

POWERPATH™ NAC POWER SUPPLIES



Description

The Wheelock Series PS-6 and PS-8 are 24VDC, filtered and regulated, supervised remote power supply/battery chargers are used for supervision and expanded power driving capability of Fire Alarm Notification Appliance Circuits. The PS-6 provides 6 amps of power distributed across 4 outputs, while the PS-8 provides 8 Amps across 4 output. In addition the PS-8 provides additional room in the chassis for accessories like an Addressable Control Module, with mounting studs.

The Power Supplies may be connected to any 12V or 24V (FWR or DC) Fire Alarm Control Panel (FACP) by using a Notification Appliance Circuit (NAC) or a "Dry Contact". Primary applications include NAC expansion (supports ADA requirements) and auxiliary power to support system accessories. This unit provides filtered and regulated 24VDC, up to four (4) Class "B", two (2) Class "A", or two (2) Class "B" and one (1) Class "A" Notification Appliance Circuits. With the optional plug-in PS-EXP module the unit supports (8) Class "B" or (4) Class "A" Notification Appliance Circuits. Additionally, an auxiliary power output of 2.5 Amps (disconnected upon AC power loss or an alarm condition) or up to 0.240 A of constant power on the PS-8 and 0.075 A of constant power on the PS-6.

The Wheelock Power Supplies can accommodate 7 or 12 AH batteries inside its lockable chassis. Using an external battery cabinet it can charge up to 33 AH batteries (pending UL testing). Two FACP NAC circuits or two "Dry" contact initiating circuits can be connected to the inputs. These inputs can then be directed to control supervision and power delivery to any combination of the four (4) outputs. Each output is rated at 3.0 Amps (Class "B") or (Class "A") and can be programmed to generate a steady or Code 3 Temporal Horn sound and a strobe output under alarm condition. Total load for the PS-6 and PS-8 NAC circuits must not exceed the power supplies rated output.

The Power Supplies under non-alarm condition provides independent supervision for Class "A" and Class "B" FACP NAC circuits. In the event of circuit trouble, the FACP will be notified via the POWERPATH steered input (IN1 or IN2). In addition there are two sets of trouble reporting terminals, one used for AC power loss reporting and the other for all troubles. The AC power loss reporting, on the common trouble terminals and on IN1 or IN2, can be delayed for either 30 seconds or 170 minutes. The AC power loss terminals will always report the trouble within 1 second after loss of AC power.

The PS-6 and PS-8 Power Supplies are UL Listed under UL Standard 864, 9th Edition to be used with any 24 volt Listed Regulated notification appliances. They include the capability to synchronize Wheelock strobes and horns and to silence the horn signal when horn/strobes are operating on two wires.

Approvals

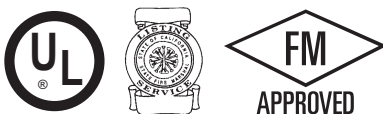
- Approvals Include: UL Standard 864, 1481, California State Fire Marshal (CSFM), Factory Mutual (FM)
- Compliant with NFPA 72

Inputs

- 120VAC, 50/60Hz, 4.25 Amps (PS-6/8) and 5.32 Amps (PS-8) Operating Power in Alarm
- 240VAC, 60Hz, 2.42 Amps (PS-6E) and 3.22 Amps (PS-8E) Operating Power in Alarm
- 24VDC Battery Backup Connection
- Two (2), 12V or 24V NAC Initiating Circuits (8-33V at 5mA) FWR or DC
- Two (2) "Dry" Contact initiating Circuits
- Accepts two (2) Class "A" or two (2) Class "B" circuit inputs
- Built in battery charger for sealed lead acid or gel type batteries

Outputs

- NAC outputs are 24VDC, 3.0 Amps each, power limited
- 8 Amps on PS-8 and 6 Amps on the PS-6 total alarm current



...Features continued on next page

- Capable of four (4), Class "B" circuits
- Capable of two (2) Class "A" circuits
- Capable of one (1) Class "A" circuit and two (2) Class "B" circuits
- Capable of (8) Class "B" or four (4) Class "A" circuits with optional PS-EXP module
- Temporal (Code 3), constant voltage output, Wheelock Sync output or True input to output follower mode
- Built-in Wheelock synchronization mode that can be fed to any or all of the output circuits
- Input and output can be synchronized with "IN>OUT SYNC" mode (DSM, 2nd POWERPATH™ or FACP with synchronization protocol is required)
- Audible silence capability
- Filtered and electronically regulated output
- 2.5 Amp auxiliary power limited output with reset capability. (Removed upon AC loss or alarm. Automatic reset 30 seconds after AC power returns or the alarm condition is over) or 0.075 Amps (PS-6) or 0.240 Amps (PS-8) of auxiliary power limited output which remains on during AC loss or an alarm condition when configured for 24 hour battery backup

Supervision

- Compatible with 12V or 24V (FWR or DC) FACP
- Signaling appliance circuits are supervised and steered to either IN1 or IN2
- 10K Ohm, 1 Watt (Wheelock Model #MPEOL) End of Line Resistor (EOLR) for supervision of all outputs
- 37 distinguishable trouble diagnostics
- AC loss trouble reported over a separate set of contacts (delay of 1 second)
- All troubles are reported over the common trouble contacts (AC loss can have a delay of 30 seconds or 170 minutes)
- Automatic switchover to standby battery when AC fails
- Thermal and short circuit protection with auto reset
- Input and output status LED indicators
- AC fail supervision
- Battery presence and low battery supervision
- Ground Fault Detection, with diagnostics to indicate which circuit fault is on
- Latching LED's for NAC trouble annunciation and Diagnostic trouble LED's (latching can be disabled)

Power

- Not Battery Dependent
- Automatic switch over to standby batteries when AC fails
- Supports sealed lead acid or gel type batteries
- Fused battery protection
- Thermal and short circuit protection with auto reset
- Supports both 7AH or 12AH batteries in the same cabinet

POWERPATH™ Operating Modes (refer to Installation Manual):

Normal Mode: Provides constant 24 VDC output upon initiation by a voltage to input IN1 or IN2 or by a contact opening on DRY1 or DRY2. The unit returns to standby mode when the input is deactivated.

Wheelock Sync Mode: Provides signals for synchronization of patented Wheelock audible and strobe notification appliances. Audibles can also be silenced in this mode while the strobes continue to flash.

In>Out Sync Mode: Accepts a synchronization signal on the input to provide a coded output or synchronized output. This signal may come from a FACP, another POWERPATH or a Wheelock DSM synchronization module. Caution: Do not use strobes on coded output circuits.

True Input Follower Mode: Accepts a coded signal on the input to provide a coded output with the same timing as the input. The signal may come from a FACP, another POWERPATH or other coded source. Caution: Do not use strobes on coded output circuits.

Temporal Mode: Codes the output voltage in a code-3 temporal pattern to drive audible appliances such as horns, bells or chimes. Caution: Do not use strobes on coded output circuits.

Specifications and Ordering Information

Model Number	Order Code	Input Voltage/Current	Approvals		
			UL	CSFM	FM
PS-6	105530	6 amp, red enclosure	X	X	X
PS-6B	100257	6 amp, black enclosure	X	X	X
PS-8	105531	8 amp, red enclosure	X	X	X
PS-8B	105830	8 amp, black enclosure	X	X	X
PS-6EXP	105083	6 amp power supply with preinstalled expansion module	X	X	X
PS-8EXP	105084	8 amp power supply with preinstalled expansion module	X	X	X
PS-EXP	105534	4 class B or 2 class A expansion module	X	X	X
PS-EXP-RETRO	105527	Field upgrade kit for models prior to January 2010 [#]	X	X	X
Input Circuit		Input Voltage and Current		X= Approved *= Pending #=Contact Technical Support for additional information on upgrade options	
Input voltage Range		8 to 33 VDC			
Input Current @ 12 VDC		0.005 amps			
Input Current @ 24 VDC		0.005 amps			
Output Circuit		Output Voltage and Current			
Four (4) Class B or		24 VDC @ up to 3 amps per circuit			
Two (2) Class A or					
One (1) Class A and Two (2) Class "B" or					
8 Class B or 4 Class A (optional PS-EXP module necessary)					
Continuous duty up to 3 Amps per circuit, up to 4 Amps maximum per panel					
Standby Current		0.129 Amps			
Alarm Current		0.129 Amps			
Primary PS-6 (120 VAC models)		105 to 130 VAC, 50/60 Hz @ 4.25 Amps			
Primary PS-8 (120VAC models)		105 to 130 VAC 50/60 Hz @ 5.32 Amps			
Primary PS-6E (240 VAC models)		210 to 260 VAC, 50/60 Hz @ 2.42 Amps			
Primary PS-8E (240 VAC models)		210 to 260 VAC 50/60 Hz @ 3.22 Amps			
Secondary Power Charging Capacity		32 Amp hours @ 0.750 Amps per hour			
Enclosure can house up to two 12 AH batteries					
Aux Output					
CP Mode	PS-6 up to 75 mA	PS-8 up to 250 mA			
MP Mode	2.5A during non alarm				
Model	Dimensions	Weight	Comments		
PS-6/PS-6B	17"H x 13"W x 3.5"D	11.5lbs. (Ship) 9.4lbs (Unit)	Small profile		
PS-8/PS-8B	17"H x 15"W x 5.5"D	17.7lbs (Ship) 15.6lbs (Unit)	Additional room for modules		
PS-EXP	4.3"H x 3.7"W x 1"D	1lb. (Ship & Unit)	Plugs into main pcb on all models		

Architects and Engineers Specifications

The power supply shall be Wheelock POWERPATH™ Series PS-8, or equivalent. The unit shall be stand alone power supply intended for powering fire alarm notification appliances via its own Notification Appliance Circuit(s) (NAC). The unit shall be UL 864 Listed for power limited operation of outputs and comply with NFPA 70 (NEC), article 760.

The power supply shall support a full 8A of notification power even if the battery is in a degraded mode and only AC power is connected.

The power supply shall be activated by a standard Notification Appliance Circuit (NAC) from any Fire Alarm Control Panel (FACP) or a "Dry contact" opening. The units shall be 8 ampere, 24 VDC, regulated and filtered, supervised remote power supply/charger. It shall operate over the voltage range of 8 to 33 VDC or FWR. The primary application of the unit shall be able to expand fire alarm system capabilities for additional NAC circuits to support ADA requirements and to provide auxiliary power to support system accessories or functions. The power supply shall provide four Class "B", two Class "A", or two Class "B" and one Class "A" NAC circuit(s). Eight Class "B" or Four Class "A" circuits shall be available with an optional PS-EXP module. The PS-8 unit shall supply up to 240 mA of auxiliary power that is available during both non-alarm and alarm or auxiliary power of not less than 2.5A at 24 VDC during non-alarm. The power supply shall be capable of charging batteries of up to 33 ampere hours per NFPA 72 at maximum rate of 0.750 Amps per hour.

Input activation options shall be from not less than two NAC circuits or Dry Contact closures. These inputs shall have the capability of being directed to any combination of the four NAC circuit outputs. Each NAC circuit output shall be rated at 3 amperes for Class "B" applications or 3 amperes each for Class "A". The outputs shall be programmable to generate a steady or Temporal (Code 3) output and or a synchronized strobe or horn output. The power supply shall provide independent loop supervision for either Class "A" or Class "B" FACP NAC circuits and shall have the capability to "steer" all alarm or trouble conditions to either incoming NAC circuit. The units shall have common trouble terminals. The power supply shall be powered from a 120 VAC source with a current consumption of xx amperes max. The unit shall incorporate short circuit protection with auto reset. The power supply shall incorporate a built in battery charger for lead acid or gel type batteries with automatic switchover to battery back up in the event of AC power failure. The charger shall incorporate fused protection for the batteries and have the ability to report low battery and/or no battery condition(s). Standby current for battery back up shall be 0.129 Amps max. The power supply shall have the ability to latch trouble LED's so the circuit in trouble can be identified. The cabinet dimensions shall be 17"H x 15"W x 5.5"D.

The power supply shall be Wheelock POWERPATH™ Series PS-6, or equivalent. The unit shall be stand alone power supply intended for powering fire alarm notification appliances via its own Notification Appliance Circuit(s) (NAC). The unit shall be UL 864 Listed for power limited operation of outputs and comply with NFPA 70 (NEC), article 760.

The power supply shall support a full 6A of notification power even if the battery is in a degraded mode and only AC power is connected.

The power supply shall be activated by a standard Notification Appliance Circuit (NAC) from any Fire Alarm Control Panel (FACP) or a "Dry contact" opening. The units shall be 6 ampere, 24 VDC, regulated and filtered, supervised remote power supply/charger. It shall operate over the voltage range of 8 to 33 VDC or FWR. The primary application of the unit shall be able to expand fire alarm system capabilities for additional NAC circuits to support ADA requirements and to provide auxiliary power to support system accessories or functions. The power supply shall provide four Class "B", two Class "A", or two Class "B" and one Class "A" NAC circuit(s). Eight Class "B" or Four Class "A" circuits shall be available with an optional PS-EXP module. The PS-6 unit shall supply up to 200 mA of auxiliary power that is available during both non-alarm and alarm or auxiliary power of not less than 2.5A at 24 VDC during non-alarm. The power supply shall be capable of charging batteries of up to 33 ampere hours per NFPA 72 at a maximum rate of 0.750 Amps per hour.

Input activation options shall be from not less than two NAC circuits or Dry Contact closures. These inputs shall have the capability of being directed to any combination of the four NAC circuit outputs. Each NAC circuit output shall be rated at 3 amperes for Class "B" applications or 3 amperes each for Class "A". The outputs shall be programmable to generate a steady or Temporal (Code 3) output and or a synchronized strobe or horn output. The power supply shall provide independent loop supervision for either Class "A" or Class "B" FACP NAC circuits and shall have the capability to "steer" all alarm or trouble conditions to either incoming NAC circuit. The units shall have common trouble terminals. The power supply shall be powered from a 120 VAC source with a current consumption of xx amperes max. The unit shall incorporate short circuit protection with auto reset. The power supply shall incorporate a built in battery charger for lead acid or gel type batteries with automatic switchover to battery back up in the event of AC power failure. The charger shall incorporate fused protection for the batteries and have the ability to report low battery and/or no battery condition(s). Standby current for battery back up shall be 0.130 Amps max. The power supply shall have the ability to latch trouble LED's so the circuit in trouble can be identified. The cabinet dimensions shall be 17"H x 13"W x 3.5"D.

⚠ WARNING: PLEASE READ THESE SPECIFICATIONS AND INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS AND WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock Inc. standard terms and conditions.



WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
1 YEAR WARRANTY

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