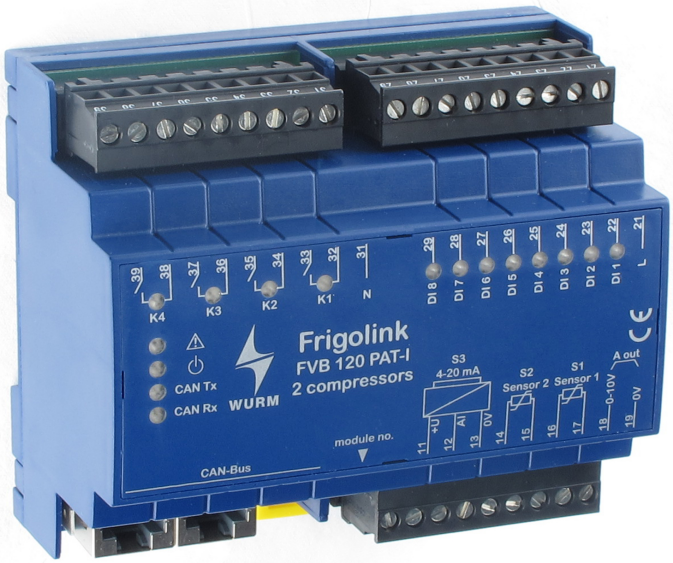
Front View

Field module for switching and monitoring 2 compressors



Features

- 4 relay switch outputs 230V~ for 2 compressor
- 230V~ inputs for operation acknowledgements and detailed alarm routing monitoring
- 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
- Emergency program in case of bus errors
- No parameters need to be set on the device
- Connection to master module via field bus (CAN bus)

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** that 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.
Intended purpose	The FVB120-PAT is a field module for switching and monitoring 2 compressors.

⚠ **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!

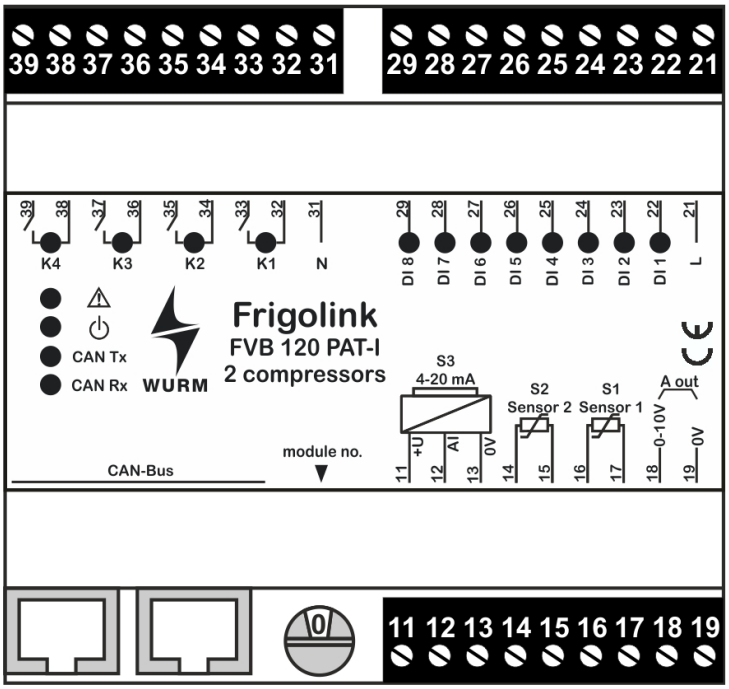
- Do not open the device.
- Do not repair the device yourself! If required, send it in for repair with an exact description of the fault!

Software revisions and validity of documentation

Software version		Functional upgrade	Page
V2.4	2012-01	Basis of documentation	
V2.4	2015-02	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

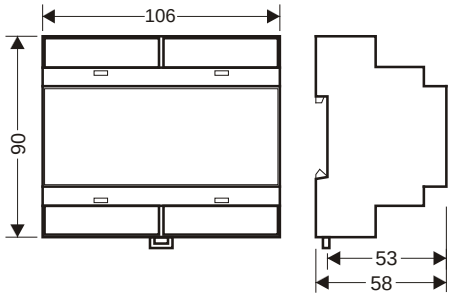
Circuit diagram



Notes!

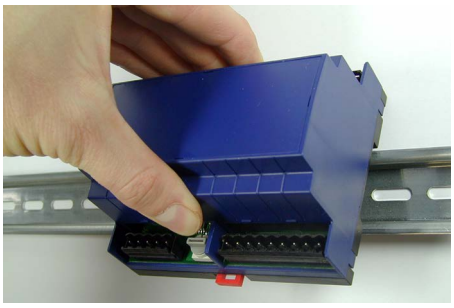
- The bus shield must be connected at only one (!) end by means of the 6.3mm connecting lug with PE.
- Further information on the CAN bus can be found in the Frigolink Bus System handbook.

Mounting



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

The devices can be assembled side-by-side without clearance.



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.

Technical data

Supply voltage	230V~, +10%/-15%, approx. 7VA
Displays	1 x red LED, flashing in case of fault 1 x green LED, operating voltage 2 x green LED, CAN bus data traffic (CAN Tx, CAN Rx) 8 x yellow LED, for signal at the input 4 x green LED, for controlling the relays
Communication	2 x RJ45 sockets for CAN bus connection, with integrated supply voltage, electronically isolated
Digital inputs	8 x 230 V~, electrically isolated via optocoupler.
Temperature probe	1 x TRK277, F1 for cold zone temperature T_u 1 x TRK277, F2 for suction gas temperature T_s
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	2.5mm²
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

Notes!

- Please observe the detailed descriptions in the chapters of the Frigolink catalogue.