APPLICATION NOTE

ETR2

ETOG-55   ETF-744/99

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Application note on Ice and snow melting for small hydronic applications

The ETR2 gives an economical control of ice-and snow melting for all smaller applications.
With focus on power consumption and easy installation, the ETR2 keeps ground areas free of ice and snow.

- Control of hydronic or electrical ice and snow melting in the outdoor area.
- Economical control through both detection of temperature and moisture
- Electronic on/off control up to 3,600W
- Easy to install

PRODUCT PROGRAM

TYPE	PRODUCT
ETR2	1550 Thermostat with 16A voltage free output relay
ACCESSORIES	
ETOG-55	Ground sensor for detection of temperature and moisture, 10 m cable
ETF-744/99	Outdoor sensor for detection of temperature

WE CANNOT CHANGE THE WEATHER - BUT WE DO CONTROL THE CONSEQUENCES

OJ has developed the ETR2 controller for ice and snow
melting in small ground areas.
Using readings from temperature and moisture sensors, the
controller ensures economical control of power consumptions when keeping outdoor areas free of ice and snow.
The moisture sensor is installed in the surface of the outdoor area. As soon as moisture is detected, the ETR2 controller activates the snow melting system.
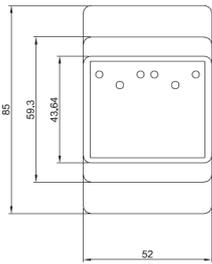Once the sensor has dried out, the thermostat switches off the heating system.

APP2-FHH-001v100-Application note on ETR2 used in hydronic app.doc

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APPLICATION NOTE

ETR2

Dimensions (mm)
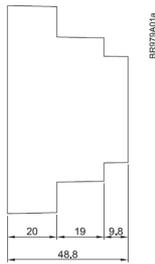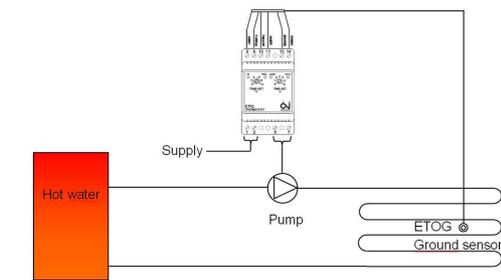
Example with ground temperature & moist sensor
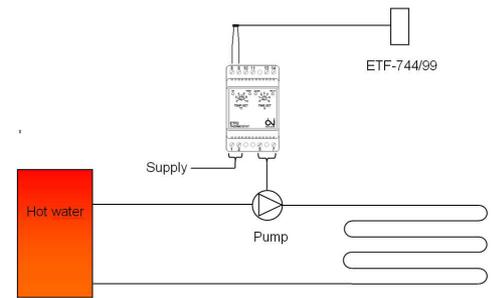
Example with air temperature sensor

THERMOSTAT FUNCTIONS

For Outdoor areas with snow/ice detection
- ETR2-4550 and ETOG-55 is used:
The sensor type ETOG is designed for embedding into the surface of the outdoor area. ETOG detects ground temperature and moisture. The snow melting system will be energized only when the outdoor temperature is below the selected setting and snow or ice occurs on the ETOG.
Combining with the ETF-744/99 air sensor is possible for measurement of rapid air temperature changes.

For Outdoor areas with air temperature detection
- ETR2-4550 and ETF-744/99 is used:
The snow melting system will be energized only when the air temperature is below the selected setting.

Easy startup:
Adjust the temperature and the afterrun time. The thermostat is now working when the outdoor temperature is below the set temperature.

SENSORS
Ground sensor type ETOG:
Designed for embedding into the surface of the outdoor area.
Detects temperature and moisture. Up to two sensors type ETOG can be installed.

Outdoor sensor type ETF:
The outdoor sensor detects rapidly changes in air temperatures reducing the risk of temporarily icy areas.

MOUNTING:
Mounting of thermostat ETR2:
DIN-rail mounting in switchboard.

Mounting of ground sensor ETOG:
Must be level mounted where the worst snow and ice problems normally occurs. The sensor must be mounted on a hard foundation, in a concrete base, levelling the top of the sensor.
Where an asphalt surface is used, it should be placed in a concrete recess.

Mounting of outdoor sensor ETF:
Is mounted under the roof eaves on the north side of the building.

TECHNICAL DATA

ETO2-4550:

Supply voltage	230V ±10%, 50/60 Hz
Output relay:	16A voltage-free max 3600W
On / off differential	0,4°C
Temperature setting range	0/+10°C
Afterrun time setting range	0 - 6 hours
LED indications:	Green - Power on
Red - moist - moisture is detected
Red - temp - Outdoor temperature is below setpoint
	Red - relay - Output is on
Power consumption	3VA,
Ambient temperature	0 / +50 °C
Housing	IP20

Ground sensor ETOG-55:

Detecting	Moisture and temperature
Mounting	Outdoor area
Housing	IP68
Ambient temperature	-20/+70°C
Dimensions	H32, Ø60 mm

Outdoor sensor ETF-744/99:

Detecting	Air temperature
Mounting	Wall surface
Housing	IP54
Ambient temperature	-20/+70°C
Dimensions	(H/W/D) 86/45/35 mm

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