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Installation and User Manual

Models: **ACCESS-PSU1**

13.8Vdc 4A Advanced PSU

ACCESS-PSU2

With **UNIVERSAL** back plate for mounting Access Control Devices

The **ACCESS-PSU1** and **-PSU2** products are advanced, high efficiency power supplies, designed for use within Access Control applications. Featuring a regulated 13.8Vdc output, it supplies continuous full rated current to load (4A) plus an additional 0.5A for charging a 12Vdc standby battery. Full PSU and battery fault monitoring is offered as standard in conjunction with battery Deep Discharge Protection. Housed in a powder coated, lockable steel enclosure it offers a unique 'Universal' mesh backplate, providing simple & flexible mounting options for a range of Genetec Access controllers / devices, utilising the supplied fixings.

1. FEATURES

- Continuous full rated current to load (4A)
- Universal mains input voltage 90-264Vac
- Lockable steel enclosure
- Volt free contact signalling mains failure (EPS)
- Volt free contact signalling output and battery faults (GEN)
- Universal enclosure with mesh backplate (fixings supplied)
- Installer safe design with all high voltage electronics fully shrouded
- Lid and removal from wall tamper detection
- 4 x fused outputs with Individual fire relay functionality and health LED's
- LED status indication (Mains & Fault)
- Full electronic short circuit & overload protection
- Individual battery and output fuse protection
- Mains transient protection circuit
- Accommodates a 12Vdc 7Ah or 17Ah SLA battery
- Limited Lifetime Warranty

2. SAFETY INFORMATION



Mains equipment, observe local regulations.

3. INSTALLATION AND COMMISSIONING

Installation and repair must be carried out by a certified professional or qualified electrician in accordance with all relevant safety regulations that are applicable.

This unit is only suitable for installation as permanently connected equipment and is to be used with DC appliances only. This equipment is NOT SUITABLE for external installation and must be installed according to all relevant safety regulations.

The unit must be fed from an AC power source having a separate (approved) disconnect device and fitted with a fuse or other over-current protection device rated at 3A maximum. Ensure that the disconnect device used has appropriate earth fault protection to the applicable standard.

3.1. Door opening / closing

Door locking is provided by a Camlock key on either one or two positions on the front right-hand side of the enclosure – Figure 1

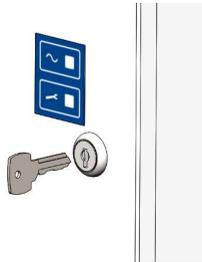
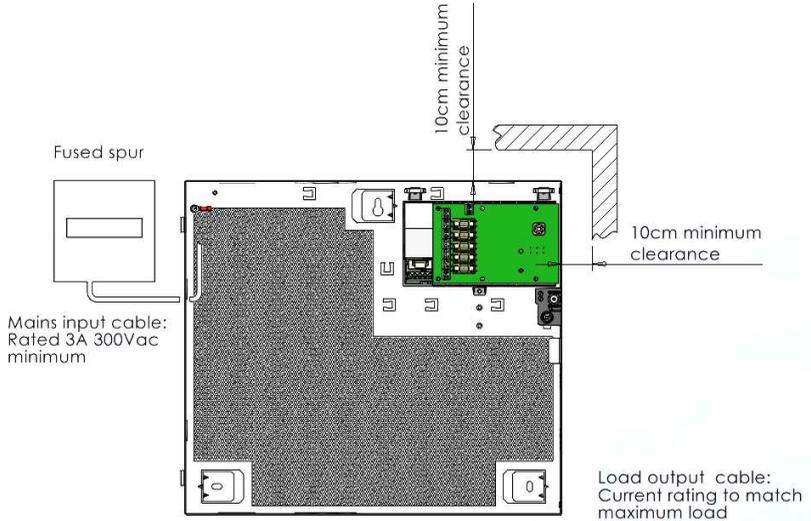


Figure 1: Key lock

3.2. Mounting

- Mount enclosure securely in correct orientation allowing minimum clearance of 10cm from walls, ceilings or other obstacles and using 5mm diameter steel screws having a thread size and length suitable for the wall type or the surface being mounted on (Figures 2 and 3)
- Route power and LV cables via different knockouts / cable entry holes.
- Use bushes and cable glands rated to UL94 HB minimum.



**Figure 2: Mounting and clearances. Illustration is PSU1.
 PSU2 has same clearances**

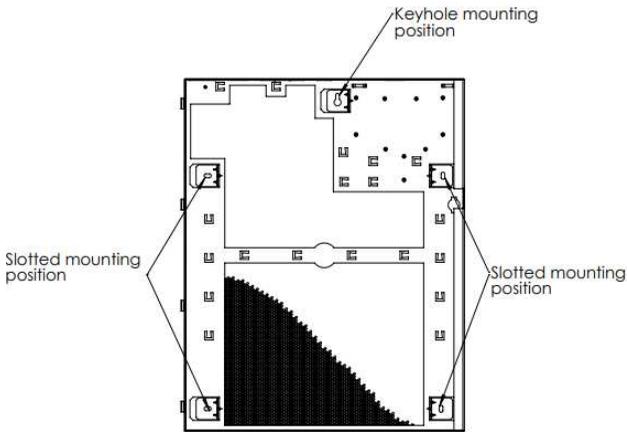


Figure 3a: PSU2 mounting positions

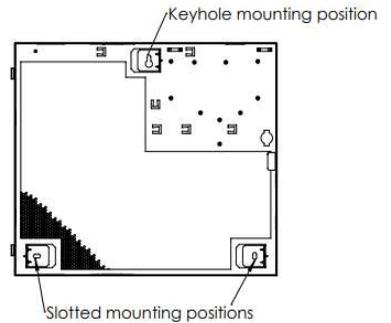


Figure 3b: PSU1 mounting positions

3.3. AC Power Up (commissioning)

- Attach correctly rated AC power cable (minimum 0.5mm² [3A], 300/500V ac) and fasten using cable ties.
- Apply AC power. Check for 13.8Vdc on load output and AC power Green LED is on.
- Disconnect AC power.

3.4. Load Output (commissioning)

- Attach correctly rated load cable and fasten using cable ties. Note polarity.
- Apply mains power and check Green AC power LED is ON, verify load is operating correctly.
- *N.B. - The Red fault LED may flash to indicate no battery is connected. This is normal.*
- Disconnect mains power.
- Connect EPS and GEN fault outputs to appropriate inputs of CIE equipment.
- Attach supplied battery cables to the correct PSU terminals and battery.
- *N.B. - Ensure correct polarity of battery connections.*
- Connect tamper switch to appropriate input of CIE equipment.
- Close the lid and fasten with keylock
- Reconnect AC power.
- Check there is no fault indication on the Fault LED. A single short flash indicates the battery is charging, please note, this is normal operation.
- Disconnect AC power. Check that the battery continues to supply voltage and current to the load.
- Reconnect AC power.

3.5. Standby battery

NOTE: Ensure batteries being fitted to the unit are in good condition

- Attach supplied battery cables to terminal block and then the battery
- **NOTE: Ensure correct polarity of connections: +ve = red lead, -ve = black lead**
- Apply mains power and check green Mains LED is on
- Check the fault indication LED is not illuminated
- Disconnect mains power. Check that the battery continues to supply voltage and current to the load. The Green LED should be off
- **NOTE: Batteries must have sufficient charge to supply the attached load.**
- Reconnect mains power. Green LED should be on.
- Disconnect mains power, remove load fuse and check Fault LED is on
- Replace Load fuse. Reconnect mains power, check Fault LED is off

3.6. Tamper (commissioning) Figure 5

- Check that the CIE recognises the tamper is 'OPEN'.
- Close the lid and lock it with either the key or M4 screw supplied.
- With the unit mounted on the wall check that the rear tamper pin is not resting on
 - any irregularities (eg: gap in mortar course or protrusion).
- Using a continuity meter, check that the tamper switch is: CLOSED when the lid/cover is closed and locked and OPEN when the lid is more than 5mm open. Use the fine adjustment screw to alter the projection of the rear tamper pin.

- Close the lid and lock. Re-check tamper circuit is closed at the control panel.

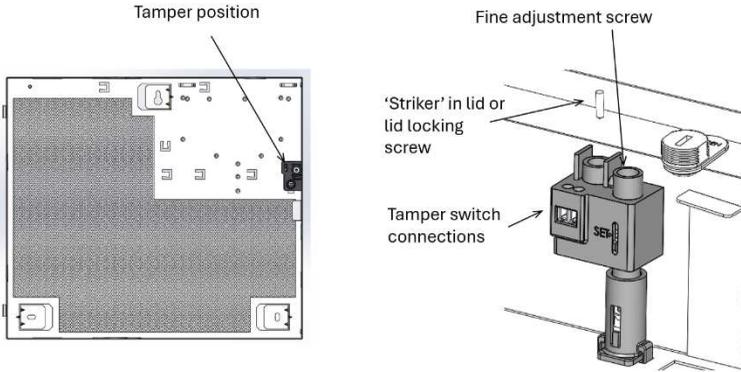


Figure 5: Tamper setting. Illustration is PSU1, Similar position in PSU2

3.7. Universal Backplate

The hole pattern in the enclosures allows a wide variety of access devices to be mounted in any position. A kit is included that comprises of standoffs and self-tapping screws for this purpose.

For PCB type devices, use the nylon arrowhead type standoffs supplied in the fixing kit.

It is recommended that the standoffs are fitted as described below:

- 1) Fit the standoffs into the PCB mounting holes.
- 2) Gently place the device in the required position, locating/aligning the standoffs on the Universal mesh but without pressing in place.
- 3) Once positioning is correct, push standoffs into the selected hole positions, ensuring each one has locked in place (Figure 6a)

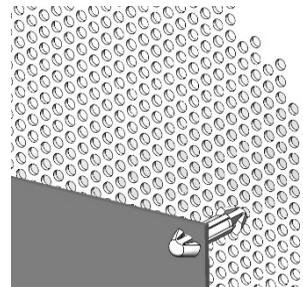


Figure 6a: Standoff fitting

For devices that need to be fixed by screws, use the 3.5mm (No.6) self-tapping screws that are supplied in the fixing kit.

It is recommended that the devices are fitted as described below:

- 1) Align the device over the mesh, so that the required number of mounting holes are aligned as close as possible with the mesh hole pattern.
- 2) Loosely fix the screws in each of the aligned mounting positions.
- 3) Once position is correct, tighten all screws (max torque 0.6Nm, Figure 6b)

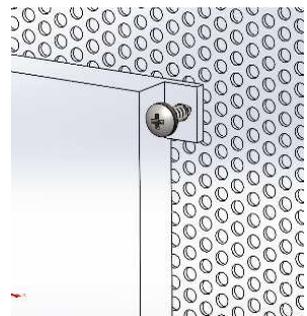


Figure 6b: Screw fixing

3.8 Connections (figure 7)

Outputs 1, 2, 3 4: Connections for equipment to be powered (Observe polarity).

BATT +, - Connection to the battery.

EPS FAULT Relay output for AC power fail. Open if loss of AC power - Normally Closed when Healthy.

GEN FAULT Relay output for General Fault. Open in fault condition - Normally Closed when Healthy.

TAMPER Front & Rear Enclosure Tamper signal – Normally Closed when Healthy.

In the event of loss of AC power, a battery fault or a PSU fault, the corresponding fault signal contacts will open.

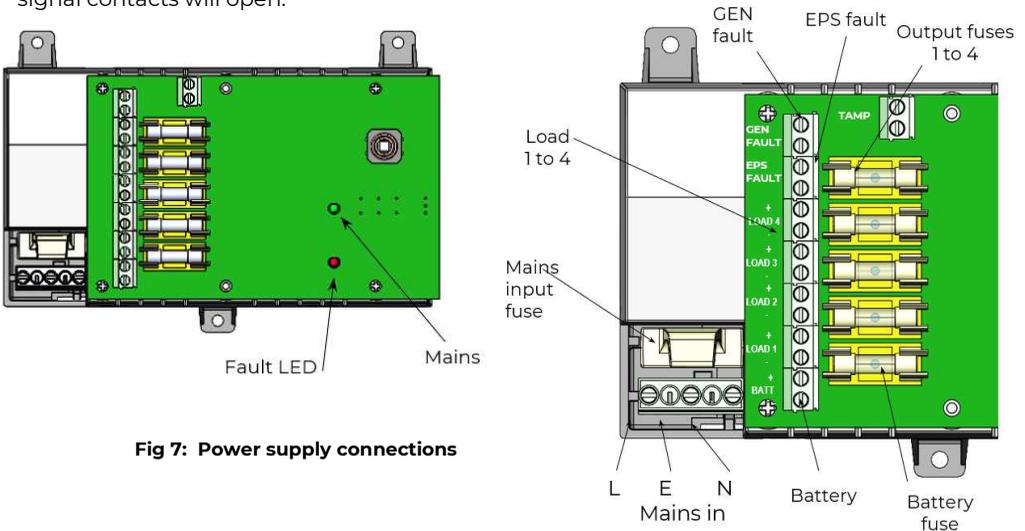


Fig 7: Power supply connections

4. OPERATING AND MONITORING

This unit is intended for use by trained Service Personnel only. Once installed and operational there are no user functions other than observance of the two LED status indicators.

The green Mains LED will be illuminated whilst the mains supply is present. In the event of a fault condition, the lower Fault LED will be illuminated under the conditions shown in the fault diagnostics section

Should a fault occur, the relevant fault signal will be activated, and the diagnostic LEDs will provide additional information regarding the type of fault detected. The unit will continue normal operation once the fault has been rectified.

5 SPECIFICATION

Input		
Rated Voltage/Operational Voltage	100 – 240Vac / 90 – 264Vac	
Max. AC power Input Current	<2.0A @ 90V ac	
Frequency	50 – 60Hz	
Mains input fuse (20mm 250Vac HBC)	T3.15A HRC	
Output		
Voltage – mains power	13.5 – 14.2V dc (13.8V dc nominal)	
Voltage – battery standby	10.0 to 12.3Vdc on battery standby	
Output Load Current (continuous)	4A	
Load output fuse (20mm Glass)	4 x F1.0A	
Ripple	< 150 mV pk-pk max	
Overload	Electronic shutdown until overload or short circuit removed (under mains power only)	
Standby Battery		
Battery Type	12V Valve Regulated Lead Acid	
Battery Capacity (max)	ACCESS-PSU 1: 1 x 12V 7Ah	ACCESS-PSU 2: 1 x 12V 17Ah/18Ah
Battery Fuse Protection	F4.0A	
Environmental		
Temperature - Operating	-10 to +40°C 90% RH non-condensing	
Temperature - Storage	-20 to +80°C	
Mechanical		
	ACCESS-PSU1	ACCESS-PSU2
Dimensions W x H x D mm (not including mounting points)	382 x 337 x 88	408 x 508 x 90
Weight (without battery) Kg	3.2	5.8
IP and IK ratings	IP30 / IK08	
Signalling outputs		
EPS Fault:	0.1A @ 60vdc N/O volt free contact. Open when loss of mains for more than 10s	
GEN Fault:	0.1A @ 60vdc N/O volt free contact. Open when battery disconnected, *output fuse fail, battery fuse fail or output short circuit. (*Applies only to O/P 1 of multiple fused units)	
Tamper:	3A @ 125Vac N/O volt free contact Note: Contact opens when lid opened or case removed from mounting (TAMPER ACTIVE condition).	

Fault diagnostics:

RED LED (Fault)	Green LED (Mains)	PSU Status
OFF	ON	Normal: Battery fully charged
Flashing (1s)	ON	Loss of mains, battery disconnected, output fuse fail, output shorted or low output voltage.
OFF	OFF	Fault: No mains, No output, Batteries disconnected or completely discharged

6. MAINTENANCE

This unit is intended for use by Service Personnel only. There are NO USER SERVICEABLE parts, and no regular is maintenance required of the PSE other than periodic testing and replacement of the standby battery.

7. COMPLIANCE

This power supply unit meets the essential requirements of the following European Directives:

Low Voltage 2014/35/EU EMC 2014/30/EU

WEEE 2012/19/EU RoHS 2011/65/EE

8. END OF LIFE DISPOSAL

This product falls within the scope of EU Directives 2012/19/EU Waste Electrical and Electronic Equipment (WEEE) and 2013/56/EU (Battery). At the end of life, the product must be separated from the domestic waste stream and disposed via an appropriate approved WEEE disposal route in accordance with all national and local regulations.

Before disposal of the product, any battery must be removed and disposed of separately via an appropriate approved battery disposal route in accordance with all national and local regulations. Package used batteries safely for onward transport to your supplier, collection point or disposal facility.

See Specification for battery type information.

For more information see: www.recyclethis.info

Warning: risk of explosion if incorrect battery type fitted.

*The packaging supplied with this product may be recycled.
Please dispose of packaging accordingly.*

9. SYMBOL DEFINITIONS



Fault Indication



Shock Risk –
isolate
before
attempting
access



Mains Present



Protective Earth



Do not
dispose of in
unsorted
waste

Specifications subject to change without notice