

NBS Category:

Trace heating systems

NBS Manufacturer:

DEVI™ by Danfoss

NBS Sub Category:

Self-regulating trace heating cables

Application

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

Description

A self-regulating, energy efficient snow and ice melting system to prevent damage by maintaining water flow on roof edges and in gutters. The system is complete with self-regulating trace heating cables, advanced energy efficient controllers and cold-applied components. The advanced system saves energy by using a programmable control unit that uses a combination of moisture and ambient sensors plus a self-regulating heating cable that increases its heat output only when in snow or ice and automatically reduces it in dry surroundings. The advanced control unit and use of dual sensors ensures no energy is consumed in cold dry weather. The cable, control units and interconnection components 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:

- Self-regulating trace heating cables
- Cold applied, insulation displacement components for interconnection
- Cold applied, gel-filled end seals for end termination
- 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

Self-regulating roof and gutter heating cables (DEVliceguard™ 18):

DEVliceguard™ 18 is a self-regulating trace heating cable designed specifically for melting snow and ice on roof edges and in gutters to prevent damage and icicle formation and maintain continuous water flow. Covered by an Environmental Product Declaration (EPD), the self-regulating cable is CE marked and tested to demonstrate compliance with IEC EN 62395-1:2013 and SS 424 24 11: 1992.

The self-regulating trace heating cable comprises a conductive polymer core, modified electrical insulation (radiation cross-linked to ensure long life expectancy), tinned copper braid and modified UV resistant over jacket (printed with cable type, batch number and metre marks).

Cold applied interconnection and termination components (DEVI™-Connecto):

Interconnection and end terminations are made with high performance, cold-applied, insulation displacement connectors and gel filled end seals. All are UV-resistant, IP66 and 85°C rated and suitable for 2500 V DC insulation resistance test. The DEVI™-Connecto components are covered by an Environmental Product Declaration (EPD).

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

All roof and gutter trace 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 roof and gutter trace heating circuits are controlled with a surface mounted electronic thermostat (DEVIreg™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, tees and end seals; 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 5 years on self-regulating heating cables, 2 years on all controllers and cold applied connection systems

Uniclass

CAWS

Specification data – Self regulating trace heating cables

Application

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

Self-regulating trace heating cables

DEVliceguard™ 18

Guidance for specification option:

On virtually any type of roof, gutter and downpipe. Do not place in direct contact with bitumen. PE-foil can be used as an intermediate layer between the bitumen and the heating cable.

Cold applied insulation displacement interconnection components and gel filled end terminations

DEVI™-Connecto-B-S

Guidance for specification option:

Powered connection to trace heating cable. Supplied with 1.5m length power cable and 1 gel filled trace heating cable end termination.

DEVI™-Connecto-B-A

Guidance for specification option:

Powered connection to trace heating cable. Supplied with 1.5m length power cable.

DEVI™-Connecto-B-E

Guidance for specification option:

Gel filled end termination for trace heating cable.

DEVI™-Connecto-B-C

Guidance for specification option:

Splice to connect 2 lengths of trace heating cable.

DEVI™-Connecto-B-T

Guidance for specification option:

Y-junction to connect 3 trace heating cables. Supplied with 1 gel filled trace heating cable end termination.

DEVI™-Connecto-B-TE-2

Guidance for specification option:

Powered Y-junction to connect 3 trace heating cables. Supplied with 1.5m length power cable and 2 gel filled trace heating cable end terminations.

DEVI™-Connecto-B-TE-3

Guidance for specification option:

Powered Y-junction to connect 3 trace heating cables. Supplied with 1.5m length power cable and 3 gel filled trace heating cable end terminations.

DEVI™-Connecto-B-X

Guidance for specification option:

X-junction to connect 4 trace heating cables. Supplied with 2 gel filled trace heating cable end terminations.

BIM objects

Platform	Compatible	Version
Revit	Revit 2017	1

[Download BIM](#)

Similar products from DEVI™ by Danfoss

DEVpipeguard™ 10/25/33

DEVIsnow™ 20/30T

DEVIsnow™ 300T

DEVasphalt™

DEVhotwatt™

DEViflex™

DEVimat™