



- Connects the IS-RPI system to the control system via PROFIBUS PA
- 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 31.25 kBits/s
- Up to 8 I/O modules on one gateway via the backplane bus
- PROFIBUS PA with intrinsically safe IEC 61158-2 transmission technology
- PROFIBUS PA interface in accordance with FISCO
- 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.PA gateway is the interface between the intrinsically safe external PROFIBUS PA and the internal bus.

It converts the protocols of the internal bus to PROFIBUS PA protocols and vice versa.

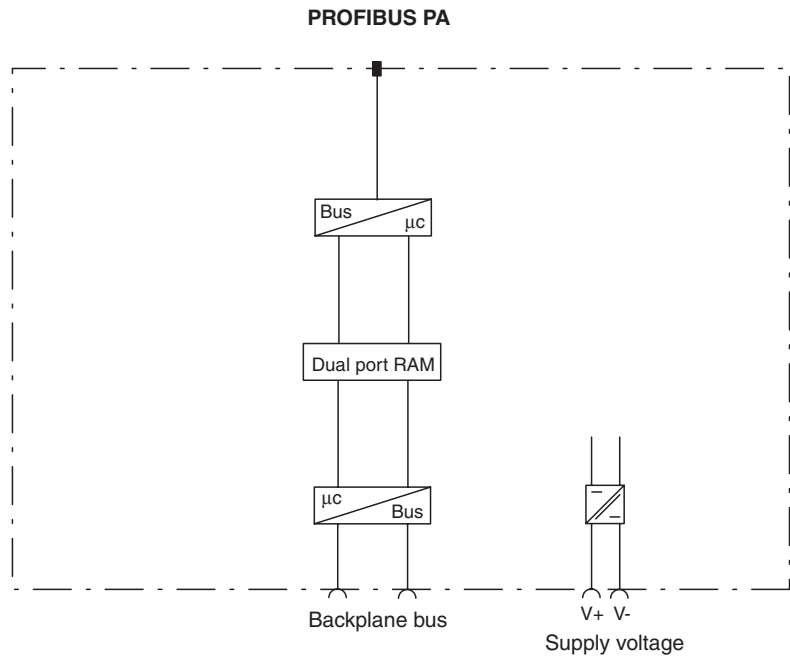
The connection to the PROFIBUS DP is made with a PROFIBUS DP/PA SK1 segment coupler (KFD2-BR-Ex1.3PA.93) or a SK2 segment coupler (gateway KLD2-GT(R)-DP.*PA in combination with a power link KLD2-PL-Ex1.PA).

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™**.

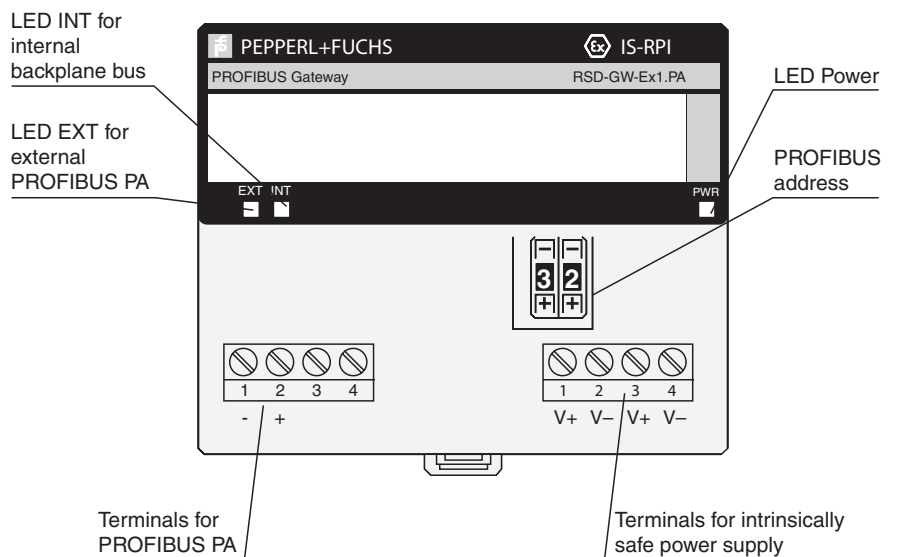
The internal and external buses are galvanically isolated from the power supply.

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+	
Rated voltage	≥ 9 V	
Rated current	≤ 13.2 mA	
FDE (Fault Disconnect Equipment)	≤ 9 mA	
Interface	PROFIBUS PA with intrinsically safe IEC 61158-2 transfer technique	
Transfer rate	31.25 kBit/s	
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	

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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.

Application

- Connects conventional binary and analogue sensors as well as actuators via PROFIBUS PA
- Configuration via PROFIBUS DP

Notes

- Parameters are set for the I/O modules connected to the gateway acyclically via PROFIBUS DP-V1
- Parameterisation of the I/O modules connected to the gateway via PROFIBUS DP "User Parameters"
- 1 power supply channel for 2 gateways
- With PROFIBUS PA, 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 PROFIBUS; flashes if no communication is taking place on the external PROFIBUS
- The gateway must be powered via the intrinsically safe power supplies RSD2-PSD2-Ex4.34 or RSA6-PSD-Ex4.34