

## **NBS Category:**

**Trace heating systems**

## **NBS Manufacturer:**

**DEVI™ by Danfoss**

## **NBS Sub Category:**

**Electrical resistance trace heating systems**

## **Application**

Snow and ice melting on ground surfaces.

## **Description**

A complete range of constant wattage, snow and ice melting systems to melt and remove snow and ice from ground surfaces, providing safety for people, vehicles and buildings. The systems are complete with constant wattage heating cables, supplied in pre-terminated fixed lengths or on a drum or as a pre-assembled heating mat, plus a range of control options. The advanced controller option saves energy by using a programmable control unit with a combination of moisture and ambient sensors. The use of dual sensors ensures no energy is consumed in cold dry weather. The heating cables, mats and control units are all covered by an Environmental Product Declaration (EPD) to transparently report and document the environmental impact, based on a product life-cycle assessment (LCA). All are CE marked and certified according to relevant IEC (EN) codes.

### **System components:**

- Twin conductor, constant wattage heating cables: for concrete - fixed length or on drum
- Twin conductor, constant wattage heating cables: for asphalt - fixed length
- Twin conductor, constant wattage heating mats: for concrete
- Twin conductor, constant wattage heating mats: for asphalt
- Single conductor, constant wattage heating cables: for concrete - fixed length or on drum
- Multi circuit programmable control system, with moisture and ambient sensors, DIN rail mounted
- Single circuit electronic thermostat, with ambient sensor, DIN rail or surface mounted
- Fixings and clips

### **Twin conductor, fixed length, constant wattage heating cables (DEVIflex™ 18T, 230 V):**

DEVIflex™ 18T is a robust, twin conductor, fully screened constant wattage heating cable, designed specifically for installation in concrete, to melt snow and ice on ground surfaces. Available in various fixed lengths, it has a power output of 18W/m and is supplied pre-terminated with a 2.3m cold lead. It is covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:2009 class M2.

### **Twin conductor, fixed length, constant wattage heating cables (DEVIsafe™ 20T, 230 V):**

DEVIsafe™ 20T is a robust, twin conductor, fully screened constant wattage heating cable, designed specifically for installation in concrete, to melt snow and ice on ground surfaces. Available in various fixed lengths, it has a power output of 20W/m and is supplied pre-terminated with a 2.3m cold lead. It is covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:2009 class M2

### **Twin conductor, fixed length, constant wattage heating cables (DEVIsnow™ 20/30T, 230 V and 400 V):**

DEVIsnow™ 20/30T are robust, twin conductor, fully screened constant wattage heating cables designed specifically for installation in concrete, to melt snow and ice on ground surfaces. Available in various fixed lengths, for 230 and 400 V power supplies, with power outputs of 20 or 30W/m each are pre-terminated with 2.3m cold leads. All covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:2009 class M2

**Twin conductor, on drum, constant wattage heating cables (DEVIsnow™, maximum 400 V):**

DEVIsnow™ is also available on drum, with 30W/m power output and suitable for power supplies to maximum 400 V. It is covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:2009 class M2

**Twin conductor, fixed length, constant wattage heating cables for asphalt (DEVlasphalt™ 30T, 400 V):**

DEVlasphalt™ 30T is a robust, twin conductor, fully screened constant wattage heating cable, designed specifically for embedding in asphalt, to melt snow and ice on ground surfaces. Available in various fixed lengths, it has a power output of 30W/m and is supplied pre-terminated with a 10m cold lead. All covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:2009 class M2

**Twin conductor, constant wattage heating mat (DEVIsnow™ 300T, 230 V and 400 V):**

DEVIsnow™ 300T is a robust heating mat pre-assembled from twin conductor, fully screened constant wattage heating cables and is recommended for simple, fast and safe ground installations. It is designed specifically for installation in concrete, to melt snow and ice on ground surfaces. With a power output of 300W/m<sup>2</sup>, it is available in various sizes, for 230 or 400 V power supplies and supplied with a 10m or 30m pre-terminated cold lead. DEVIsnow™ 300T is covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:2009 class M2

**Twin conductor, constant wattage heating mat for asphalt (DEVlasphalt™ 300T, 230 V and 400 V):**

DEVlasphalt™ 300T is a robust heating mat pre-assembled from twin conductor, fully screened constant wattage heating cables and is recommended for simple, fast and safe ground installations. It is designed specifically for embedding in asphalt to melt snow and ice on ground surfaces. With a power output of 300W/m<sup>2</sup>, it is available in various sizes, for 230 or 400 V power supplies and supplied with a 10m or 30m pre-terminated cold lead. DEVlasphalt™ 300T is covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:2009 class M2

**Single conductor, fixed length, constant wattage heating cables (DEVbasic™ 20S, 230 V and 400 V):**

DEVbasic™ 20S is a robust, fully screened, single conductor constant wattage heating cable, designed specifically for installation in concrete, to melt snow and ice on the ground surface. Available in various fixed lengths, for 230 and 400 V power supplies, it has a power output of 20W/m and is supplied pre-terminated with two 3m length cold leads. All covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:1992 class M2

**Single conductor, on drum, constant wattage heating cables (DEVbasic™, maximum 400 V):**

DEVbasic™ 20S is also available on a drum, for maximum 400 V power supply. It is covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:1992 class M2

**Multi circuit programmable control and monitoring system (DEVireg™ 850):**

All ground surface heating circuits are controlled with a DIN rail mounted electronic programmable controller (DEVireg™ 850) capable of independently operating two systems, areas or zones with maximum four sensors. To provide much improved energy efficiency, control is based on inputs from separate moisture and ambient sensors. For higher rates accuracy, the sensors are digital, and the moisture sensor has a built in element for snow melting, priority setting is possible. The DEVireg™ 850 controller is covered by an Environmental Product Declaration (EPD).

**Single circuit, single application electronic thermostat, surface mounted (DEVireg™610)**

All simple or low output ground surface heating circuits are controlled with a surface mounted electronic thermostat (DEVireg™610) with a ground temperature sensor, all covered by an Environmental Product Declaration (EPD).

**Design:**

The manufacturer or operations partner shall be able to provide full design details including electrical schedules providing cable lengths, circuit breakers, circuit start up currents, operating currents and loads, line list summary and single line details; system layout and schematic drawings indicating power connections; controller configuration listing and wiring diagrams.

## **Installation:**

All ground surface heating cables shall be installed, tested and commissioned in strict accordance with the design plans and the DEVI Ground Surface Ice and Snow Melting Application Manual, within the defined maximum circuit lengths and using a 2500 V DCMegger.

## **Electrical connection:**

- Supply voltage: 230 or 400 V AC / 50 Hz
- Connections between the electrical supply, control panel and ground surface heating circuits shall be installed by an approved electrical contractor
- Circuit breaker protection required by MCB (BS EN 60898 type C). Residual current device required, RCD (30 mA sensitivity, tripping within 100ms). Maximum approximately 500 m of self-regulating heating cable can be monitored per RCD

## **General Information**

### **Warranty Description**

### **Manufacturers Guidance**

Warranty of 20 years on constant wattage heating cables and mats, 2 years on all controllers

### **Uniclass**

### **CAWS**

## **Specification data – Self regulating trace heating cables**

### **Application**

Snow and ice melting on ground surfaces.

### **Constant wattage heating cables, twin conductor:**

DEVIflex™ 18T

Guidance for specification option:

18W/m; 230 V; suitable for installation in concrete; fixed lengths 7.3-170m; cold lead 2.3m

DEVIsafe™ 20T

Guidance for specification option:

20W/m; 230 V; suitable for installation in concrete; fixed lengths: 6-194m; cold lead 2.3m

DEVIsnow™ 20/30T

Guidance for specification option:

Suitable for installation in concrete

20W/m; 230 V; fixed lengths: 6-195m; cold lead 2.3m

20W/m; 400 V; fixed lengths: 21-205m; cold lead 2.3m

30W/m; 230 V; fixed lengths: 5-140m with 2.3m cold lead: 10-140m with 30m cold lead

30W/m; 230 V; fixed lengths: 8.5-215m with 10m cold lead: 17.5m-215m with 30m cold lead

DEVIsnow™, maximum 400 V

Guidance for specification option:

30W/m; for installation in concrete; 230 V or max 400 V; supplied on drum: cold tail accessories

DEVlaspalt™ 30T, 400 V

Guidance for specification option:

30W/m; 400 V; suitable for embedding in asphalt; fixed lengths 8.5-215m; cold lead 10m

**Constant wattage heating mats, twin conductor:**

DEVlsnow™ 300T, 230 V and 400 V

Guidance for specification option:

Suitable for installation in concrete

300W/m<sup>2</sup>; 230 V; fixed sizes: 1-12m<sup>2</sup>, 0.5m width; 1.4-12m<sup>2</sup>, 0.75m width; 3-12m<sup>2</sup>, 1.0m width; cold lead 10m

300W/m<sup>2</sup>; 400 V; fixed sizes: 1.7-7.9m<sup>2</sup>, 0.5m width; 2.4-21.15m<sup>2</sup>, 0.75m width; 6-19m<sup>2</sup>, 1.0m width; cold lead 10m

300W/m<sup>2</sup>; 400 V; fixed sizes: 1.7-7.9m<sup>2</sup>, 0.5m width; 2.4-21.15m<sup>2</sup>, 0.75m width; 6-19m<sup>2</sup>, 1.0m width; cold lead 30m

DEVlaspalt™ 300T, 230 V and 400 V

Guidance for specification option:

Suitable for embedding in asphalt

300W/m<sup>2</sup>; 230 V; fixed sizes: 1-12.4m<sup>2</sup>, 0.5m width; cold lead 10m

300W/m<sup>2</sup>; 400 V; fixed sizes: 1.7-7.9m<sup>2</sup>, 0.5m width; 2.4-21.15m<sup>2</sup>, 0.75m width; 6-19m<sup>2</sup>, 1.0m width; cold lead 10m

300W/m<sup>2</sup>; 400 V; fixed sizes: 1.7-7.9m<sup>2</sup>, 0.5m width; 2.4-21.15m<sup>2</sup>, 0.75m width; 6-19m<sup>2</sup>, 1.0m width; cold lead 30m

**Constant wattage heating cables, single conductor:**

DEVlbasic™ 20S, 230 V and 400 V

Guidance for specification option:

20W/m; 230 V; suitable for installation in concrete; fixed lengths: 21-407m; 2 x 3m cold leads

DEVlbasic™, maximum 400 V

Guidance for specification option:

20W/m; for installation in concrete; 230 V or max 400 V; supplied on drum: cold tail accessories

## BIM objects

Platform	Compatible	Version
Revit	Revit 2017	1

Download BIM

## Similar products from DEVI™ by Danfoss

DEVlpipeguard™ 10/25/33

DEVliceeguard™ 20/30T

DEVlhotwatt™

DEVlmat™