Model Number

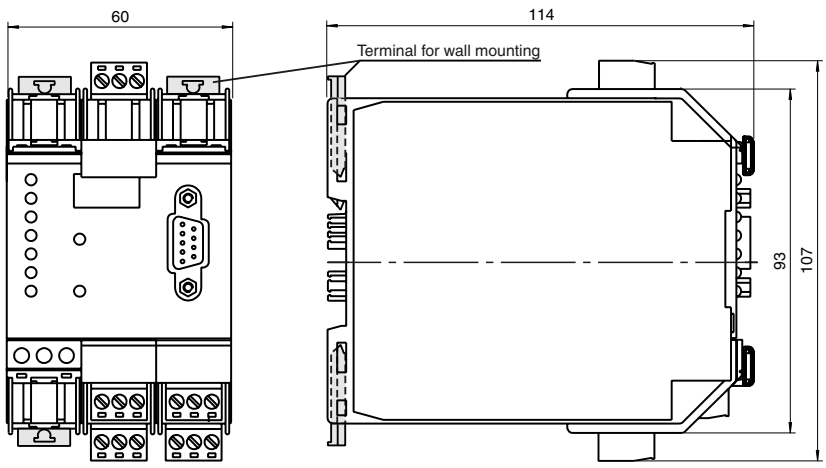
VAG-MOD-KF-R4

MODBUS gateway cabinet module

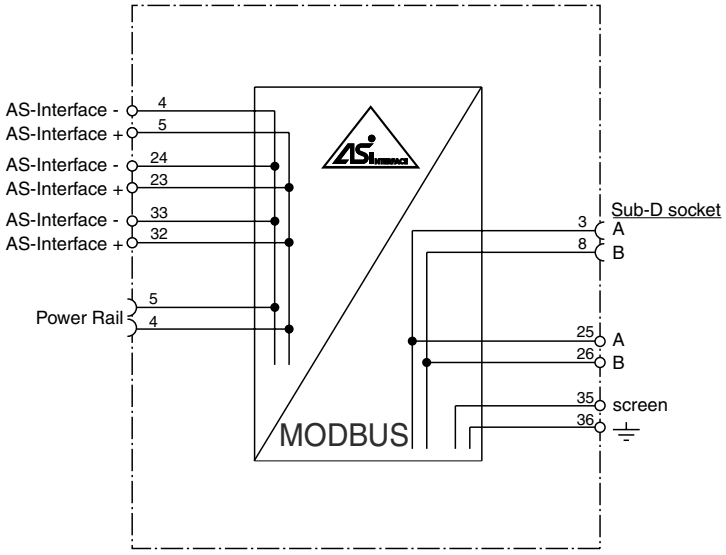
Features

- Coded, removable terminals
- PLC functionality
- Two-digit LC display
- Power supply from MODBUS and AS-Interface
- Programmable slave addresses
- Display of detected slaves
- Fault diagnosis
- Power Rail connection

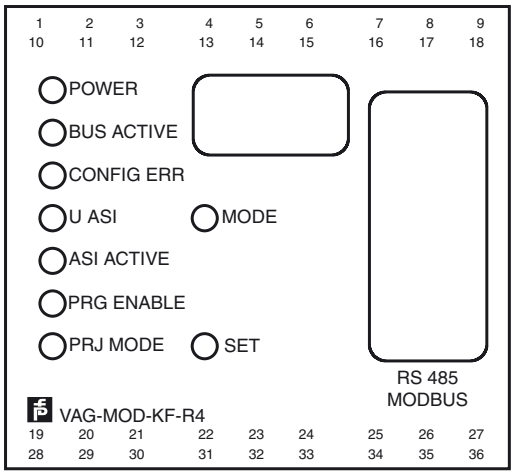
Dimensions



Electrical connection



Indicating / Operating means



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Technical data

General specifications		
AS-Interface specification		V2.0
Diagnostics function		integrated
Indicators/operating means		
Display		LC display, 2 digits, for addressing and error messages
LED BUS ACTIVE		MODBUS interface in operation, LED green
LED AS-i ACTIVE		AS-Interface operation normal; LED green
LED CONFIG ERR		configuration error; LED red
LED PRG ENABLE		autom. programming; LED green
LED ENERGY		voltage ON; LED green
LED PRG MODE		projecting mode active; LED yellow
LED U AS-i		AS-Interface voltage; LED green
Switch SET		Selection and setting of a slave address
Button MODE		Mode selection/save configuration
Electrical specifications		
Insulation voltage	U_i	≥ 500 V
Rated operational voltage	U_e	from AS-Interface
Rated operational current	I_e	≤ 200 mA
Interface		
Protocol		MODBUS
Interface type		RS 485
Connection		
AS-Interface		removable coded terminals, Power Rail
MODBUS		RS 485 interface
Ambient conditions		
Ambient temperature		0 ... 55 °C (273 ... 328 K)
Storage temperature		-15 ... 70 °C (258 ... 343 K)
Mechanical specifications		
Protection degree		IP20
Mass		420 g
Construction type		Low profile housing , plastic
Compliance with standards and directives		
Standard conformity		
Protection degree		EN 60529

Function

The VAG-MOD-KF-R4 is a MODBUS gateway with PLC functionality. The design of this master is ideal for use in a cabinet.Its housing, only 60 mm wide, occupies little space in a cabinet installation. The VAG-MOD-KF-R4 is installed by snapping it onto the 35 mm DIN Rail according to EN 50022, with the integrated Power Rail. The AS-Interface signal is transmitted via conductors, which are integrated in the Power Rail. Thus all cabinet modules in KF housing can be connected to the AS-Interface cable by simply snapping them onto the DIN Rail. The AS-Interface data can be accessed in a binary format (functions 1, 2, 5 and 15), or through the registers (functions 3, 4, 6 and 16). MODBUS diagnostic registers are supported.
The AS-Interface data can be used in various ways. Important data is available either packed or unpacked by means of the registers or in the binary format. Thus the AS-Interface masters with MODBUS slave interface can be accessed by different MODBUS masters and do not require large-scale adaptations. Power to the master is supplied by the AS-Interface cable.
Two push buttons are used for address assignment of the AS-Interface slaves and acceptance of the desired configuration. In configuration mode, all detected AS-Interface slaves are displayed on the 2-digit LCD. In normal operation, the LCD is blank unless the master detects a faulty AS-Interface slave. There are 7 LEDs on the front panel, showing the current status of the AS-Interface line.

PLC Functionality
The VAG-MOD-KF-R4 has 16 kBytes of program memory, 8 kBytes of main memory, 1024 counters and 1024 timers for the PLC functionality. These capacities suffice to process data on the AS-Interface. Thus the master can also be operated in "stand-alone" mode. The program processing time is 2 ms per 1000 word commands. The programming language is based on the STEP5® programming language.

Software

The AS-i Control Tools software is supplied as restricted version together with the documentation. The software performs addressing, programming and monitoring of the AS-Interface network. In addition, it contains an editor that creates programs for the integrated PLC functionality. The full version of the AS-i Control Tool is available as an accessory and features an expanded diagnostics monitor as well as a larger program memory for AS-Interface Control which makes it possible to detect faulty telegrams of slaves.

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Accessories

VAZ-SW-ACT32
AS-Interface software

VAZ-R4-R2
Interface converter RS 232C/RS 485

UPR-E
End cap

UPR-05
Universal Power Rail

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