

NBS Category:

Trace heating systems

NBS Manufacturer:

DEVI™ by Danfoss

NBS Sub Category:

Electrical resistance trace heating systems

Application

Frost heave and condensation prevention in cold stores and frost protection of doors

Description

A complete range of constant wattage heating systems to prevent frost heave and condensation in cold stores and provide frost protection of doors. The systems are complete with constant wattage heating cables, supplied in pre-terminated fixed length or pre-assembled mats along with controller options. All are covered by an Environmental Product Declaration (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: fixed length
- Twin conductor, constant wattage heating mats
- Thermostat controls
- Temperature sensors, fixings and clips

Twin conductor, fixed length, constant wattage heating cables (DEVIflex™ 6/10/18T, 230 V):

DEVIflex™ 6/10/18T are robust, twin conductor, fully screened constant wattage heating cables designed for installation in concrete. The heating cables prevent frost heave and condensation in cold stores and provide frost protection of doors and gates. Available in various fixed lengths, they have 6/10/18W/m power output respectively and are supplied pre-terminated with a 2.3m cold lead. All are 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 range of robust heating mats pre-assembled from twin conductor, fully screened constant wattage heating cables and recommended for simple, fast and safe ground installations. They are designed specifically for installation in concrete and used to prevent condensation in cold stores. With a power output of 300W/m², they are available in various sizes, for 230 or 400 V 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

Single circuit, single application electronic thermostat, DIN rail mounted (DEVireg™330)

The cold store heating systems are controlled with a simple electronic din rail mounted thermostat (DEVireg™330) designed to be installed in an electric cabinet and switched with the supplied ground temperature wire sensor. It is covered by an Environmental Product Declaration (EPD) and has a button to adjust the temperature setting (-10°C to +10°C), an LED that shows standby (green) or heating (red) and a relay with two contact pairs.

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

The cold store heating systems are controlled with a simple surface mounted electronic thermostat (DEVireg™610) and 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, operating currents and loads, line list summary and single line details; system layout and schematic drawings indicating power connections ; controller configurations and wiring diagrams.

Installation:

All cold store heating systems shall be installed, tested and commissioned in strict accordance with the design plans and the DEVI Cold Store Application Manual.

Electrical connection:

Supply voltage: 230 or 400 V AC / 50 Hz. Connections between the electrical supply, control panel and cold store 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).

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 – Cold store heating cables and mats

Application

Snow and ice melting on ground surfaces.

Constant wattage heating cables, twin conductor:

DEVIflex™ 6/10/18T

Guidance for specification option:

6W/m; fixed lengths 30-200m; cold lead 2.3m
10W/m; fixed lengths 2-210m; cold lead 2.3m
18W/m; fixed lengths 7.3-170m; cold lead 2.3m

Constant wattage heating mats, twin conductor:

DEVIsnow™ 300T, 230 V and 400 V

Guidance for specification option:

300W/m²; 230 V; fixed sizes: 1-12m², 0.5m width; 1.4-12m², 0.75m width; 3-12m², 1.0m width; cold lead 10m
300W/m²; 400 V; fixed sizes: 1.7-7.9m², 0.5m width; 2.4-21.15m², 0.75m width; 6-19m², 1.0m width; cold lead 10/30m

Controls

DEVIreg™330

Guidance for specification option:

Simple electronic thermostat, din rail mounted. It has an adjustable temperature range (-10°C to +10°C), LED indication and a relay with two contact pairs. The unit must be installed via an all-pole disconnection switch.

DEVlreg™610

Guidance for specification option:

Simple electronic IP44, 10A thermostat, surface mounted indoor or outdoor. It has a button for adjusting the temperature setting, an LED indicating the current mode (heating, standby or fault) and a relay with two contact pairs.

BIM objects

Platform	Compatible	Version
Revit	Revit 2017	1

[Download BIM](#)

Similar products from DEVI™ by Danfoss

DEVlpipeguard™ 10/25/33

DEVliceguard™ 20/30T

DEVlhotwatt™

DEVlmat™