

NBS Category:

Trace heating systems

NBS Manufacturer:

DEVI™ by Danfoss

NBS Sub Category:

Electrical resistance trace heating systems

Application

Snow and ice melting in gutters to prevent damage and icicle formation by maintaining water flow.

Description

A fixed length, constant wattage snow and ice melting system to prevent damage and icicle formation, on roof edges and in gutters, by maintaining continuous water flow. The system is complete with fixed length, twin conductor, constant wattage heating cables and a range of control options. The advanced control unit 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 cable and control units are covered by Environmental Product Declarations (EPD) to transparently report and document the environmental impact, based on a product life-cycle assessment (LCA). CE marked and certified according to relevant IEC (EN) codes.

System components:

- Twin conductor, constant wattage heating cables - ready made, various fixed lengths and outputs, cold leads
- Multi circuit programmable control system, DIN rail mounted with moisture and ambient sensors
- Single circuit electronic thermostat, DIN rail mounted with variable range ambient sensor
- Single circuit electronic thermostat, surface mounted with fixed point ambient sensor
- Roof and drain pipe fixings

Constant wattage roof and gutter heating cables (DEVIsnow™ 20/30T):

DEVIsnow™ 20/30T is a range of robust, ready made, twin conductor resistive heating cables designed specifically to melt snow and ice on roof edges and in gutters, to prevent damage and icicle formation and maintain continuous water flow. Designed for either 230V or 400V power supplies, each range is available in various fixed lengths. DEVIsnow™ 20T has a power output of 20W/m and is supplied with a 2 m or 3 m cold lead. DEVIsnow™ 30T has a higher 30W/m output and is available with 2m, 3m, 10m or 30m cold lead. All covered by an Environmental Product Declaration (EPD), CE marked and tested to demonstrate compliance with IEC EN 60800:2009.

The constant wattage heating cables comprise a 360° fully screened twin conductor cable and tough black UV resistant outer jacket. The cable is round in profile and robust in construction, the cold lead has solid conductors.

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

All roof and gutter trace heating circuits are controlled with a DIN rail mounted electronic programmable controller (DEVlreg™ 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 DEVlreg™ 850 controller is covered by an Environmental Product Declaration (EPD).

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

All roof and gutter trace heating circuits are controlled with a surface mounted electronic thermostat (DEVlreg™610) 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 roof and gutter heating cables shall be installed, tested and commissioned in strict accordance with the design plans and the DEVI Roof and Gutter Application Manual, within the defined maximum circuit lengths and using a 2500 V DCMegger. Installation is possible on virtually any type of roof, gutter and down pipe, however do not place in direct contact with bitumen. PE-foil shall be used as an intermediate layer between the bitumen and the heating cable.

Electrical connection:

- Supply voltage: 230 V AC / 50 Hz
- Connections between the electrical supply, control panel and roof and gutter trace 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 2 years on all controllers

Uniclass

CAWS

Specification data – Self regulating trace heating cables

Application

Snow and ice melting in gutters to prevent winter damage and icicle formation by maintaining water flow.

Constant wattage heating cables

DEVIsnow™ 20/30 T

Guidance for specification option:

Pre-terminated constant wattage cables, with options for power output, voltage, heating cable length, cold lead length

20W/m or 30W/m options; 230 V or 400 V options

Various fixed lengths:

20W/m: 6-195m for 230 V and 21-205m for 400 V, with either 2m or 3m cold lead

30W/m, 230 V: 5-140m with 2m or 3m cold lead; 10-140m with 30m cold lead

30W/m, 400 V: 8.5-215m with 10m cold lead; 17.5-215m with 30m cold lead

Installed on virtually any type of roof and gutter, but do not place in direct contact with bitumen. Instead use PE-foil as an intermediate layer between the bitumen and the heating cable.

BIM objects

Platform

Compatible

Version

Download BIM

Similar products from DEVI™ by Danfoss

DEVipeeguard™ 10/25/33

DEVliceguard™ 20/30T

DEVIsnow™ 300T

DEVlasphalt™

DEVhotwatt™

DEViflex™

DEVImat™