



- Connects the IS-RPI system to the control system via ControlNet
- Fieldbus intrinsically safe EEx ia IIC
- Device installation in Zone 1, Zone 2, or Zone 22
- Up to 6 gateways on one intrinsically safe bus network
- Transfer rate 4800, 9600, 19200, 38400 kBit/s in association with the segment coupler KFD2-BR-Ex1.3MOD.38
- Up to 8 I/O modules on one gateway via the backplane bus
- MODBUS RTU with intrinsically safe IEC 61158-2 transmission technology
- LED status indication
- Gateway can be replaced under voltage in zone 1 (hot swap)
- EMC acc. to NAMUR NE 21

Function

The RSD-GW-Ex1.MOD gateway is the interface between the external MODBUS RTU and the internal bus. It converts the protocols of the internal bus to MODBUS RTU protocols and vice versa.

The connection to a MODBUS RTU segment with the RS 485 transmission mode is made with a MODBUS RTU segment coupler KFD2-BR-Ex1.3MOD.38.

Up to 8 I/O modules can be connected to a gateway via the internal backplane bus. Communication with the I/O modules is performed via the address and data lines of the backplane bus.

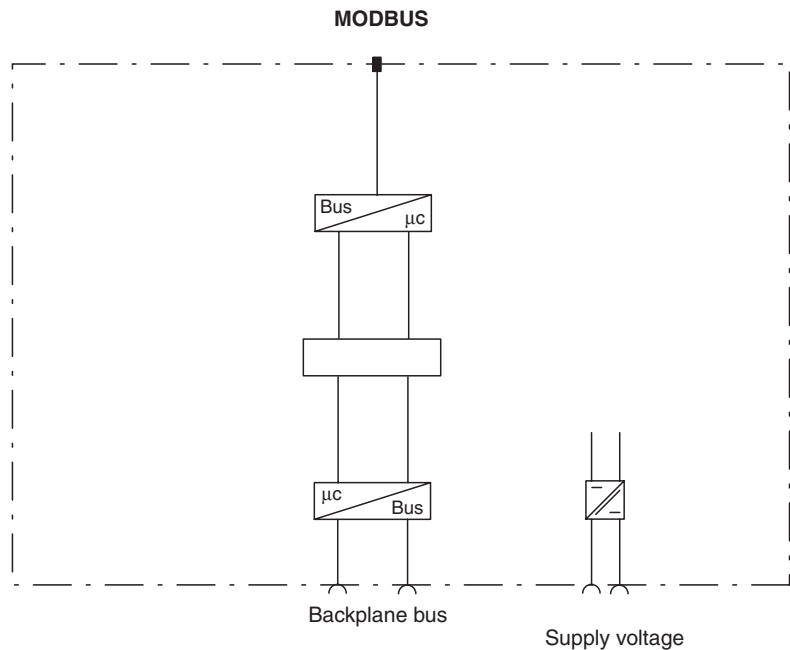
Configuration and parameter assignment of the system can be performed by **PACTware™**.

The internal and external buses are galvanically isolated from the power supply.

Application

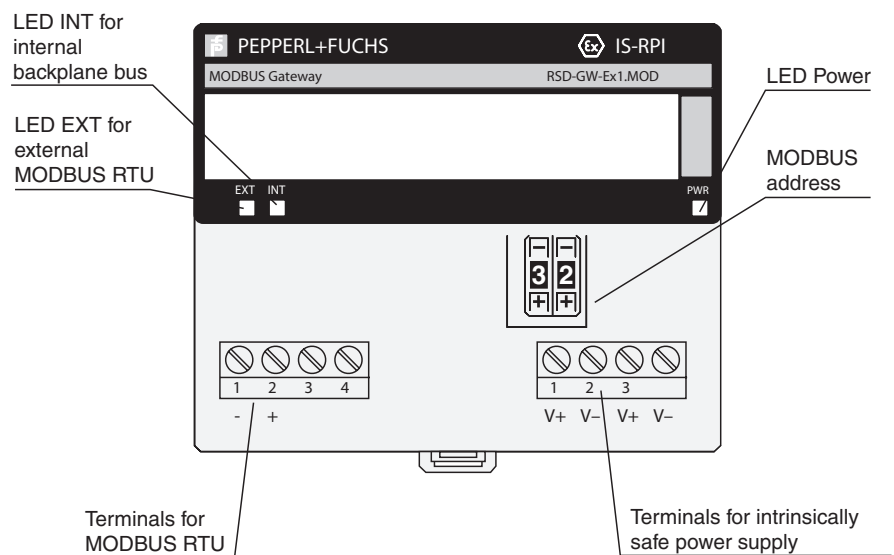
- Connects conventional binary and analogue sensors as well as actuators via MODBUS RTU
- Configuration via MODBUS RTU

Connection



Composition

Front View



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Supply		
Connection		terminals V+, V-
Rated voltage		8.88 ... 9.5 V
Power loss		3.5 W
Power consumption		4.25 W
Internal bus		
Connection		backplane bus
Interface		manufacturer specific bus
Cycle time		1.6 ms
External bus		
Connection		terminals 1-, 2+
Bus address		1 ... 99 , adjustable via switch
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Explosion protection		
Directive 94/9/EC		EN 60079-0:2006, EN 60079-11:2007, EN 60079-26:2004 , EN 61241-0:2006, EN 61241-1:2006
Standard conformity		
Insulation coordination		EN 50178
Electrical isolation		EN 60079-11:2007
Electromagnetic compatibility		NE 21:2006
Protection degree		IEC 60529
Climatic conditions		IEC 60721
Ambient conditions		
Classification		3K3
Ambient temperature		-20 ... 70 °C (253 ... 343 K)
Storage temperature		-20 ... 100 °C (253 ... 373 K)
Relative humidity		95 % non-condensing
Shock resistance		15 g peak, 11 ms period
Vibration resistance		2 g , 10 ... 500 Hz according to IEC 60068-2-6
Damaging gas		acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications		
Connection type		terminals
Core cross-section		≤ 2.5 mm ²
Protection degree		IP20, for in-situ installation a separate housing is required with a minimum of IP54
Mass		approx. 305 g
Mounting		DIN rail mounting
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		DMT 99 ATEX E 001 X , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		⊕ II (1)2G EEx ia/ib IIB/IIC II (1D)(2D)
Temperature class		T4
Supply		only in connection with the power units RSD2-PSD2-Ex4.34, RSA6-PSD-Ex4.34
External bus		
Voltage	U _i	15.75 V
Current	I _i	250 mA
Power	P _i	1.93 W
Internal capacitance	C _i	120 pF
Internal inductance	L _i	negligible
Internal bus		customer specific
Statement of conformity		
Group, category, type of protection, temperature classification		⊕ II 3D IP54 T 90°C
Electrical isolation		
Internal/external bus		no electrical isolation
Internal bus/power supply		safe electrical isolation acc. to EN 60079-11:2007, voltage peak value 60 V
External bus/power supply		safe electrical isolation acc. to EN 60079-11:2007, voltage peak value 60 V

Supplementary information

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see www.pepperl-fuchs.com.

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Notes

- Parameterisation of the I/O modules connected to the gateway via MODBUS RTU
- 1 power supply channel for 2 gateways
- With MODBUS RTU, up to 1000 m lead length in the hazardous area
- LED "INT" for internal backplane bus; flashes if no communication is taking place with one or more modules or if the configuration in the master does not agree with the configuration in the modules
- LED "EXT" for external MODBUS RTU; flashes if no communication is taking place on the external MODBUS RTU
- The gateway must be powered via the intrinsically safe power supplies RSD2-PSD2-Ex4.34 or RSA6-PSD-Ex4.34