- For the simultaneous connection of non-intrinsically safe and intrinsically safe field signals to one IS-RPI system
- Non-intrinsically safe/intrinsically safe isolation of the internal backplane bus
- Satisfies the European standard 94/9 EG
- Satisfies the US standard NEC 500

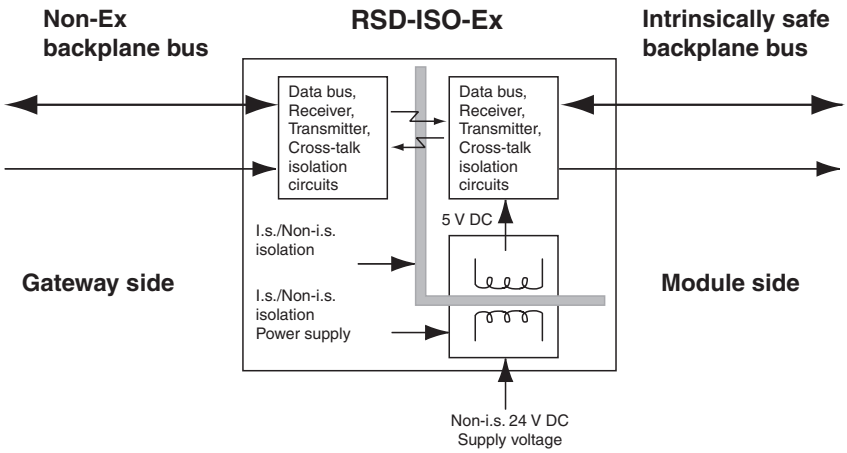
Function

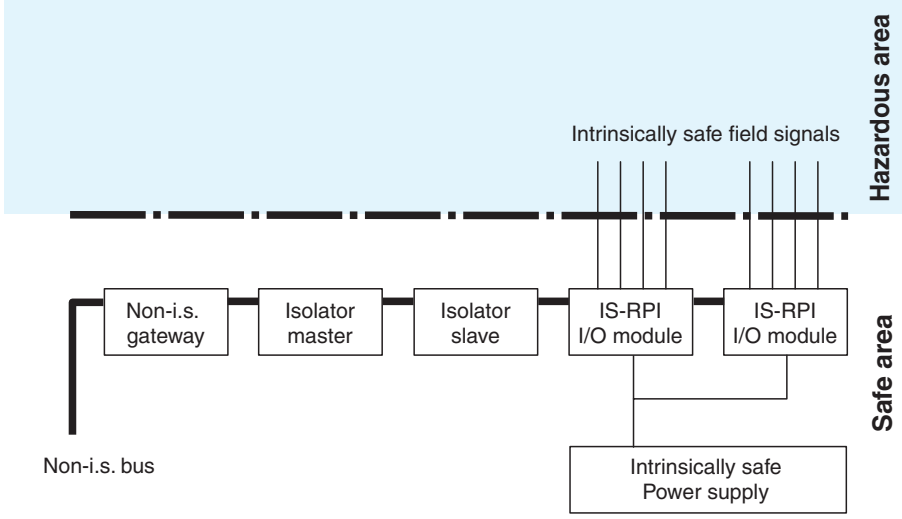
The bus isolator makes it possible to connect non-intrinsically safe and intrinsically safe field signals to the same IS-RPI system at the same time. One task it is responsible for is generating the intrinsically safe current for operating the intrinsically safe backplane bus segment from a non-intrinsically safe power supply. It also converts non-intrinsically safe backplane bus signals reliably into intrinsically safe backplane bus signals and vice versa. Preferably, the layout of the IS-RPI system provides for use in the safe area when the bus isolator is used.

The type of isolation described above is achieved by using 2 devices: the RS-ISO.Master and the RSD2-ISO-Ex.Slave. Both devices must be fitted and connected in the manner shown on the front view.

RS-ISO.Master and RSD2-ISO-Ex.Slave form a unit and can under the part code RSD-ISO-Ex be ordered only together.

Connection

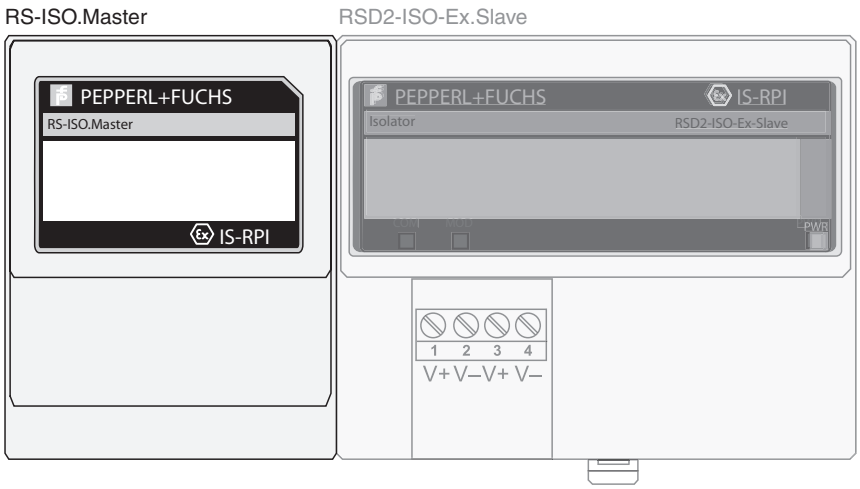




Composition

Front View

RSD-ISO-Ex consisting of:



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Supply	
Connection	not intrinsically safe backplane bus
Rated voltage	5 V DC
Internal bus	
Interface	manufacturer specific bus
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Explosion protection	
Directive 94/9/EC	EN 60079-15:2005
Standard conformity	
Insulation coordination	EN 50178
Electromagnetic compatibility	NE 21:2006
Protection degree	IEC 60529
Climatic conditions	DIN IEC 721
Ambient conditions	
Classification	3K3
Ambient temperature	-20 ... 70 °C (-4 ... 158 °F)
Storage temperature	-20 ... 100 °C (-4 ... 212 °F)
Relative humidity	95 % non-condensing
Shock resistance	30 g peak, 11 ms period
Vibration resistance	5 g , 10 ... 500 Hz according to IEC 60068-2-6
Damaging gas	acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications	
Protection degree	IP20, for on-site installation a separate housing is required with a minimum of IP54
Mass	approx. 200 g
Mounting	DIN rail mounting
Data for application in connection with Ex-areas	
Input	
Maximum safe voltage U_m	253 V AC
Internal bus	customer specific
Declaration of conformity	
Group, category, type of protection, temperature classification	⟨Ex⟩ II 3G Ex nA IIC T4
Electrical isolation	
Input/power supply	no electrical isolation
Input/Internal Bus	no electrical isolation
Internal bus/power supply	no electrical isolation

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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