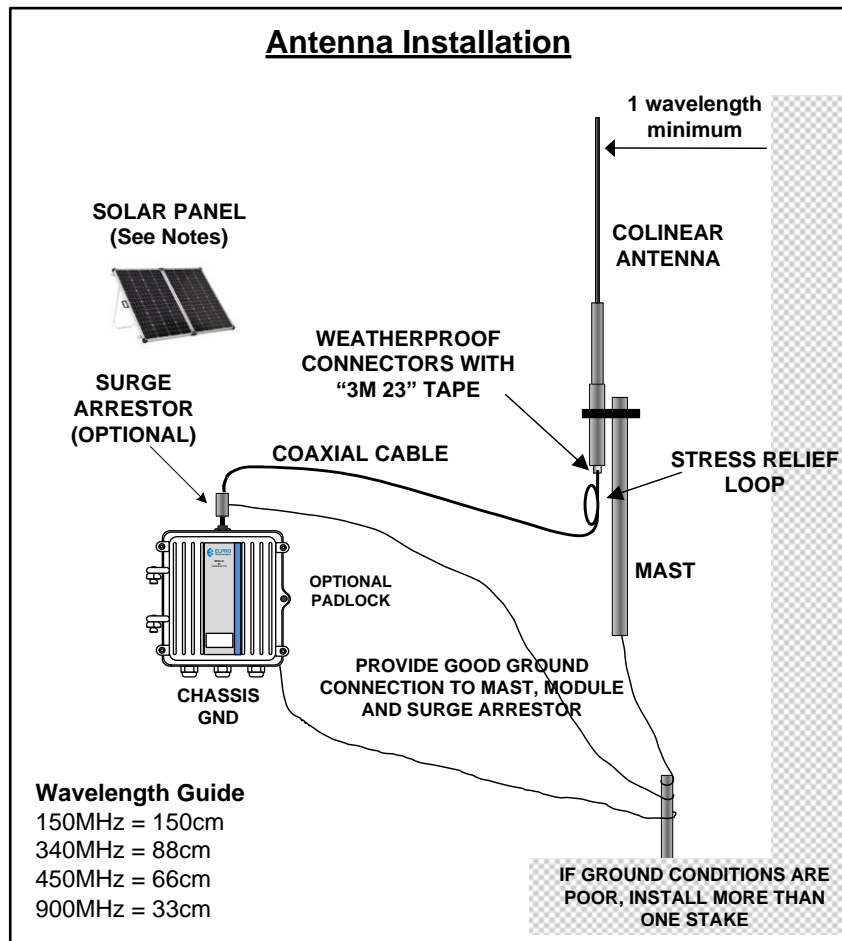


# 905U-K-IP Wireless Solar-Battery Enclosure

## Installation Guide



### Battery Power Applications:

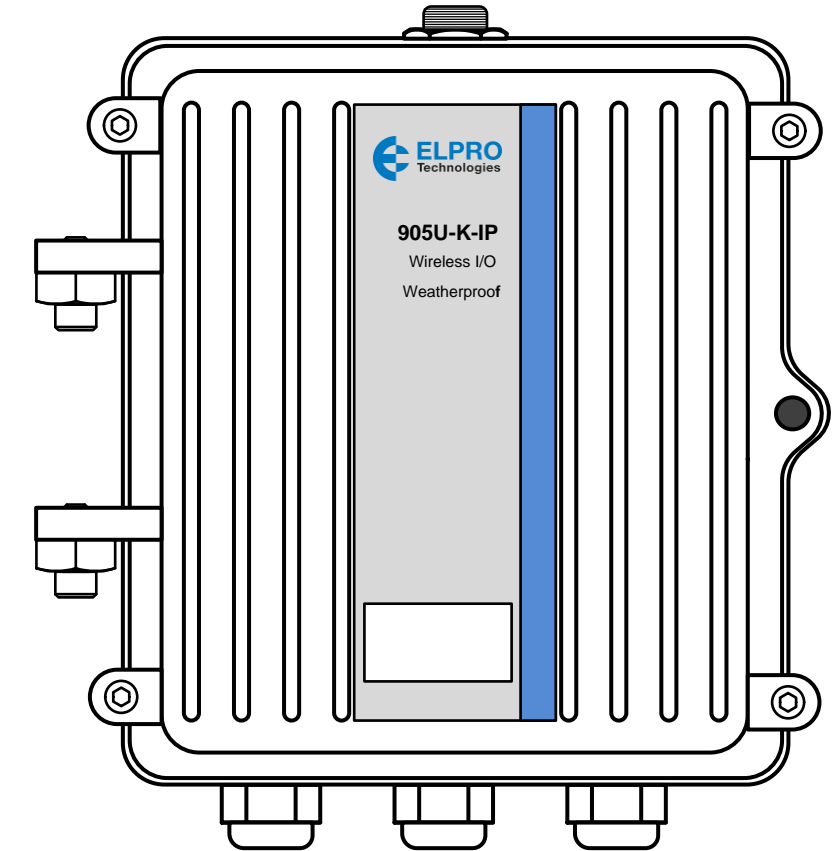
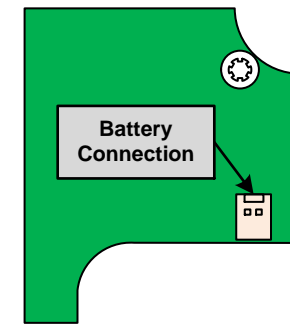
Units shipped with internal battery option do not have the battery connected during shipping.

**CAUTION - Lithium Primary (LiP non-rechargeable) internal battery:** DO NOT connect external voltage directly to battery terminals or to supply/solar terminals as this battery is **NOT rechargeable** and damage may result.

**CAUTION - Lithium Iron Phosphate (LFP rechargeable):** DO NOT connect external voltage directly to battery terminals as this may result in damage or overheating of battery pack.

To connect the internal battery:

- Remove the battery holder by removing the two Philips screws and battery bracket.
- Locate the battery connector located at the top right of battery as shown in picture.
- For internal battery connect the battery by plugging battery cable connector onto the two pin connector on circuit board located to right of internal/external selection link, using correct orientation (keyed).
- The PWR/OK LED green flash every 10 seconds in normal operation. See unit configuration on reverse side of this document.



**WARNING: DO NOT DISCONNECT WHILE CIRCUIT IS LIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS**

### Installation and Configuration

The ELPRO 905U-K is configured using the E-Series Configuration tool. Please download the configuration tool from the ELPRO web site:

Configuration is performed by using the ELPRO E-Series configuration PC tool and connecting to the RS-232 connector

Please download the configuration tool for the 905U-K module from the ELPRO website:

[https://elpro.com.au/wp-content/uploads/2018/06/BUS\\_WIR\\_Inst\\_EConfig.2.1.0.412.zip](https://elpro.com.au/wp-content/uploads/2018/06/BUS_WIR_Inst_EConfig.2.1.0.412.zip)

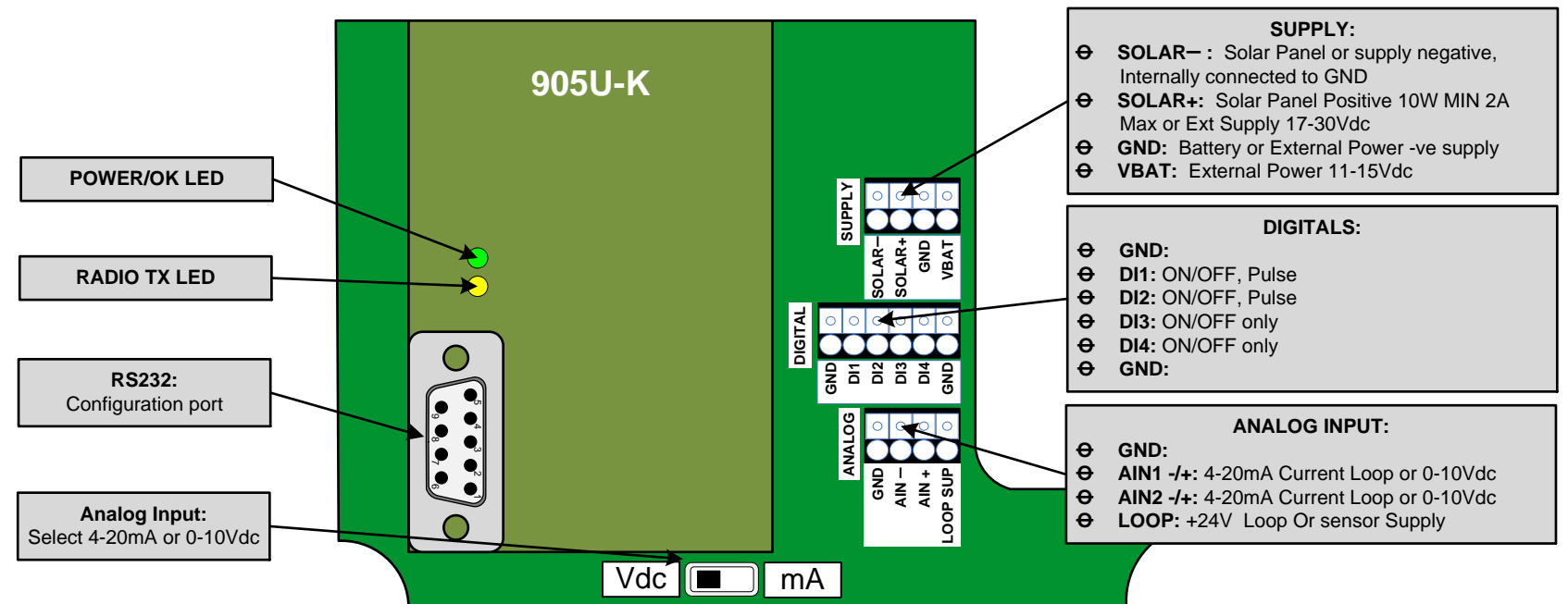


For further information on installation and configuration please refer to the 905U-K user manual that can be found at the ELPRO web page:

<https://elpro.com.au/wp-content/uploads/2018/06/bus-wir-man-905K-1.10.pdf>



**CONNECTIONS:**  
 Wiring Entry: IP66 M20 Cable entry Gland (5-13mm)  
 Terminals: PushIN connection max 0.2 – 1.5mm<sup>2</sup> wire.



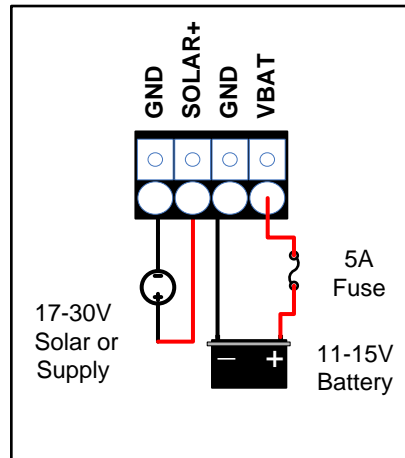
### **POWER SUPPLY**

**BAT (11-15Vdc):** Internal battery if fitted or connect external battery with 5A fast blow fuse.

**GND:** Power supply system ground

**SOLAR+ (17-30Vdc):** 5-30W solar panel or external 24W power supply to power unit or charge internal/external battery (ONLY Lithium Iron Phosphate or SLA).

**GND:** Solar or external power supply common/Ground connection



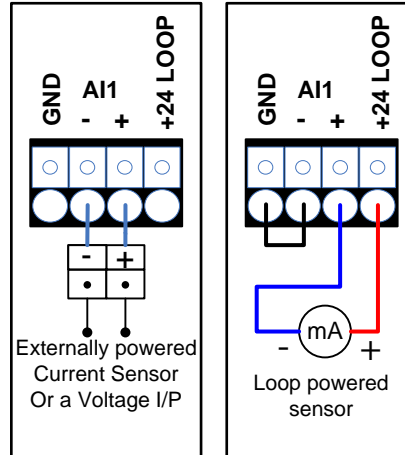
### **4-20mA or 0-10Vdc ANALOG INPUTS**

**GND:** Analog input ground

**AIN1 +/-:** • Externally powered 4-20mA input

- 0-10Vdc Voltage Input
- Loop powered 4-20mA. 30Vdc max

**+24 LOOP:** 4-20mA Loop or sensor power supply. Switched on for warmup plus sample period. 50mA MAX



### **DISCRETE INPUTS**

**GND:** Discrete inputs ground

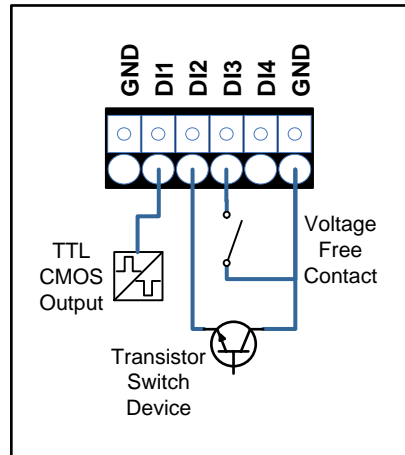
**DI1:** ON/OFF or pulse

**DI2:** ON/OFF or pulse

**DI3:** ON/OFF input

**DI4:** ON/OFF input

**Note:** Discrete input DRY contact close to ground



### **NOTES:**

**All I/O connections must be SELV**

**Solar and external power supply/ battery charger:**

- (A) 17-30Vdc Supply or internal battery charger input, 2A NEC Certified Class 2
- (B) Solar panel to charge internal/external 12V battery (30W, charge current 2.0A MAX)
- (C) 11-15Vdc battery supply input
- (D) DO NOT connect external supply to BAT terminal with internal battery option connected.

**Environmental Specification:**

Ingress Protection	IP66
Operating Temperature ext supply	-40 to 70°C (-40 to 158°F)
LFP rechargeable battery	-20 to 60°C (-4 to 140°F)
LiP non-rechargeable battery	-40 to 70°C (-40 to 158°F)
Altitude	2000m
Pollution Degree	4
Internal Humidity	Max 95% non-condensing

## **Important Notices**

ELPRO products are designed to be used in industrial environments by experienced industrial engineering personnel with adequate knowledge of safety design considerations. ELPRO radio products can be used unprotected license-free radio bands with radio noise and interference. The products are designed to operate in the presence of noise and interference, but in an extreme case radio noise and interference can cause product operation delays or operation failure. Like all industrial electronic products, ELPRO products can fail in a variety of modes due to misuse, age, or malfunction. We recommend that users and designers design systems using design techniques intended to prevent personal injury or damage during product operation and provide failure tolerant systems to prevent personal injury or damage in the event of product failure. Designers must warn users of the equipment or systems if adequate protection against failure has not been included in the system design. Designers must include this Important Notice in operating procedures and system manuals. These products should not be used in non-industrial applications, or life-support systems, without consulting ELPRO first. A radio license is not required in some countries, provided the module is installed using the aerial and equipment configuration described in the Installation Guide. Check with your local distributor for additional information on regulations. Operation of unlicensed equipment is authorized by the radio frequency regulatory authority in your country on a non-protection basis. Although all care is taken in the design of these units, there is no responsibility taken for sources of external interference. Systems should be designed to be tolerant of these operational delays. To avoid the risk of electrocution, the aerial, aerial cable, data/IO cables and all terminals of the module should be electrically protected. To provide maximum surge and lightning protection, the module should be connected to a suitable ground and the aerial, aerial cable, IO, data cables and the module should be installed as recommended in the Installation Guide. To avoid accidents during maintenance or adjustment of remotely controlled equipment, all equipment should be first disconnected from the module during these adjustments. Equipment should carry clear markings to indicate remote or automatic operation. For example: "This equipment is remotely controlled and may start without warning. Isolate at the switchboard before attempting adjustments." The equipment operates unlicensed radio frequencies, proprietary protocols to communicate over the radio, cyber security features and encryption. Nevertheless, if your system is not adequately secured, third parties may be able to gain access to your data or gain control of your equipment via the radio link. Before deploying a system, make sure that you have carefully considered the security aspects of your installation and read the user documentation.

## **Proper Use**

Any unauthorized modifications to or use of this equipment outside its specified mechanical, electrical, or other operating limits may cause personal injury and/or property damage, including damage to the equipment. Any such unauthorized modifications: (1) constitute "misuse" and/or "negligence" within the meaning of the product warranty, thereby excluding warranty coverage for any resulting damage; and (2) invalidate product certifications or listings.