



# THE DRY SWITCHABLE ROBOT

## SCM-L2









A CUTTING-EDGE AUTONOMOUS CLEANER DESIGNED TO OPTIMIZE PERFORMANCE, ENSURING SPARKLING CLEANLINESS AND MAXIMUM ENERGY OUTPUT.

### Revolutionizing Solar Panel Cleaning?

The Dry switchable Robot is a specialized robot designed for autonomous cleaning of all types of solar panel installations. It utilized dual cleaning technology to effectively remove dust and dirt from solar panels, ensuring their safety, cleanliness, and optimized performance.

### WHAT DO WE OFFER?

- Two cleaning modes: dry cleaning and wet cleaning. In dry cleaning mode, the robot utilizes rotating brushes to gently clean the surface of the solar panels, effectively removing dirt and dust.
- The SCM-L2 robot can be activated in a wet cleaning mode, which uses a water injection system to switch from dry to wet cleaning, enabling a thorough cleaning process.

 <h4>CUSTOMIZED AUTOMATION LEVEL</h4> <p>SCM can be tailored to meet the specific needs and requirements of different types of solar panel systems. It is designed to accommodate various panel sizes, and tilts, ensuring optimal cleaning performance for each unique configuration.</p>	 <h4>EASY DEPLOYMENT PROCESS</h4> <p>Providing an easy deployment process reduces and enhances various aspects, including time efficiency, cost savings, user-friendliness, flexibility, and scalability.</p>	 <h4>GAPS BYPASSING TECHNOLOGY</h4> <p>Enabling the robot to bypass any gap up to 30cm without installing rails, which reduces the cleaning system installation cost significantly.</p>	 <h4>SELF-LOCK MECHANISM</h4> <p>Ensuring proper alignment between the robot and the solar panels. This specially designed mechanism helps the robot maintain a secure and precise position while cleaning.</p>
 <h4>DARBSENSE TECHNOLOGY</h4> <p>The DarbSense technology allows users of the DARBCO robotic solution to manage and supervise all the components of the system using a smart IoT platform or a mobile application, either locally or remotely.</p>	 <h4>EDGE DETECTION SENSORS</h4> <p>Edge detection sensors play a crucial role in ensuring robot safety and preventing potential accidents.</p>	 <h4>DUAL CLEANING TECHNOLOGY</h4> <p>Solar panel cleaning technology utilizes two stages: water injection and brushing, offering flexibility in dry and wet methods for specific requirements of the solar panel cleaning process.</p>	 <h4>RESILIENT DESIGN</h4> <p>SCM-L2 features a durable design, enabling it to withstand harsh environmental conditions, including strong winds, high humidity levels, and dusty environments.</p>

# SCM-L2 DRY SWITCHABLE ROBOT

Family	SCM-L3	
Length	4m (4-4.6m)	6m(6-6.8m)
Cleaning technology	Wet, Dry	Wet, Dry
Weight	59 kg	80 kg
Dimensions (W, H, L)	(500X220x4620) mm	(500X220x6840) mm
Basic running distance	600 m	400 m
Max running distance	8 km	
Water consumption *W/D	200 mL/m <sup>2</sup> /0	
Max in motion angle *W/D	20°/10°	
**Level of Autonomy *W/D	3/2	
Max Cleaning frequency	3 cleanings / day	
Ingress Protection	IP65	
Max speed	20m/min	
Corrosion Resistance	C4	
Amb working temperature *W/D	(-30°C - 60°C) / (1°C - 60°C)	
Max operating wind speed	17 m/s, 4-second gust, 10 m	
Max docking wind speed	55 m/s, 4-second gust, 10 m	
Power supply	Self-powered, AC, DC	
System communication technology	LoRa/ Xbee / Wi-Fi	
Control system interconnection	Modbus/ Wi-Fi	
Control & monitoring interface	DarbSense local mobile App, DarbSense on-line platform, BMS, SCADA	
Humidity	100%	
Charging time	Two hours	
Electrical safety	Overcurrent Protection, Overheating Protection, Overvoltage Protection	
Motion safety	Anti-fall protection, Edge detection, Gaps detection	
Gaps bypassing	300 mm (customized)	
AI	Abnormal Condition Detection, Self-Cleaning Cycle Triggering, Auto safe mode	
Structure compatibility	Fixed, Tracker, Rooftop, car-parking.	
Multi-Row	Yes	

\*W/D: REFERS TO WET CLEANING TECHNOLOGY / DRY CLEANING TECHNOLOGY

\*\*LEVEL OF AUTONOMY:

LEVEL "1" REFERS TO PORTABLE

LEVEL "2" REFERS TO WITH OPERATOR

LEVEL "3" REFERS TO NO OPERATOR