

Simplified menu structure 1773 (without “back” menu items), status 2016

Home display

SlabTemp. RemainingHeatTime
Operating state

press SET
press (+) and (-)

In general:
Settings are made as follows:
press **SET**, adapt setting with
[+] or [-] and confirm with
SET.
In order to abort press **[+]**
and **[-]** at the same time.

The error codes are added up, i. e.
error code 12 = error 8 + error 4

Error codes
a) Ice/snow detector: Description
1 Slab/gutter temperature cannot be
determined; all active temperature sensors
report temperature measurement failure.
possible causes:
- see sensor error code 1 (slab/gutter
sensors only)
- internal detector failure
2 Outdoor temperature required but not
available (slab idle mode only); outdoor
temperature sensor reports temperature
measurement failure.
possible causes:
- see sensor error code 1 (outdoor air
temperature sensor only)
- internal detector failure
4 Moisture cannot be determined; all
active moisture sensors report temperature
measurement and/or moisture detection
failure.
possible causes:
- see sensor error codes 2 or 4 respectively
- temperature loop of affected sensor faulty
- internal detector failure
8 Configuration problem.
possible causes:
- no sensor defined for temperature
measurement
- no sensor defined for moisture detection
- slab idle mode enabled but no valid sensor
defined for outdoor air temperature
measurement
b) Sensors: Description
1 Temperature sensor faulty.
possible causes:
- temperature detector inside the sensor
faulty
- internal detector failure
- open loop or short circuit in sensor cable
2 Supply voltage prior to start of the last
moisture detection cycle not within the
defined voltage range; detection cycle was
not started.
possible causes:
- detector supply voltage more than + 10 %
above rated voltage
- detector supply voltage more than - 15 %
below rated voltage
- internal detector failure
4 Last moisture measurement faulty.
possible causes:
- supply voltage too low during last moisture
detection cycle
- open loop or short circuit in sensor cable
- moisture detector inside the sensor faulty
- internal detector failure
8 Internal failure during last moisture
measurement.
possible causes:
- configuration problem
- internal detector failure
16 Internal failure during interval between
two moisture detection cycles.
possible causes:
- current > 25 mA although no detection
cycle is active on any sensor
- internal detector failure
32 Error because temperature is too high
(> 30 °C) when measurement cycle begins.
Effect:
Measurement is not executed because
measurement values are not meaningful or
in order to avoid damage to the sensor.
64 Error because temperature is too high
(> 55 °C) during the measurement
Effect: Measurement is aborted to avoid
damage to the sensor.

Basic config
Basic configuration

press SET
press (+) and (-)

Show status
Operating states of control system

press SET
press (+) and (-)

Test
Operating states and possibility to test
sensors and heating relays

press SET
press (+) and (-)

Configuration
Settings to be done by the installation
technician

press SET
press (+) and (-)

Administra- tion
General settings:
Factory default, language

press SET
press (+) and (-)

Language
Set language

Sensor
Set type of sensor 1: 31 AT
3354 roof, 3352-53, 3355-56 ground

Temp Hi Lim.
Set to activate when outside temperature/
high temperature limit is reached

HeatTime min.
Set minimum heating time
30-600min

State
Display operating mode of ice/snow detector

Error Code
Display error code of ice/snow detector

Slab Heating

RemHeat Tim. ...m
Display remaining heating time
for slab heating

Slab T. ...°C
Display active slab temperature

Outdoor T. ...°C
Display outdoor temperature;
only active in slab idle mode

Status Sensor n
Select sensor (1/2), display status

HeatTime Test ..
Activate heating relay for
minimum heating time

Sensor Test n
Select sensor (1/2) for testing

Operat. Mode
Set ON - OFF and ON ! = Slab idle mode

Temp Hi Lim.
Set to activate when outside temperature/
high temperature limit is reached

Temp Lo Lim
Set to activate when outside temperature/
low temperature limit is reached

Slabidle Temp. ...
Set slab idle temperature,
control temperature for slab temperature

Moisture Limit ...
Set moisture limit for activation
5-95 (determine moisture value)

HeatTime min.m
Set minimum heating time in min
30-600min = switching time heating relay

Config Sensor n
Select sensor (1/2) configuration

As of version 2.0
Invert Alarm 0/1
Invert alarm output = 1

Language
Set menu language

Temp. Units .
Set °C or °F

Factory Def.
Reset all parameters to factory default
settings

SW-Vers. XX.XX
Display software version

Internal Status
Informative display

As of version 2.0

Slab Heat
Display status of slab heating

TimeMtr 1
Operating hour counter of slab heating,
can be reset

Time Mtr 2
Operating hour counter of slab heating,
cannot be reset

Reset Mtr1
Reset counter 1 to zero/
delete

State S.
Display state of ice/snow detector

Error Code
Display error code of sensor n

Sensor T....°C
Display current sensor temperature

Ambient T.°C
Display sensor temperature before
measurement starts

Last Moist. ...
Display last measured moisture

InhibTim Tmp. ...m
Display inhibit time during which the
sensor temp. is not evaluated

InhibTim MDet. ...m
Display inhibit time until next
moisture measurement starts

State S.
Display state of sensor n

Sensor T....°C
Display current sensor temperature

InhibTim MDet. ...m
Display inhibit time until next
moisture measurement starts

Start MDet.
Test and determination of setting of
moisture limit only at temp. <5°C)

Last Moist. ...
Display last measured moisture value

Attention
During the sensor test the slab heating
will not be activated.
It only serves to test the sensor.

Sensor- Typ ...
Set type of sensor n: 31 AT
3354-roof, 3352-53, 3355-56 ground

Method Meas. ...
Set sensor specification
T=temperature, M=moisture

Moisture Limit
Set moisture limit only in case of 2 sensors
with different M limits

LED: operating state indicator

Green flashing	System initialization
Green	System in service
Green/red flashing	System in service, at least one sensor faulty (refer to error code)
Red flashing	System not in service (refer to error code)
Red	System switched off

Display: operating state indicator

Off – Detector manually switched off

Functions:

Slab heating off

All temperatures undefined

Moisture measurement cycles not activated

Ready – In ready state: temperature of all sensors not within active temperature window

Functions:

Slab heating off

Moisture measurement cycles not activated

Monitoring of all active temperature sensors

[Active] - Activated: temperature within relevant window, no moisture detected

Functions:

Slab heating off

Regular activation of moisture measurement cycle

Monitoring of all active temperature sensors

[Active *]- Activated in Slab idle mode: temperature outside relevant window, no moisture detected

Functions:

Slab heating regulated to setpoint temperature (2-point control)

Regular activation of moisture measurement cycle

Monitoring of all active temperature sensors

[Heating #] – Heating operation during minimum heating time: Heating on

Functions:

Slab heating on

Regular activation of moisture measurement cycle

Monitoring of all active temperature sensors

[Heating] – Heating operation: temperature within relevant window, moisture detected, heating on

Functions:

Slab heating on

Regular activation of moisture measurement cycle

Monitoring of all active temperature sensors

[Heating *] – Heating in Slab idle mode: temperature within window, moisture detected, heating on

Functions:

Slab heating on

Regular activation of moisture measurement cycle

Monitoring of all active temperature sensors

[Error] – Error state: all active sensors faulty or internal error

Functions:

Slab heating off

In case of faulty moisture measurement regular activation of moisture measurement cycle

Operational mode LED flashes red

Entry in error code table