

Backplane bus isolator

RSD2-ISO-Ex.Slave

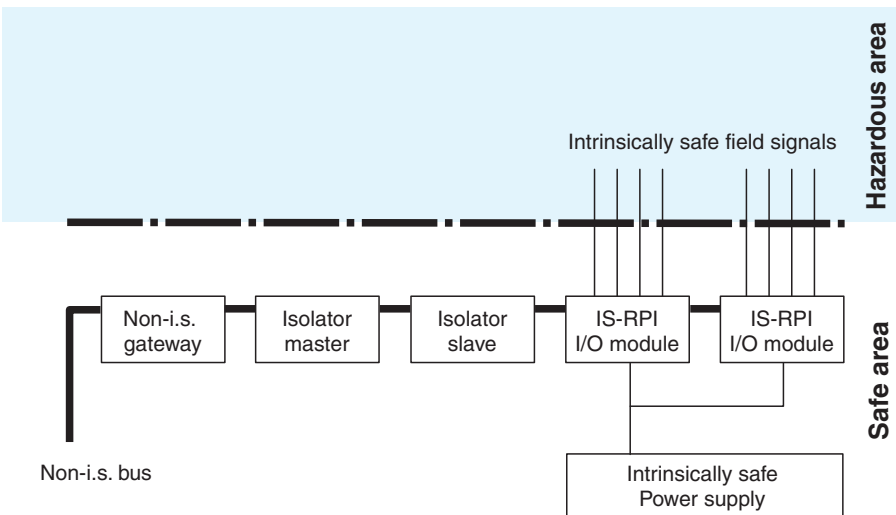
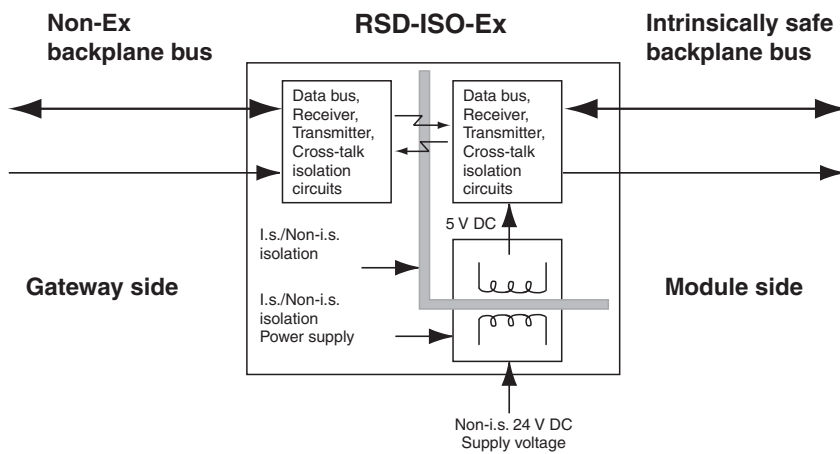
- For the simultaneous connection of non-intrinsically safe and intrinsically safe field signals to one IS-RPI system
- Non-intrinsically safe/intrinsically safe isolation of the internal backplane bus
- Satisfies the European standard 94/9 EG
- Satisfies the US standard NEC 500



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



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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

Supply			
Connection			terminals V+, V-
Rated voltage	U_r		18 ... 32 V DC
Ripple			max. 10 %
Rated current	I_r		150 mA
Power dissipation			2.2 W
Internal bus			
Interface			manufacturer specific bus
Output			
Connection			intrinsically safe backplane bus
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 61241-11: 2006
Standard conformity			
Insulation coordination			EN 50178
Galvanic isolation			EN 60079-11:2007
Electromagnetic compatibility			NE 21:2006
Degree of protection			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			
Connection type			Terminals
Degree of protection			IP20, for on-site installation a separate housing is required with a minimum of IP54
Mass			approx. 265 g
Mounting			DIN rail mounting
Data for application in connection with hazardous areas			
EU-type examination certificate			DMT 00 ATEX E 055 , for additional certificates see www.pepperl-fuchs.com
Marking			⊕ II (2)G [Ex ib] IIC ⊕ II (2)D [Ex ibD]
Supply			18 ... 32 V DC
Maximum safe voltage	U_m		253 V AC
Output			
External capacitance	C_o		39 μF
External inductance	L_o		100 μH
Voltage	U_i		5.75 V
Current	I_i		400 mA
Power	P_i		2.05 W
Internal bus			customer specific
Certificate			
Marking			⊕ II 3G Ex nA IIC T4
Galvanic isolation			
Internal bus/power supply			safe electrical isolation acc. to EN 60079-11: 2007, voltage peak value 375 V
Output/power supply			safe electrical isolation acc. to EN 60079-11: 2007, voltage peak value 375 V
Output/Internal Bus			safe electrical isolation acc. to EN 60079-11: 2007, voltage peak value 375 V

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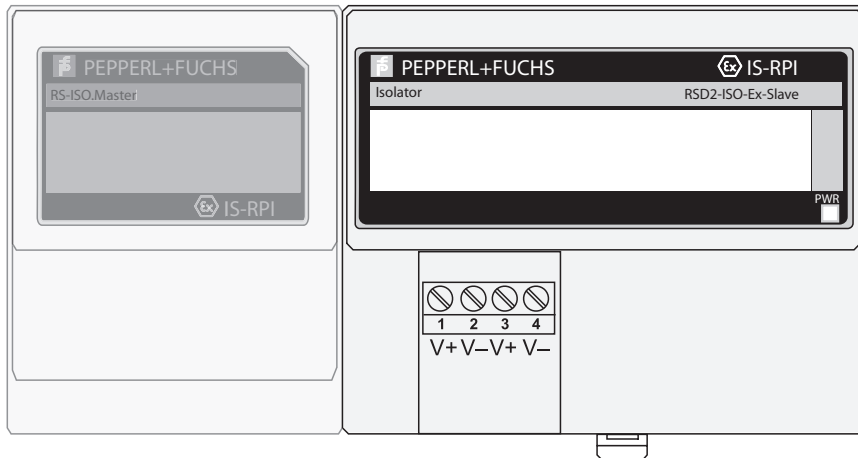
Assembly

Front View

RSD-ISO-Ex consisting of:

RS-ISO.Master

RSD2-ISO-Ex.Slave



Safety 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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