

Manual PowerPAK

SignalFire Model: PPAK-1BIS



The SignalFire PowerPAK is an Intrinsically Safe power source with the following features:

- Powers a remote HART (4mA) or loop powered device
- Internal Battery is boosted to 18.5 Volts (with a 4mA load)
- Configurable ON-time ranges (1-30 mins)
- Pushbutton to start (or end) power cycle
- Optional solar battery system for extended power on intervals
- Compact and simple to install and maintain

Specifications

Enclosure Size	4" x 4" x 2" with ½ NPTF conduit port
Power Source	Internal IS Lithium battery pack SignalFire Part Number: 1BIS
Temperature Rating	-40°C to +80°C (IS Certified -40°C to +60°C)
Enclosure NPT Fitting Material	IP64 rated, Polycarbonate Zamek-2 and Zamek-3 Zinc
Compliance	Class I, Division 1, Groups C-D, T3 Class I Zone 0 AEx ia IIB T3 Ga Ex ia IIB T3 Ga



WARNING: Use of this equipment in a manner not specified by the manufacturer may impair the protection provided by the equipment.

AVERTISSEMENT: L'utilisation de cet équipement d'une manière non spécifiée par le fabricant peut nuire à la protection fournie par l'équipement.

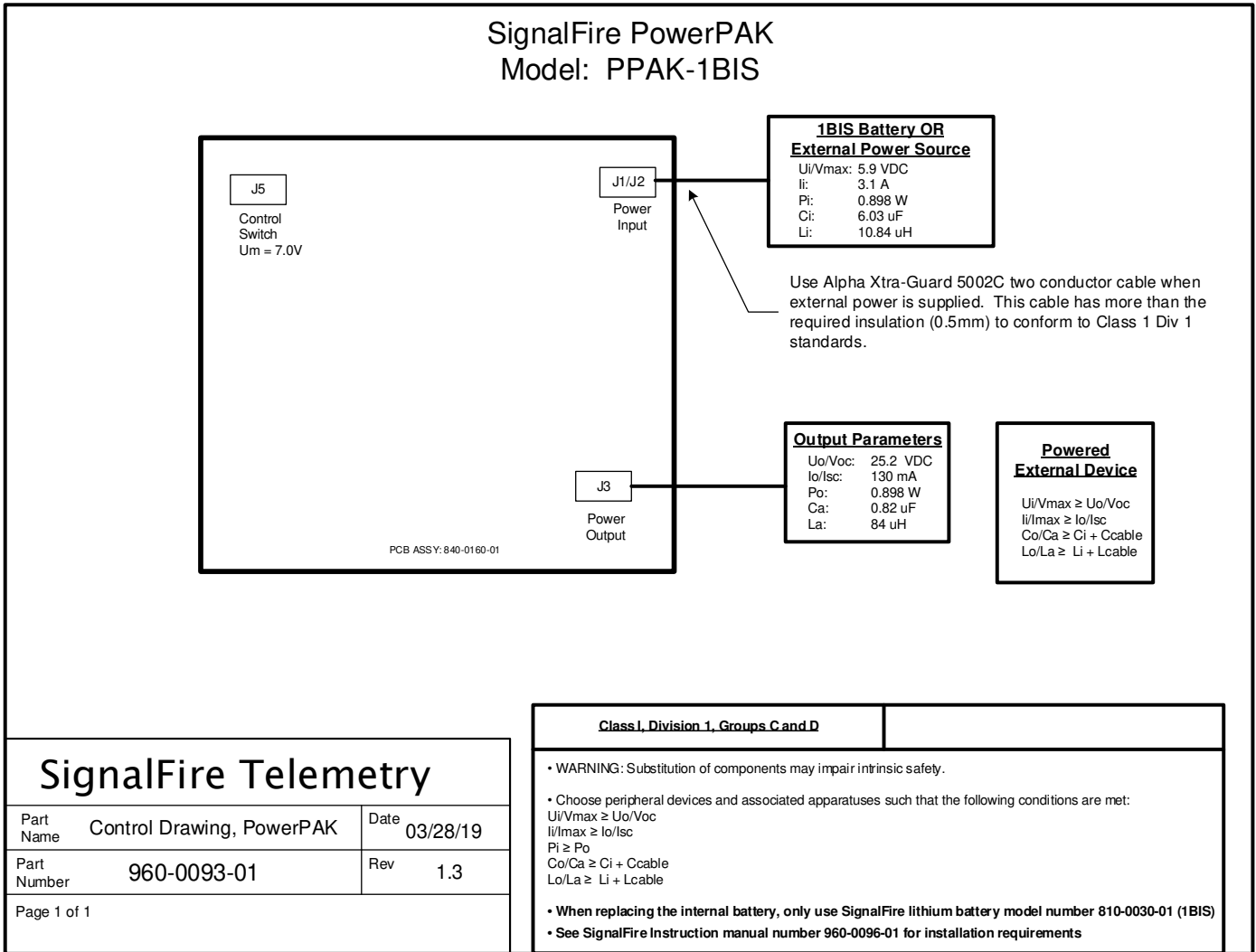


WARNING: The use of any parts not supplied by the manufacturer violates the safety rating of the equipment.

AVERTISSEMENT: L'utilisation de pièces non fournies par le fabricant est contraire à la cote de sécurité de l'équipement.

Refer to control drawing 960-0093-01 for requirements when used in a Class I Division 1 area.

Reportez-vous à l'illustration de contrôle 960-0093-01 pour connaître les exigences lorsqu'elle est utilisée dans une zone de classe I division 1.



Product Marking

 PowerPAK <div style="border: 1px solid black; width: 50px; height: 30px; margin: 0 auto; text-align: center; font-size: 8px;">BAR CODE</div>	 Intertek 4003827	Class I, Division 1, Groups C-D, T3 Class I Zone 0 AEx ia IIB T3 Ga Ex ia IIB T3 Ga $-40^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$ Enclosure: IP64
INTRINSICALLY SAFE and SECURITE INTRINSEQUE WARNING: Use of any battery other than the SignalFire part number 810-0030-01 (1BIS) will impair the protection provided by the equipment. AVERTISSEMENT: L'utilisation d'une pile autre que la référence SignalFire 810-0030-01 (1BIS) compromettra la protection fournie par l'équipement. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS AVERTISSEMENT – DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES – VOIR INSTRUCTIONS Install per manual (Installer par manuel): 960-0093-01		

Power Output

- Output power is available on the screw terminal connector inside the enclosure.
- Route the power wires in through the conduit fitting and attach to the screw terminal connector.

Status LED

- The STATUS LED (green) will blink when the unit is on and supplying power
- The STATUS LED will blink twice each blink period if the battery is getting low and needs to be replaced.

Power Button

- If this button is pressed the unit will begin supplying power for the set (see below – time is set using the DIP switches) time.
- To shut off the unit prior to its timing out, press the button and hold for 5 seconds. The LED will slowly dim when the unit shuts off and stop blinking.

DIP Switches

- The switch settings allow for the user to set the ON time for the unit. Switch configuration is as follows:
 - SW1 ON (others off) Unit on for 1 minute
 - SW2 ON (others off) Unit on for 2 minutes
 - SW3 ON (others off) Unit on for 5 minutes
 - SW4 ON (others off) Unit on for 10 minutes
 - All Switches ON Unit will stay on until manually shut off
- The time will reset if the power button is pressed while in the middle of a cycle. For example, if the unit is set to be on for 5 minutes (SW3 ON) and the button is pressed after 4 minutes, the timer will be reset and the unit will stay on for another 5 minutes for a total ON time of 9 minutes. Each time the button is pressed, the timer resets to the set time.

Mounting and Care

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The PowerPAK unit comes with an integrated and replaceable battery. Be sure to plug the battery into the pigtail power cable attached to the electronics.

Mount the PowerPAK to the sensor it is to power using the conduit fitting. Most sensors will have a ½" NPT conduit fitting making mounting easy.

A cord grip may be used in the NPT port of the PowerPAK if conduit is not used.



WARNING: All sealing devices/connections including cable glands, blanking elements, thread adapters, stopping plugs and connectors shall maintain a minimum degree of protection of IP-54

AVERTISSEMENT: Tous les dispositifs d'étanchéité / connexions, y compris les presse-étoupes, les obturateurs, les adaptateurs de filetage, les bouchons d'arrêt et les connecteurs doivent conserver un degré de protection minimal IP-54.



WARNING: The PowerPAK must be mounted in a location free of high vibrations. Over time vibrations can damage the unit or battery pack, which could impair its safety ratings. Do not mount directly to continuous vibrating equipment such as pumps or compressors.

Internal Lithium Battery Replacement

The Battery Pack can be changed with the unit in place.

1. Unscrew the cover.
2. Unplug the battery from the PCB, by depressing the locking clip on the connector.
3. Remove/replace battery
4. Connect the battery to the main PCB battery connector.
5. Install the enclosure cover.



WARNING: Use of any battery other than the SignalFire part number 810-0030-01 (1BIS) will impair the protection provided by the equipment.

AVERTISSEMENT: L'utilisation d'une pile autre que la référence SignalFire 810-0030-01 (1BIS) compromettra la protection fournie par l'équipement.

Cleaning Instructions

The outside of the enclosure may be cleaned with water, mild soap, and a damp cloth as needed. High pressure washing is not recommended.



WARNING: Electrostatic Discharge Hazard! Care must be taken to avoid the potential of creating a charge on the enclosure. Do not wipe with a dry cloth. Do not brush against the enclosure with clothing or gloves.

AVERTISSEMENT: Risque de décharge électrostatique! Il faut veiller à éviter tout risque de changement de l'enceinte ou de l'antenne. Ne pas essuyer avec un chiffon sec. Ne pas brosser contre l'enceinte avec des vêtements ou des gants.



WARNING: The following metal parts have a capacitance in excess of 3pF, are isolated from ground and may pose a potential electrostatic charging hazard.

Edge of NPTF plug: 3.63 pF
 Top part of NPTF plug (1): 4.77 pF
 Top part of NPTF plug (2): 3.83 pF

Refer to the manufacturers' instruction manual for details on the mitigation of electrical discharge

AVERTISSEMENT: Les pièces de métal suivantes ont une capacitance qui excède 3pF et sont isolées de la mise à la terre et ainsi peuvent créer une décharge électrostatique dangereuse.

*Rebords du bouchon NPTF : 3.63 pF
 Dessus du bouchon NPTF (1): 4.77pF
 Dessus du bouchon NPTF (2): 4.77pF*

Technical Support and Contact Information

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Revision	Date	Changes/Updates
1.0	12/1/18	Initial release
1.1	2/6/19	Added notes per Intertek – first round
1.2	2/13/19	Updated certification details
1.3	3/28/19	Updated control drawing, ATEX removed, IP rating changed
1.4	4/2/19	Added details on maintaining IP rating
1.6	4/22/19	Updated marking details