



ELPOS ELECTRONICS

SNOW MELT CONTROLLER

SIMPLE

RELIABLE

HIGH QUALITY

SAFE

ECONOMICAL

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SNOW MELT CONTROLLER

SMC-2

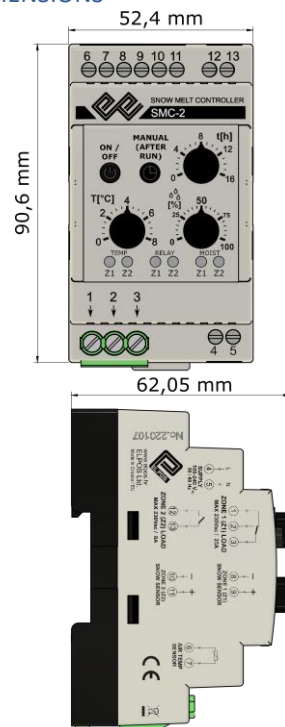
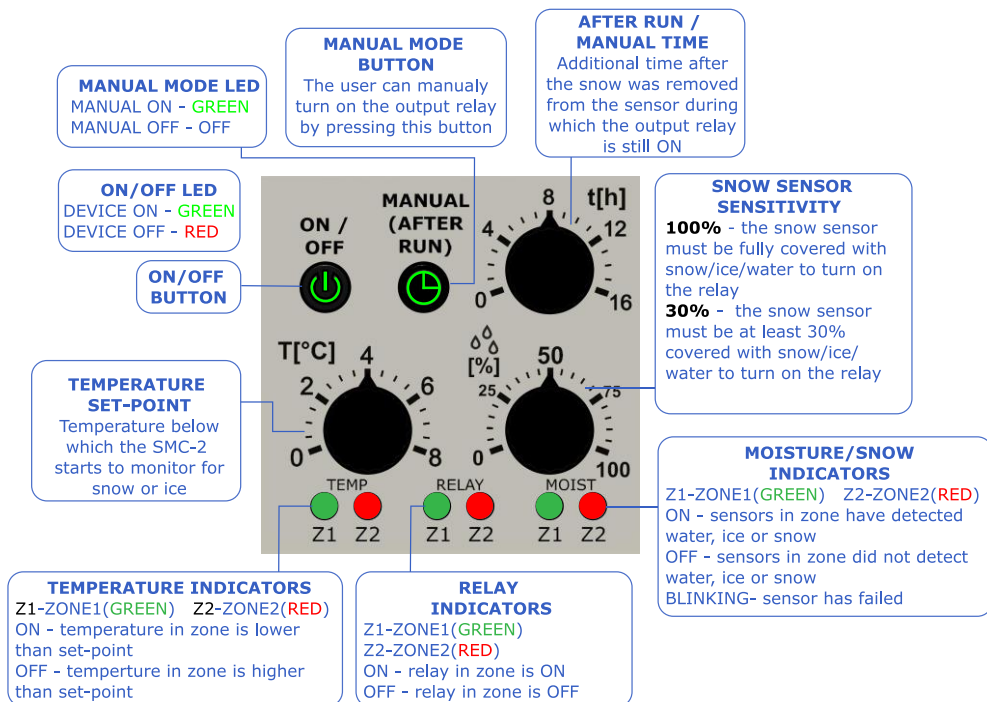
- reliably detects snow, ice or freezing water and turns on the heating cables
- connects to a ground (PSL-1) or gutter (SOV-5) snow sensor
- prevents gutter or downpipe damage in winter
- makes sure the driveway or walkway is dry and snow/ice free
- two output relays (two Zones)
- main advantages:
 - simple to use and install
 - has a high capacity 25 A relay (Zone 1)
 - turns the heating system only when necessary thus reducing the electricity bill
- universal power supply from ~100 to ~240 V (50/60 Hz)
- DIN rail mounting 3 modules wide (52.5 mm)

DESCRIPTION

The SMC-2 is a compact electronic snow melt controller designed to turn on the gutter or ground snow melting system as soon as the snow starts to fall or as soon as ice starts to form. The SMC-2 can be used to prevent the freezing and damage of gutters or downpipes during winter, or to make sure that the walkway or driveway is dry and snow/ice free. The SMC-2 works in pair with the **SOV-5 gutter snow sensors** or **PSL-1 ground snow sensor**. Users can connect up to 4 sensors to the SMC-2. The SMC-2 monitors if there is snow, ice or water that can freeze on the snow/ice sensors. If the SMC-2 detects water, ice or snow it will turn on one of two output relays. Each relay controls heating in one zone. The relay in Zone 1 has a 25A continuous and 40A instantaneous switching capacity, while the relay in Zone 2 has 8A continuous capacity. The relay in Zone 1 can be used to directly control high power ground heating



cables, while the relay in Zone 2 can be used to control medium power gutter heating cables. The SMC-2 also has a power ON/OFF button and a manual button. If the user presses the manual button the output relay will turn on for a limited amount of time. The length of time during which the relay is on is controlled with the time dial. The user can also choose a temperature below which the device starts to monitor if there is snow, ice, or water. This temperature is set on the temperature dial. The SMC-2 monitors the SOV-5 or PSL-1 sensors for snow, ice, or water only when the ambient temperature is lower than the temperature set-point. Additionally, users can also set the sensitivity of the sensors. This means that the users can choose how much snow can accumulate on the sensors before the output relay is turned on.



Parameter	Value / Description
Name	SMC-2
Type of functionality	Snow melt controller
Type of mounting	DIN rail 35 mm (according per EN 60715) or panel flush mount
Power supply	universal, from ~ 100 V to ~ 240 V, 50 Hz / 60 Hz
Power supply connection	terminals 4 (Line) - 5 (Neutral)
SMC-2 internal power consumption	< 15 W
Zone 1 output type	Relay SPDT
Zone 1 output max. load current and switching voltage	25 A continuous (40A instantaneous), ~240 V / cosφ ≥ 0.8
Zone 2 output type	Relay SPST
Zone 2 output max. load current and switching voltage	8 A continuous (20A instantaneous), ~240 V / cosφ ≥ 0.8

Parameter	Value / Description
Load connection wire cross section	Zone 1 ≤ 4 mm ² Zone 2 ≤ 2,5 mm ²
Power supply wire cross section	≤ 1,5 mm ²
Zone 1 sensor connection terminals	8 (-), 9(+)
Zone 2 sensor connection terminals	10 (-), 11(+)
Air temperature sensor	NTC thermistor 10kΩ / B3435 terminals 6 – 7 (SZT-10 sensor)
Snow sensor type	SOV-5 gutter sensor PSL-1 ground sensor
Max. sensor number	2 sensors per zone
Maximum ambient temperature	from -20 °C to +55 °C
Protection degree	IP 40 front panel with dials IP 20 connectors
Overvoltage category	III
Pollution degree	2
Dimensions	D= 90,6 mm, W= 52,4 mm, H= 62,1 mm (3 DIN modules)
Mass	300 g
Complies with standards	EN 60730-1, EN 60730-2-9

For example, if the sensitivity dial is set to 65% then the SMC-2 will turn on the output relay even if the sensor is not fully covered with snow. Similarly, if the sensitivity dial is set to 100% then the SMC-2 will turn on the relay when the sensor is fully covered with snow. The SMC-2 can also detect if there is a malfunction of the sensor. In case the snow/ice sensors fail the MOIST indicator on the front panel will blink.

SOV-5 gutter and PSL-1 ground sensors are the latest generation of snow sensors that need only two wires for connection to the SMC-2 controller. Besides detecting snow, ice or water, sensors also measure the surrounding temperature. This enables more accurate control of the snow melting process thereby reducing the total energy consumption. Users can also connect an additional ambient air sensor (SZT-10 temperature sensor) to the SMC-2. In ground snow melting applications accurate ambient temperature measurement can help to decrease the SMC-2 response time and can additionally decrease the electricity bill.



