Pre-installation guide

This document provides a detailed breakdown of the pre-installation checklist to help you ensure that all necessary preparations are completed before starting the installation process. Each item on the checklist is explained clearly, with step-by-step guidance on how to check or verify specific tasks.

Table : Pre-installation checklist

N°	Task	Details	Status	Comments
Site preparation				
1	Verify power source	Grid, PV, Genset		
2	Confirm voltage rating	For all devices		
3	Grounding system	Properly tested		
4	Area clean & dry	Suitable for installation		
5	Equipment protected from elements	Temperature, humidity, dust		
Tools and equipment				
	Required tools			
6		Flathead screwdriver		
7		Crimping tool		
8		Wire stripper		
9		Bootlace ferrules		
10		Electrical wires :		
		Black for negative (-)		
		Red for positive (-)		
		Yellow/Green fro ground (GND)		
	Required equipment			
11		Elum's device		
12		Power supply		
13		UPS (optional)		
14		Laptop		
15		RJ45-to-RJ45 Ethernet cable		

16		USB to RJ45 adapter (if your laptop lacks a LAN port)		
Power supply setup				
17	Power supply voltage	Within Elum's device range		
18	UPS installed	Backup tested and functional		
19	Surge protectors	Installed and tested		
Communication setup				
20	RS485 devices	Number of devices verified		
21	Ethernet setup	IP Addresses and subnet mask configured		
Documentation and settings				
22	Manuals and data sheets	Gathered for all equipment		
Final confirmation				
23	Cross-check checklist items	Final review before installation		

Site preparation		
1	Verify power source	
	Explanation	The type of power source (Grid, PV, Genset, or hybrid system) needs to be confirmed to ensure compatibility with the devices you are installing
	How to check:	• Consult site energy plans or ask the site manager for details on the power source. • Use a multimeter to measure the input voltage at the installation point.
2	Confirm voltage rating	
	Explanation	Ensure that the site provides the correct voltage that matches Elum equipment's voltage rating.
	How to check:	• Use a multimeter to check the voltage at the installation point. • Compare the measured voltage with the equipment's rated voltage (found in the product's manual). For example, 230V, 110V, etc.
3	Grounding system	
	Explanation	A proper grounding system is essential to prevent electrical shock and protect devices from faults.
	How to check:	• Inspect the site to ensure that a grounding connection is present at the installation point. • Use a grounding tester or multimeter to check that the grounding resistance is within acceptable limits (typically <5 ohms). • Review the site's electrical diagrams to confirm grounding
4	Area clean & dry	
	Explanation	The installation area for Elum's device should be clean and dry to avoid any moisture or dust that could disrupt the installation or affect the device's performance.
	How to check:	• Visually inspect the area for any signs of dust, water,

		or debris. • Clean or cover the area if necessary to ensure a safe installation environment.
5	Equipment protected from elements	
	Explanation	Ensure that Elum's device is located in an area protected from extreme temperatures and high humidity.
	How to check:	• Review the installation area for protection from environmental factors (e.g., weatherproof enclosures). • Confirm that temperature and humidity levels are within the equipment's operating range (found in the datasheet)
Tools and equipment		
6,7,8,9,10	Required tools	
	Explanation	Ensure that all necessary tools (flathead screwdrivers, crimping tool, wire strippers, bootlace ferrules, electrical wires) are available and functional
	How to check:	• Create a list of tools required for installation based on the equipment manual. • Physically inspect the toolset to ensure all items are present and in working condition.
11,12,13,14,15,16	Confirm equipment availability	
	Explanation	Make sure all devices (controllers/datalogger, Power supply, UPS units, Laptop, RJ54-toRJ-45 ethernet cable, USB to RJ45 adapter in case your laptop doesn't have a LAN port) are on-site and ready for installation.
	How to check:	• Cross-check the packing list with the equipment that has been delivered. • Inspect each device for any visible damage and verify the serial numbers if applicable.
Power supply setup		

17	Power supply voltage	
	Explanation	Ensure the power supply at the site provides the correct following parameters : **Input voltage** : 12 to 24 VDC **Input current** : ● 450 mA @ 12 VDC ● 225 mA @ 24 VDC **Power consumption** : 5.4 W
	How to check:	• Use a multimeter to measure the voltage at the installation point. • Compare the measured voltage with the equipment's required operating voltage (found in the manual).
18	UPS installed and tested	
	Explanation	(Optional) Install the UPS according to its user manual to provide backup power during a power failure, and ensure it is tested for proper functionality.
	How to check:	• Follow the UPS manufacturer's instructions for installation. • Simulate a power outage to confirm the UPS provides backup power and that Elum's connected devices remain operational.
19	Surge protectors installed	
	Explanation	Surge protectors prevent damage to sensitive equipment in case of power spikes.
	How to check:	• Install surge protectors at power entry points of the installation. • Use a multimeter to confirm that the surge is not damaged
Communication setup		
20	RS485 devices	

	Explanation	Verify the number of devices on the RS485 communication bus.
	How to check:	• Install surge protectors at power entry points of the installation. • Review site plans or diagrams to ensure the correct number of devices are being daisy-chained.
21	Ethernet setup	
	Explanation	Check that Ethernet connections are properly configured with IP addresses and that the network is functional.
	How to check:	• Review IP address assignments and subnet configurations for all devices.
Documentation and setup		
22	Manuals and datasheets	
	Explanation	Collect all necessary product manuals and data sheets for reference during installation.
	How to check:	• Ensure hard copies or digital versions of manuals are available for each device, including Elum's device, power supply, UPS (if used), and surge protectors. • Review these documents to familiarize yourself with the installation procedures and device configurations.
Final confirmation		
23	Cross-check all checklist items	
	Explanation	Perform a final review of the checklist to ensure all items are completed before starting the installation.
	How to check:	• Go through the checklist item by item, confirming that all tasks are marked as completed. • Ensure any issues or missing items are resolved before moving forward.