

CPS-A

Intrinsically Safe Compact Power Supplies

Features

- Switched Mode Power Supply
- 32mm DIN Rail Mounting
- LED Status Indication
- Certified Intrinsically Safe - Exia
- Tested to IEC 60079.0:2004 and IEC 60079.11:1999
- Designed For 110VAC Mains Voltage

Description

The CPS-A series of Compact Intrinsically Safe Power Supplies convert 110V AC mains power to intrinsically safe low voltage DC power.

The DIN rail mount enclosure is made of robust black polycarbonate and has a protection rating of IP20. Top and bottom enclosure walls feature ventilation slots for natural convection cooling. The side walls are solid and allow other components be stacked against it on the DIN rail. Top and bottom ventilation slots must be kept free for air circulation. Screw terminals are located on the front for connecting the AC mains cable and the output load circuits. The output has two terminals for each of the positive and negative DC supply.

The power supply has Associated Apparatus approval and must be mounted in an appropriate enclosure, or in the safe area.

Some typical uses of this power supply are for voice communication systems, gas detection systems and other electronic equipment requiring intrinsically safe Ex ia power in a Group 1 environment.

Operation

The CPS-A is an active power supply and exhibits very low output impedance. At full load the output voltage is reduced by only 0.3V.

The power supply output acts as a current limited voltage source. The load impedance can vary down to short circuit while the maximum output current is maintained.

LED INDICATORS

The following four (4) Status LED's are located on the fascia:

LED 1 AC Mains supply ON	Green
LED 2 DC Output Power ON	Green
LED 3 DC Output Switch ON	Green
LED 4 DC Output Overload	Red

The red OVERLOAD indication lamp on the fascia lights up when current limit sets in. The OUTPUT indication lamp is driven directly by the output voltage. In current limit the light intensity drops with lower voltage. The OUTPUT SWITCH light indicates that the internal control circuit is healthy and the output is ON. The light turns off when mains power is removed and when a fault occurs. If mains power is healthy but the OUTPUT SWITCH light is OFF, return the power supply to Ampcontrol for repair.



Specification

Supply Voltage	110V AC ± 20%, 50/60Hz
Operating Temperature	0-50°C for 12.6V / 2.4A 0-60°C all other models
Dimensions	125 W x 102 H x 125 D mm
Weight	1kg
Input Parameter	Um = 132V
Output Parameters (currently approved types)	

Uo	Io	Co	Lo	L/R
12.6V	2.4A	10uF	74uH	30uH/Ω
12.6V	2.4A	20uF	40uH	8uH/Ω
12.6V	2.0A	20uF	95uH	40uH/Ω
15.1V	1.5A	1uF	190uH	30uH/Ω
15.1V	0.469A	2uF	450uH	70uH/Ω
15.1V	0.51A	2uF	450uH	65uH/Ω

Condition of Safe Use

The input mains terminals and output DC terminals have a minimum separation distance of 50mm. This separation must be maintained by using insulated wires and lugs.

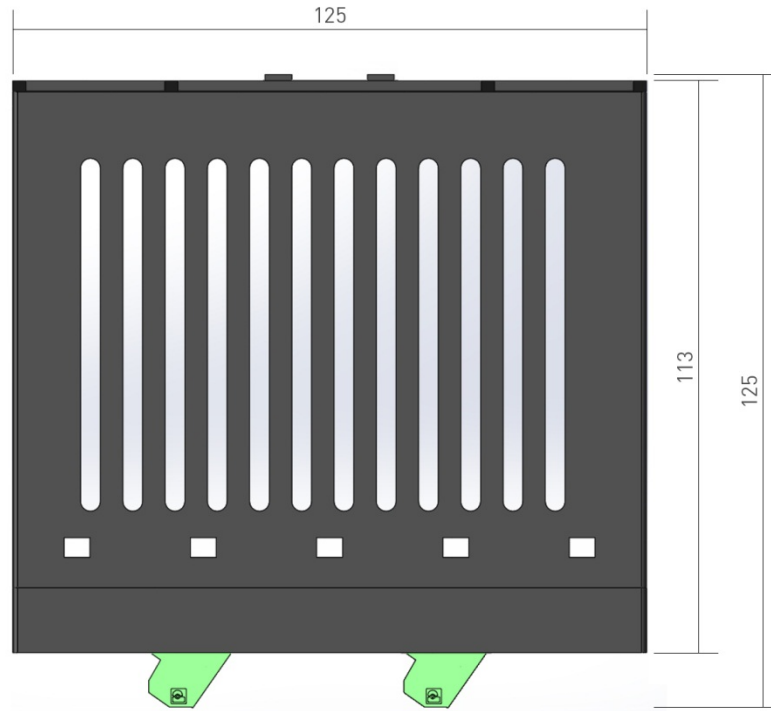
Approval & Certification

IEC Ex TSA 06.0014X [Ex ia] I

Ordering Information

Part Number	Descriptions
157353	CPS-A 12.6V DC 2.0A IECExV1
157351	CPS-A 12.6V DC 2.4A IECEx V1
157352	CPS-A 15.1V DC 0.47A IECEx V1
157341	CPS-A 15.1V DC 0.51A IECEx V1
157354	CPS-A 15.1V DC 1.5A IECEx V1

Dimensions



IS DC OUTPUTS



MAINS INPUTS