Power Supply RSD2-PSD-Ex4.34





- 4 intrinsically safe power supply channels
- Output power 8.5 W per channel
- Doubled terminals for looping through the input voltage
- Contained in an explosion-protected, pressure-tight encapsulated housing (EEx d) with external connection terminals for increased safety (EEx e) in a separate terminal compartment
- Installation in the Ex-area: EEx de [ib] IIC T4
- Intrinsically safe outputs: EEx ib IIC

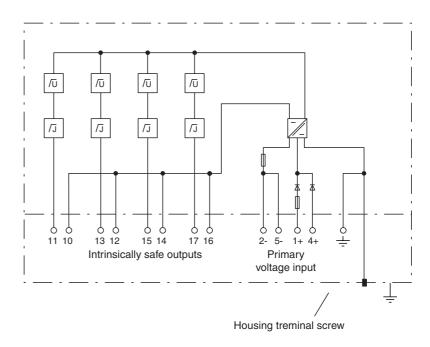
Function

This power supply unit can be installed directly in hazardous areas. It has four (4) intrinsically safe output channels. The power supply unit is kept in an explosion-protected, flameproof encapsulated housing. For increased safety, the external connections are kept in a separate terminal box for the following connections:

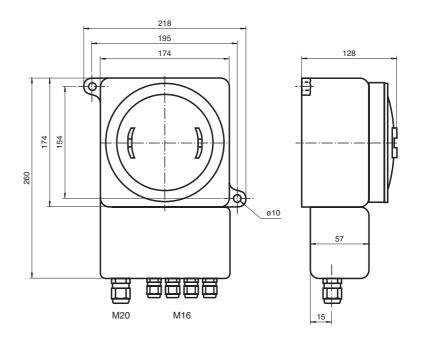
- 1. Primary voltage input
- 2. Redundant primary voltage input
- 3. Intrinsically safe power supply outputs

The input and output voltage are galvanically separated from each other. The outputs have no galvanic separation from each other.

Connection



Composition



Connection terminals 1+, 4+; 2-, 5-, PE Rated voltage 18 32 V DC Ripple 5 % AC Power loss 21 W Power consumption 55 W Output Connection Connection terminals 10+, 12-, 14+, 16+, 11-, 13-, 15-, 17- Voltage 8.7 9.5 V DC Power 8.5 W per channel Directive conformity Electromagnetic compatibility Directive 89/336/EEC EN 61326 Standard conformity	Supply	
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Directive 89/336/EEC EN 61326 Standard conformity	·	
Standard conformity		EN 04000
·		EN 61326
	•	EN SOLTO
Insulation coordination EN 50178		EN 50178
Ambient conditions		00 T000 (1 1 1 T00 T)
Ambient temperature -20 70 °C (-4 158 °F)	·	
Storage temperature -20 100 °C (-4 212 °F)		-20 100 °C (-4 212 °F)
Mechanical specifications	Mechanical specifications	
Connection type Terminals	Connection type	
Core cross-section $\leq 2.5 \text{ mm}^2$	Core cross-section	≤ 2.5 mm ²
Protection degree IP65	Protection degree	
Mass 5360 g	Mass	5360 g
Mounting panel mounting	Mounting	panel mounting
Tightening torque of clamping srews 0.4 Nm	Tightening torque of clamping srews	0.4 Nm
Data for application in connection with Ex-areas		
EC-Type Examination Certificate	EC-Type Examination Certificate	
Group, category, type of protection 🔯 II 2G EEx de [ib] IIC	Group, category, type of protection	
Temperature class T4	Temperature class	T4
Certificate of conformity BVS 98.D.2017X	Certificate of conformity	BVS 98.D.2017X
Supply	Supply	
Maximum safe voltage U _m 40 V DC		40 V DC
Output		
Voltage U _o 9.5 V	-	9.5 V
Current I _o 1 A		1 A
Power P _o 9.5 W		
External capacitance C ₀ 800 nF	· ·	
External inductance L _o 10 μH		
Electrical isolation		
Output/power supply safe galvanic isolation acc. to EN 50020, voltage peak value 375 V		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Output/Output no electrical isolation		

Notes

EEx e input:

The PE conductor of the cable must **not** be connected with the terminals or housing of the power stage. The potential equalisation lead **must** be connected with the housing.

The EEx e input has an M20 screwed connection and can receive cables from 6 mm to 12 mm in diameter. The EEx e terminals receive cables of max. 1 x 2.5 mm² or 2 x 1 mm². The maximum current for these terminals is 23 A. The input is protected by a 5 A fuse (safe triggering of fuse at 8.5 A in accordance with EN 50019). If an EEx e distributor box is used, a maximum of 2 power supplies can be operated via the EEx e terminals of this box.

EEx i output (9 V DC):

The EEx i outputs have M16 screwed connections and are suitable for cables of from 4 mm to 8 mm in diameter.

Maximum cable length:

- 3.5 m (1.5 mm²)
- 5.9 m (2.5 mm²)