

Installation Manual

ENFORCER[®]

EAP-505Q (5A@12VDC, 2.5A@24VDC)

Access Control Power Supply

SPECIFICATIONS:

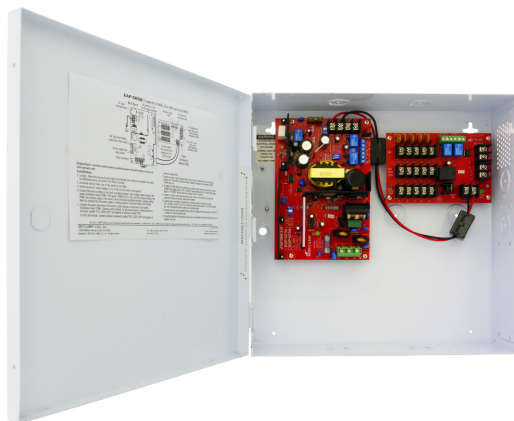
POWER:

- ▶ Input: 110~240VAC.
- ▶ Output: Field selectable 12VDC or 24VDC output.
- ▶ Five individually fused (PTC*-type fuses) power outputs. Each output operates both in fail-safe and fail-secure modes.
- ▶ Each individually fused (PTC*-type fuses) output rated at 1.1 Amp.
- ▶ AC input fuse rated at 3.15 Amps (glass fuse).
- ▶ Filtered and electronically regulated outputs.

ENCLOSURE:

- ▶ Heavy-duty steel case to protect the power connections.
- ▶ Removable steel cover for easy access to power connections.
- ▶ Ventilation holes to prevent heat build-up.
- ▶ Room for two 7AH batteries (not included).
- ▶ 6-foot power cord and battery leads included.
- ▶ Dimensions - 12¹/₈"x12¹/₄"x3⁹/₁₆"(308x311x90 mm).
- ▶ Knock-out on the cover for optional cam lock.

* Positive Temperature Coefficient



FEATURES:

- ▶ AC power failure supervision relay.
- ▶ Battery fail / low battery supervision relay.
- ▶ DC output fail supervision relay.
- ▶ Auxiliary output relay.
- ▶ Adjustable voltage range to compensate for voltage drop.
- ▶ Built-in back-up battery charger (batteries not included).
- ▶ DIP switch selectable 2.2kΩ End-of-Line (EOL) resistor for AC failure and battery failure supervision relays.
- ▶ DIP switch selectable delay timer (5 sec., 5 min., 5 hours) for AC failure supervision relay.
- ▶ LED status indicator for AC input, DC outputs, and channel outputs.

What it is:

The ENFORCER Access Control Power Supply centralizes the power sources for multiple 12 or 24 VDC-powered electronic locks or accessories used in access control system. The power input and all fused power outputs are enclosed in one heavy-duty, easy-to-install enclosure. As a result, an ENFORCER Access Control Power Supply can replace multiple separate individual power sources.

Note before installation:

The ENFORCER Power Supply is not waterproof or weatherproof. Therefore, it must be mounted indoors where it cannot be exposed to rain or other moisture.

Installation must be done by qualified personnel, and should conform to local and all other applicable codes.

Installation:

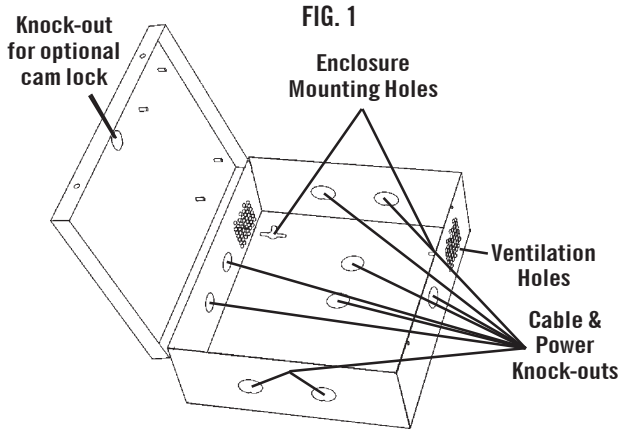
1. Find a good location for the enclosure. The enclosure should be mounted where it is out of sight and protected from moisture and the weather, but where an authorized person can have access for servicing in the future.

NOTE: Make sure the space where the enclosure is to be mounted has adequate ventilation. Otherwise, heat buildup inside the enclosure could damage the electronic parts or cause the PTC fuses to trip needlessly.

2. Locate the enclosure mounting holes. Using these holes as a template, mark the location of the 4 screws on the wall with a pencil. First fasten two 5/32" x 1" (4 x 26mm) upper screws (not included) until the gap between the wall and the screw head is approximately 1/4" (6mm). Hang the enclosure on the 2 screws using the enclosure's upper screw holes and adjust the proper location of the enclosure. Then securely fasten the upper and lower screws. *Use larger sized screws if backup batteries will be placed inside the enclosure.*

Note: Products with model numbers that end with "Q" or that have a round green "Q" sticker are RoHS compliant.

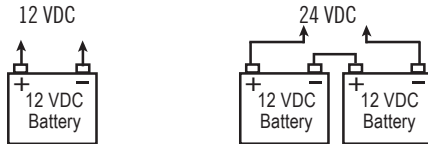




NOTE: For concrete walls, first drill four holes on the concrete wall in the location of the screws. Then insert a "plastic anchor" in each of the holes before fastening the screws.

- Set the desired DC output voltage (12 or 24 VDC) via DIP switch (see Fig.10).
- Connect the back-up battery (not included) to the back-up battery terminal (see Fig.2 & Fig.10). Check the voltage output reading of the Power Distribution Module (PDM). If the "POWER LED" is ON, and if the voltage reading of the PDM's five channel output is the same as that of the back-up battery terminal's voltage reading, then this indicates that the power supply is working properly. Disconnect battery after testing.

Fig. 2 – Back up battery configuration.



- Connect the power input wires of the access control devices or accessories to the Power Distribution Module (PDM) (see Fig.10). Observe correct polarity. For fail-secure devices, connect positive to terminals marked "POS. OPEN LOOP" and negative to terminals marked "NEG."

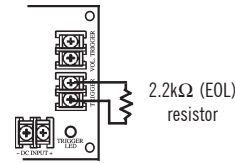
For fail-safe devices, connect positive to terminals marked "POS. CLOSE LOOP" and negative to terminals marked "NEG".

Maximum total current connected to all terminals must not exceed the power supply's total current capacity (see Table 1).

- Connect a visual or audio indicator device (such as siren or strobe light) to the AC-fail and battery-fail / low battery supervision relays if needed (see Fig.10). Use between 22AWG to 18AWG wire size.
- Connect a visual or audio indicator device (such as siren or strobe light) to the power fail supervision relay and Auxiliary output relay if needed (see Fig.10). Use between 22AWG to 18AWG wire size.

IMPORTANT NOTE: If the "TRIGGER" terminal block function is not going to be used, then a 2.2kΩ resistor must always be connected to the "TRIGGER" terminal block as shown below in Fig.3.

Fig. 3



- Follow the connection diagrams shown on Fig. 4~9 to trigger the PDM from a wet and/or dry contact switch from the control station:

Fig. 4 – Momentary trigger wiring diagram for wet and / or dry N.C. switch.

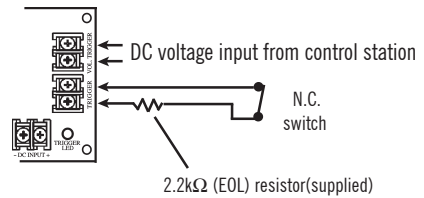


Fig. 5 – Momentary trigger wiring diagram for wet and / or dry N.O. switch.

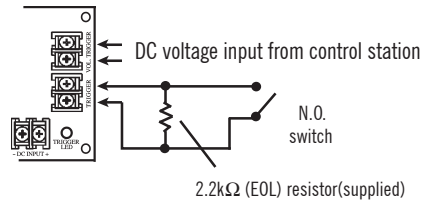


Fig. 6 – Latch trigger wiring diagram for wet and / or dry N.C. switch.

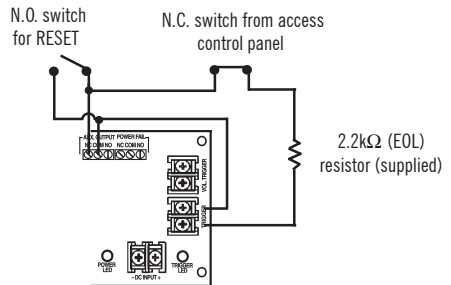
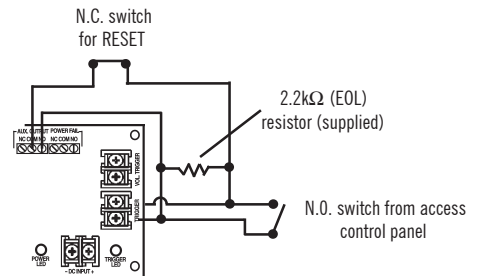


Fig. 7 – Latch trigger wiring diagram for wet and / or dry N.O. switch.



Access Control Power Supply Installation Manual

Fig. 8 – Multiple PDM momentary trigger wiring diagram for wet and / or dry N.O. switch.

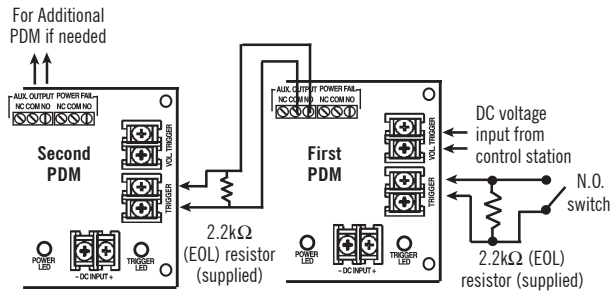
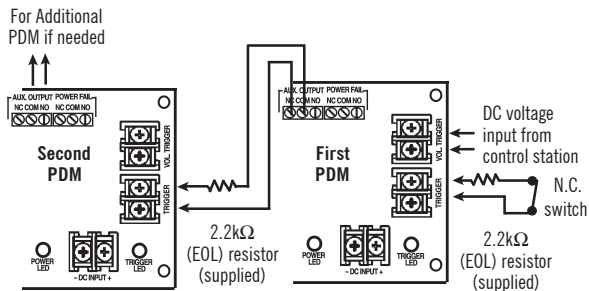


Fig. 9 – Multiple PDM momentary trigger wiring diagram for wet and / or dry N.C. switch.



NOTE: Output LEDs on the PDM will turn ON when fuse has been tripped.

9. Double check connections to ensure everything is connected properly.
10. Connect the AC power (110~240VAC). The AC LED and DC LED on the mainboard and the power LED on the PDM should turn ON to indicate the power supply unit is working properly.
11. Connect the back-up battery wiring. Check the voltage output reading of the PDM to ensure it is within the normal working range.

Table 1: Max. supply current chart

Model	Max. supply current at 12VDC	Max. supply current at 24VDC
EAP-5D5Q	5 Amp.	2.5 Amp.

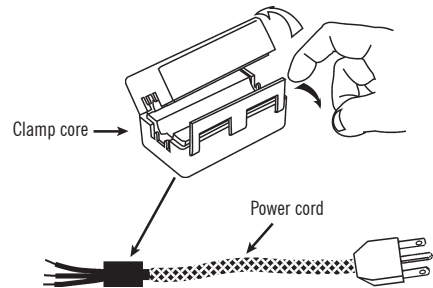
Table 2: Terminal Functions

Mainboard

Terminal Legend	Functions
A E N	To connect 110~240 VAC power. ("A" for active wire, "E" for earth or ground wire, and "N" for neutral wire)
BAT. FAIL	Used to notify battery failure. Dry contact relay rated at 3Amp.@24VDC. If back-up battery is not connected properly or if voltage output falls below 10.8VDC for 12VDC setting (or 21.6VDC for 24 VDC setting), the connected warning device will be activated.
AC FAIL	Used to notify loss of AC power. Dry contact relay rated at 3Amp.@24VDC. If AC power is cut-off, the connected warning device will be activated.
- BAT +	Used to charge the back-up battery. Maximum charging current is 3.5 Amp.
- DC +	12 or 24VDC output terminal from main board.

IMPORTANT:

- a. To avoid risk of electrical shock, the ground terminal of the "AC INPUT" MUST be connected to earth via the power cord.
- b. The included core clamp must be installed on the power cord as shown below.



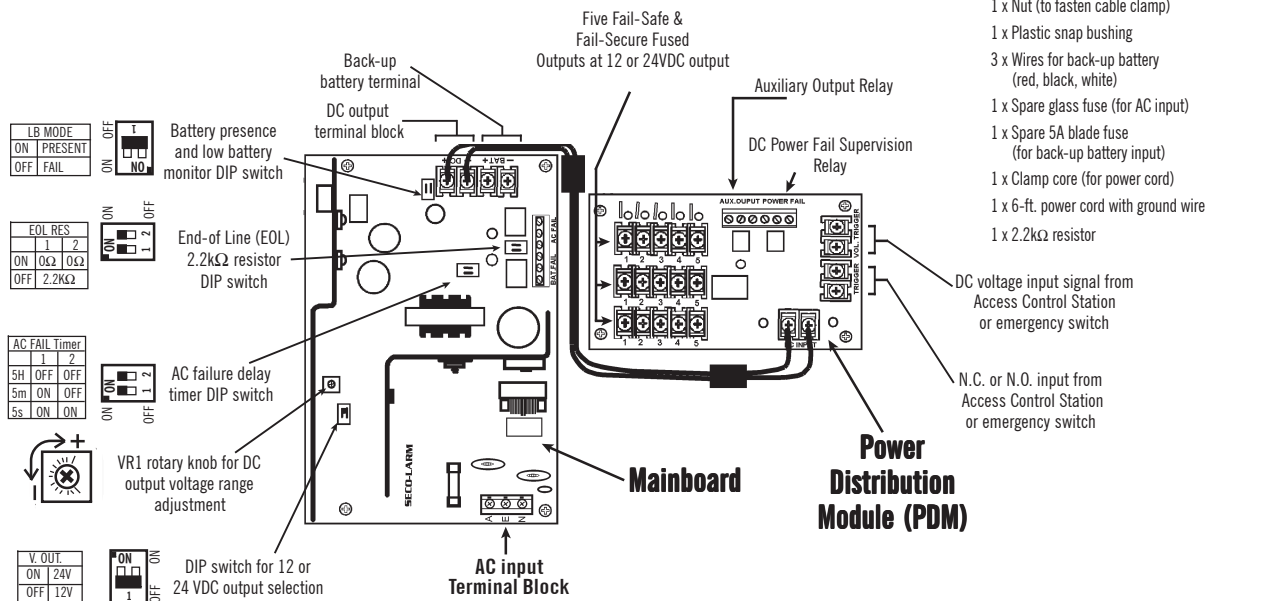
Programmable/Adjustable Features:

- A. AC-failure Relay Output Delay Timer — Programmable AC-failure relay delay timer can be set at 5 sec., 5 min. or 5 hr. using the DIP switch. See Fig. 10. Default setting is at 5 sec.
- B. 2.2kΩ End-of-Line (EOL) resistor — End-of-line 2.2kΩ resistor for AC-failure relay and battery-failure / low battery supervision relays can be activated independently using the DIP switch. See Fig. 10.
- C. Battery presence and low battery monitor — When the LB MODE DIP switches are in the ON position, the power supply will monitor the battery to verify if it has sufficient voltage to run the power supply in case of AC power failure. It can take up to 5 minutes to send a battery failure alert. The length of time the system will run will be limited by the overall capacity and the age of the batteries and the amount of load being drawn off the power supply. See Fig. 10.
- D. VR1 rotary knob for DC voltage output adjustment -- Use to increase or decrease the voltage of the outputs. Measure voltage output at the device located furthest from the power supply.

Power Distribution Module (PDM)

Terminal Legend	Functions
TRIGGER	Used to connect N.O. or N.C. input trigger signal (2.2kΩ EOL resistor) from access control panel. A short or open circuit will transfer power from "POS. CLOSE LOOP" to "POS. OPEN LOOP".
VOL. TRIGGER	Used to connect wet (5-30VDC) input trigger signal from access control panel. A short or open circuit will transfer power from "POS. CLOSE LOOP" to "POS. OPEN LOOP".
POWER FAIL	Used to notify loss of DC power. Dry contact relay rated at 3Amp.@24VDC If VDC input to the PDM is interrupted, the connected warning device will be activated.
AUX OUTPUT	Used to activate other auxiliary device when trigger signal is received from the "TRIGGER" or "VOL TRIGGER" terminals.
- DC INPUT +	12 or 24 VDC input from main board.

FIG.10: Power Connections and Dip Switches for Mainboard & Power Distribution Module (PDM)



Note: If an overload occurs, such as the total current connected to the power supply exceeds the power supply's total current capacity, the mainboard's voltage output will start to drop. The voltage drop will depend on the extent of the overload. The greater the overload the bigger the output voltage drop. If the overload is extensive, the voltage output will become intermittent and the red LED will start flashing. When the overload is removed, the mainboard will automatically restart normal output.

If an output short-circuit occurs, the mainboard will automatically shut the output down and the red LED will turn off. When the short-circuit is removed, the mainboard will automatically come back on line.

The SECO-LARM® policy is one of continual development and improvement. For that reason, SECO-LARM reserves the right to change specifications without notice. SECO-LARM is not responsible for misprints.

WARRANTY: This SECO-LARM product is warranted against defects in material and workmanship while used in normal service for a period of one (1) year from the date of sale to the original consumer customer. SECO-LARM's obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation prepaid, to SECO-LARM.

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SECO-LARM® U.S.A., Inc., 16842 Millikan Avenue, Irvine, CA 92606
Tel: 800-662-0800 / 949-261-2999 Fax: 949-261-7326

Website: www.seco-larm.com
E-mail: sales@seco-larm.com

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