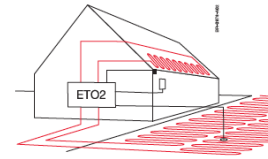


# Ice and Snow Detector Type ETO2



### Technical Data:

#### Thermostat ETO2-4550:

Supply voltage..... 120-240V ±10%, 50/60Hz  
 Temperature range .....0/+10°C  
 Built-in timer for manual snow melting / afterrun .....0-18 hours  
 Output relays .....3x16A potential-free relays  
 2-zone application..... Via 2x16A potential-free output relays  
 Hydronic system .. Control of 3 or 4 way valve, primary pump, secondary pump  
 Display ..... Graphic, backlit  
 Ambient temperature.....0/+50°C  
 Housing/incl. cover ..... IP20  
 Weight ..... 495g  
 Dimensions excl. cover (H/W/D) .....90/156/45mm  
 Dimensions incl. cover (H/W/D) .....170/162/45mm  
 LED indication:  
 - ON/Green..... Thermostat energized  
 Error/Red..... Fault

#### ETOG-55 Ground sensor:

Measurement..... Moisture and temperature  
 Installation ..... Outdoor surface  
 Housing ..... IP68  
 Ambient temperature..... -50/+70°C  
 Dimensions..... H32, Ø60mm

#### ETOG-56/ETOK-1 embedded ground sensor:

Measurement..... Moisture and temperature  
 Installation ..... Outdoor surface  
 Housing ..... IP68  
 Ambient temperature..... -50/+70°C  
 Dimensions..... H32, Ø60mm  
 Dimensions, tube ..... H78, Ø63.5mm

#### ETOR-55 Gutter sensor:

Measurement..... Moisture  
 Installation ..... Gutter or down pipe  
 Housing ..... IP68  
 Ambient temperature..... -50/+70°C  
 Dimensions (H/W/D).....105/30/13mm

#### ETF-744/99 Outdoor sensor:

Measurement..... Temperature  
 Installation ..... Wall surface  
 Housing ..... IP54  
 Ambient temperature..... -50/+70°C  
 Dimensions H/W/D.....86/45/35mm

**All products:..... 3-year warranty from production date**

### Installation:

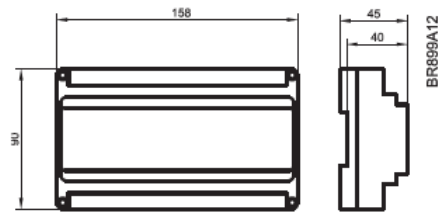
#### ETO2 thermostat installation:

DIN-rail mounting in electrical cabinet, mounting box, or on a wall surface.

#### ETOG ground sensor installation:

Should be installed where the worst snow and ice problems normally occur. The sensor should be embedded in a concrete base on a hard surface with the top of the sensor flush with the surface.

Where an asphalt surface is used, or where easy installation is desired, installing ETOG-56 together with ETOK-1 is the obvious choice.

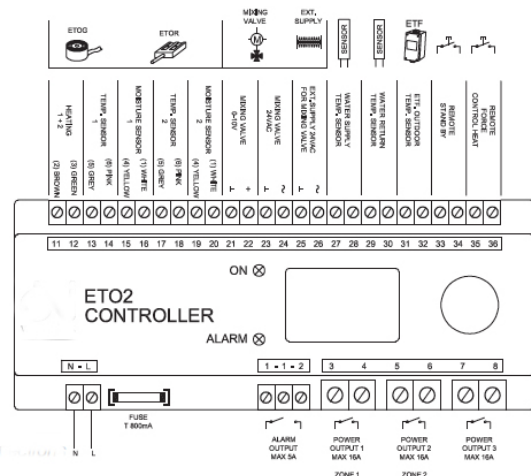


#### ETOR gutter sensor installation:

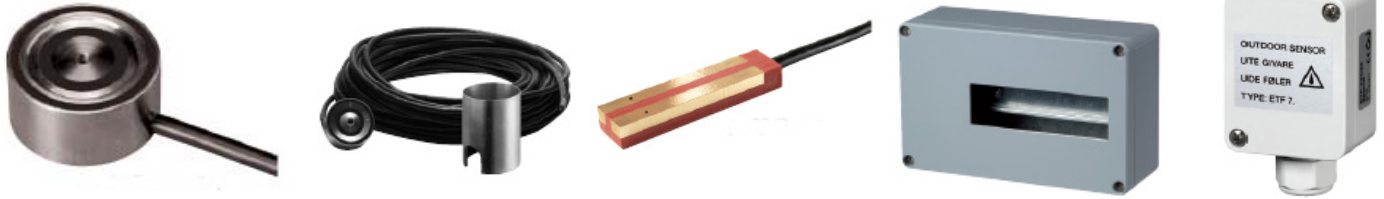
Should be installed in the gutter or down pipe on the sunny side of the building. The sensor contact point must be aligned in the direction of the melt-water flow. Where necessary, two sensors can be connected in parallel.

#### ETF outdoor temperature sensor installation:

Should be installed beneath the leaves on the northern side of the building.



## Ice and Snow Detector Type ETO2



### Energy-efficient control of ice and snow melting

An intelligent all-in-one solution for ice and snow melting suitable for any application which uses hydronic or electric heating. Optimal operation is ensured through output control, making the system both effective and economical. ETO2 offers the possibility of snow melting - the green way.

- Electronic on/off control of up to 11kW
- Two-zone control, individually controlled
- Economical control - minimized energy consumption
- Adjustable moisture sensitivity
- Display and selector knob for easy programming
- Control of hydronic or electric ice and snow melting systems
- Several language options

### We cannot change the weather - but we can control the consequences

The ETO2 controller has been developed for ice and snow melting on the ground and in gutters.

Using readings from temperature and moisture sensors, the controller ensures economical control of power consumption while keeping outdoor areas and roofs free of ice and snow. The moisture sensor should be installed in the ground surface or placed in the gutter. As soon as moisture is detected in conjunction with low temperature, the ETO2 controller activates the snow-melting system.

Once the sensor has dried out, the thermostat immediately goes into afterrun and the system continues to provide heat for a set time.

### Thermostat functions

#### Ensuring minimal energy consumption:

The snow melting system is only energized when the outdoor temperature drops below the selected setting and snow or ice is detected by the sensors. Energy is thus only used when absolutely needed.

#### For gutters - ETO2-4550, ETOR-55 and ETF-744/99

The ETOR sensor is designed for installation in gutters, downpipes, etc. ETOR sensors detect moisture, while ETF sensors measure temperature.

#### For outdoor surfaces - ETO2-4550, ETOG-55 and ETOG-56/ETOK-1

The ETOG sensor is designed for embedding in the surface of the outdoor area. ETOG sensors measure ground temperature and moisture. The ETF-744/99 sensor can be used for measuring rapid temperature drops.

#### Remote control:

It is possible to control the ETO2 via an external signal (day/week timer, GSM module or other signal source).

The ETO2 can be switched on/off (standby) and the system can be temporarily forced to provide heat during the period of time set in the afterrun menu.

#### Sensors:

##### ETOG Ground sensor:

Designed for embedding into the surface of the outdoor area. Measures temperature and moisture. Up to two ETOG sensors can be installed.

##### ETOR Gutter sensor:

Designed for installation in gutters, down pipes etc. Measures moisture only. Should be installed in combination with an ETF outdoor temperature sensor. Up to two ETOR sensors can be installed.

##### ETF Outdoor temperature sensor:

Measures temperature. Is normally used in combination with ETOR gutter sensor, but can also be used separately for temperature measurement only.

An ETF sensor can also be used in combination with ETOG ground sensors for outdoor areas. The ETF sensor can detect rapid drops in air temperature, thus avoiding icy areas.

Part no.	Type	Product
32205	ETO2-4550	Thermostat incl. cover for wall surface mounting
32212	ETOG-55	Ground sensor for measuring temperature and moisture. 10m cable
32213	ETOG-56/ ETOK-1	Ground sensor for embedding in outdoor surfaces, e.g. asphalt, 25m cable
32210	ETOR-55	Gutter sensor for measuring moisture, 10m cable
32214	ETF-744/99	Outdoor sensor for measuring temperature
32206	ETO2-BOX	UL mounting box for ETO2