G4, HVV-G3/G4
- Connection to master module via field bus (CAN-bus)

Product information

Writing conventions

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

Target group	These instructions are intended for "service technician" personnel.
Use as intended	The FVB110B is a field module for switching and monitoring 1 compressor.



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!

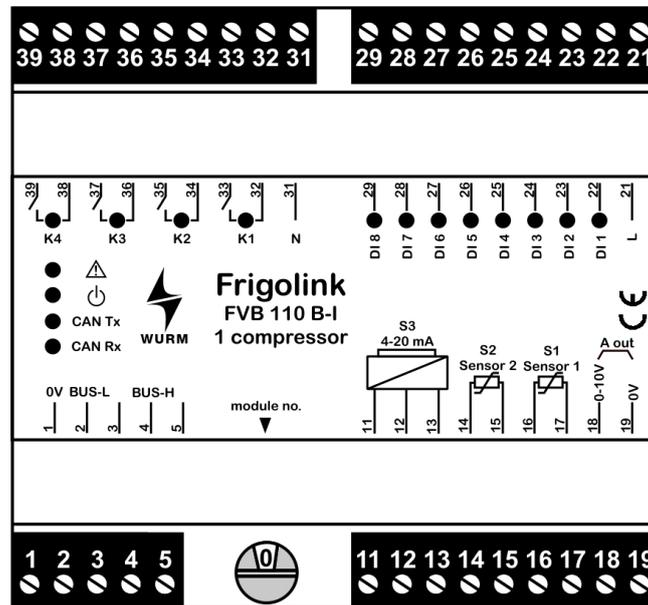
- Do not open the device.
- Do not repair the device yourself! If required, send it in for repair with an exact description of the fault!

Software revisions and validity of documentation

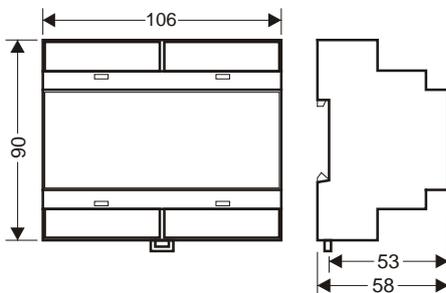
Software version	Functional upgrade	Page
V2.4	2012-06	Basis of documentation
	2013-02	Updating of technical data, circuit diagram
	2015-01	Updating of documentation

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

Circuit diagram

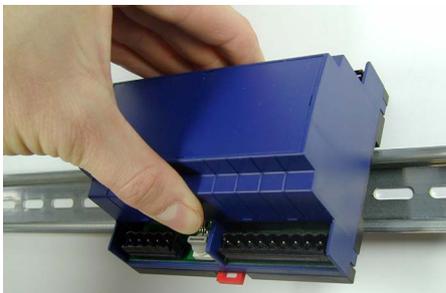


Mounting



The device is designed for profile rail mounting. The housing is of a standard size and is also suitable for installation in fuse boxes, distribution switch boxes or electric boxes of refrigerators.

The devices can be positioned immediately next to one another and without gaps.



First, place the upper guide edge of the module on the top-hat rail.

Then press it gently downward until it engages with the mounting safety catch on the rail.

Product information

Fault inputs that are not used

In order to obtain correct fault information, fault inputs that are not used must be jumpered with the fault signal that is connected upstream within the alarm routing. The input "Operation" is used for measuring the operating hours. If no corresponding signal is available from the machine protection, then it is advisable to jumper the output relay.

Monitoring function/emergency program

In the event of a field bus fault the field module enters an emergency program corresponding to the operating mode.

If a problem with the cover identification arises at the same time, then all of the output relays are switched off and the analogue output is set to 0V.

Module addressing

Make sure that each of the maximum of 8 (HVI-G3/G4: 12) field modules per main module has a different number. Permissible addresses are the values 0-7 (HVI-G3/G4: 0-B). No other settings are permitted. The address of the module FIO001B / FIO-PAT and the addresses of the field modules FVBxxxB / FVBxxx-PAT must not overlap. In the event of an address collision, an entry is made in the fault list of the main module and the light-emitting diode "Fault" on the field module flashes.

Technical data

Supply voltage	230V~, +10%/-15%, approx. 7VA
Displays	1 x red light-emitting diode, flashing in case of fault 1 x green light-emitting diode, operating voltage 2 x green light-emitting diodes, CAN bus data traffic (CAN Tx, CAN Rx) 8 x yellow light-emitting diodes, for signal at the input 4 x green light-emitting diodes, for controlling the relays
Communication	3-wire CAN bus interface, with integrated supply voltage, electronically isolated
Digital inputs	8 x 230V~, electrically isolated via optocoupler.
Temperature probe	1 x TRK277, F1 for suction gas temperature probe T_s 1 x DGF, F2 for compressor end temperature T_{vd}
Analogue input	4...20mA, output voltage 18V=, max. 22mA, suction pressure T_o
Output relay	4 x NO contact 230V~, 4(2)A
Analogue output	1 x 0...10V=, tied to potential, capable of bearing max. 10mA
Connection cross section	2.5mm ²
Enclosure dimensions	(WxHxD) 106 x 90 x 58mm, DIN 43880
Mounting	Mounting rail DIN EN 50022 35x15
Ambient temperature	Operation: 0...+50°C, storage: -25...+70°C
Weight	Approx. 450g
CE conformity	EC conformity according to – 2004/108/EC (EMC Directive) – 2006/95/EC (Low Voltage Directive)
	RoHS
Valid from	Version 2.4

	<p>Note!</p> <ul style="list-style-type: none"> ▪ Please observe the detailed descriptions in the chapters of the Frigolink catalogue.
---	--