

NBS Category:

Trace heating systems

NBS Manufacturer:

DEVI™ by Danfoss

NBS Sub Category:

Self-regulating trace heating cables

Application

For use on all insulated pipes exposed to risk of freezing

Description

An energy efficient, self-regulating trace heating system for use on all insulated pipes exposed to risk of freezing. The system is complete with low smoke zero halogen self-regulating trace heating cables, advanced energy efficient controllers and cold-applied components. All are covered by Environmental Product Declarations (EPD), CE marked and certified according to IEC (EN) codes.

System components:

- Low smoke, zero halogen, self-regulating trace heating cables
- Cold applied, insulation displacement components for interconnection
- Cold applied, gel-filled end seals for end termination
- Multi circuit, multi application programmable control and monitoring system, DIN rail mounted
- Single circuit, single application electronic thermostat, DIN rail mounted
- Single circuit, single application electronic thermostat, surface mounted

Self-regulating heating cables (DEVIpipelineguard™ 10/25/33 LSZH):

DEVIpipelineguard™ LSZH is a range of low smoke, zero halogen, self-regulating trace heating cables. 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). The full range is designed specifically for pipe frost protection and suitable for use on cold water pipes, sprinklers and low pressure hot water services. Each demonstrate extended maximum circuit lengths, due to higher circuit breaker compatibility. The complete range is qualified for a useful lifetime in excess of 25 years and tested to demonstrate compliance with:

- IEC EN 61034-2:2005/A1:2013
- IEC EN 60754-1:2014
- IEC EN 60754-2:2014
- IEC EN 62395-1:2013
- IEC 60068-2-5 and 2-9
(low smoke emission, zero halogen, self-extinguishing, resistant and colour fast under UV exposure)

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

All insulated pipework exposed to the risk of freezing is fitted with DEVIpipelineguard™ 10 LSZH self-regulating trace heating cables, this includes cold water pipes, sprinklers and low-pressure heating services. On larger pipes DEVIpipelineguard™ 25 LSZH or DEVIpipelineguard™ 33 LSZH are fitted. All installed within the maximum circuit lengths of 226m for DEVIpipelineguard™ 10 LSZH on 20 A MCB, 146m for DEVIpipelineguard™ 25 LSZH on 25 A MCB and 120m for DEVIpipelineguard™ 33 LSZH on 32 A MCB. Maximum lengths assume a minimum 0°C switch on.

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

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™-Easyconnect components are covered by an Environmental Product Declaration.

Multi circuit, multi-application programmable control and monitoring system (DEVlreg™Multi):

All frost protection trace heating circuits are controlled with a 7 channel electronic programmable controller (DEVlreg™Multi) installed on a DIN rail. Each channel can be set up individually with 3 control modes – temperature sensing, time proportional power regulation without sensor and manually on/off with time limitation. Channel inputs can be selected by software between 8 types of temperature sensors, including NTC 15kOhm at 25°C. BMS control can be utilised with the Modbus RS485 opto-insulated serial interface. The DEVlreg™Multi controller is covered by an Environmental Product Declaration.

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

All frost protection trace heating circuits are controlled with a surface mounted electronic thermostat (DEVlreg™610) covered by an Environmental Product Declaration.

Thermal insulation:

Insulation selection and thickness is strictly in accordance with the design plans and the DEVI Pipe Frost Protection Application Manual.

Design:

The manufacturer or operations partner shall be able to provide all design calculations, including heat loss and corresponding selection of heating cables; 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 pipe frost protection cables shall be installed, tested and commissioned in strict accordance with the design plans and the DEVI Pipe Frost Protection Application Manual, within the defined maximum circuit lengths and using a 2500 V DCMegger. Installation of thermal insulation shall be closely coordinated with the responsible sub-contractors. Professional grade aluminium tape shall be used on plastic pipes:

Electrical connection:

- Supply voltage: 230 V AC / 50 Hz
- Connections between the electrical supply, control panel and 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

For use on all insulated pipes exposed to the risk of freezing

Self regulating trace heating cables

DEVipeguard™ 10 LSZH

Guidance for specification option:

On cold water pipes, sprinklers and low pressure heating services.

DEVipeguard™ 25 LSZH

Guidance for specification option:

On larger pipes. Suitable for cold pipes, sprinklers and low pressure heating services.

DEVipeguard™ 33 LSZH

Guidance for specification option:

On larger pipes. Suitable for cold pipes, sprinklers and low pressure heating services.

BIM objects

Platform	Compatible	Version
Revit	Revit 2017	1

Download BIM

Similar products from DEVI™ by Danfoss

DEVipeguard™ 10/25/33

DEVliceguard™ 18(T) Ready-made

DEVIsnow™ 20/30T

DEVIsnow™ 300T

DEVlasphalt™

DEVhotwatt™

DEViflex™

DEVimat™