FINDLAY IRVINE

product data

ICELERT 407M Switch Heating Controller

Application

The Icelert 407M system forms part of a railway switch heating system used to prevent railway switch points from freezing in adverse conditions and uses information gathered from temperature and precipitation (rain/snow) detectors to determine when the switch heating should be turned on. This is accomplished by energising a relay within the unit which in turn energises the main switch heating contactor.

The ICELERT 407M is the latest in a succession of heating controllers. It utilises digital electronics to combine accurate and repeatable performance with ease of use.

The 407M also incorporates an RS232 serial data interface to allow connection to a computer, monitoring system or data logger, enabling remote interrogation of the measured rail parameters and also remote setting of the control parameters.

The 407M is compatible with Findlay Irvine DCU390PH data loggers for remote monitoring and control of switch heating applications.

The DCU390PH is compatible with the Network Rail Intelligent Infrastructure management system.

The 407M is available in 110/240v AC versions.

The 407M can be supplied as a kit comprising of

> ICELERT 407M Controller
>
> 1 Hot rail temperature sensor
>
> 1 Cold rail temperature sensor
>
> 1 Precipitation sensor
>
> 2 Rail temperature sensor clips

Features & Benefits

- Proven
- Reliable
- Network Rail approved
- Connects to remote loggers

Technical Specification

ICELERT 407M Controller

Supply Voltage	110V/ 230V a.c. link selected at factory
Supply Current	0.2A max. (2.2A incl. switched output)
Supply Frequency	50/60Hz
Output	Contact switched to incoming supply voltage Live
Switched Current	2A max.
Operating Temperature	-20 to +60°C ambient. For operation below -20°C a cubicle heater is recommended.
Measured Temperature range	+60°C to -25°C
Temperature Accuracy	±0.25°C , 0.2°C (-9.8°C to +25°C)
Temperature Resolution	1°C (+25.0°C to +60°C) ,1°C (-10°C to -25°C)
Temperature Setpoint range	Temperature Setpoint range -20°C to +20°C
Dimensions	240x117x185 mm (WxDxH)
Weight	Suitable for back panel mounting
Mounting	ABS
Material	

ICELERT 407M Temperature Sensor

Sensor	Thermistor
Measurement Range	-40 to +60 Deg C
Dimensions	10x10x25mm
Max Cable recommended Length to controller	100m
IP Rating	IP68
Material	Brass
Weight	
Termination	5m or 30 m flying lead

ICELERT 407M Precipitation Sensor

Supply Voltage	12V DC or 24V DC
Power supply current	1A (12V)
Outputs	Volt-free contact
Construction	Epoxy resin/ brass
Termination	Flying lead, 3m
Mounting	16mm screwed thread
Dimensions	215 x 40mm
Weight	500 gms
IP Rating	IP68

FI (NR) Cat No	Items
I994501 (055/056006)	407M (110V) complete with sensors - standard
I990661 (055/056011)	407M (240V) complete with sensors
I996575 (055/009023)	407M complete with sensors, excluding junction box
I996031 (055/056008)	407M Control Unit only
I540030 (055/006014)	Junction Box for 407M probes
I990101 (055/162901)	Rail Temperature Probe with 5m cable for use with 407M
I990105 (055/162902)	Rail Temperature Probe with 30m cable for use with 407M
I993342 (055/056007)	Probe Unit comprising: Hot and cold rail probes & junction box
I993768 (055/046001)	Precipitation Sensor with 3m cable, for use with 407M
I991102	407M Test Box

Railway Industry Association

NetworkRail

Link-up