GM INTERNATIONAL
TECHNOLOGY FOR SAFETY

PSD 1001C

IIB Group Power Supply for Hazardous Area Equipment Model PSD1001C

Characteristics:

General Description:

The PSD1001C is a single channel Din Rail Power Supply to drive measuring, process control equipments in IIB Group Hazardous Area; it provides isolation between input and output (1.5 KV).
Typical application is to drive high power devices, transmitter or other equipment with 13 V, 100 mA supply capability.

Function:

1 channel IIB Group power supply to operate Hazardous Area Loads providing isolation (input/output).

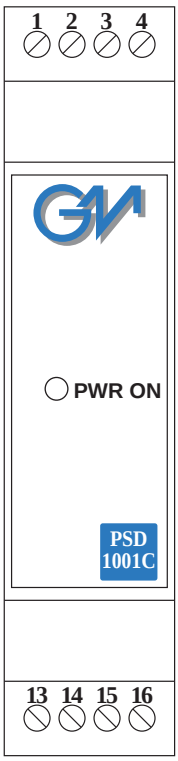
Signalling LED:

Power supply indication (green).

EMC:

Fully compliant with CE marking applicable requirements.

Front Panel and Features:



- High Output Capability Power Supply for Hazardous Area equipment.
- Isolation Input/Output.
- EMC Compatibility to EN61000-6-2, EN61000-6-4.
- Output short circuit proof and current limited.
- ATEX, UL & C-UL Certifications.
- High Reliability, SMD components.
- Simplified installation using standard DIN Rail with plug-in terminal blocks.
- 250 Vrms (Um) max. voltage applied to the instruments associated with barrier.

Technical Data:

Supply:

24 V nom (21.5 to 30 V) reverse polarity protected
ripple within voltage limits ≤ 5 Vpp.
Current consumption @ 24 V: 110 mA with 80 mA nominal load, 130 mA with 100 mA load and 150 mA with short circuit output.
Max. power consumption: 3.80 W at 30 V supply voltage with short circuit output.

Isolation (Test Voltage):

I.S. Out/Supply 1.5 KV;

Output:

100 mA at 13.5 V, 150 mA at 10 V (20.5 V no load, 68 Ω series resistance).
Short circuit current: ≥ 160 mA.

Compatibility:

CE mark compliant, conforms to 94/9/EC Atex Directive and to 89/336/CEE EMC Directive.

Environmental conditions:

Operating: Temperature limits -20 to + 60 °C,
relative humidity max 90 % non condensing, up to 35 °C.
Storage: Temperature limits – 40 to + 80 °C.

Safety Description:

II (1) G D [EEx ia] IIB or I M2 [EEx ia] I associated electrical apparatus.
Uo/Voc = 24.2 V, Io/Isc = 362.8 mA, Po/Po = 1724 mW at terminals 13/15-14/16.
Um = 250 Vrms, -20 °C ≤ Ta ≤ 60°C.
Approvals: DMT 01 ATEX E 042 X conforms to EN50014, EN50020, UL & C-UL E222308 conforms to UL913 (Div.1), UL 60079-0 (General, All Zones), UL60079-11 (Intrinsic Safety "i" Zones 0 & 1), UL60079-15 ("n" Zone 2), UL 1604 (Div.2) for UL and CSA-C22.2 No.157-92 (Div.1), CSA-E60079-0 (General, All Zones), CSA-E60079-11 (Intrinsic Safety "i" Zones 0 & 1), CSA-C22.2 No. 213-M1987 (Div. 2) and CSA-E60079-15 ("n" Zone 2) for C-UL.

Mounting:

T35 DIN Rail according to EN50022.
Weight: about 120 g.
Connection: By polarized plug-in disconnect screw terminal blocks to accomodate terminations up to 2.5 mm^2.
Location: Safe Area / Non Hazardous Locations or Class I, Division 2, Groups A, B, C, D and Class I, Zone 2, Group IIC installation.
Protection class: IP 20.
Dimensions: Width 22.5 mm, Depth 99 mm, Height 114.5 mm.

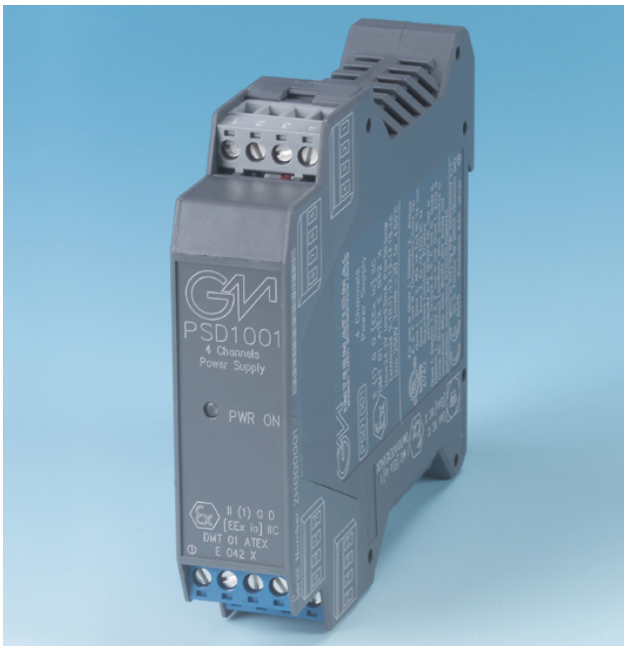
Ordering Information:

Model:	**PSD1001C**
Power Bus enclosure	/B

Parameters Table:

Safety Description	Maximum External Parameters			
	Group Cenelec	Co/Ca (µF)	Lo/La (mH)	L/R / La/Ra (µH/Ω)
Terminals 13/15-14/16				
Uo/Voc = 24.2 V				
Io/Isc = 362.8 mA	II B	0.910	1.08	64.7
Po/Po = 1724 mW	II A	3.270	2.16	129.4

NOTE for USA and Canada:
II B equal to Gas Groups C, D, E, F and G.
II A equal to Gas Groups D, E, F and G.



Function Diagram:

HAZARDOUS AREA / HAZARDOUS LOCATIONS
CLASS I, DIVISION 1 and CLASS II, DIVISION 1 or
CLASS I, Zone 0

SAFE AREA / NON HAZARDOUS LOCATIONS or
CLASS I, DIVISION 2, GROUPS A, B, C, D or
CLASS I, ZONE 2, GROUP IIC