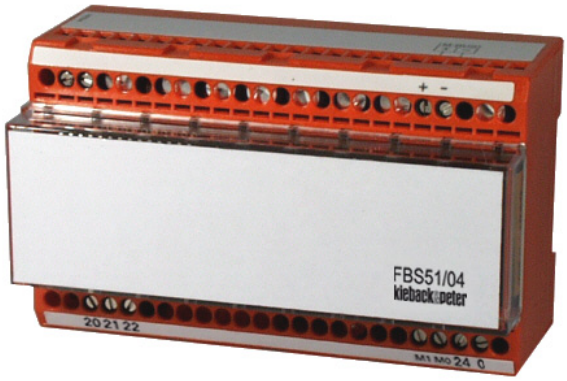
FBS51/04 Gateway Module

For M-bus With 6 Meters



Application

The FBS51/04 Gateway Module is used to connect a maximum of 6 meters of external equipment to the BMR via the m-bus in accordance with DIN EN 1434-3.

Contents **Page**

Kieback&Peter GmbH & Co. KG
Tempelhofer Weg 50, 12347 Berlin/Germany
Telefon: +49 30 60095-0, Telefax: +49 30 60095-164
www.kieback-peter.de, info@kieback-peter.com

Important Information Regarding Product Safety

Safety Instructions

This data sheet contains information on installing and commissioning the product "FBS51/04 Gateway Module". Each person who carries out work on this product must have read and understood this data sheet. If you have any questions that are not resolved by this data sheet, you can obtain further information from the supplier or manufacturer.

If the product is not used in accordance with this data sheet, the protection provided will be impaired.

Applicable regulations must be observed when installing and using the device. Within the EU, these include regulations regarding occupational safety and accident prevention as well as those from the VDE (Association for Electrical, Electronic & Information Technologies). If the device is used in other countries, it is the responsibility of the system installer or operator to comply with local regulations.

Mounting, installation and commissioning work on the devices may only be carried out by qualified technicians. Qualified technicians are persons who are familiar with the described product and who can assess given tasks and recognize possible dangers due to technical training, knowledge and experience as well as knowledge of the appropriate regulations.

Meaning of the Symbols

WARNING

Indicates a hazard of medium risk which can result in death or severe bodily injury if it is not avoided.

CAUTION

Indicates a hazard of low risk which can result in minor or medium bodily injury if it is not avoided.

NOTICE

Indicates a hazard of medium risk which can result in material damage or malfunctions if it is not avoided.

Note

Indicates additional information that can simplify the work with the product for you.

Notes on Disposal

For disposal, the product is considered waste from electrical and electronic equipment (electronic waste) and must not be disposed of as household waste. Special treatment for specific components may be legally binding or ecologically sensible. The local and currently applicable legislation must be observed.

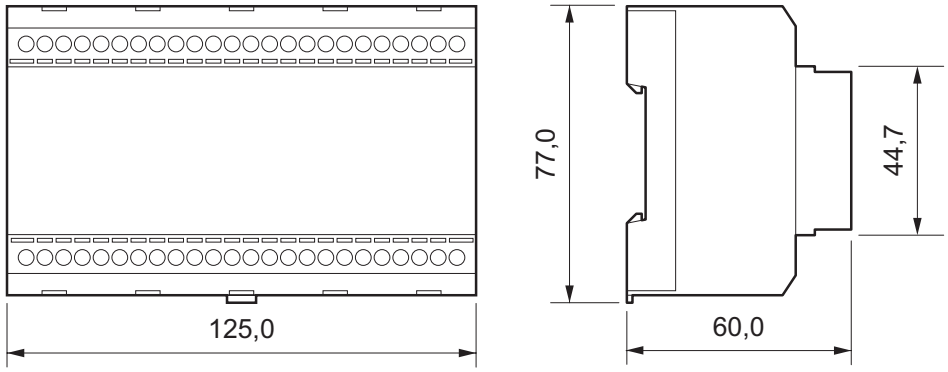
Item

FBS51/04	Gateway module for m-bus with a maximum of 6 meters

Technical Data

Nominal voltage	AC 24 V ±10 %; max. 5.4 VA
Fuse	Electronic fuse protection for AC 24 V
Displays and controls	▪ 4 LEDs in housing ▪ Address switch in housing (Siehe Kapitel "Displays and Controls", Seite 6.)
Interfaces	▪ Fieldbus, maximum 2000 m ▪ M-Bus in accordance with DIN EN 1434-3, maximum 1000 m
Degree of protection	IP20
Ambient temperature	0 to 45°C
Ambient humidity	20 to 80% r. h., non-condensing
Mounting	Mounting rail DIN EN 50022 This device is intended for installation in a switch cabinet.
Dimensions	WxHxD mm 125 x 77 x 60

Dimensions

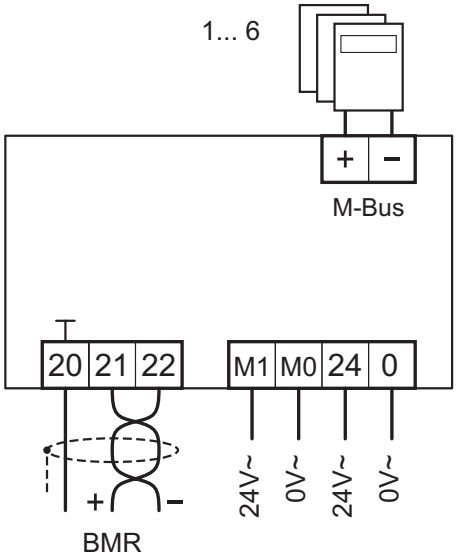


Connection

WARNING

Contact with live parts of electrical domestic installation can cause death due to electric shock.

Only connect the device and switch on the power supply if you are qualified to do so. Be sure to comply with VDE guidelines and local wiring regulations.



Power Supply

Terminals [0], [24]: power supply for module FBS51/04.

Terminals [M1], [M0]: additional power supply for m-bus.

Note

The additional m-bus power supply does not need to be connected, as the module power supply is sufficient for the maximum of 6 m-bus meters that can be connected.

Fieldbus

When connecting the fieldbus, use a cable of at least type JY(St)Y 2x2x0.8 Lg: two x two wires, twisted to a pair with plastic insulation and an electrostatic shield with a wire diameter of at least 0.8 mm. Use a stranded pair of wires for the data lines (+ and -) and another free wire for the ground connection (0).

At the end of the fieldbus (furthest point from the DDC controller), install a terminating resistor of about 180 ohms between both data lines (+ and -). The terminating resistor is included with the DDC controller.

The maximum cable length for the Fieldbus is 2000 m.

M-Bus

The m-bus is specified in DIN EN 1434-3.

When connecting the m-bus, use a cable of at least type JY(St)Y 1x2x0.8 Lg: two wires, twisted to a pair with plastic insulation and an electrostatic shield with a wire diameter of at least 0.8 mm. Use a stranded pair of wires for the data lines (+ and -). Both wires can be interchanged.

The maximum cable length for the M-Bus is 1000 m.

Mounting

WARNING

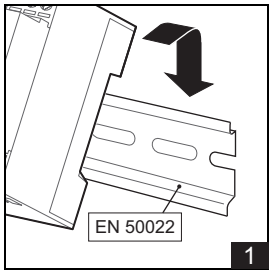
Contact with live parts of electrical domestic installation can cause death due to electric shock.

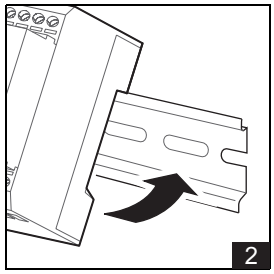
Mounting/removal may only be carried out when power is switched off.

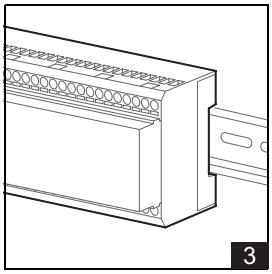
NOTICE

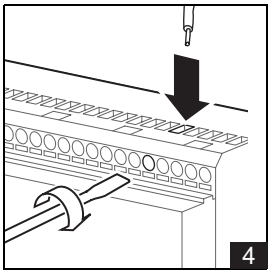
Switching on the power supply of unparameterized products can lead to unforeseen consequences such as malfunctions or material damage.

Switch on the power only after the device has been configured by the commissioning technician.

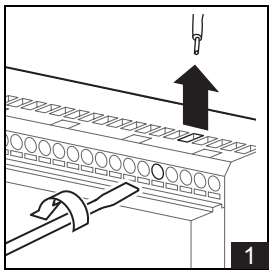


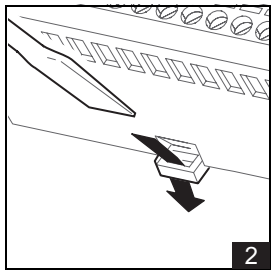


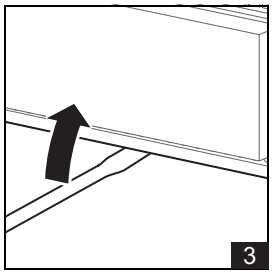


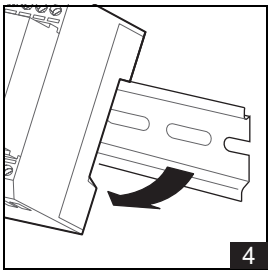


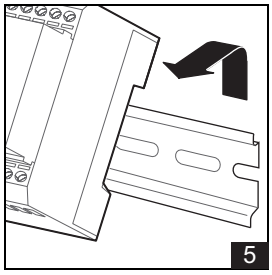
Dismounting











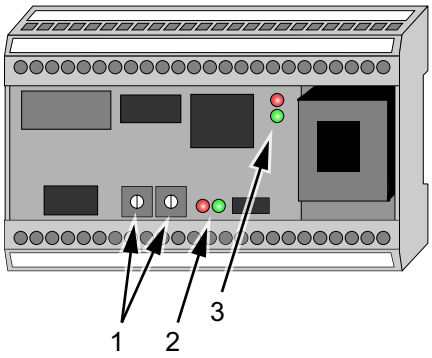
Commissioning

NOTICE

Power may only be switched on after the DDC controller and device have been configured by the commissioning technician.

Configuration of the DDC controller is described in the respective project planning documentation.

Displays and Controls

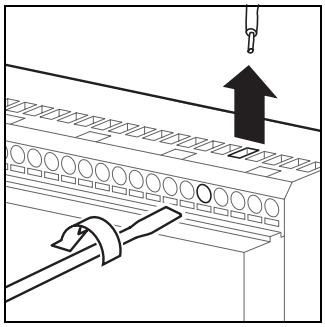


1 Rotary switch for setting the fieldbus address
2 LED "Fieldbus"
3 LED "M-bus"

LED	Signal	Meaning
LED "Fieldbus"	Green	FBS51/04 in operation
LED "Fieldbus"	Flashing green	Data transmission Fieldbus
LED "Fieldbus"	Red	Bus error Fieldbus or duplicate field-bus address
LED "Fieldbus"	Flashing red	Incorrect or duplicate fieldbus address
LED "M-bus"	Green	M-Bus switched on
LED "M-bus"	Flashing green	Data transmission M-Bus
LED "M-bus"	Red	M-Bus off
LED "M-bus"	Flashing red	Bus error M-Bus

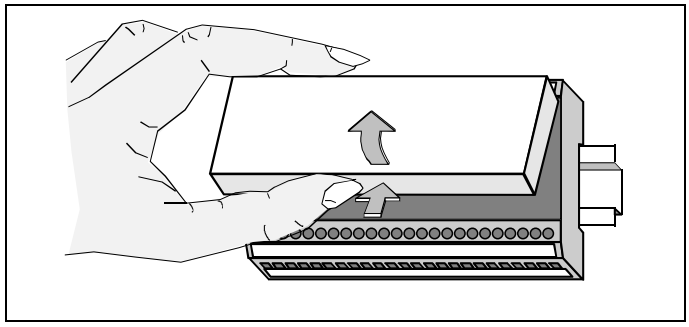
Setting the Fieldbus Address

- Disconnect the power supply of the FBS51/04.



- Press the lower edge of the front cover and remove the cover.

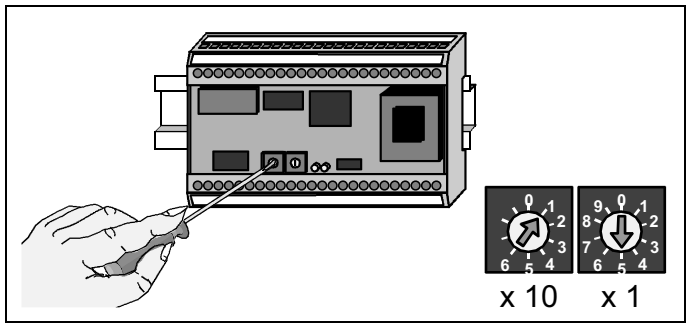
The rotary switches for setting the fieldbus address are located inside the FBS51/04.



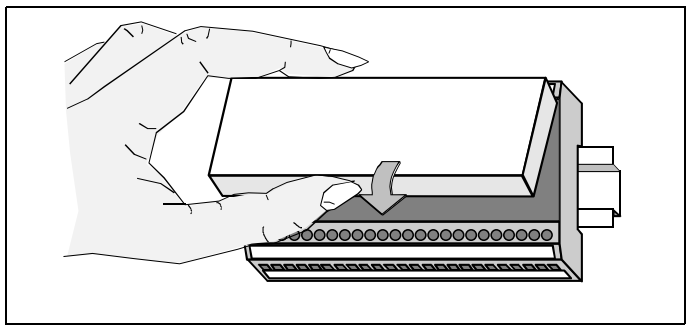
- Set the first rotary switch to the first digit of the fieldbus address, the second rotary switch to the second digit.

The example shows the address "15".

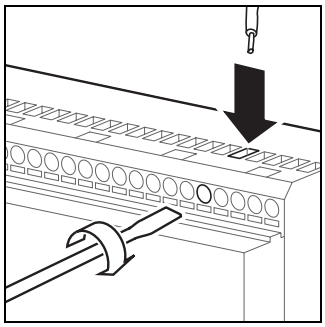
Permitted range for the fieldbus address: 01 to 06



- Insert the front cover along the top edge and lock it in with the bottom edge.



- Reconnect the power supply of the FBS51/04.



Switching on the Power

WARNING

Contact with live parts of electrical domestic installation can cause death due to electric shock.

Only connect the device and switch on the power supply if you are qualified to do so. Be sure to comply with VDE guidelines and local wiring regulations.

Before switching on the power, ensure that the device has been mounted correctly and check the electrical connection.

After turning on the power, check the transmission function of the FBS51/04.