



- Connects the IS-RPI system with the control system via PROFIBUS DP
- Fieldbus intrinsically safe EEx ib IIC
- Device installation in Zone 1, Zone 2, or Zone 22
- Up to 10 gateways on one intrinsically safe bus network
- PROFIBUS DP V1 up to 1.5 MBit/s
- Up to 8 I/O modules on one gateway via the backplane bus
- PROFIBUS DP media redundancy
- Transfer of HART signals
- LED status indication
- Gateway can be replaced under voltage in zone 1 (hot swap)
- EMC acc. to NAMUR NE 21

Function

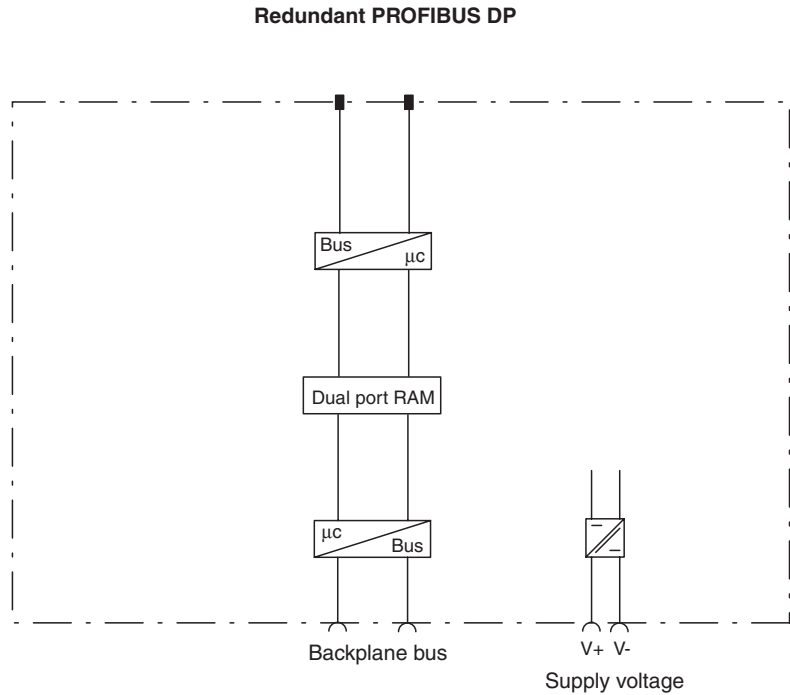
The RSD-GW3-Ex2.DPE gateway is the interface between the external PROFIBUS DP-V1 and the internal bus. It converts the protocol of the internal bus to PROFIBUS DP protocol and vice versa.

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™**. HART telegrams are received over the PROFIBUS DP-V1 by the gateway and are forwarded on to the HART field devices connected to the I/O modules. HART communication can also be performed with **PACTware™**. The gateway interface with the PROFIBUS DP is designed for media-redundant operation.

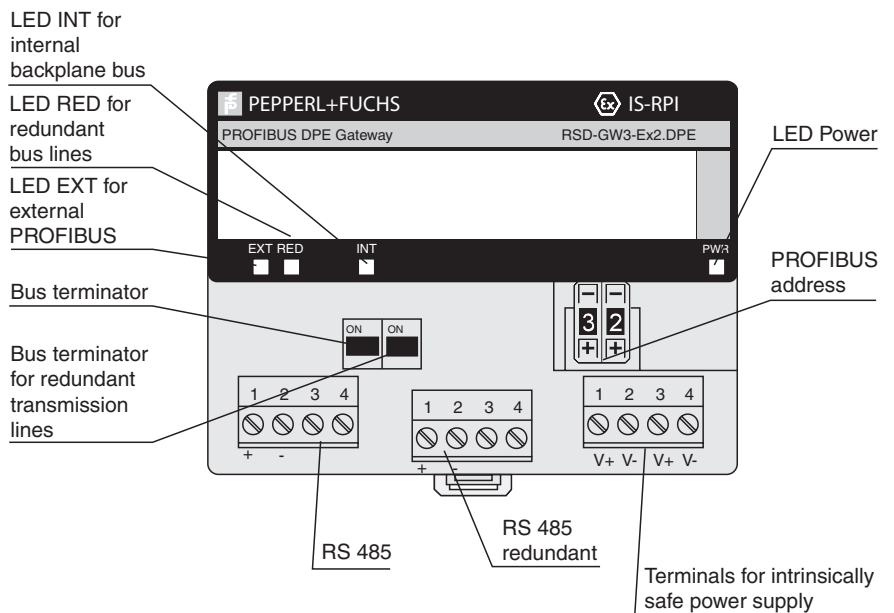
The internal and external buses are galvanically isolated from the power supply.

Connection



Composition

Front View



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Supply		
Connection		terminals V+, V-
Rated voltage		8.88 ... 9.5 V
Power loss		8 W
Power consumption		8.5 W
Internal bus		
Connection		backplane bus
Interface		manufacturer specific bus
Cycle time		1.6 ms
External bus		
Connection		terminals 1+, 2-
Interface		PROFIBUS with intrinsically safe RS 485 transfer technique
Transfer rate		9.6 ... 1500 kBit/s
Bus address		1 ... 99 , adjustable via switch
Terminating impedance		adjustable with sliding switch: I = OFF; ON = ON
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 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. 325 g
Mounting		DIN rail mounting
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		DMT 00 ATEX 023 X , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		⊕ II 2G EEx ib IIC II (2D)
Temperature class		T4
Supply		only in connection with the power units RSD2-PSD2-Ex4.34, RSA6-PSD-Ex4.34
External bus		
Voltage	U _o	± 3.72 V
Current	I _o	76.5 mA
Power	P _o	103 mW
Voltage	U _i	± 3.75 V
Internal capacitance	C _i	negligible
Internal inductance	L _i	negligible
External capacitance	C _o	100 µF
External inductance	L _o	1.5 mH
L/R-ratio		344 µH/Ω
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

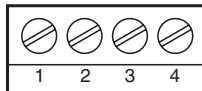
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Supplementary information

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

Electrical connection

Terminal assignment



V+ V- V+ V-

Application

- Connects conventional binary and analogue sensors as well as actuators to the control system via PROFIBUS DP
- HART communication with the field devices connected to the I/O modules
- Configuration via PROFIBUS DP

Notes

- Parameterisation of the I/O modules connected to the gateway via PROFIBUS DP V1
- Parameterisation of the I/O modules connected to the gateway via PROFIBUS DP "User Parameter"
- 1 power supply channel for 1 gateway
- 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 PROFIBUS; flashes if no communication is taking place on the external PROFIBUS
- LED "RED" for redundant bus line; flashes if no communication is taking place on the redundant transmission line
- The gateway must be powered via the intrinsically safe power supplies RSD2-PSD2-Ex4.34 or RSA6-PSD-Ex4.34