About Fire Alarm Interfacing

- The SP-1000X Panic Device Power Controller provides versatility with a configurable Fire Alarm Interface that can either energize or de-energize the lock outputs upon FACP activation accommodating fail-safe or fail secure locking system applications.
- Standard fail-secure devices (i.e. exit devices) can be unlocked upon FACP activation for blow open control / smoke evacuation systems applications with auto-operators or for building locking systems that require easy access by the fire department into the building in the event of a fire.
- For a fail-safe exit device application, a NC (normally closed) set of dry (no voltage present) contacts shall be connected to the FACP screw terminals of the power supply. Upon activation of the fire alarm, the NC set of contacts will change states opening the closed circuit and the power supply will be triggered to apply power to the lock outputs and unlock the exit devices.
- **NOTE: BATTERY BACK-UP IS REQUIRED FOR CANADIAN UL APPLICATIONS** (per ULC code)
- **NOTE: BATTERIES SOLD SEPARATELY FROM SP-1000X POWER CONTROLLER UNIT**

About Battery Back-up Capacities

- Battery back-up of the SP-1000X may be required to ensure that in the event of building power loss, the lock outputs of the power supply will stay energized (doors unlocked) for a dependable amount of time until the fire alarm is reset manually.
- SPG affirms that (2) 12VDC 7AH batteries (wired in series) are sufficient to meet the needs of reliable battery back-up time with either fail-safe or fail-secure Fire Alarm Interface configurations.
- To calculate approximate battery back-up times, you must first calculate the amperage required by any load operating on the SP-1000X. Then you will need to reference the exact battery model specifications and verify the class of rating. **NOTE: ONLY USE 12VDC LEAD ACID OR GEL TYPE BATTERIES.**
- The Amp-Hour rating specifies how much current (amperage) is available when discharged evenly over a 20 hour period. To calculate how many constant amps the battery will supply for 20 hours, you must divide the Amp-Hour rating by 20 since the rating is cumulative.
- **NOTE: SPG Recommends replacing batteries every 3-4 years to ensure integrity of system.**
- SPG stocks Power-Sonic 12VDC 7AH Batteries with 20 hour rating. Always refer to battery manufacturer’s exact model specifications for accurate capacity calculations.

*EXAMPLE CALCULATION: 7AH / 20 = 0.35. So, a 7AH battery rated for a 20 hour discharge rate will provide 0.35 Amps or 350mA (milli-amps) for 20 hours before dropping its voltage to 10.5 Volts.*

(10.5VDC is the fully discharged level at which point the battery needs to be re-charged)

Simple calculation: Load with 400mA is 7 / 0.4 = 17.5 (hours)

Specific Device Calculations w/ (2) 12VDC-7AH Batteries @ 20Hr. Rating

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Load holding current</th>
<th>Total time before battery reaches fully discharged level and requires recharging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kawneer - Paneline EL</td>
<td>0.4 Amps / 400mA</td>
<td>*1 device = 17.5 hours *2 devices = 8.75 hours</td>
</tr>
<tr>
<td>First Choice - EL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Von Duprin QEL Motor</td>
<td>0.14 Amps / 140mA</td>
<td>*1 device = 20 hours *2 devices = 20 hours</td>
</tr>
<tr>
<td>Von Duprin EL</td>
<td>0.3 Amps / 300mA</td>
<td>*1 device = 20 hours *2 devices = 11.6 hours</td>
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</tbody>
</table>