

PHOTOVOLTAIC HEATING

Anti Snow / De-icing

Warmset's heating system restores PV output in snow and ice by delivering fast, even **heat across the module surface**. The aluminum backing spreads heat uniformly, while the **self-adhesive layer** ensures durable bonding on clean, dry panels; some customers optionally add a thin bead of glue along the edges for extra security. Installation is quick and requires no additional hardware.

The heaters **operate at 230 V (also in 120V or 400V** upon request), and draw about 200 W/m² when active. **Energy use can be cut by up to 50%** with the optional load-management control unit, which engages the heaters only when temperature and humidity sensors indicate the need.

Electrical connectivity is practical and flexible: the **integrated connectors support series wiring** as specified, and parallel connections are allowed up to a **maximum branch current of 15 A**; therefore, the number of panels that can be connected in parallel depends on the module size and the supply voltage, and must always comply with the applicable current limits and local codes.



Heaters for PV panels can be manufactured to any size and voltage, with the space of the connection box into the panel

STANDARD SIZES AND POWERS

CUSTOMIZABLE SIZE & POWERS

STANDARD MODELS				
SIZE (M)	POWER (W)	MAXIMUM PANELS / ARRAY		
		MAX IN 230 V	MAX IN 400 V	MAX IN 120 V
2X1	400 (W)	8	15	4
2,2X1	440 (W)	7	13	4
1,7X1	340 (W)	10	17	5
1,8X1	360 (W)	9	16	5
1,5X09	270 (W)	12	22	6

INSTALLATION

Installation is straightforward and suitable for both **new modules and panels already in service.**

After isolating the circuit and exposing the rear of the panel, the backsheet is cleaned and dried; the release liner is removed and the heater is applied from one edge, pressing evenly to avoid folds or air pockets. **The self-adhesive aluminum backing ensures durable bonding** on properly prepared surfaces; where extra security is desired, installers sometimes secure the corners with heat-resistant tape or apply a thin bead of glue along the edges (optional). Electrical connection is completed **using the supplied IP-rated connectors** without modification.

CONTROL

The system is managed by a **control unit** with dual **temperature and humidity sensors**. The controller continuously monitors local conditions and automatically switches the heating circuits on when the measured values cross the programmed activation thresholds (wet surface/ risk of frost) and off once the surface is dry or the temperature rises above the setpoint. **Setpoints are user-adjustable from the display**; automatic and manual modes are available, with optional remote activation. Sensors should be placed in moisture-prone areas.

