

PRODUCT CODE

ODC-SNOPRO-100-W	SNOPRO-100 WIFI: Control Panel, WiFi Enabled
ODC-SNOPRO-100	SNOPRO-100: Control Panel, Non WiFi



PRODUCT DESCRIPTION

The **SNOPRO-100 WIFI** control is connected to Warmup's WSM Snowmelting App and will monitor snow and ice probability within 2 hours for that location using weather forecasting. When the probability of snow and ice are equal to or greater than the trigger point set by the user, the control will begin to preheat the slab 2 hours before the storm arrival. The user has several options within the App including the ability to remotely turn on and off their system manually. The **SNOPRO-100** can also be used with compatible sensors.

The **SNOPRO-100** control can be used as a standalone (non-connected) control or as a satellite control to the **SNOPRO-100 WIFI** for projects with loads larger than 100A. Both units, when used with one or more compatible sensors, automatically control snow and ice heating cable(s) for minimum energy costs. Applications include pavement, sidewalk, loading dock, roof, gutter, and downspout snow/ice melting in residential, commercial, and industrial environments. The adjustable hold-on timer continues heater operation for up to 10 hours after snow stops to ensure complete melting. The optional Sno-Pro Remote Control Unit can be located where system operation can be conveniently observed. It duplicates many of the **SNOPRO-100** front panel functions.

The **SNOPRO-100** provides advanced patented and patent pending ground fault equipment protection (GFEP) as required by the USA and Canadian National Electric Codes. The GFEP automatically tests itself every time the heater contactors operate and once every 24 hours. The trip current can be set at 60 or 120 mA via an internal switch or retained at the 30-mA default value. As an aid to troubleshooting heater ground faults, the **SNOPRO-100** provides an output that can indicate the ground current on a service person's portable digital volt meter.

The calibrated 40°F to 90°F (4°C to 32°C) high limit temperature sensor prevents excessive temperatures when using constant wattage and mineral insulated (MI) heaters. It also permits safe testing at outdoor temperatures too high for continuous heater operation. The temperature sensor is included. The **SNOPRO-100** provides a complete interface for use in environments supervised by an energy management computer (EMC). This feature can also be used for general purpose remote control and annunciation. All sensor and communication wiring are NEC Class 2. This simplifies installation while enhancing fire and shock safety. The **SNOPRO-100** can interface up to six sensors from the Pro-Sensor product family. Using more sensors provides superior performance by better matching the controller to site performance requirements.

The **SNOPRO-100** is an exceptionally capable de-icing controller. For complete information describing its application, installation, and features, please contact Customer Service.

FEATURES & BENEFITS

- Automatic snow/ice melting control
- Satellite contactor interface for larger systems
- Energy management computer (EMC) interface
- Accommodates MI, constant wattage, and self-regulating heaters
- Multiple sensor capability
- Advanced patented and patent pending ground fault equipment protection
- Heater hold-on and test capabilities
- C-UL-US
- Simple to install and operate
- Low system costs
- Minimum energy costs

SPECIFICATIONS

GENERAL

Area of Use	Non-hazardous locations
Approvals	Type 873 Temperature Regulating Equipment Also evaluated by Underwriters Laboratories Inc® in accordance with UL 1053 Ground-Fault Sensing and Relaying Equipment



ENCLOSURE

Protection	NEMA 3R
Cover Attachment	Hinged polycarbonate cover, lockable
Entries	One 1-1/16" entry (top) for NEC Class 2 connections Two 1-11/16" entries (bottom) for supply and load power, except 277 V single phase Two 1-1/16" entries (bottom) for supply and load power, 277 V single phase only
Material	Polycarbonate
Mounting	Wall mount
Dimensions	9.125"(L) x 1 1.50(W) x 6.56(H) 232mm (L) x 292mm (W) x 167mm (H)

CONTROL

Supply Voltage	208-240 VAC, 35 VA, three phase 50/60 Hz 277 VAC, 45 VA, single phase 50/60 Hz 277/480 VAC, 45 VA, three phase 50/60 Hz 600 VAC, 50 VA, three phase 50/60 Hz
Load	208-240 VAC, 50 amp max. resistive 277 VAC, 40 amp max. resistive 277/480 VAC, 50 amp max. resistive 600 VAC, 50 amp max. resistive
Contact Type	3 Form A
Weight	SNOPRO-100 WiFi: 8.6 pounds SNOPRO-100: 7.1 pounds
Maximum Ratings	Voltage: 600 V Current: 50 A except 277 V single phase, 40 A for 277 V single phase
Heater Hold-On Timer	0 to 10 hours; actuated by snow stopping or toggle switch
System Test	Switch toggles heater contact on and off. If temperature exceeds optional high limit thermistor (45°F), heater shuts off to reduce costs and prevent damage.



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SNOPRO-100

SUBMITTAL SHEET WSC - 0723

SPECIFICATIONS CONT'D

FRONT PANEL INTERFACE

- Status Indicator SUPPLY (green): Power on
- HEAT (yellow): Heating cycle in progress
- SNOW (yellow): Sensor(s) detect snow
- GFEP (red): Ground Fault condition
- GFEP (red, flashing): Failed
- GFEP (red, rapid flashing): GFEP test in progress

COMMUNICATION BUS

- Number Cascaded Units Unlimited
- Contact Delay 5 seconds
- Bus-Wire Type 3-wire jacketed cable
- Circuit Type NEC Class 2
- Lead Length Up to 500' (152m) using 18 AWG 3-wire jacketed cable
- Up to 2,000' (609m) using 12 AWG 3-wire jacketed cable

GROUND FAULT EQUIPMENT PROTECTION (GFEP)

- Set Point 30 mA (default); 60 mA and 120 mA selectable by DIP switch
- Automatic Self-Test Mode A: Verifies GFEP function before contactors operate
- Mode B: Verifies GFEP and heaters every 24 hours
- Manual Test/Reset Toggle switch provided for this function

ENVIRONMENTAL

- Operating Temperature -40°F to 131°F (-40°C to 55°C)
- Storage Temperature -50°F to 140°F (-45°C to 60°C)

ORDERING INFORMATION

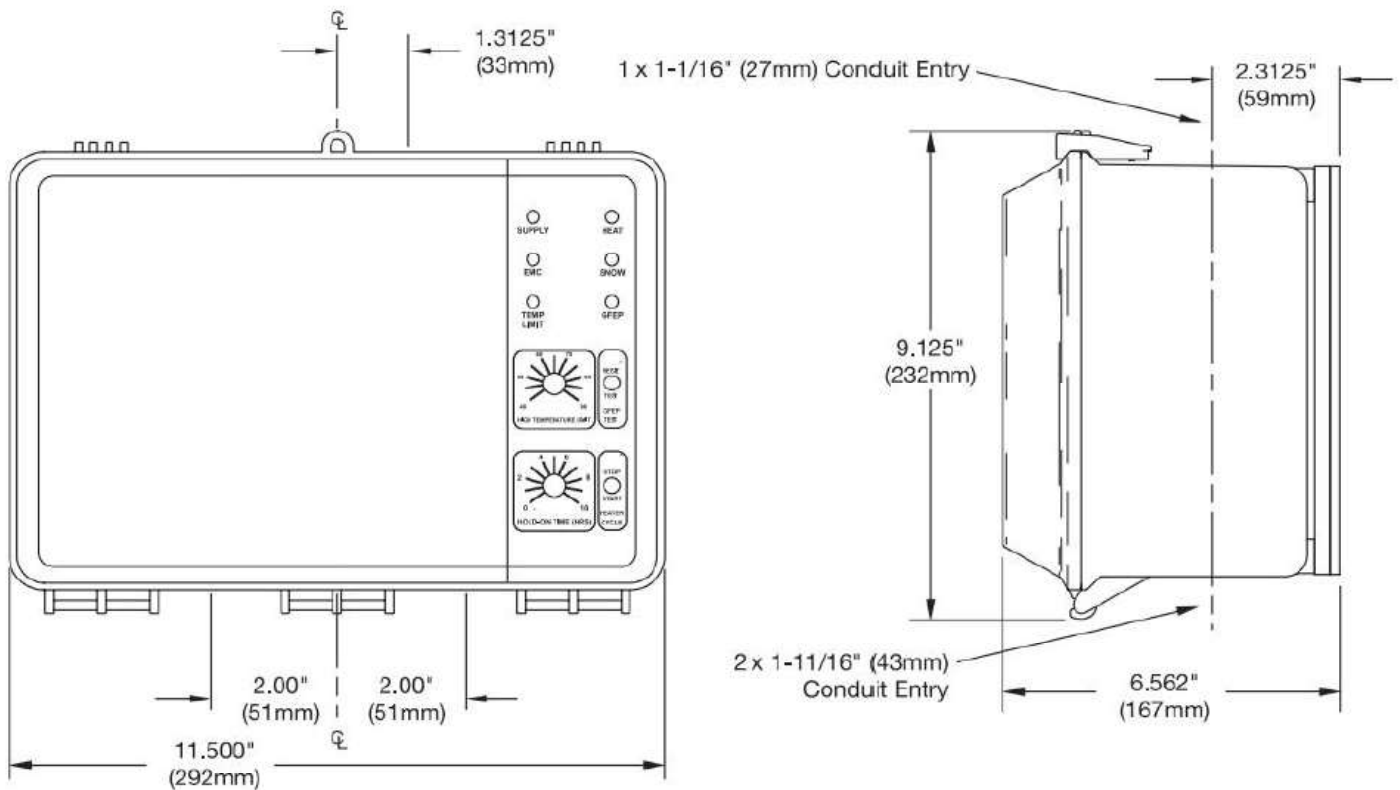
ORDER NUMBER	DESCRIPTION
OODC-SNOPRO-100-W	SNOPRO-100 WIFI: Control Panel, WiFi Enabled, 120 VAC 50/60 Hz
ODC-SNOPRO-100	SNOPRO-100: Control Panel, Non WiFi, 120 VAC 50/60 Hz

LIMITED WARRANTY

2 Years



DIMENSIONAL DRAWINGS



TECHNICAL SUPPORT

Warmup is available 24/7/365.

For quotes, layouts, and specific technical information, contact us at:

Warmup USA
(888) 927-6333
ussales@warmup.com

Warmup CANADA
(888) 592-7687
ca@warmup.com

RELATED PRODUCTS

- WSMM Snow Melt Cables and Mats
- Self-Regulating Cable: Roof & Gutter and Pipe Freeze Protection
- Pro-A: Aerial Mount Snow Sensor
- Pro-G-H: Pavement Sensor (includes Housing)
- Pro-R: Gutter Sensor
- Pro-Remote: Remote Control (optional)

DESCRIPTION

The outdoor temperature set-point as well as ground Upper limit temperature and ambient lower limit temperature can be easily set.

The Technician Settings mode allows installer or technician to adjust the parameters for customized installations.

The RESIBOX-120 is a "Plug and Play" controlled power distribution panel for frost protection, ice and snow melting applications.

When receiving a signal from the snow sensor/s, it activates the contactors energizing the heating elements.

Based on the DIP switches configuration, the zones are activated either continuously or in customized sequencing between the zones.

The adjustable Hold-On timer, keeps the outputs to the zones active to ensure complete snow melting.

The Hold-On (Time delay) is adjustable in the range of up to 99 hours.

The RESIBOX-120 Built-in Ground Fault interrupter allows settings for the tripping current between 0.1 – 1.0 A.

The GFS adjustable time delay provides a simple and safe protection from nuisance tripping.



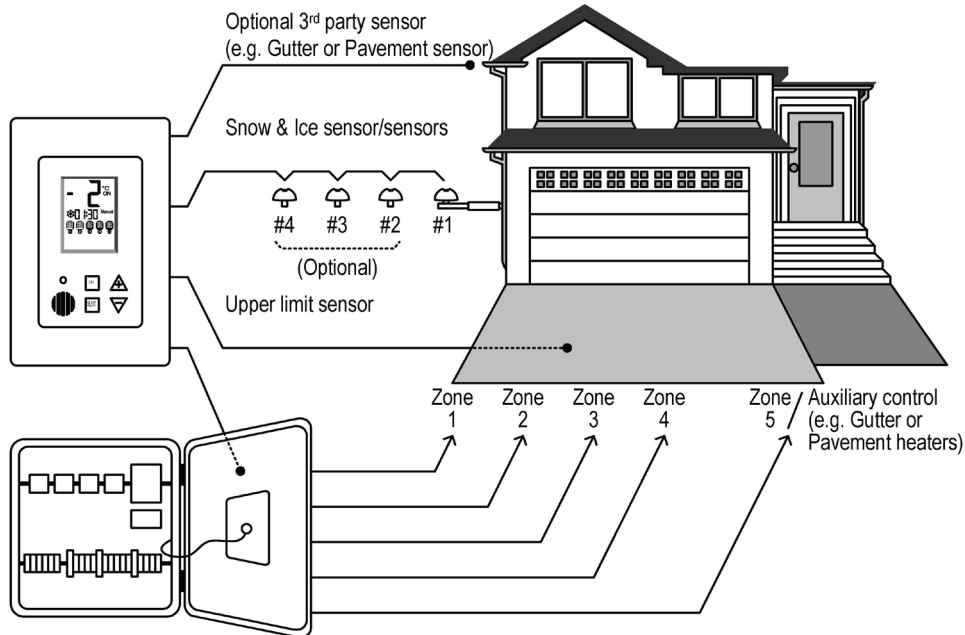
FEATURES AND BENEFITS

- Automatic Power/Load Distribution
- Up to 4 zones, 120A
- GFEP Protection Built-in
- Sequencing allows sharing of minimum required power supply
- Multiple Snow Sensor inputs
- User-friendly interface
- Integrated Electronic Controller with backlit display
- Energy Efficient Algorithm
- ETL approved with UL approved components.

THE PARAMETERS THAT CAN BE MODIFIED ARE AS FOLLOW:

- Temperature set point
 - Lower ambient temperature limit
 - Slab Upper Temperature Limit to deactivate heaters for Energy Efficiency
 - Time delay (Hold-on) before deactivating the heaters
 - ON time for Manual mode
 - Heaters cycle time / Splitting time between zones
 - Number of zones and sequence of operation (Sensors and heaters control logic)
 - Snow sensor RH sensitivity
 - Number of snow sensors connected
-
- DIP Switches located on the controllers provide easy access to technician mode and to the system configuration settings.
 - The RESIBOX-120 allows snow sensor input both from the sensors and also from a 3rd party snow sensors.
 - 3 terminals in the RESIBOX-120 are available to connect a CIT-1™, GIT-1™ or SIT-6E™ sensors and use them to control some or all of the zones.
 - Installing the system is a quick and easy task. Apart of mounting the metal box to the wall, the installer needs only to connect the line in and line out wires in the marked terminals and the system is ready to work.

GENERAL SYSTEM LAYOUT



TECHNICAL SPECIFICATIONS

Approvals	ETL Listed CAN/CSA-C22.2 No. 14 UL-508A	Manual Reset GFS	Push button on Front Panel
Enclosure Protection	IP20, Indoor Mounting	Four Satellite	240 VACS, 30 A Max
Dimensions	11.8x15x6.1 inch (30x38x15.5 cm)	Contactors	(Resistive), 50/60 Hz, 2-Poles
Ground Fault	Adjustable tripping current 0.01-0.1	Terminal blocks	6 mm ² ,10 AWG (max)
Equipment Protection	A (default 0.03A)		
GFS	Adjustable time delay 0.1-1 sec. (default 0.1 sec.)		

RELATED PRODUCTS

- COMMBOX-600 - see WSC-0927
- CIT1 - see WSC-1104
- GIT1 - see WSC-1204
- SIT6E - see WSC-1304
- APS3C - see WSC-1404
- AIRsense - see WSC-0205

PRODUCT CODE

ODC-ASE-DS2C / ODC-ASE-DS5C

PRODUCT DESCRIPTION

Intuitive outdoor controllers that will automatically activate based on readings from the temperature and moisture sensor. The DS series controllers are “all-in-one” with mounted sensor and built-in relay contactors. DS controllers mount outdoors but come with the optional ODC-CDP-2 remote panel for indoor override.



ADVANTAGES

- Sensors & controller in one outdoor unit
- Full access to electronics for manual overrides
- Automatic activation - only on when needed
- Rain and snow detection
- Adjustable temperature trigger
- Selectable low temperature cut off
- Adjustable delay-off drying cycle
- LED indication on all controllers

SPECIFICATIONS

Operating voltage / Load	100-277V
Temp. range / Trigger temp.	-40°F/+185°F (-40°C/+85°C)
Dimensions	4.7" H x 7" W x 2.7" D
Detects	Temperature and moisture

TECHNICAL DATA

Applications

By application

ODC-ASE-DS2C and ODC-ASE-DS5C are suitable for use with WSM and WSMM for in-ground applications.

ACCESSORIES

- ODC-CDP-2: indoor remote for DS controls. The remote control panel mounts in a typical electrical and connects to the controller via communication wire. A 12" communication wire connection is included. Extensions to be supplied by the contractor.



APPROVALS

- ETL



PRODUCT LISTING

Code	Description	Max Amperage
ODC-ASE-DS2C	Snow Melt All-In-One Control Unit, 1 Zone control, 115/230VAC	30A
ODC-ASE-DS5C	Snow Melt All-In-One Control Unit, 2 Zone control, 115/230VAC	2 x 30A
ODC-CDP-2	Indoor Control Panel for DS series. Fits any standard Single Gang electrical enclosure.	N/A

WARRANTY & MAINTENANCE

The DS Controller Series are warrantied for 1 year against manufacturer's defects and is protected by Warmup's SAFETYnet guarantee. See www.warmup.com for full warranty details.

TECHNICAL SUPPORT

Warmup is available 24/7/365 at (888) 927-6333.

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RELATED PRODUCTS

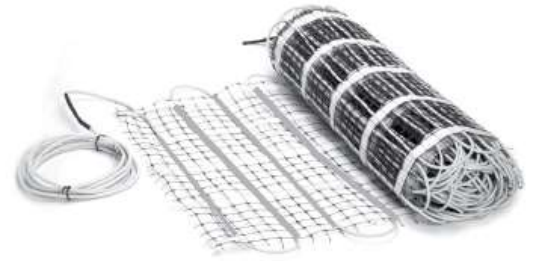
- WSM Snow Melting Cable - see WSC-0726
- WSMM Snow Melting Mats - see WSC-0729

PRODUCT CODES

WSMM-240/6000 // WSMM-Voltage/Wattage

PRODUCT DESCRIPTION

The WSMM (Warmup Snow Melting Mat) is commonly used in concrete pours, asphalt driveways and paved walkways. All Warmup Mats are rated for 208-240-277V applications. Mats are 2ft or 3ft wide and with a cable spacing providing 50w/sqft for optimum results under even the harshest conditions. Embedded up to 4" deep, they can be laid out as tire-tracks or for full coverage designs.



ADVANTAGES

- 16ft cold lead, single point connection
- Easy roll-out installation
- In sand, gravel or on wire mesh

LIMITATIONS

- Do not cut the cable or apply the cable with staples. Apply caution to avoid nailing through the cable and avoid installation under permanent fixtures.

SPECIFICATIONS

Operating voltage	240V & 480V
Output rating	± 50 W/sq ft
Mat width	2ft or 3ft wide
Lengths	Range from 5' (152cm) up to 60' (1828.8cm)
Construction	Energy efficient twin-conductor heating cable of 1/4" (6mm)
Maximum temperature	464°F (240°C)
Cold tail length	16.4' (610cm)
Warranty	10-Year



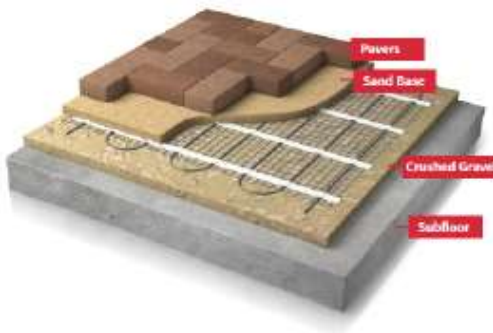
TECHNICAL DATA

Applications

Suitable Coverings	Pavers and related masonry
	Asphalt (direct contact or indirect contact)
	Concrete (not lightweight)
Suitable Base	Crushed gravel base
	Sand bed
	Insulation sheets
Min. coverage	2"
Max. coverage	4"

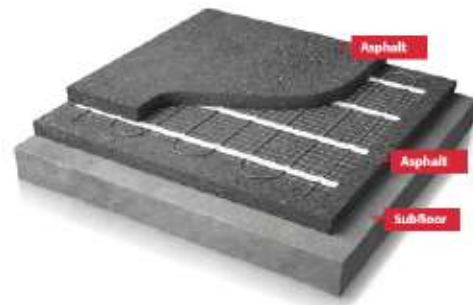
Installation under PAVERS

Mats should be covered with 2" of sand for paver application. Pavers to be maximum 4" thick.



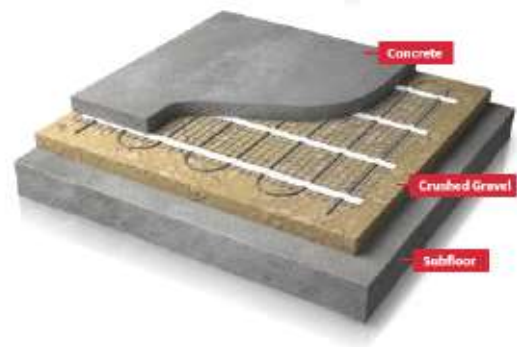
Installation under ASPHALT

Cable will withstand direct asphalt contact for limited time until asphalt cools. For pours hotter than 220F, apply a layer of 2" of sand over the cable prior to laying asphalt. Do not use rollers over 1 Ton. Hand-rolling highly recommended.



Installation under CONCRETE

Ensure the pour is 4" maximum over the cable. Use re-mesh or wire mesh to secure the cable in the middle of the pour for deeper pours. Cable/Mats can be zip tied to mesh and mesh can be raised with bricks or pulled during pour.





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WSMM Snow Melting Mats

SPECIFICATION SHEET WSC-0729

PRODUCT SIZE LISTING

Voltage	Area (sqft)	Code (2ft wide)	Mat Length (ft)	Wattage	Amps	Resistance (Ω)
240V	10	WSMM-240/500	5	500	2.1	115.20
	20	WSMM-240/1000	10	1000	4.2	57.60
	30	WSMM-240/1500	15	1500	6.3	38.40
	40	WSMM-240/2000	20	2000	8.3	28.80
	50	WSMM-240/2500	25	2500	10.4	23.00
	60	WSMM-240/3000	30	3000	12.5	19.20
	70	WSMM-240/3500	35	3500	14.6	16.46
	80	WSMM-240/4000	40	4000	16.7	14.40
	90	WSMM-240/4500	45	4500	18.8	12.80
	100	WSMM-240/5000	50	5000	20.8	11.50
	120	WSMM-240/6000	60	6000	25.0	9.60

Voltage	Area (sqft)	Code (3ft wide)	Mat Length (ft)	Wattage	Amps	Resistance (Ω)
240V	30	WSMM-240/3x10	10	1500	6.3	19.20
	60	WSMM-240/3x20	20	3000	12.5	16.46
	75	WSMM-240/3x25	25	3750	15.6	15.38
	90	WSMM-240/3x30	30	4500	18.8	14.40
	120	WSMM-240/3x40	40	6000	25.0	12.80

Voltage	Area (sqft)	Code (2ft wide)	Mat Length (ft)	Wattage	Amps	Resistance (Ω)
480V	30	WSMM-480/1500	15	1500	3.12	153.84
	40	WSMM-480/2000	20	2000	4.16	115.38
	60	WSMM-480/3000	30	3000	6.25	76.8
	80	WSMM-480/4000	40	4000	8.33	57.62
	120	WSMM-480/6000	60	6000	12.50	38.40

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WSMM Snow Melting Mats

SPECIFICATION SHEET WSC-0729

WARRANTY & MAINTENANCE

When installed according to the installation manual and proper testing has been performed throughout, the system requires no maintenance for the duration of its warranted life.

The WSMM cable is warranted for 10 years against manufacturer's defects and is protected by Warmup's SAFETYnet guarantee. See www.warmup.com for full warranty details.

TECHNICAL SUPPORT

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RELATED PRODUCTS

- WSM-252W - see WSC-0115
- Commbbox-600 - see WSC-0927
- DS series controls - see WSC-0809

