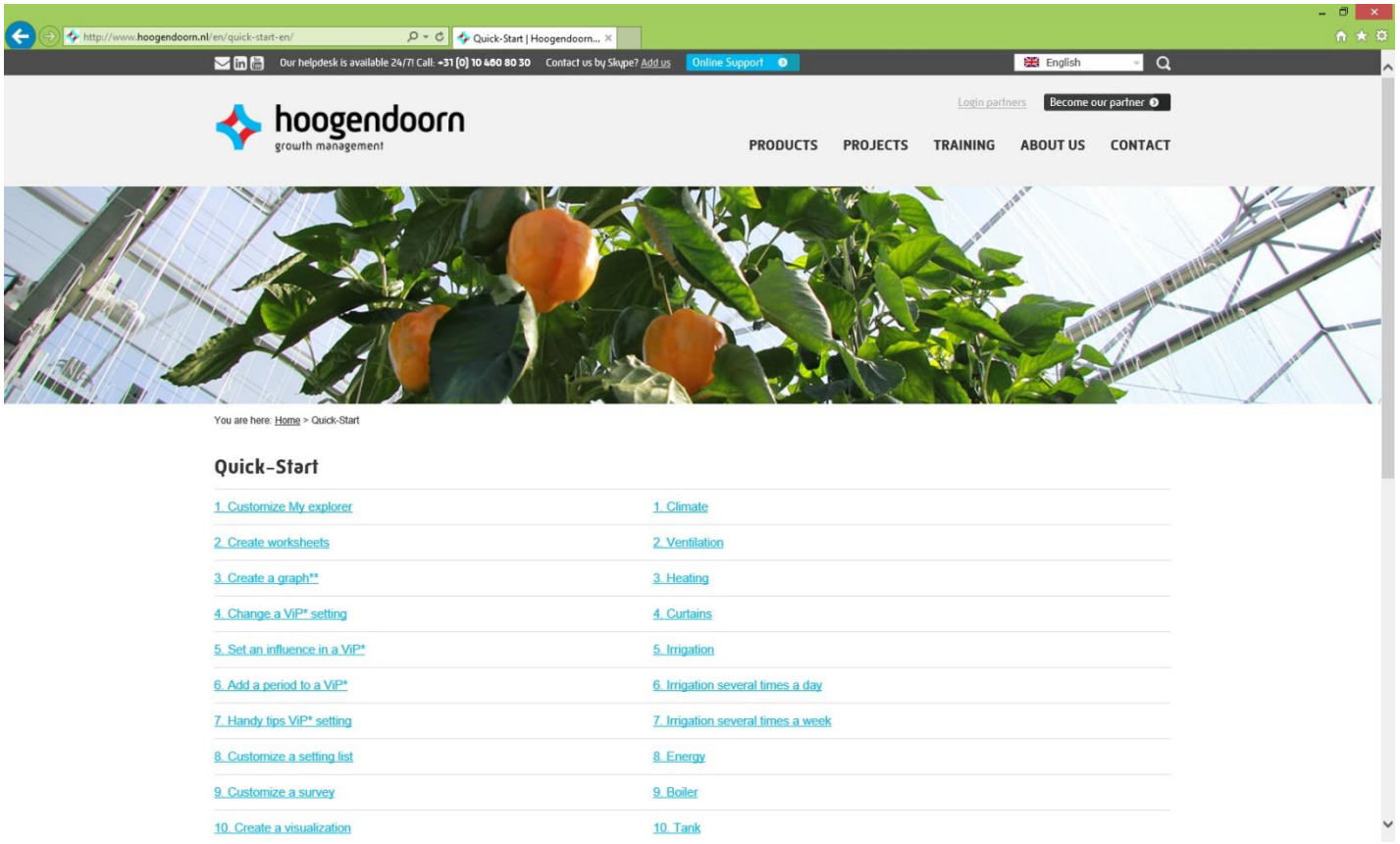
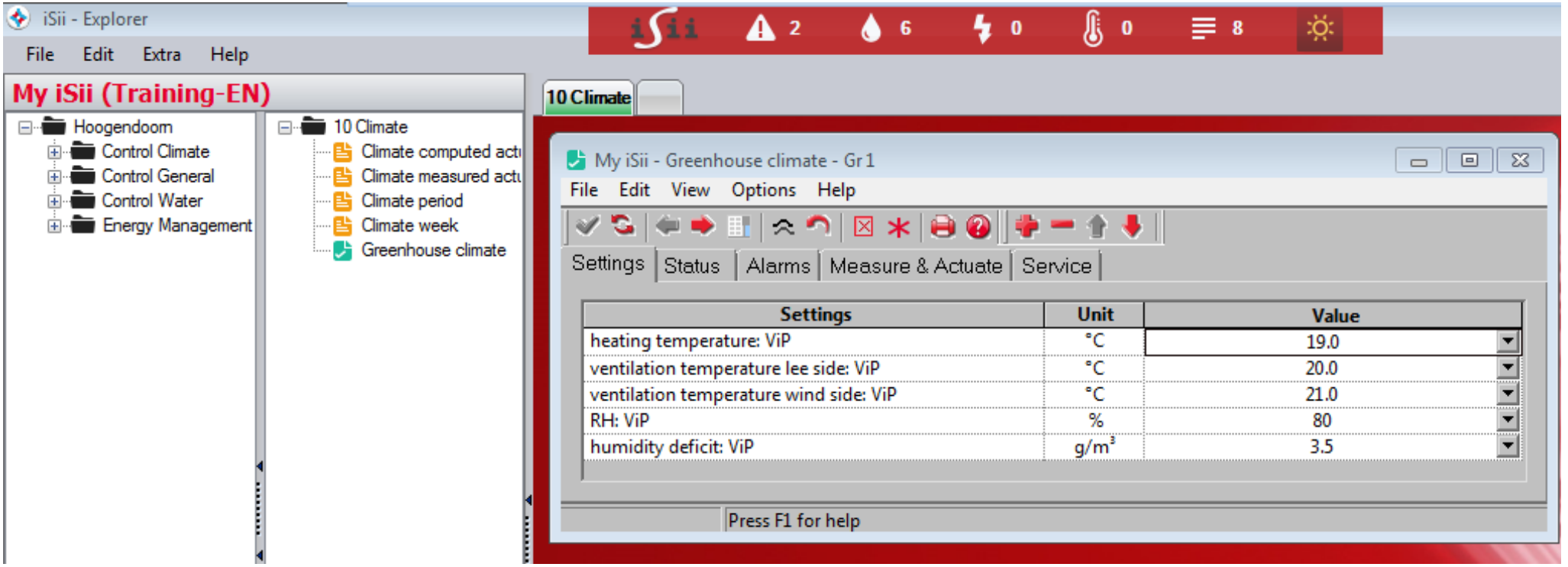
Module 2

Hoogendoorn iSii Quick-Start Controls

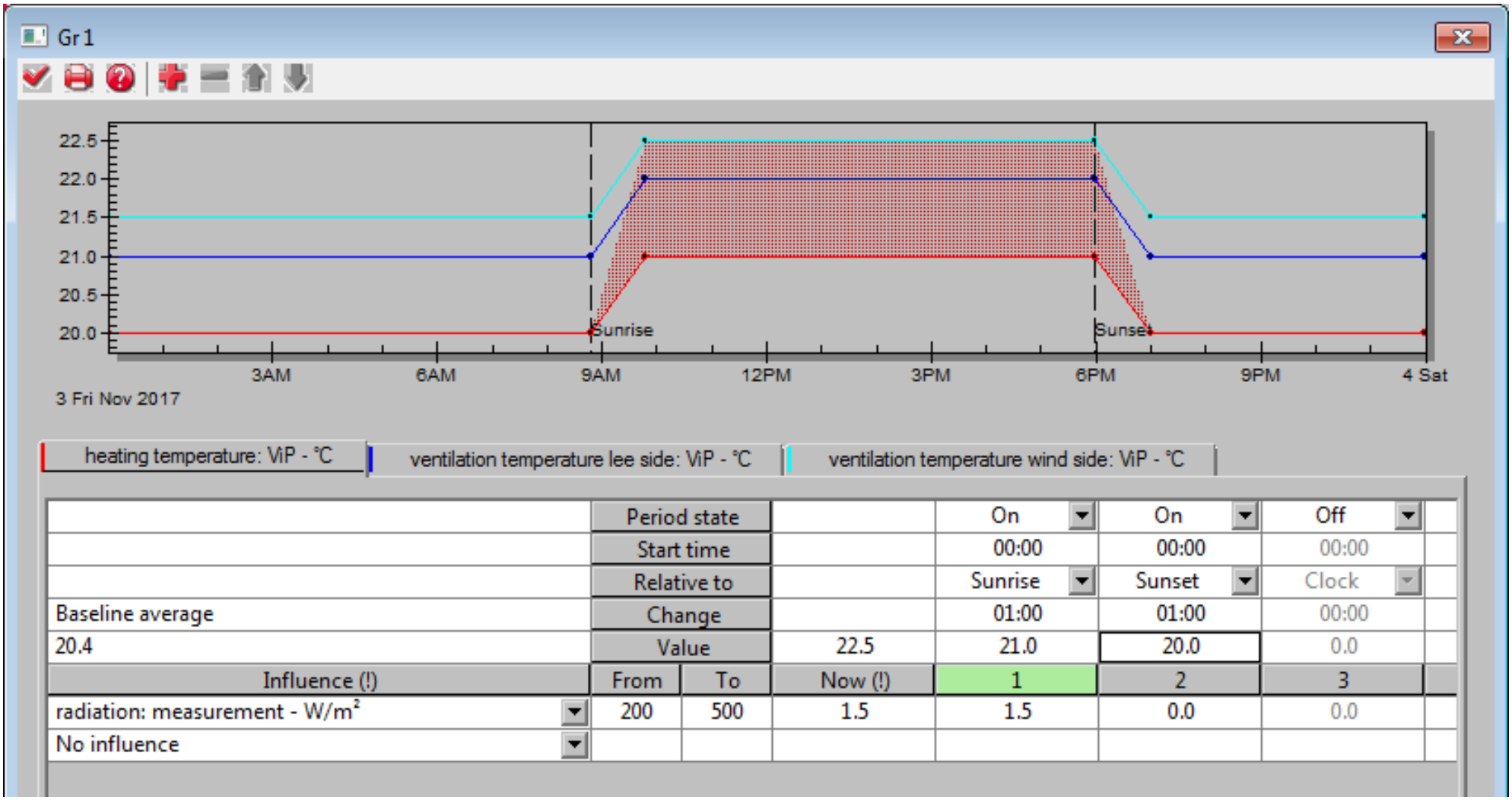


Version 8 rev 3 – January 2018


iSii - Explorer
File Edit Extra Help
My iSii (Training-EN)
Hoogendoorn
Control Climate
Control General
Control Water
Energy Management
10 Climate
Climate computed act
Climate measured act
Climate period
Climate week
Greenhouse climate
2 6 0 0 8
10 Climate
My iSii - Greenhouse climate - Gr 1
File Edit View Options Help
Settings Status Alarms Measure & Actuate Service
Settings | Unit | Value
heating temperature: ViP | °C | 19.0
ventilation temperature lee side: ViP | °C | 20.0
ventilation temperature wind side: ViP | °C | 21.0
RH: ViP | % | 80
humidity deficit: ViP | g/m³ | 3.5
Press F1 for help

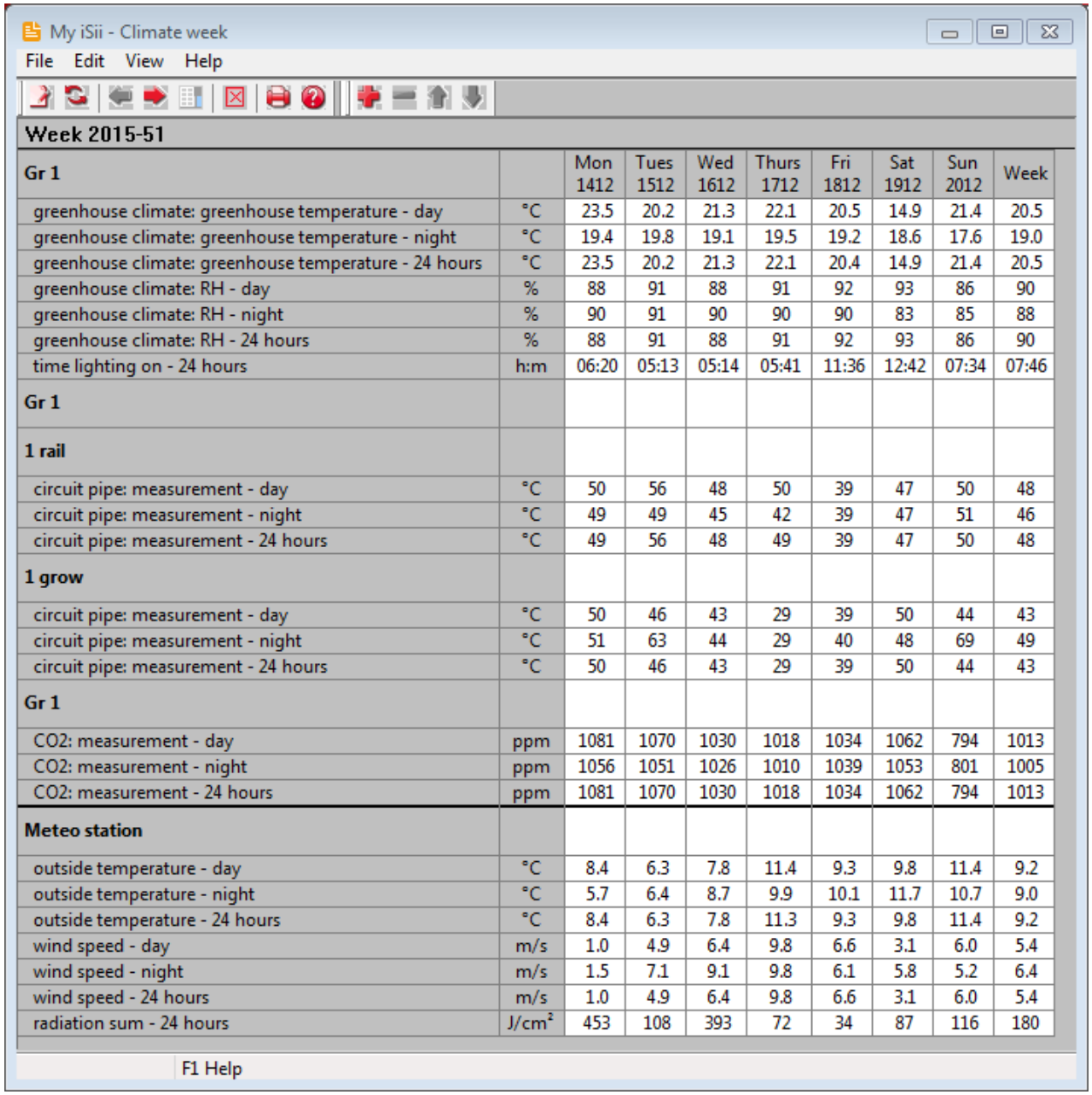
Task 1. Climate control – folder and worksheet

1. Please read the pdf file “1. Climate”
2. Create the folder “10 Climate” just like the example above
3. Drag and drop the definitions from the Hoogendoorn explorer to your own explorer
4. Create the worksheet “10 Climate” just like the example
5. Drag and drop the definitions from your own explorer to the worksheet


Gr 1
22.5
22.0
21.5
21.0
20.5
20.0
Sunrise
Sunset
3AM
6AM
9AM
12PM
3PM
6PM
9PM
4 Sat
3 Fri Nov 2017
heating temperature: ViP - °C
ventilation temperature lee side: ViP - °C
ventilation temperature wind side: ViP - °C
Period state
On
On
Off
Start time
00:00
00:00
00:00
Relative to
Sunrise
Sunset
Clock
Baseline average
Change
01:00
01:00
00:00
20.4
Value
22.5
21.0
20.0
0.0
Influence (!)
From
To
Now (!)
1
2
3
radiation: measurement - W/m²
200
500
1.5
1.5
0.0
0.0
No influence

Task 2. Climate control – setpoints

1. Change the setpoints until you get the same picture as the example above
2. Read the base line average value
    a. Heating temperature …….. °C
    b. Ventilation temperature lee side …….. °C
    c. Ventilation temperature wind side …….. °C
3. What will happen at 12:00 when the radiation is more then 500 W/m2?
    a. Setpoint heating temperature has been increased to 22,5 °C
    b. Heating is stopped
    c. Heating and ventilation simultaneously
4. How can you solve this problem?
    a. Close the vents manually
    b. Add same influence to the setpoint ventilation temperature lee side
    c. Add same influence to the setpoint maximum vent position


My iSii - Climate week

File Edit View Help

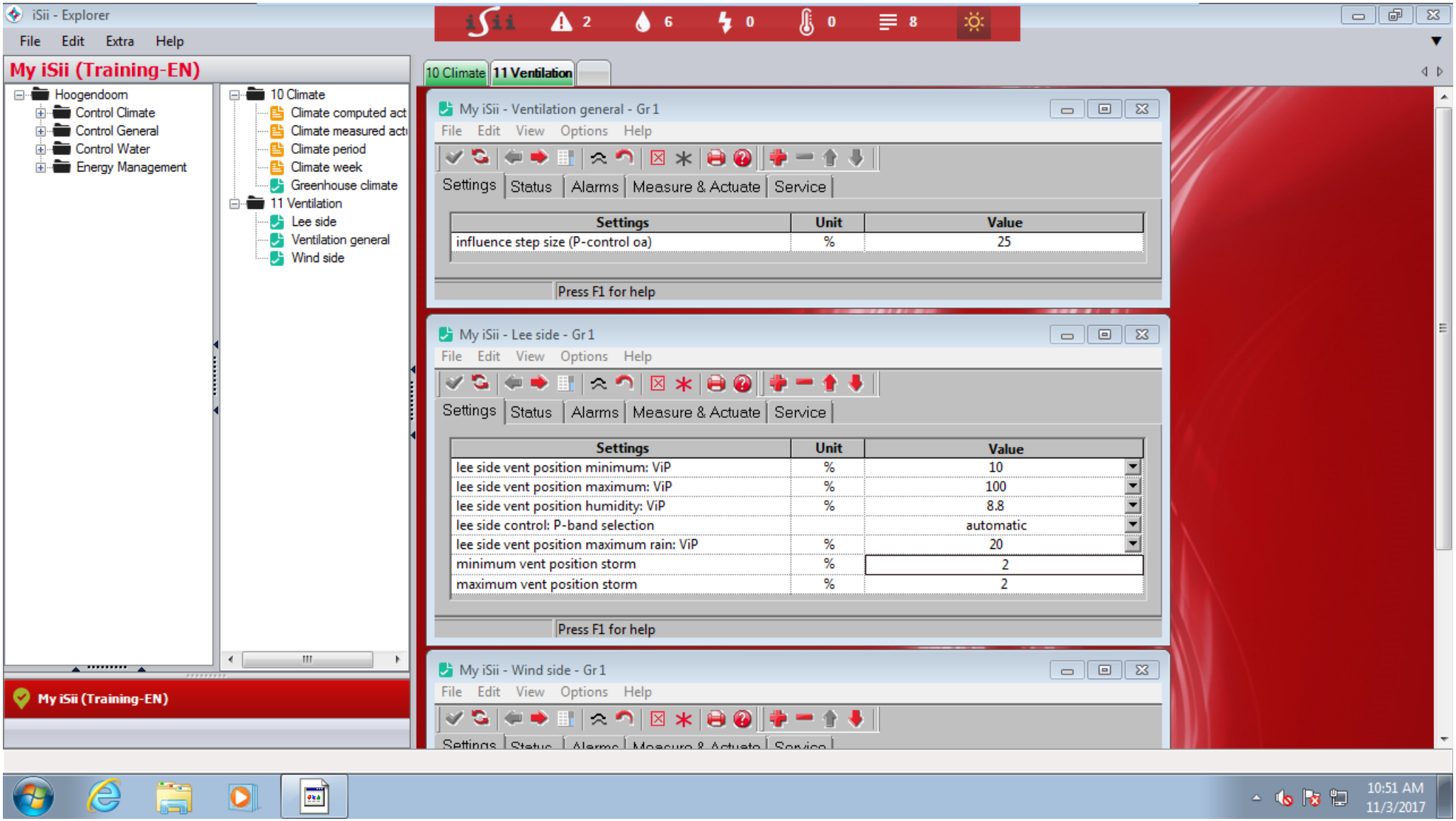
Week 2015-51

Gr 1		Mon 1412	Tues 1512	Wed 1612	Thurs 1712	Fri 1812	Sat 1912	Sun 2012	Week
greenhouse climate: greenhouse temperature - day	°C	23.5	20.2	21.3	22.1	20.5	14.9	21.4	20.5
greenhouse climate: greenhouse temperature - night	°C	19.4	19.8	19.1	19.5	19.2	18.6	17.6	19.0
greenhouse climate: greenhouse temperature - 24 hours	°C	23.5	20.2	21.3	22.1	20.4	14.9	21.4	20.5
greenhouse climate: RH - day	%	88	91	88	91	92	93	86	90
greenhouse climate: RH - night	%	90	91	90	90	90	83	85	88
greenhouse climate: RH - 24 hours	%	88	91	88	91	92	93	86	90
time lighting on - 24 hours	h:m	06:20	05:13	05:14	05:41	11:36	12:42	07:34	07:46
Gr 1									
1 rail									
circuit pipe: measurement - day	°C	50	56	48	50	39	47	50	48
circuit pipe: measurement - night	°C	49	49	45	42	39	47	51	46
circuit pipe: measurement - 24 hours	°C	49	56	48	49	39	47	50	48
1 grow									
circuit pipe: measurement - day	°C	50	46	43	29	39	50	44	43
circuit pipe: measurement - night	°C	51	63	44	29	40	48	69	49
circuit pipe: measurement - 24 hours	°C	50	46	43	29	39	50	44	43
Gr 1									
CO2: measurement - day	ppm	1081	1070	1030	1018	1034	1062	794	1013
CO2: measurement - night	ppm	1056	1051	1026	1010	1039	1053	801	1005
CO2: measurement - 24 hours	ppm	1081	1070	1030	1018	1034	1062	794	1013
Meteo station									
outside temperature - day	°C	8.4	6.3	7.8	11.4	9.3	9.8	11.4	9.2
outside temperature - night	°C	5.7	6.4	8.7	9.9	10.1	11.7	10.7	9.0
outside temperature - 24 hours	°C	8.4	6.3	7.8	11.3	9.3	9.8	11.4	9.2
wind speed - day	m/s	1.0	4.9	6.4	9.8	6.6	3.1	6.0	5.4
wind speed - night	m/s	1.5	7.1	9.1	9.8	6.1	5.8	5.2	6.4
wind speed - 24 hours	m/s	1.0	4.9	6.4	9.8	6.6	3.1	6.0	5.4
radiation sum - 24 hours	J/cm²	453	108	393	72	34	87	116	180

F1 Help

Task 3. Climate control – reports

1. Change the weekly survey like the example above
2. Choose for week 51 in 2015
3. How long was the lighting switched on at Thursday? ……. h:m
4. What was the week average CO2 measurement during the day? ……..ppm
5. When was the coldest day in that week? ……


iSii - Explorer
File Edit Extra Help
My iSii (Training-EN)
Hoogendoorn
Control Climate
Control General
Control Water
Energy Management
10 Climate
Climate computed act
Climate measured act
Climate period
Climate week
Greenhouse climate
11 Ventilation
Lee side
Ventilation general
Wind side
10 Climate
11 Ventilation
My iSii - Ventilation general - Gr 1
File Edit View Options Help
Settings Status Alarms Measure & Actuate Service
Settings Unit Value
influence step size (P-control oa) % 25
Press F1 for help
My iSii - Lee side - Gr 1
File Edit View Options Help
Settings Status Alarms Measure & Actuate Service
Settings Unit Value
lee side vent position minimum: ViP % 10
lee side vent position maximum: ViP % 100
lee side vent position humidity: ViP % 8.8
lee side control: P-band selection automatic
lee side vent position maximum rain: ViP % 20
minimum vent position storm % 2
maximum vent position storm % 2
Press F1 for help
My iSii - Wind side - Gr 1
File Edit View Options Help
My iSii (Training-EN)
10:51 AM
11/3/2017

Task 4. Ventilation control – folder and worksheet

1. Please read the pdf file “2. Ventilation”
2. Create the folder “11 Ventilation” just like the example above
3. Drag and drop the definitions from the Hoogendoorn explorer to your own explorer
4. Create the worksheet “11 Ventilation” just like the example
5. Drag and drop the definitions from your own explorer to the worksheet

Task 5. Ventilation control – step size

1. What could be the setpoint “influence step size” in the greenhouse below:
    a. 0 %
    b. 25 %
    c. 50 %
    d. 75 %
    e. 100 %

2. What is the P-range in that case? …… °C

3. What is the theoretical vent position at 12:00 when the measured greenhouse temperature is:

    a. 21 °C …….%

    b. 22 °C …….%

    c. 23 °C …….%

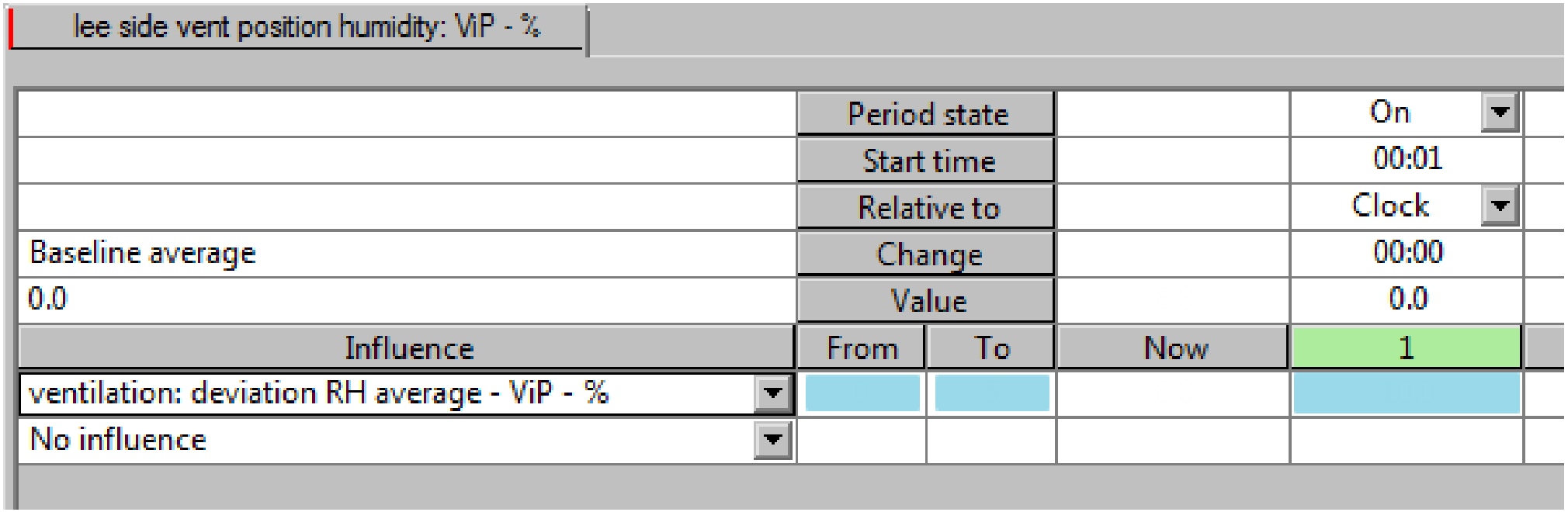
    d. 24 °C …….%

    e. 25 °C …….%

    f. 26 °C …….%

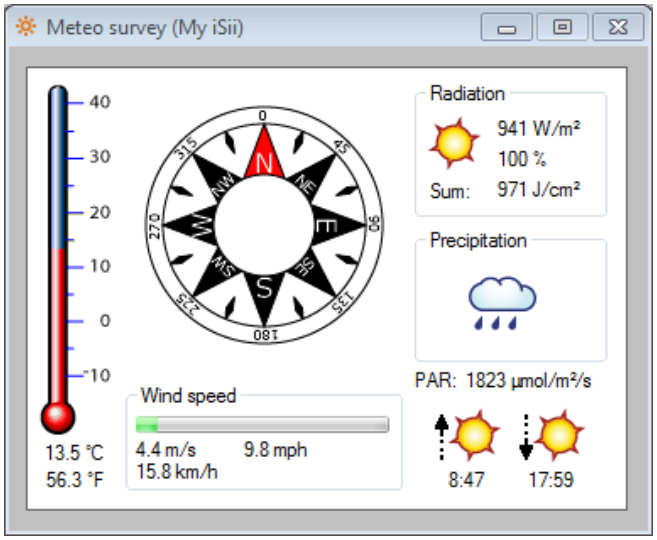
    g. 27 °C …….%

    h. 28 °C …….%


lee side vent position humidity: ViP - %
Period state
On
Start time
00:01
Relative to
Clock
Baseline average
Change
00:00
0.0
Value
0.0
Influence
From
To
Now
1
ventilation: deviation RH average - ViP - %
No influence

Task 6. Ventilation control – humidity control

1. The “basic” RH in the Greenhouse Climate settings is …... %
2. The maximum vent position for RH is 10%.
3. The control range is from 82% till 87% RH.
4. Please complete the setpoint above

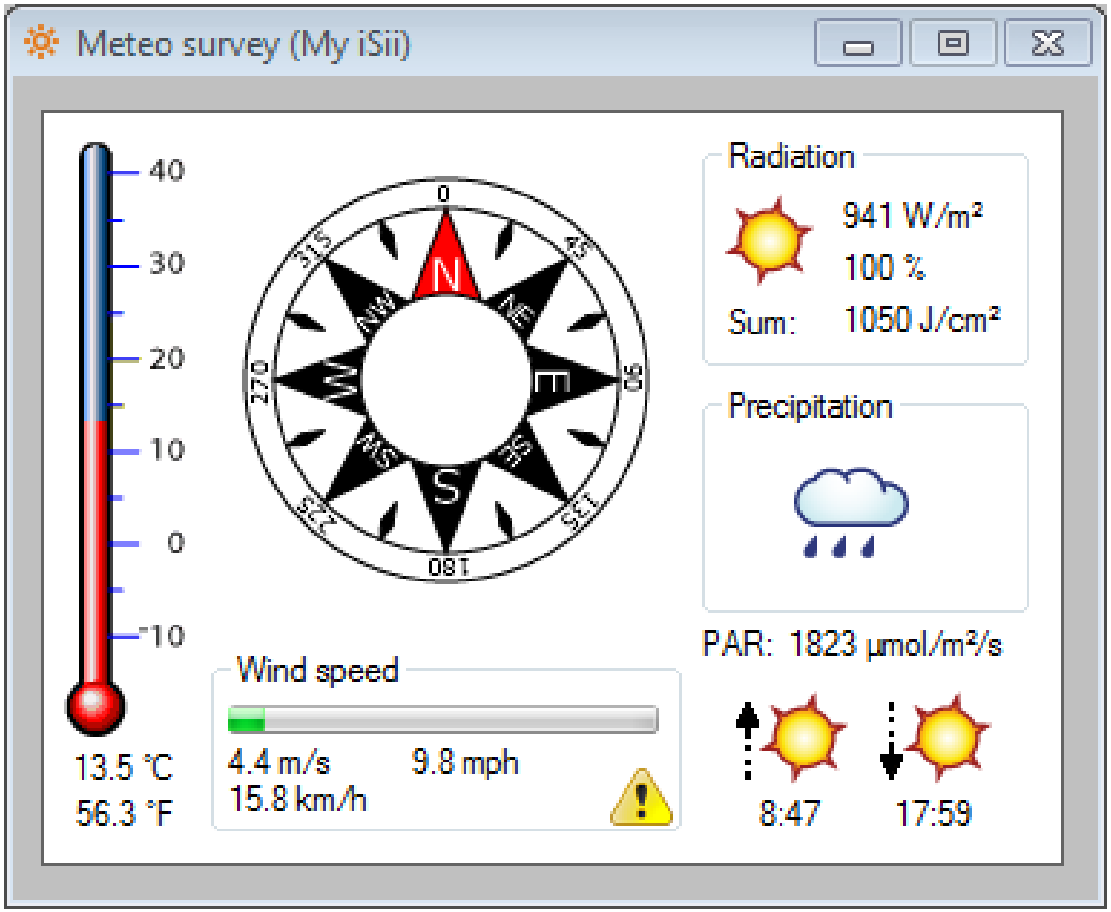


lee side vent position maximum rain: ViP - %

	Period state		On	
	Start time		01:00	
	Relative to		Sunrise	
Baseline average	Change		01:00	
0	Value		20	
Influence	From	To	Now	1
No influence				

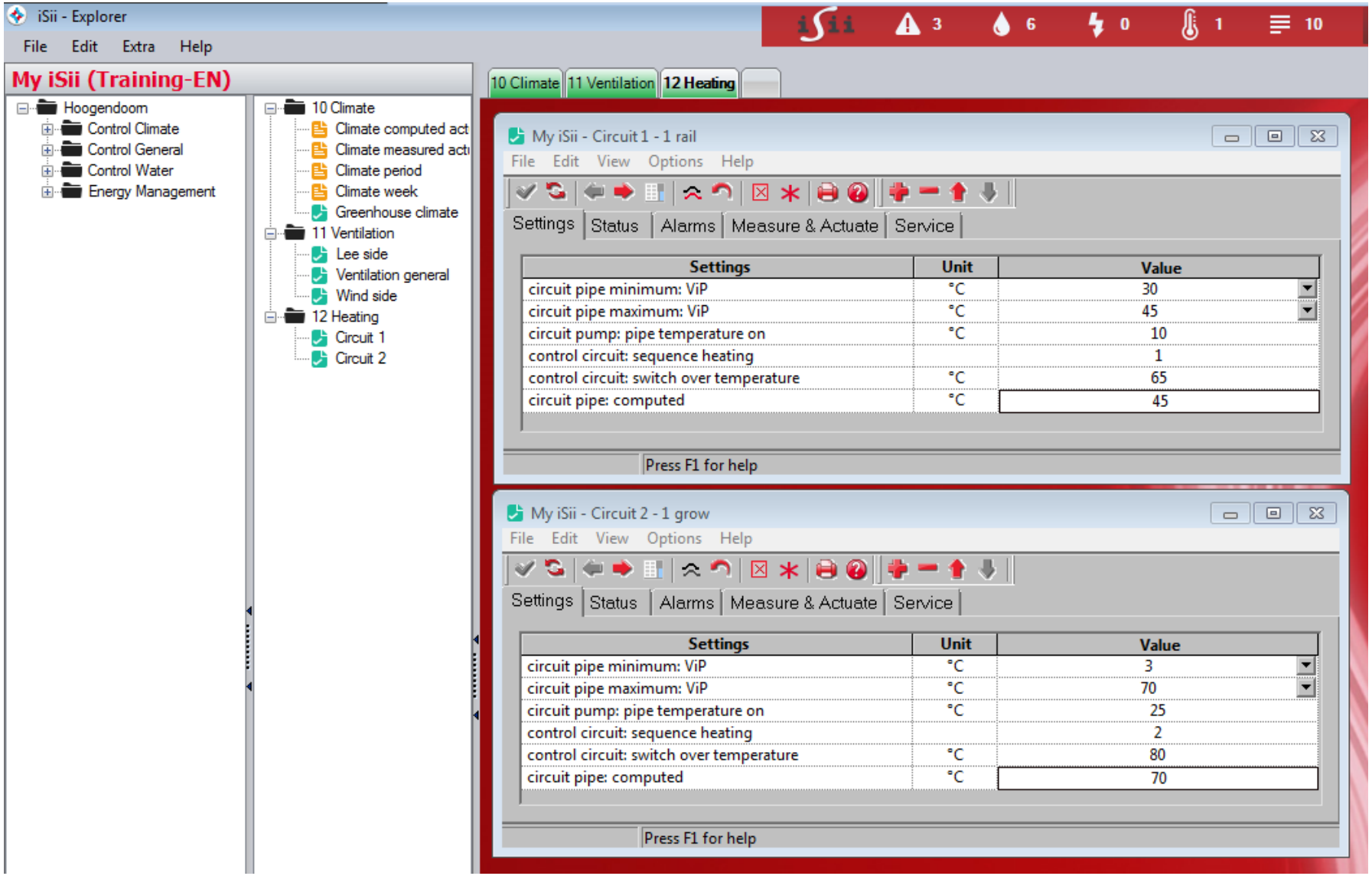
Task 7. Ventilation control – maximum vent position rain

1. You can check the rain status with the Meteo survey
2. Please add an influence “”wind speed“ with a control range from 3 m/s till 8 m/s and a maximum decreasement of 10% vent position.
3. What is the maximum vent position rain when the measured wind speed is:
    a. 2 m/s …….%
    b. 3 m/s …….%
    c. 4 m/s …….%
    d. 5 m/s …….%
    e. 6 m/s …….%
    f. 7 m/s …….%
    g. 8 m/s …….%
    h. 9 m/s …….%


Meteo survey (My iSii)
40
30
20
10
0
-10
13.5 °C
56.3 °F
0
45
90
135
180
225
270
315
N
NE
E
SE
S
SW
W
NW
Radiation
941 W/m²
100 %
Sum: 1050 J/cm²
Precipitation
PAR: 1823 µmol/m²/s
Wind speed
4.4 m/s 9.8 mph
15.8 km/h
8:47
17:59

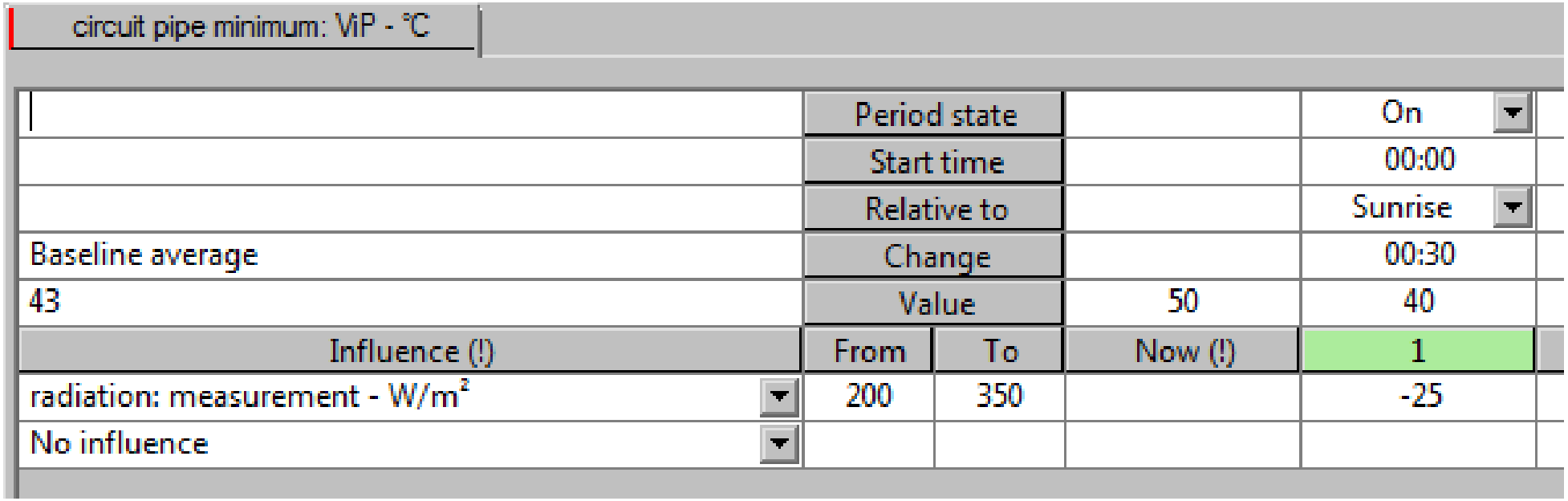
Task 8. Ventilation control – storm

1. You can check the storm status with the Meteo survey
2. The storm limit in the Meteo settings is …... m/s
3. Why is there a storm indication in the Meteo survey?
    a. The wind speed in the Meteo survey is an average value
    b. There is a delay time setting for the wind speed measurement
    c. The storm indication reacts on wind gusts
4. What is the vent position during storm?
    a. Closed at lee side and wind side
    b. 2% at lee side, closed at wind side
    c. Between 0% and 2% at lee side, closed at wind side


iSii - Explorer
File Edit Extra Help
3 6 0 1 10
My iSii (Training-EN)
Hoogendoorn
Control Climate
Control General
Control Water
Energy Management
10 Climate
Climate computed act
Climate measured act
Climate period
Climate week
Greenhouse climate
11 Ventilation
Lee side
Ventilation general
Wind side
12 Heating
Circuit 1
Circuit 2
10 Climate
11 Ventilation
12 Heating
My iSii - Circuit 1 - 1 rail
File Edit View Options Help
Settings Status Alarms Measure & Actuate Service
Settings
Unit
Value
circuit pipe minimum: ViP °C 30
circuit pipe maximum: ViP °C 45
circuit pump: pipe temperature on °C 10
control circuit: sequence heating 1
control circuit: switch over temperature °C 65
circuit pipe: computed °C 45
Press F1 for help
My iSii - Circuit 2 - 1 grow
File Edit View Options Help
Settings Status Alarms Measure & Actuate Service
Settings
Unit
Value
circuit pipe minimum: ViP °C 3
circuit pipe maximum: ViP °C 70
circuit pump: pipe temperature on °C 25
control circuit: sequence heating 2
control circuit: switch over temperature °C 80
circuit pipe: computed °C 70
Press F1 for help

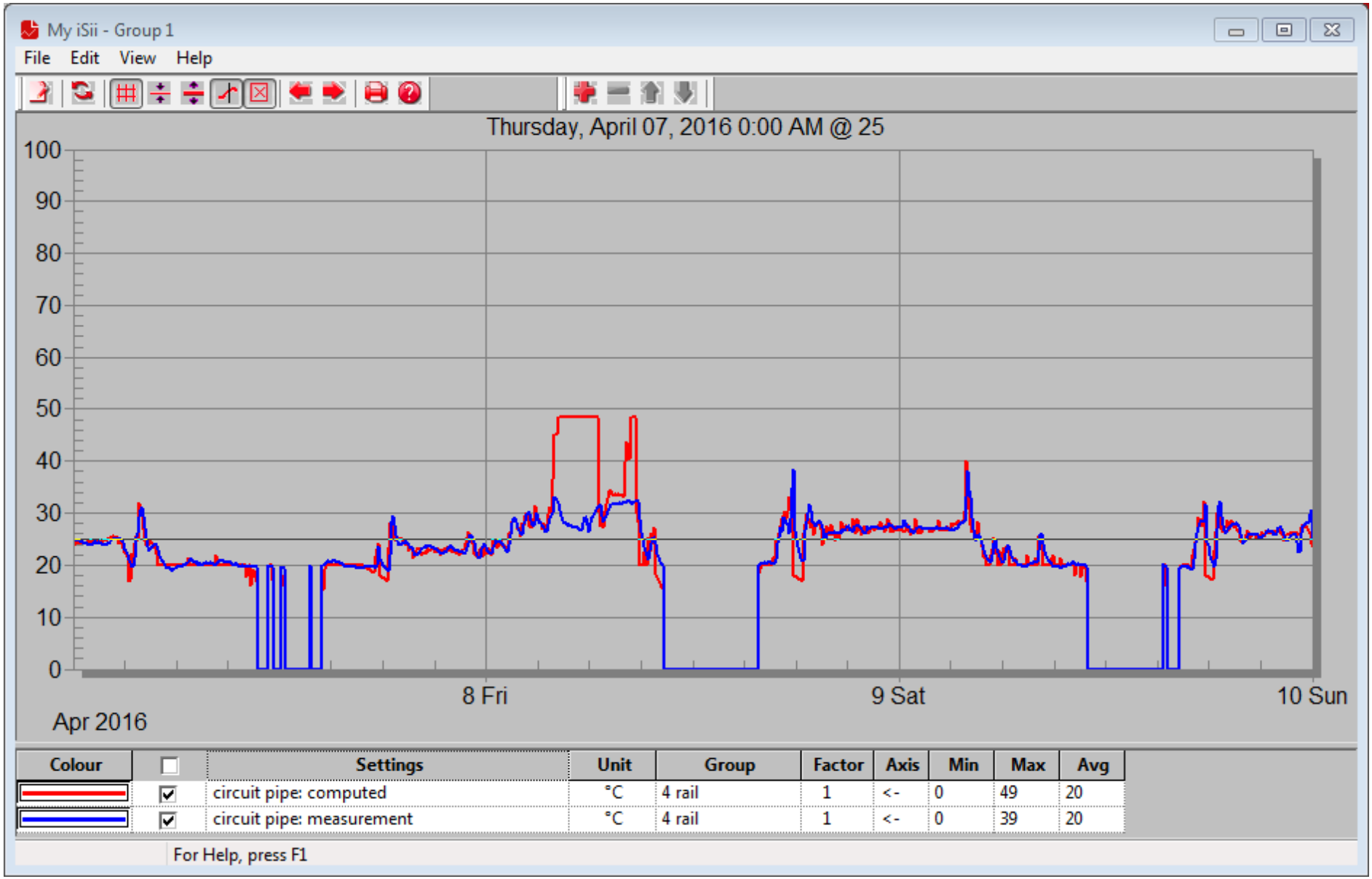
Task 9. Heating control – folder and worksheet

1. Please read the pdf file “3. Heating”
2. Create the folder “12 Heating” just like the example above
3. Drag and drop the definitions from the Hoogendoorn explorer to your own explorer
4. Create the worksheet “12 Heating” just like the example
5. Drag and drop the definitions from your own explorer to the worksheet


circuit pipe minimum: ViP - °C
Period state
On
Start time
00:00
Relative to
Sunrise
Baseline average
Change
00:30
43
Value
50
40
Influence (!)
From
To
Now (!)
1
radiation: measurement - W/m²
200
350
-25
No influence

Task 10. Heating control – minimum pipe

1. Please change the minimum pipe temperature until you get the same picture as the example above
2. What is the minimum pipe temperature when the radiation is:
    a. 150 W/m2 …….°C
    b. 200 W/m2 …….°C
    c. 250 W/m2 …….°C
    d. 300 W/m2 …….°C
    e. 350 W/m2 …….°C
    f. 400 W/m2 …….°C


My iSii - Group 1
File Edit View Help
Thursday, April 07, 2016 0:00 AM @ 25
100
90
80
70
60
50
40
30
20
10
0
8 Fri
9 Sat
10 Sun
Apr 2016
Colour
Settings
Unit
Group
Factor
Axis
Min
Max
Avg
circuit pipe: computed
°C
4 rail
1
<-
0
49
20
circuit pipe: measurement
°C
4 rail
1
<-
0
39
20
For Help, press F1

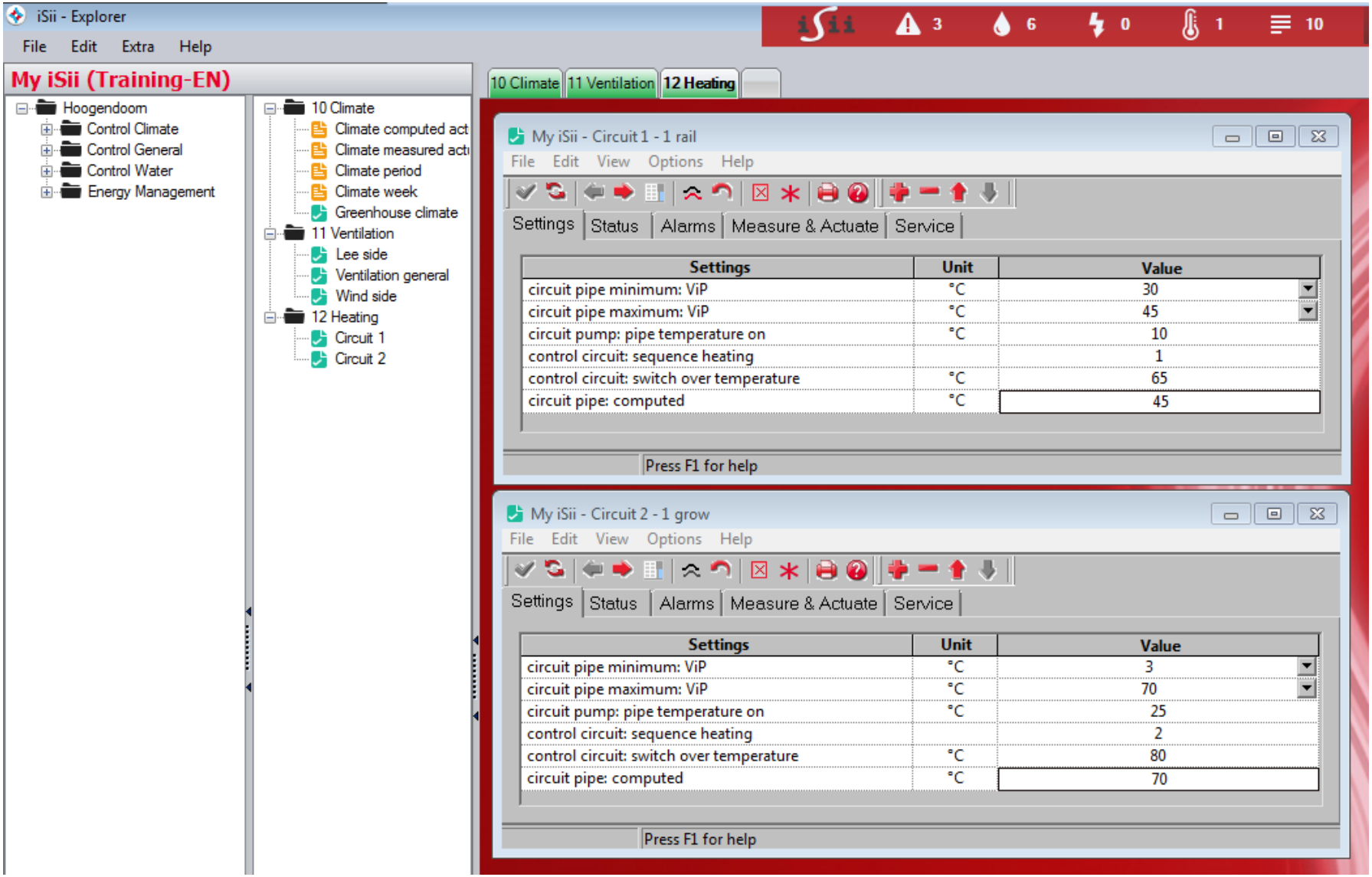
Task 11. Heating control – check graph

1. Add a new graph to folder “12 Heating”
2. Enter name “Group 1”
3. Drag and drop the graph to worksheet “12 Heating”
4. Change the period between 07-04-2016 00:00:00 and 10-04-2016 00:00:00
5. Add the graph lines like the example above
6. What can you tell about the heating control

   ……..

7. Why is the measured pipe temperature sometimes 0 °C?

   ……..

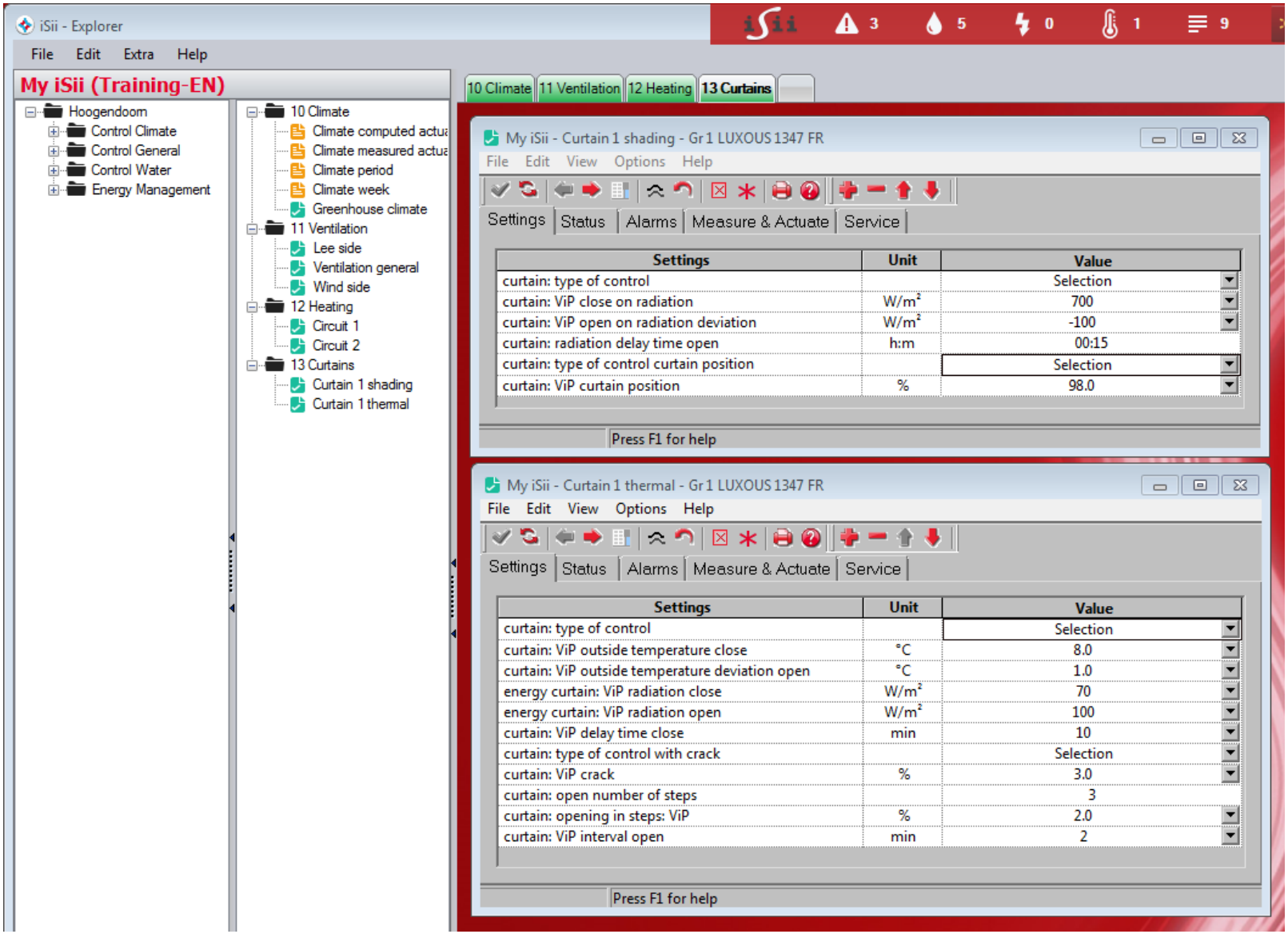

iSii - Explorer
File Edit Extra Help
3 6 0 1 10
My iSii (Training-EN)
Hoogendoorn
Control Climate
Control General
Control Water
Energy Management
10 Climate
Climate computed act
Climate measured act
Climate period
Climate week
Greenhouse climate
11 Ventilation
Lee side
Ventilation general
Wind side
12 Heating
Circuit 1
Circuit 2
10 Climate
11 Ventilation
12 Heating
My iSii - Circuit 1 - 1 rail
File Edit View Options Help
Settings Status Alarms Measure & Actuate Service
Settings Unit Value
circuit pipe minimum: ViP °C 30
circuit pipe maximum: ViP °C 45
circuit pump: pipe temperature on °C 10
control circuit: sequence heating 1
control circuit: switch over temperature °C 65
circuit pipe: computed °C 45
Press F1 for help
My iSii - Circuit 2 - 1 grow
File Edit View Options Help
Settings Status Alarms Measure & Actuate Service
Settings Unit Value
circuit pipe minimum: ViP °C 3
circuit pipe maximum: ViP °C 70
circuit pump: pipe temperature on °C 25
control circuit: sequence heating 2
control circuit: switch over temperature °C 80
circuit pipe: computed °C 70
Press F1 for help

Task 12. Heating control – multiple circuits

1. When is circuit 2 also used for heating?

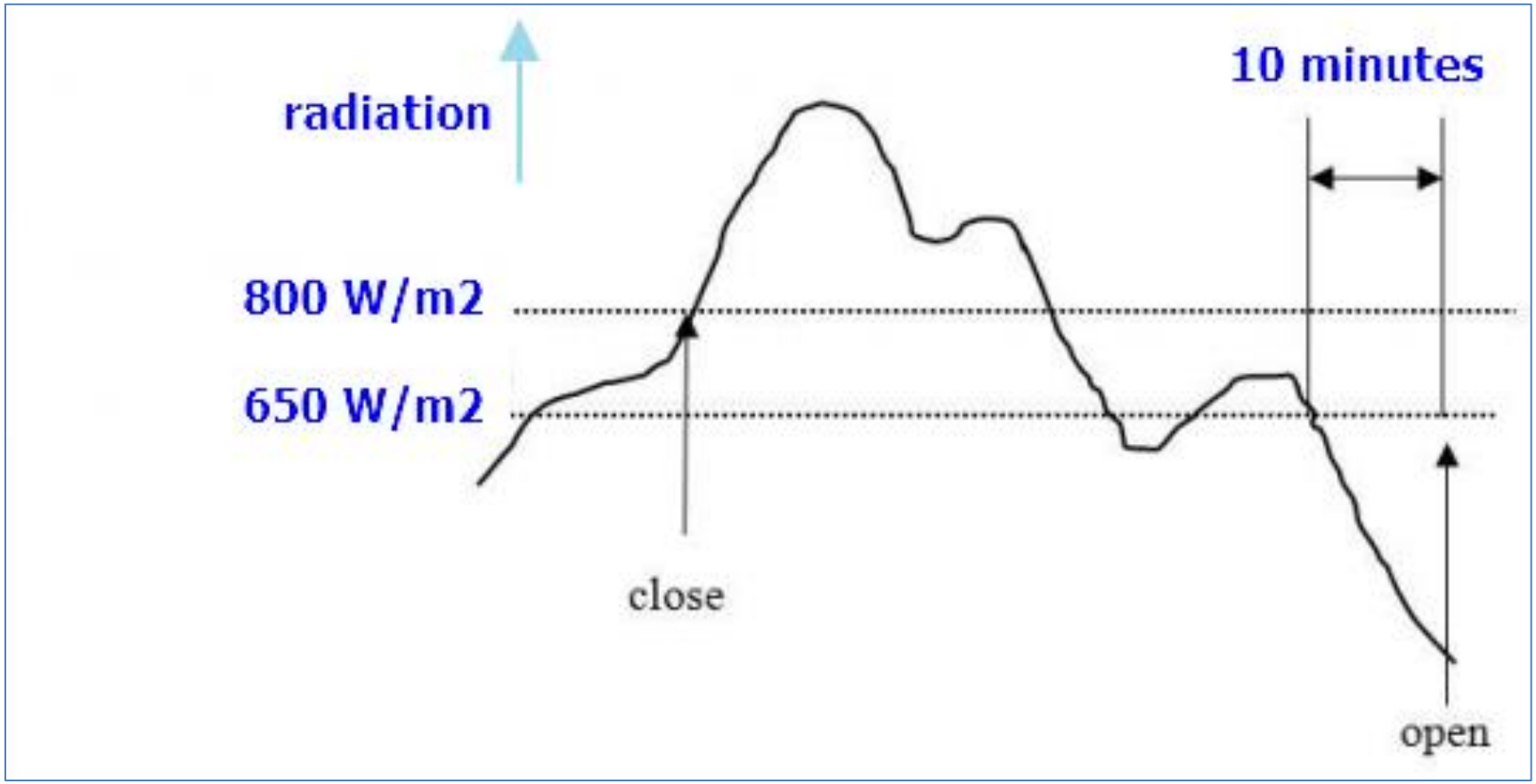
   ……..

   Use the Help to find the answer


iSii - Explorer
File Edit Extra Help
My iSii (Training-EN)
Hoogendoorn
Control Climate
Control General
Control Water
Energy Management
10 Climate
Climate computed actua
Climate measured actua
Climate period
Climate week
Greenhouse climate
11 Ventilation
Lee side
Ventilation general
Wind side
12 Heating
Circuit 1
Circuit 2
13 Curtains
Curtain 1 shading
Curtain 1 thermal
10 Climate
11 Ventilation
12 Heating
13 Curtains
My iSii - Curtain 1 shading - Gr 1 LUXOUS 1347 FR
File Edit View Options Help
Settings
Status
Alarms
Measure & Actuate
Service
Settings
Unit
Value
curtain: type of control
Selection
curtain: ViP close on radiation
W/m²
700
curtain: ViP open on radiation deviation
W/m²
-100
curtain: radiation delay time open
h:m
00:15
curtain: type of control curtain position
Selection
curtain: ViP curtain position
%
98.0
Press F1 for help
My iSii - Curtain 1 thermal - Gr 1 LUXOUS 1347 FR
File Edit View Options Help
Settings
Status
Alarms
Measure & Actuate
Service
Settings
Unit
Value
curtain: type of control
Selection
curtain: ViP outside temperature close
°C
8.0
curtain: ViP outside temperature deviation open
°C
1.0
energy curtain: ViP radiation close
W/m²
70
energy curtain: ViP radiation open
W/m²
100
curtain: ViP delay time close
min
10
curtain: type of control with crack
Selection
curtain: ViP crack
%
3.0
curtain: open number of steps
3
curtain: opening in steps: ViP
%
2.0
curtain: ViP interval open
min
2
Press F1 for help

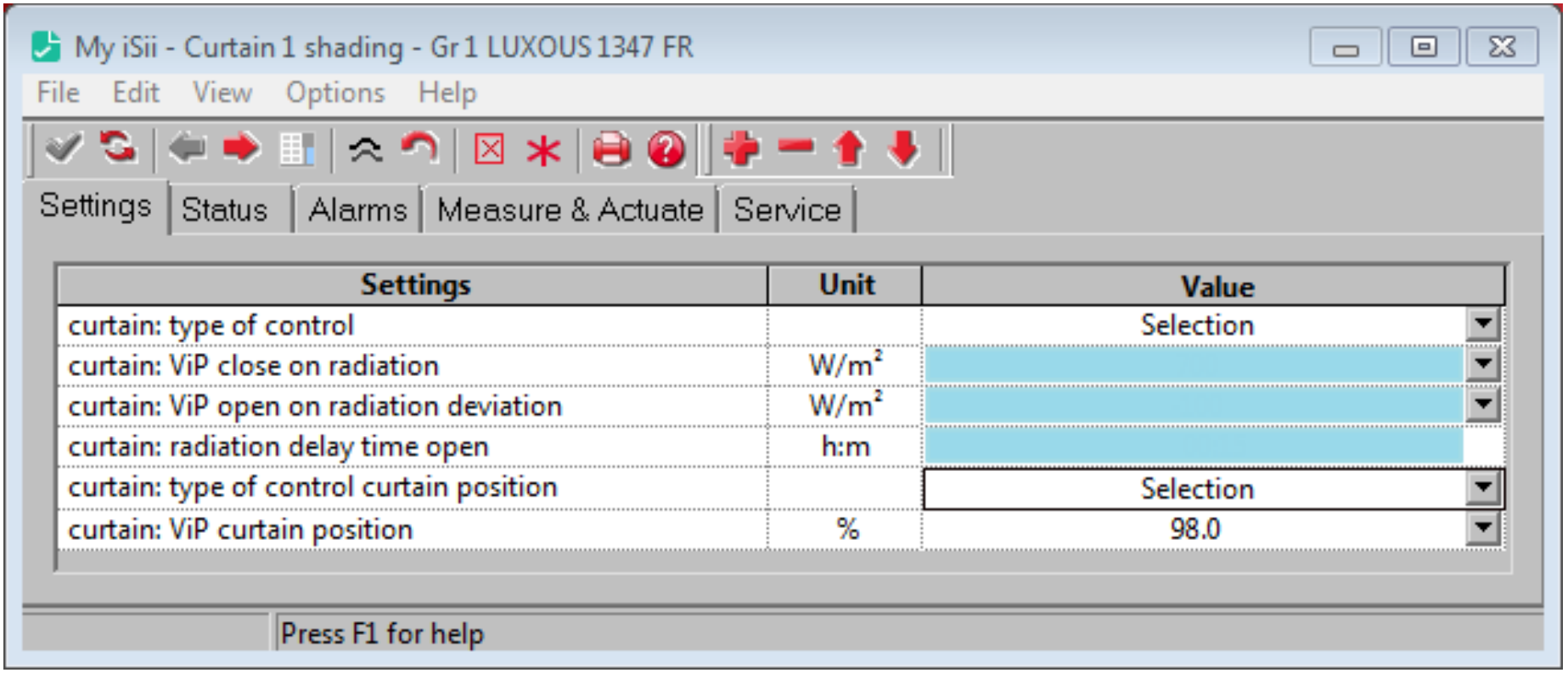
Task 13. Curtains – folder and worksheet

1. Please read the pdf file “4. Curtains”
2. Create the folder “13 Curtains” just like the example above
3. Drag and drop the definitions from the Hoogendoorn explorer to your own explorer
4. Create the worksheet “13 Curtains” just like the example
5. Drag and drop the definitions from your own explorer to the worksheet
6. Adapt the setting lists like the examples above


radiation
10 minutes
800 W/m2
650 W/m2
close
open

Task 14. Curtains - Shading

1. Change the setpoints in the list below to get the control like the chart

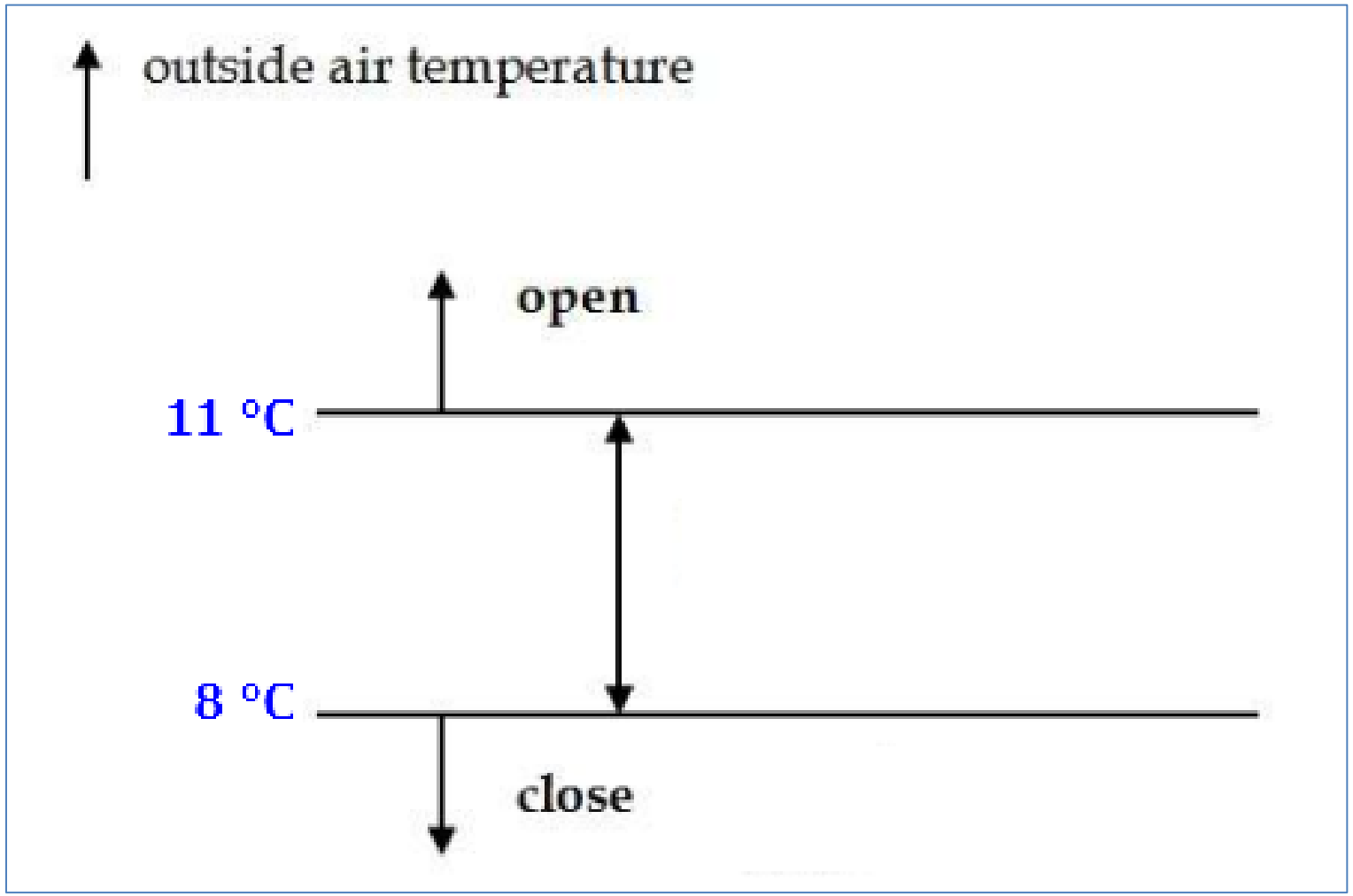


curtain: ViP curtain position - %

	Period state		On	
	Start time		02:00	
	Relative to		Sunrise	
Baseline average	Change		00:00	
0.0	Value		80.0	
Influence	From	To	Now	1
curtain: radiation delayed - W/m²				
No influence				

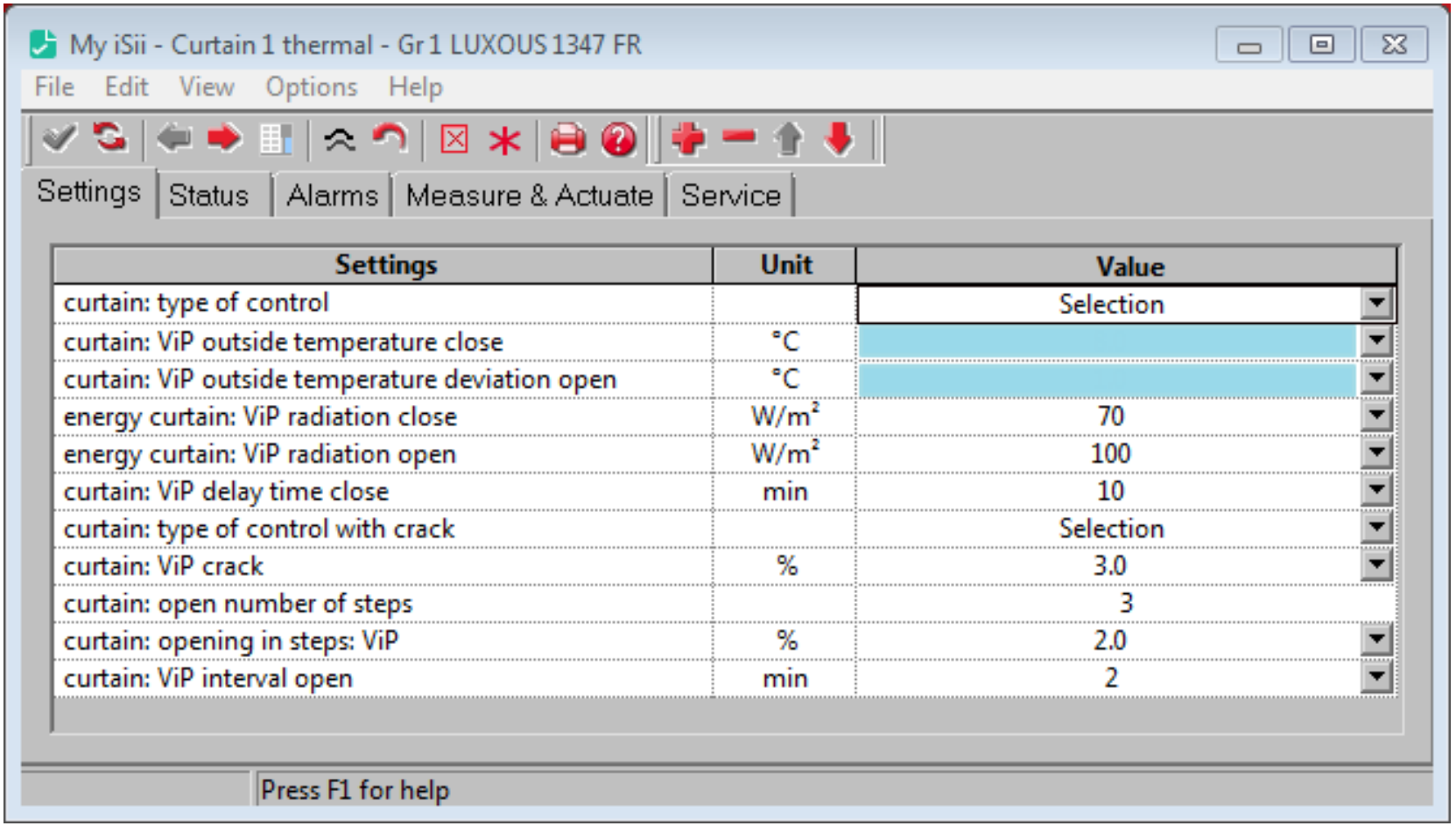
Task 15. Curtains – Shading with crack

1. Please complete the following setting
    a. The crack must be 5% when the radiation is higher than 1000 W/m2
    b. A smaller crack when the radiation is higher than 900 W/m2

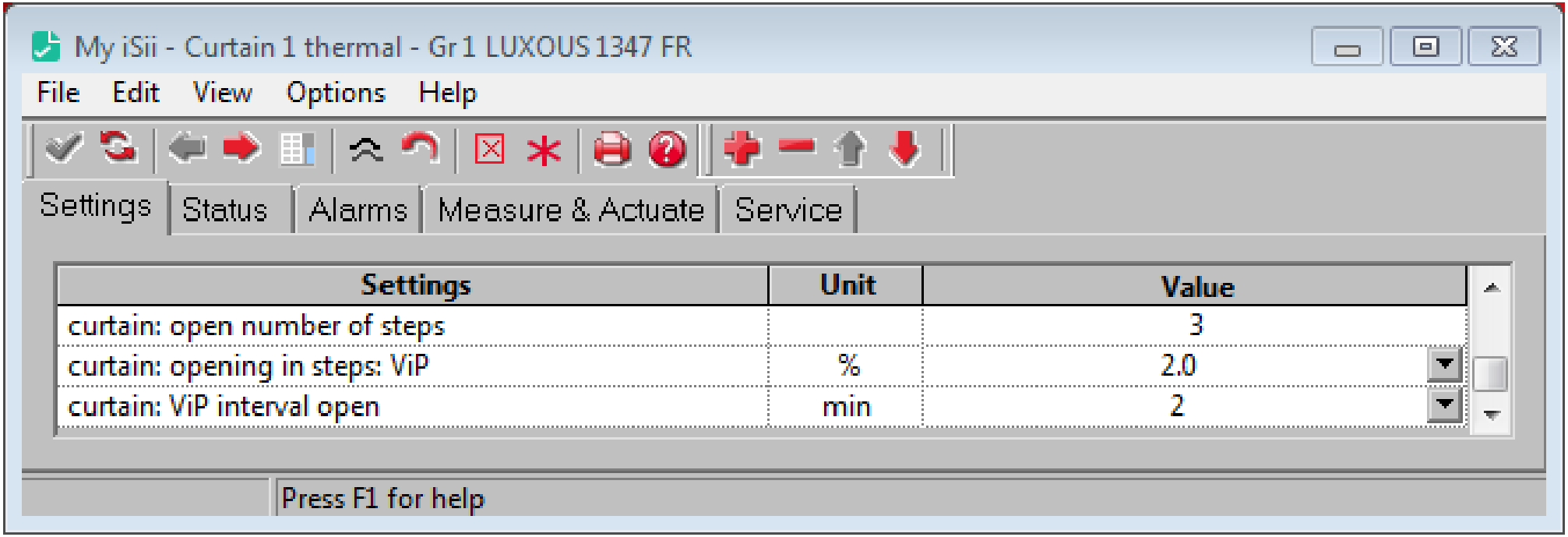

outside air temperature
open
11 °C
8 °C
close

Task 16. Curtains – Energy

1. Change the setpoints in the list below to get the control like the chart

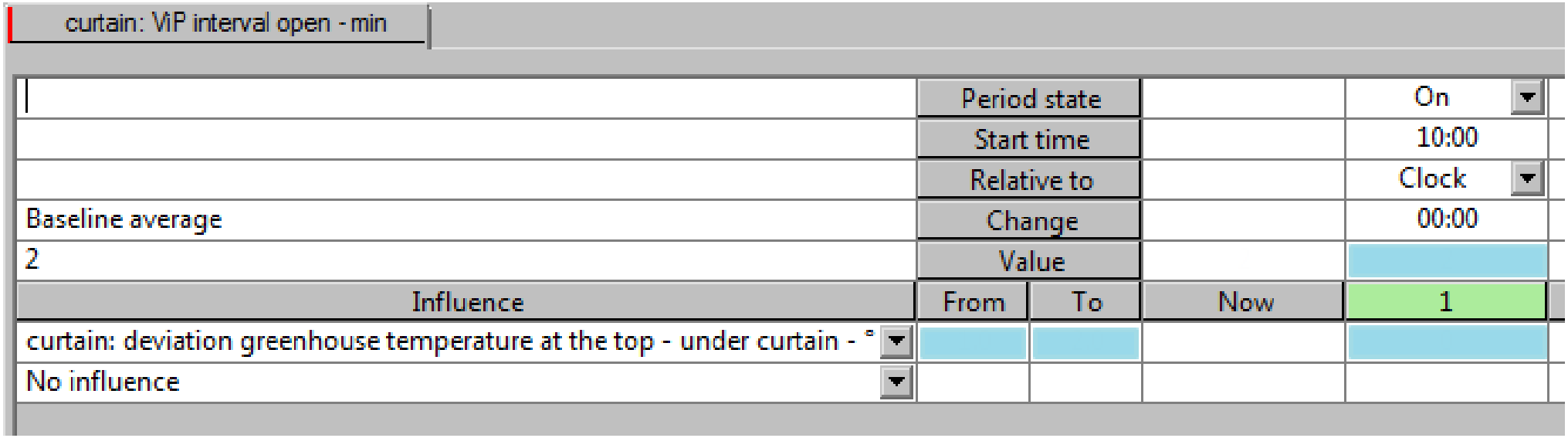


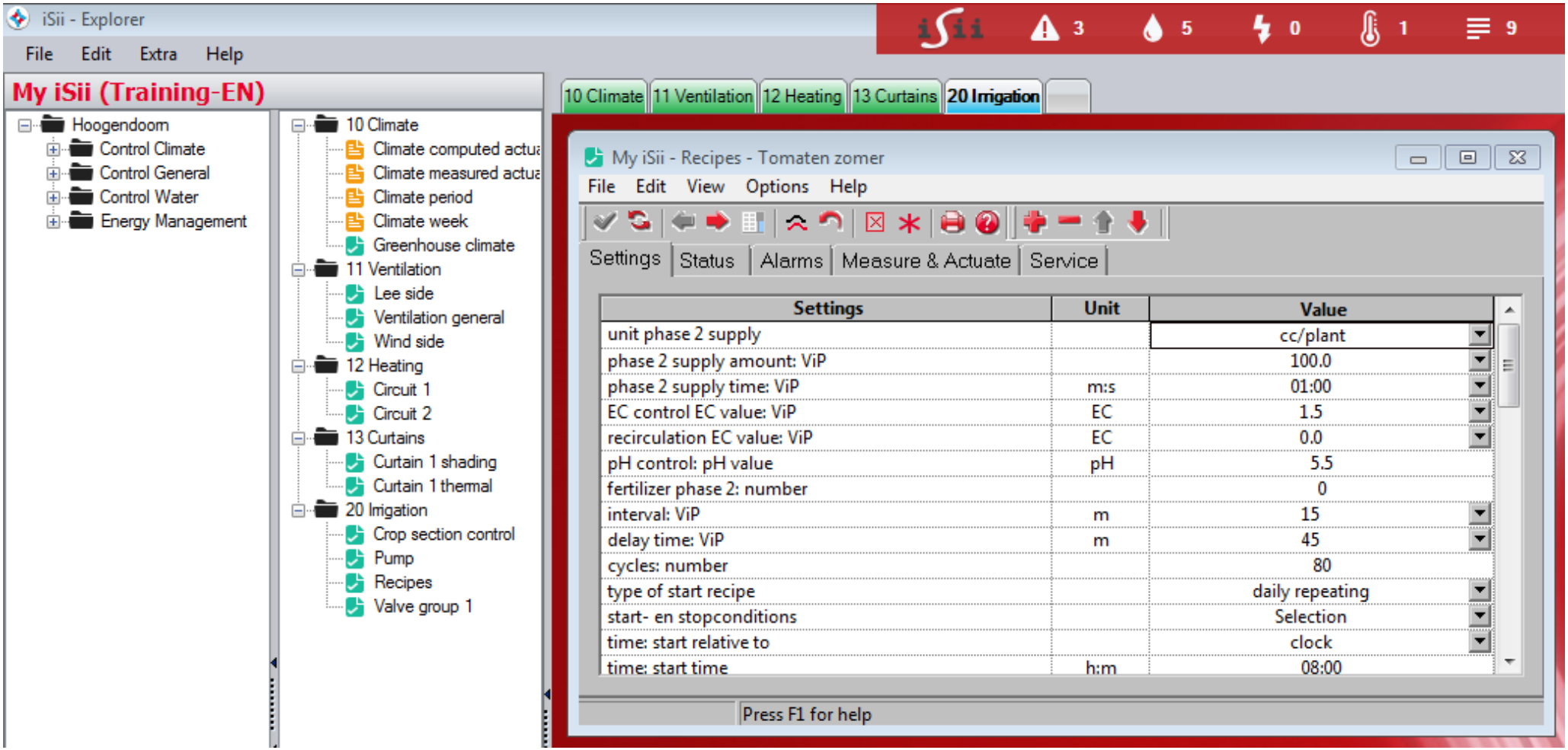
Settings	Unit	Value
curtain: type of control		Selection
curtain: ViP outside temperature close	°C	
curtain: ViP outside temperature deviation open	°C	
energy curtain: ViP radiation close	W/m²	70
energy curtain: ViP radiation open	W/m²	100
curtain: ViP delay time close	min	10
curtain: type of control with crack		Selection
curtain: ViP crack	%	3.0
curtain: open number of steps		3
curtain: opening in steps: ViP	%	2.0
curtain: ViP interval open	min	2


My iSii - Curtain 1 thermal - Gr 1 LUXOUS 1347 FR
File
Edit
View
Options
Help
Settings
Status
Alarms
Measure & Actuate
Service
Settings
Unit
Value
curtain: open number of steps
3
curtain: opening in steps: ViP
%
2.0
curtain: ViP interval open
min
2
Press F1 for help

Task 17. Curtain – Energy: opening in steps

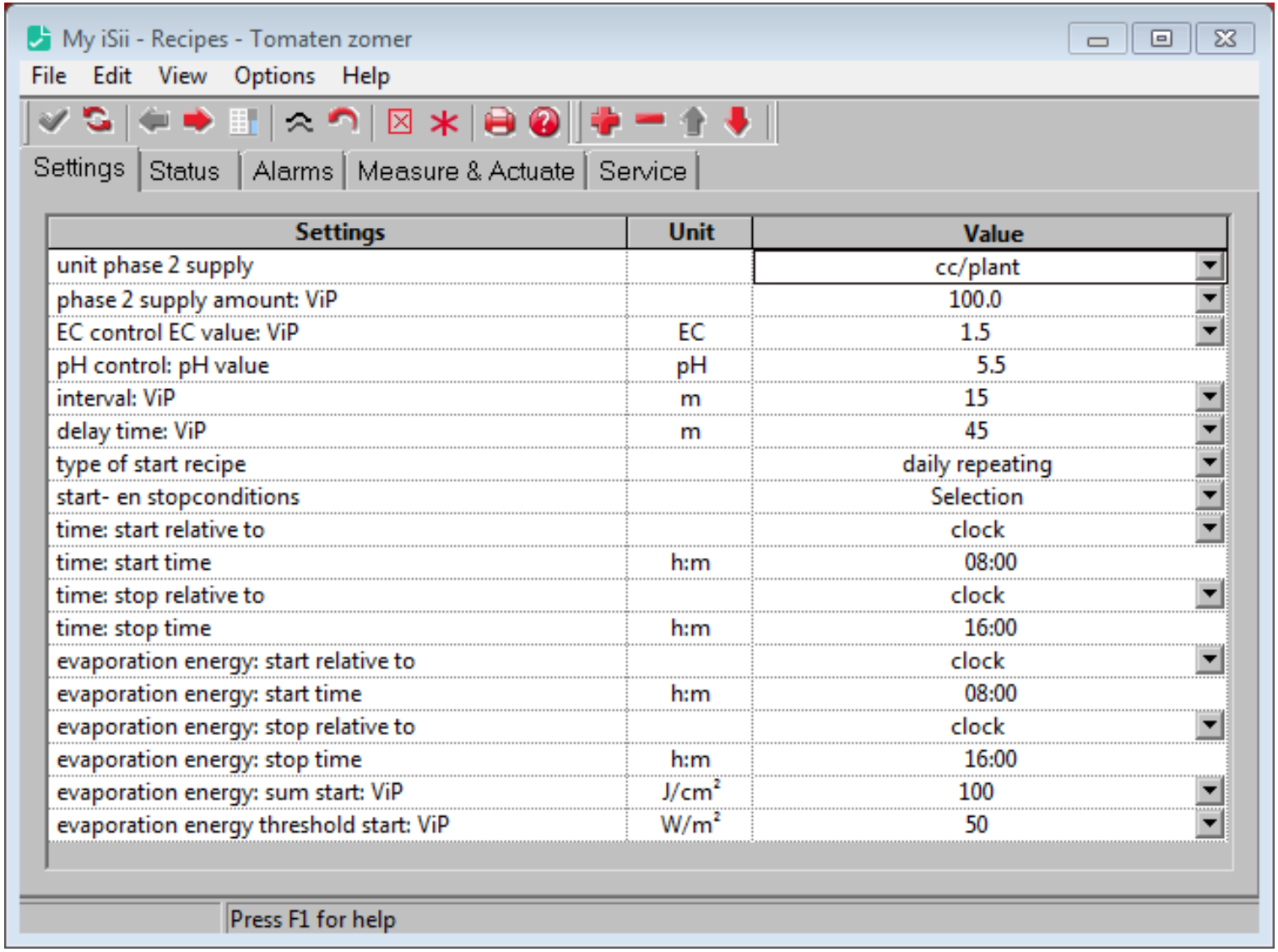
1. Please complete the following setting
   a. The screen is allowed to open with an interval time of 1 minute when it is warm enough above the screen
   b. The interval time must be 5 minutes when it is 2 degrees too cold above the screen




iSii - Explorer
File Edit Extra Help
3 5 0 1 9
My iSii (Training-EN)
Hoogendoorn
Control Climate
Control General
Control Water
Energy Management
10 Climate
Climate computed actua
Climate measured actua
Climate period
Climate week
Greenhouse climate
11 Ventilation
Lee side
Ventilation general
Wind side
12 Heating
Circuit 1
Circuit 2
13 Curtains
Curtain 1 shading
Curtain 1 thermal
20 Irrigation
Crop section control
Pump
Recipes
Valve group 1
10 Climate
11 Ventilation
12 Heating
13 Curtains
20 Irrigation
My iSii - Recipes - Tomaten zomer
File Edit View Options Help
Settings
Status
Alarms
Measure & Actuate
Service
Settings
Unit
Value
unit phase 2 supply
cc/plant
phase 2 supply amount: ViP
100.0
phase 2 supply time: ViP
m:s
01:00
EC control EC value: ViP
EC
1.5
recirculation EC value: ViP
EC
0.0
pH control: pH value
pH
5.5
fertilizer phase 2: number
0
interval: ViP
m
15
delay time: ViP
m
45
cycles: number
80
type of start recipe
daily repeating
start- en stopconditions
Selection
time: start relative to
clock
time: start time
h:m
08:00
Press F1 for help

Task 18. Irrigation – folder and worksheet

1. Please read the pdf file “5. Irrigation” and “6. Irrigation several times a day”
2. Create the folder “20 Irrigation” just like the example above
3. Drag and drop the definitions from the Hoogendoorn explorer to your own explorer
4. Create the worksheet “20 Irrigation” just like the example
5. Drag and drop the definitions from your own explorer to the worksheet

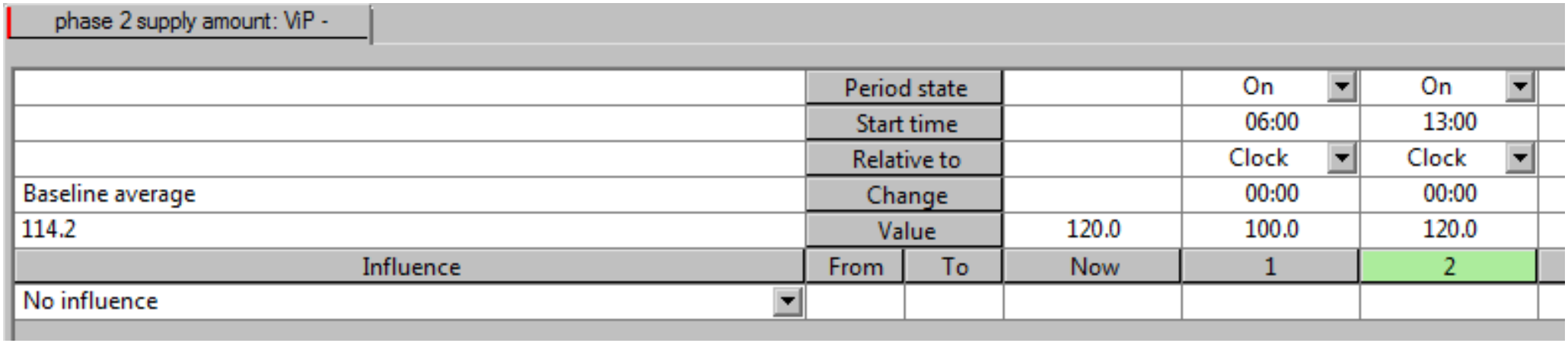


Settings	Unit	Value
unit phase 2 supply		cc/plant
phase 2 supply amount: ViP		100.0
EC control EC value: ViP	EC	1.5
pH control: pH value	pH	5.5
interval: ViP	m	15
delay time: ViP	m	45
type of start recipe		daily repeating
start- en stopconditions		Selection
time: start relative to		clock
time: start time	h:m	08:00
time: stop relative to		clock
time: stop time	h:m	16:00
evaporation energy: start relative to		clock
evaporation energy: start time	h:m	08:00
evaporation energy: stop relative to		clock
evaporation energy: stop time	h:m	16:00
evaporation energy: sum start: ViP	J/cm^2	100
evaporation energy threshold start: ViP	W/m^2	50

Task 19. Irrigation – Irrigation strategy

1. Please adapt the setting list “Recipes” like the example above
2. Please read the help of setting “interval” and “delay time”
3. What is the minimum time between 2 drip cycles? …… minutes
4. What is the maximum time between 2 drip cycles? …… minutes
5. Which setting do you have to change to get drip rounds more frequent?

   ……


phase 2 supply amount: ViP -
Period state
On
On
Start time
06:00
13:00
Relative to
Clock
Clock
Baseline average
Change
00:00
00:00
114.2
Value
120.0
100.0
120.0
Influence
From
To
Now
1
2
No influence

Task 20. Irrigation – supply amount

1. Please change the setting “phase 2 supply amount” like the example
2. What is the meaning of the 2 periods ?

   ……..

3. What is the supply amount at
   a. At 10.00 ……cc/plant
   b. At 13.30 ……cc/plant
   c. At 15.00 ……cc/plant

Source	Measurement	Contribition to evaporation energy
PAR (at the crop)	0 – 2000 micromol/m2.s	0 – 435 W/m2
Pipe temperature	20 – 60 degrees C	0 – 40 W/m2
Lighting 100 W/m2	0 – 100 (indication ON)	0 – 80 W/m2
Sunlight (outside)	0 – 1000 W/m2	0 – 700 W/m2

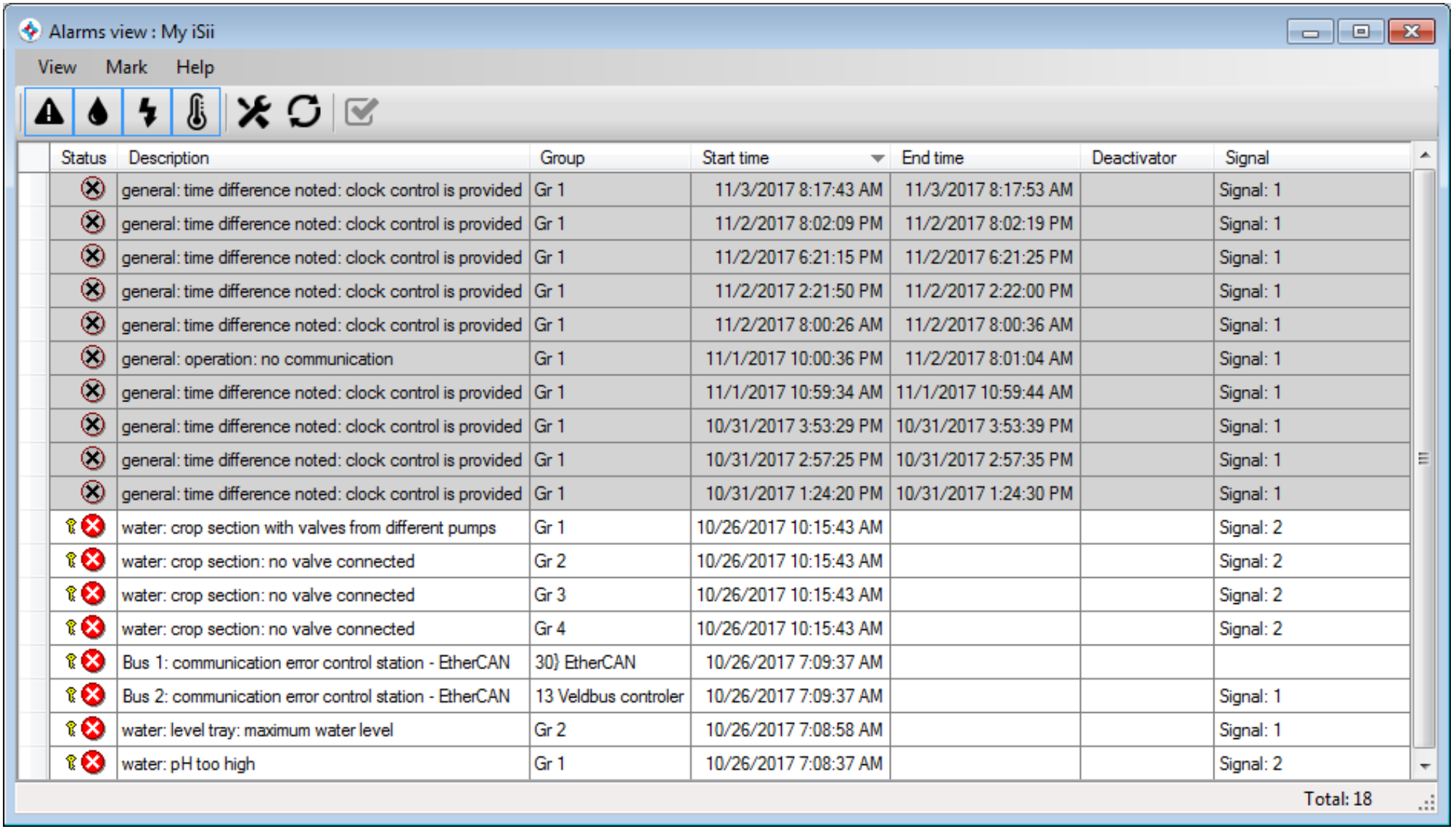
Task 21. Irrigation – Evaporation start

1. Select and open the setpoint “evaporation energy”
2. Take a look to the above table and fill in the influences in the setting below
3. What is the goal of this setpoint?

   ……..

evaporation energy: supply ViP - W/m²

	Period state			On
	Start time			00:00
	Relative to			Clock
Baseline average	Change			00:00
0	Value		700	0
Influence	From	To	Now	1
radiation: measurement - W/m²				
climate: influence PAR crop - µmol/m²/s				
circuit pipe: measurement - °C				
lighting: on/off				
No influence				


Alarms view : My iSii
View
Mark
Help
Status
Description
Group
Start time
End time
Deactivator
Signal
general: time difference noted: clock control is provided
Gr 1
11/3/2017 8:17:43 AM
11/3/2017 8:17:53 AM
Signal: 1
general: time difference noted: clock control is provided
Gr 1
11/2/2017 8:02:09 PM
11/2/2017 8:02:19 PM
Signal: 1
general: time difference noted: clock control is provided
Gr 1
11/2/2017 6:21:15 PM
11/2/2017 6:21:25 PM
Signal: 1
general: time difference noted: clock control is provided
Gr 1
11/2/2017 2:21:50 PM
11/2/2017 2:22:00 PM
Signal: 1
general: time difference noted: clock control is provided
Gr 1
11/2/2017 8:00:26 AM
11/2/2017 8:00:36 AM
Signal: 1
general: operation: no communication
Gr 1
11/1/2017 10:00:36 PM
11/2/2017 8:01:04 AM
Signal: 1
general: time difference noted: clock control is provided
Gr 1
11/1/2017 10:59:34 AM
11/1/2017 10:59:44 AM
Signal: 1
general: time difference noted: clock control is provided
Gr 1
10/31/2017 3:53:29 PM
10/31/2017 3:53:39 PM
Signal: 1
general: time difference noted: clock control is provided
Gr 1
10/31/2017 2:57:25 PM
10/31/2017 2:57:35 PM
Signal: 1
general: time difference noted: clock control is provided
Gr 1
10/31/2017 1:24:20 PM
10/31/2017 1:24:30 PM
Signal: 1
water: crop section with valves from different pumps
Gr 1
10/26/2017 10:15:43 AM
Signal: 2
water: crop section: no valve connected
Gr 2
10/26/2017 10:15:43 AM
Signal: 2
water: crop section: no valve connected
Gr 3
10/26/2017 10:15:43 AM
Signal: 2
water: crop section: no valve connected
Gr 4
10/26/2017 10:15:43 AM
Signal: 2
Bus 1: communication error control station - EtherCAN
30} EtherCAN
10/26/2017 7:09:37 AM
Bus 2: communication error control station - EtherCAN
13 Veldbus controler
10/26/2017 7:09:37 AM
Signal: 1
water: level tray: maximum water level
Gr 2
10/26/2017 7:08:58 AM
Signal: 1
water: pH too high
Gr 1
10/26/2017 7:08:37 AM
Signal: 2
Total: 18

Task 22. Alarms

1. Open the Total alarm survey
2. What is the difference between “grey lines” and “white lines”

   ……

   ……

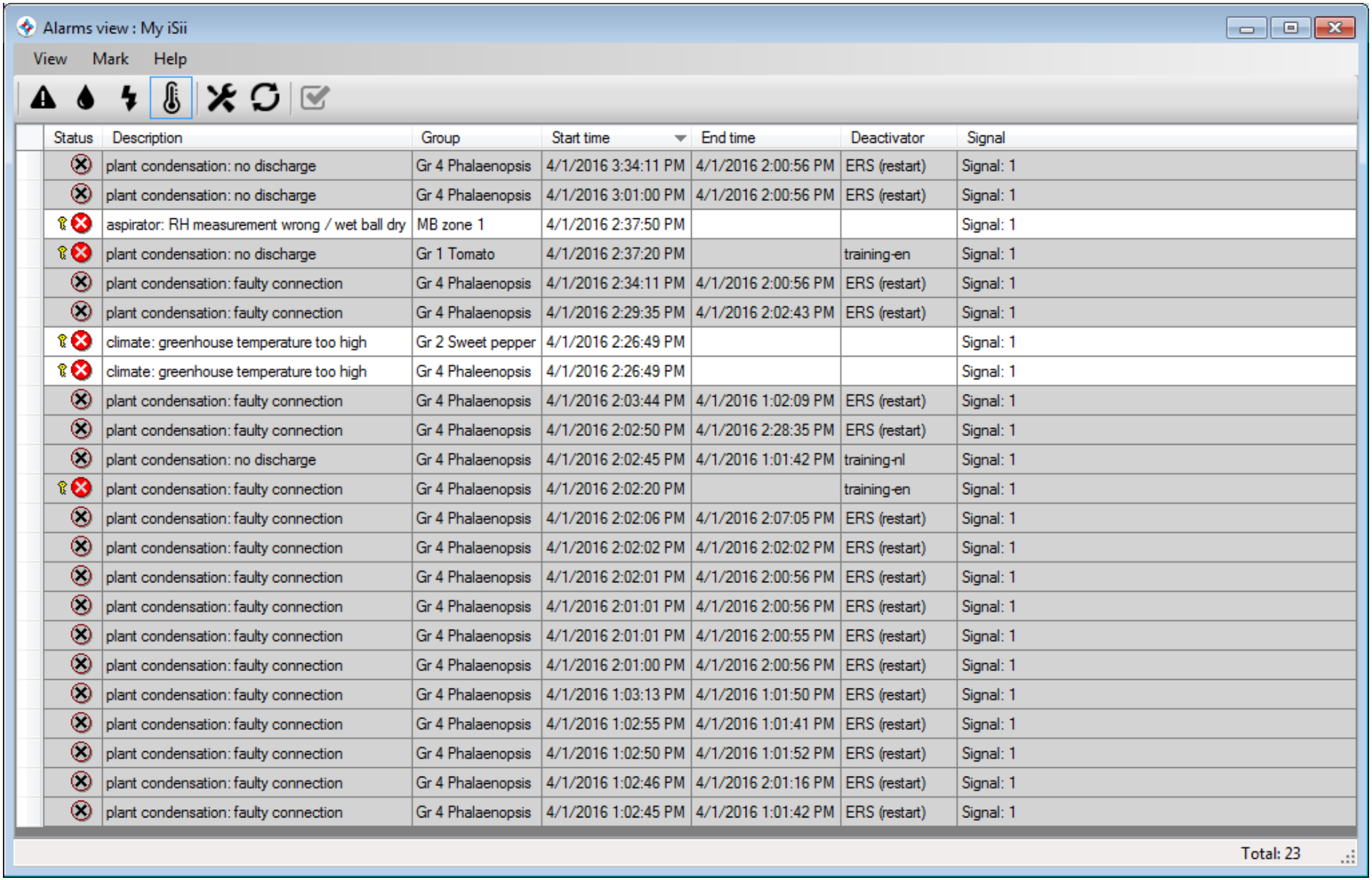
   ……

3. How many signals can be activated? ……..
4. What is a “deactivator”?

   ……

   ……

   ……


Alarms view : My iSii
View
Mark
Help
Status
Description
Group
Start time
End time
Deactivator
Signal
plant condensation: no discharge
Gr 4 Phalaenopsis
4/1/2016 3:34:11 PM
4/1/2016 2:00:56 PM
ERS (restart)
Signal: 1
plant condensation: no discharge
Gr 4 Phalaenopsis
4/1/2016 3:01:00 PM
4/1/2016 2:00:56 PM
ERS (restart)
Signal: 1
aspirator: RH measurement wrong / wet ball dry
MB zone 1
4/1/2016 2:37:50 PM
Signal: 1
plant condensation: no discharge
Gr 1 Tomato
4/1/2016 2:37:20 PM
training-en
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:34:11 PM
4/1/2016 2:00:56 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:29:35 PM
4/1/2016 2:02:43 PM
ERS (restart)
Signal: 1
climate: greenhouse temperature too high
Gr 2 Sweet pepper
4/1/2016 2:26:49 PM
Signal: 1
climate: greenhouse temperature too high
Gr 4 Phaleenopsis
4/1/2016 2:26:49 PM
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:03:44 PM
4/1/2016 1:02:09 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:02:50 PM
4/1/2016 2:28:35 PM
ERS (restart)
Signal: 1
plant condensation: no discharge
Gr 4 Phalaenopsis
4/1/2016 2:02:45 PM
4/1/2016 1:01:42 PM
training-nl
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:02:20 PM
training-en
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:02:06 PM
4/1/2016 2:07:05 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:02:02 PM
4/1/2016 2:02:02 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:02:01 PM
4/1/2016 2:00:56 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:01:01 PM
4/1/2016 2:00:56 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:01:01 PM
4/1/2016 2:00:55 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 2:01:00 PM
4/1/2016 2:00:56 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 1:03:13 PM
4/1/2016 1:01:50 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 1:02:55 PM
4/1/2016 1:01:41 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 1:02:50 PM
4/1/2016 1:01:52 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 1:02:46 PM
4/1/2016 2:01:16 PM
ERS (restart)
Signal: 1
plant condensation: faulty connection
Gr 4 Phalaenopsis
4/1/2016 1:02:45 PM
4/1/2016 1:01:42 PM
ERS (restart)
Signal: 1
Total: 23

Task 23. Alarms

1. Open the Total alarm survey
2. Deselect the General alarms, the Irrigation alarms and the Energy alarms
3. Mark the plant condensation alarms as viewed
4. Why do we have an RH measurement alarm (use the help screens)?

   ……

5. How can we solve this alarm?

   ……

   ……

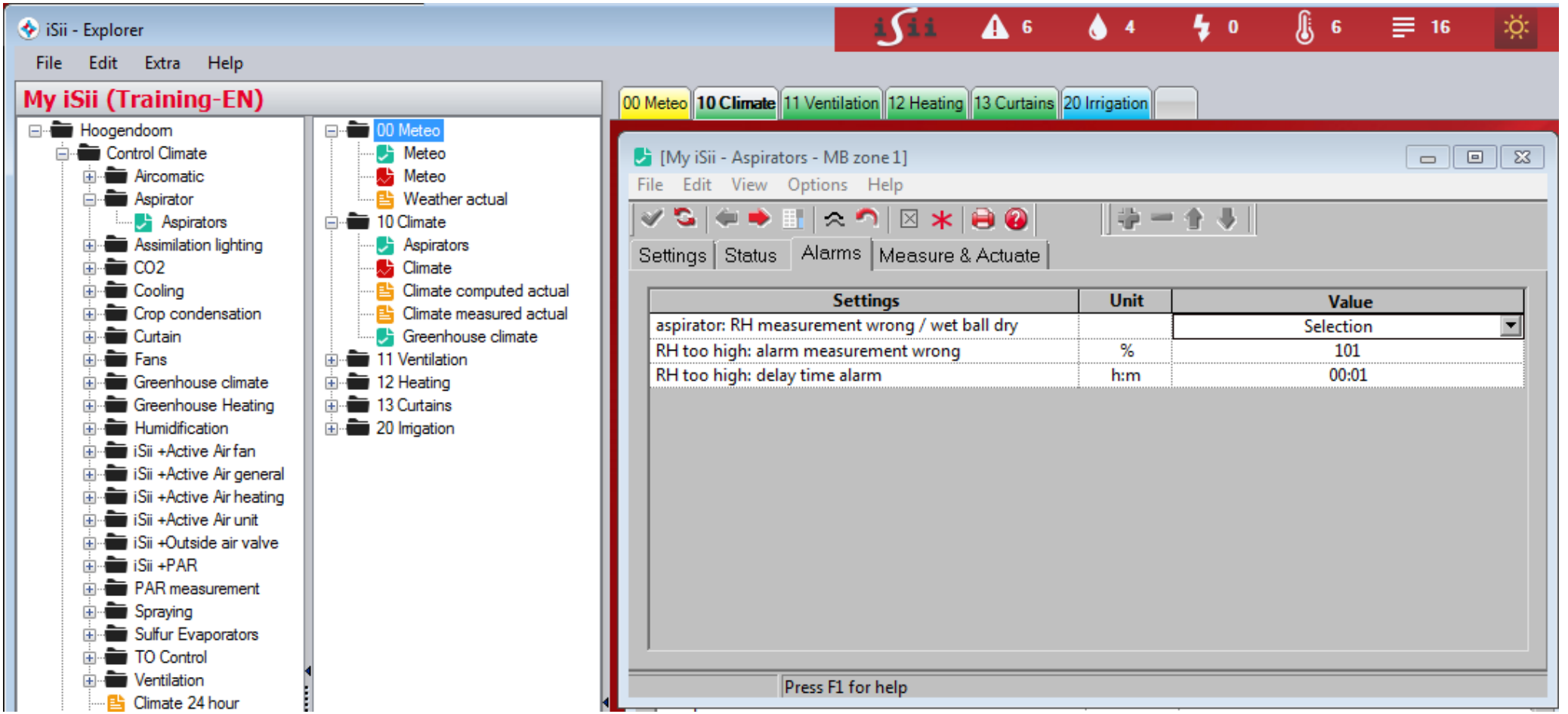
6. Why do we have the temperature alarms (use the help screens)?

   ……

7. How can we solve these alarms?

   ……

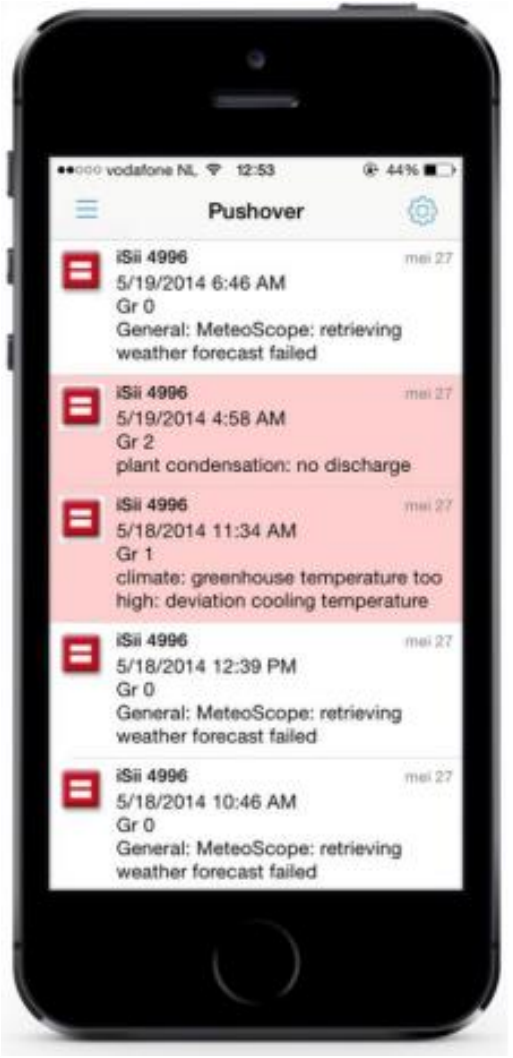
   ……


iSii - Explorer
File Edit Extra Help
My iSii (Training-EN)
Hoogendoom
Control Climate
Aircomatic
Aspirator
Aspirators
Assimilation lighting
CO2
Cooling
Crop condensation
Curtain
Fans
Greenhouse climate
Greenhouse Heating
Humidification
iSii +Active Air fan
iSii +Active Air general
iSii +Active Air heating
iSii +Active Air unit
iSii +Outside air valve
iSii +PAR
PAR measurement
Spraying
Sulfur Evaporators
TO Control
Ventilation
Climate 24 hour
00 Meteo
Meteo
Meteo
Weather actual
10 Climate
Aspirators
Climate
Climate computed actual
Climate measured actual
Greenhouse climate
11 Ventilation
12 Heating
13 Curtains
20 Irrigation
6
4
0
6
16
00 Meteo
10 Climate
11 Ventilation
12 Heating
13 Curtains
20 Irrigation
[My iSii - Aspirators - MB zone 1]
File Edit View Options Help
Settings
Status
Alarms
Measure & Actuate
Settings
Unit
Value
aspirator: RH measurement wrong / wet ball dry
Selection
RH too high: alarm measurement wrong
%
101
RH too high: delay time alarm
h:m
00:01
Press F1 for help

Task 24. Alarms

1. Add the setting list “Aspirators” to the folder “10 Climate”
2. Drag and drop the setting list to the worksheet “10 Climate”
3. Click on the tab “Alarms”
4. Select Alarm signal 5
5. Change the delay time alarm to 01:00

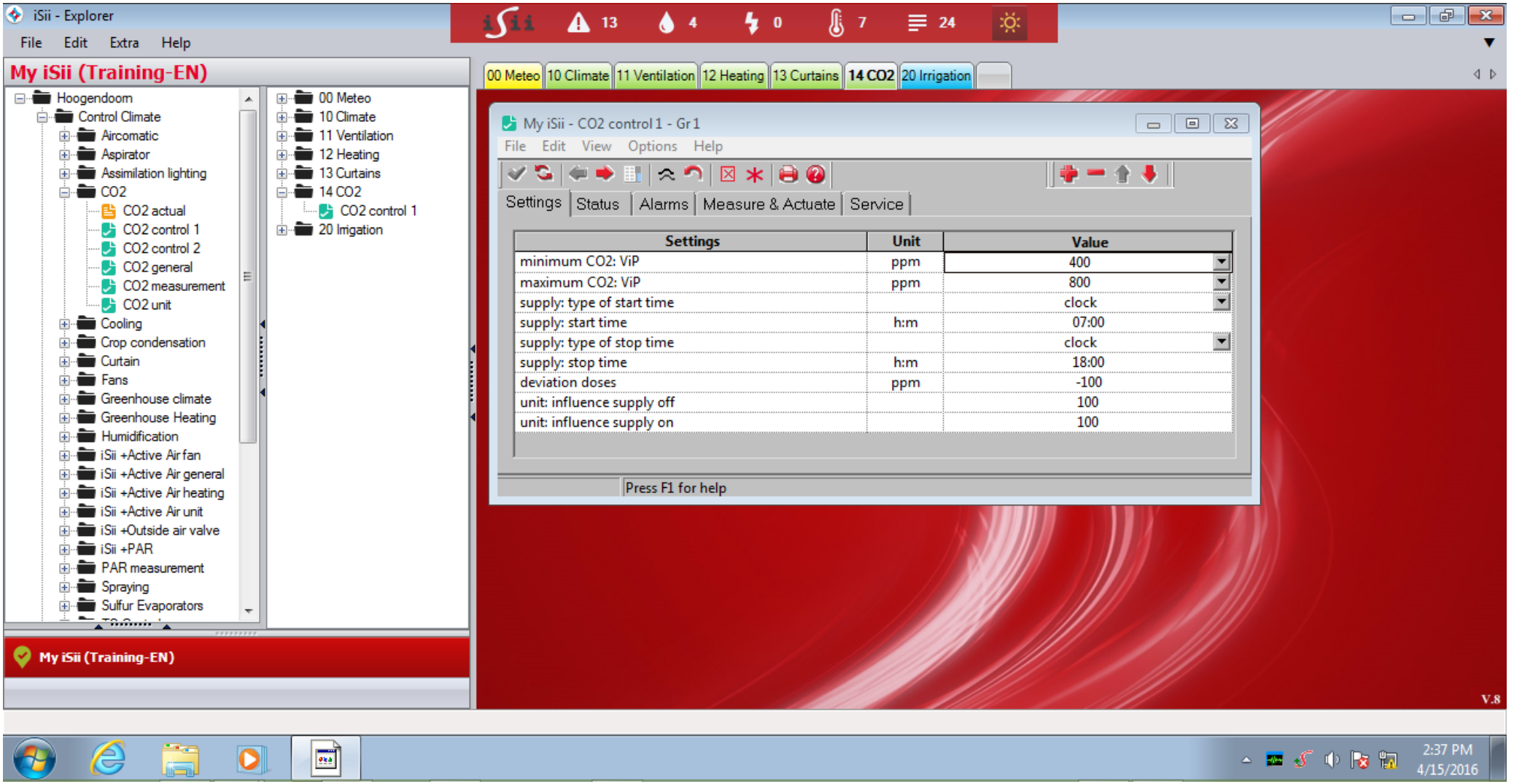

Octalarm-IP
adesys
sel
info
OK
test
reset


vodafone NL 12:53 44%
Pushover
iSii 4996 mei 27
5/19/2014 6:46 AM
Gr 0
General: MeteoScope: retrieving weather forecast failed
iSii 4996 mei 27
5/19/2014 4:58 AM
Gr 2
plant condensation: no discharge
iSii 4996 mei 27
5/18/2014 11:34 AM
Gr 1
climate: greenhouse temperature too high: deviation cooling temperature
iSii 4996 mei 27
5/18/2014 12:39 PM
Gr 0
General: MeteoScope: retrieving weather forecast failed
iSii 4996 mei 27
5/18/2014 10:46 AM
Gr 0
General: MeteoScope: retrieving weather forecast failed

Task 25. Alarms

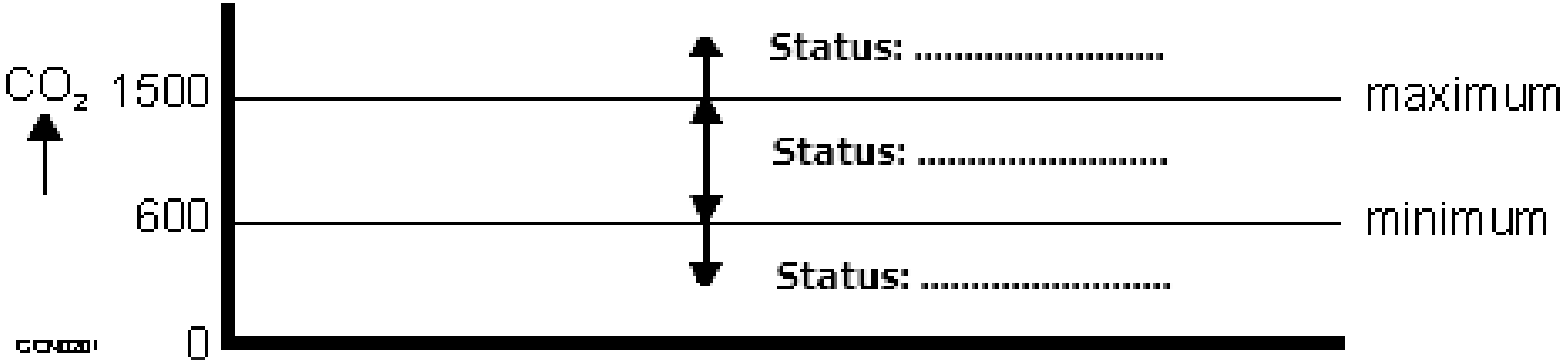
1. When there is an alarm you have to solve it. Give the right priority of your actions:

- [ ] Reset the OctAlarm
- [ ] Solve the alarm
- [ ] First take a coffee
- [ ] Switch off the buzzer with the alarm box
- [ ] Switch off the lamp
- [ ] Open the alarm survey
- [ ] Mark the alarm as viewed


iSii - Explorer
File Edit Extra Help
My iSii (Training-EN)
Hoogendoorn
Control Climate
Aircomatic
Aspirator
Assimilation lighting
CO2
CO2 actual
CO2 control 1
CO2 control 2
CO2 general
CO2 measurement
CO2 unit
Cooling
Crop condensation
Curtain
Fans
Greenhouse climate
Greenhouse Heating
Humidification
iSii +Active Air fan
iSii +Active Air general
iSii +Active Air heating
iSii +Active Air unit
iSii +Outside air valve
iSii +PAR
PAR measurement
Spraying
Sulfur Evaporators
00 Meteo
10 Climate
11 Ventilation
12 Heating
13 Curtains
14 CO2
CO2 control 1
20 Irrigation
My iSii (Training-EN)
00 Meteo
10 Climate
11 Ventilation
12 Heating
13 Curtains
14 CO2
20 Irrigation
My iSii - CO2 control 1 - Gr 1
File Edit View Options Help
Settings
Status
Alarms
Measure & Actuate
Service
Settings
Unit
Value
minimum CO2: ViP
ppm
400
maximum CO2: ViP
ppm
800
supply: type of start time
clock
supply: start time
h:m
07:00
supply: type of stop time
clock
supply: stop time
h:m
18:00
deviation doses
ppm
-100
unit: influence supply off
100
unit: influence supply on
100
Press F1 for help
V.8
2:37 PM
4/15/2016

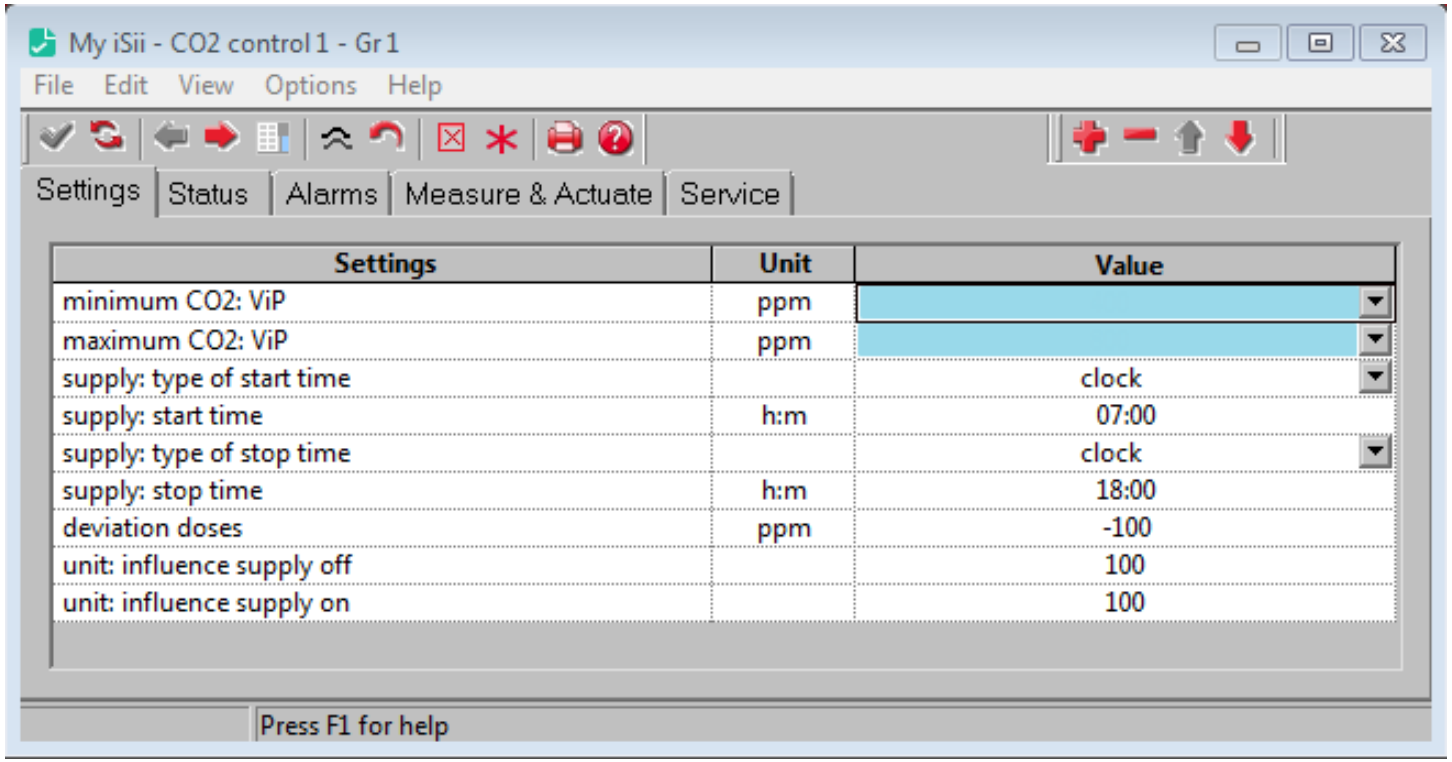
Task 26. CO2 control – folder and worksheet

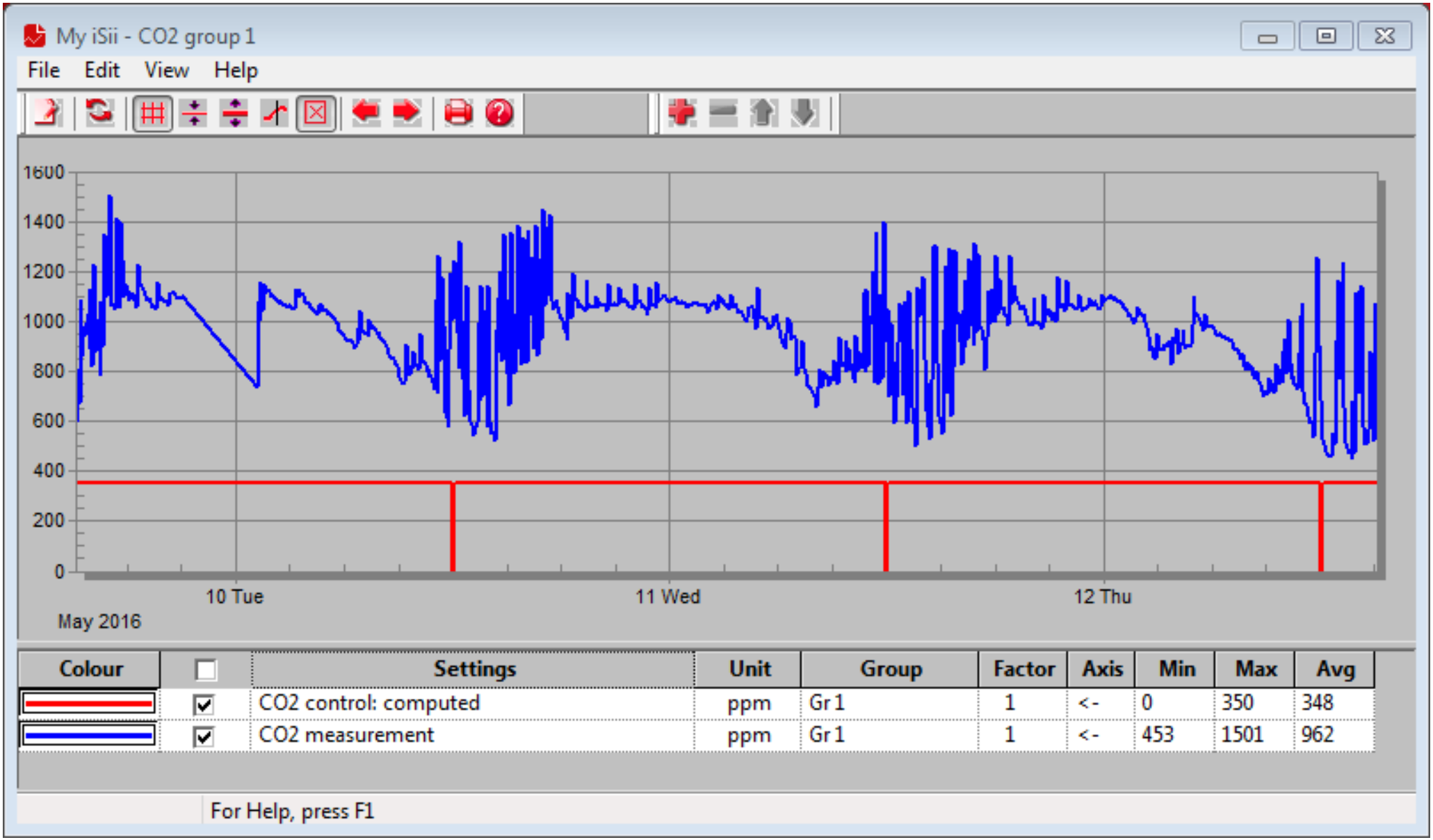
1. Create the folder “14 CO2” just like the example above
2. Drag and drop the definitions from the Hoogendoorn explorer to your own explorer
3. Create the worksheet “14 CO2” just like the example
4. Drag and drop the definitions from your own explorer to the worksheet


CO_2
1500
600
0
Status: .....
Status: .....
Status: .....
maximum
minimum

Task 27. CO2 control – settings

1. Change the setting in the list below to get the control like the chart
2. Select the setting “minimum CO2: ViP”
3. Press the F1 key to show the help screen
4. Try to fill in the status above

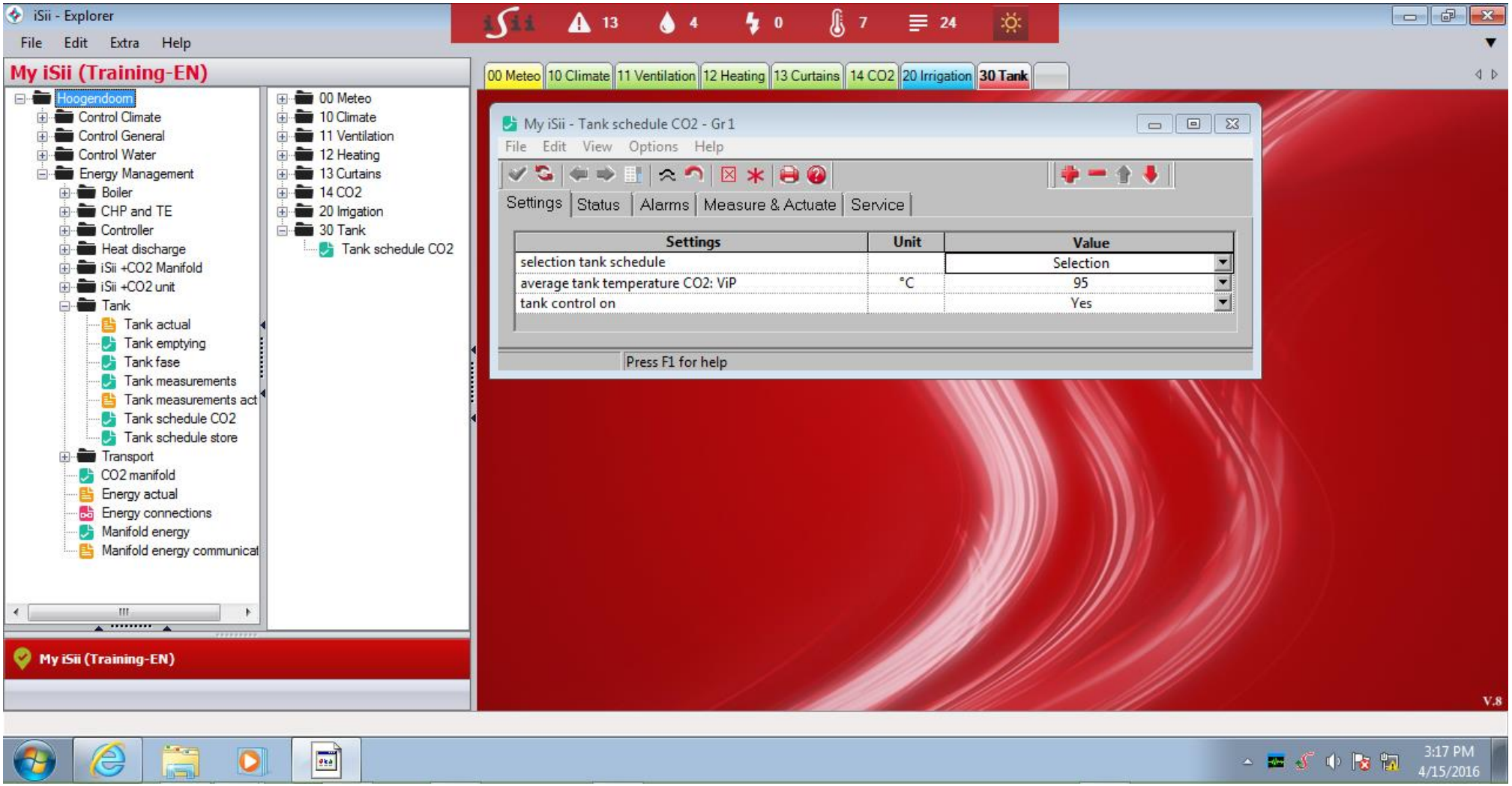



My iSii - CO2 group 1
File
Edit
View
Help
1600
1400
1200
1000
800
600
400
200
0
10 Tue
11 Wed
12 Thu
May 2016
Colour
Settings
Unit
Group
Factor
Axis
Min
Max
Avg
CO2 control: computed
ppm
Gr 1
1
<-
0
350
348
CO2 measurement
ppm
Gr 1
1
<-
453
1501
962
For Help, press F1

Task 28. CO2 control – check graph

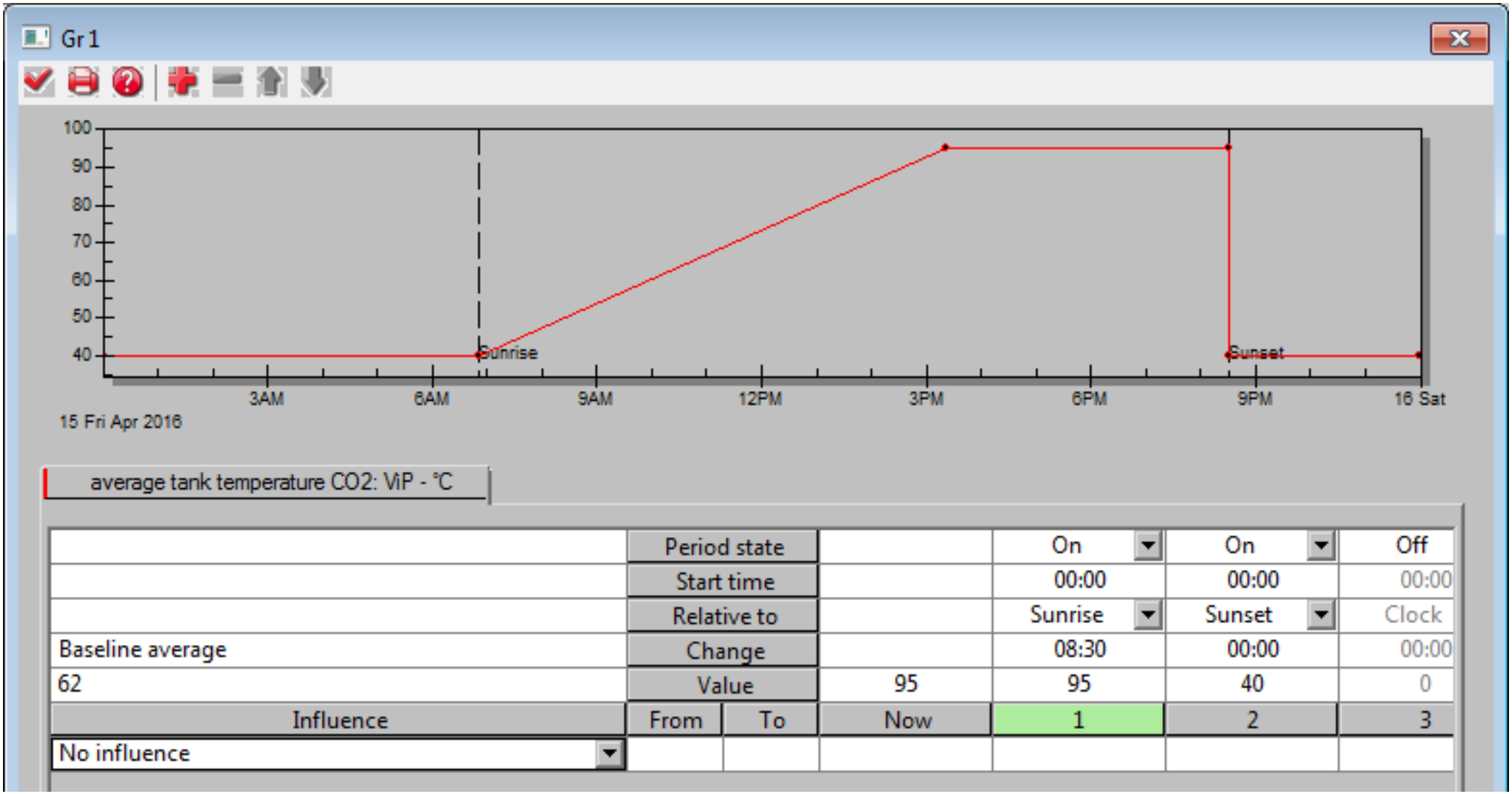
1. Add a new graph to folder “14 CO2”
2. Enter name “CO2 group 1”
3. Drag and drop the graph to worksheet “14 CO2”
4. Change the period between 09-05-2016 00:00:00 and 12-05-2016 00:00:00
5. Add the graph lines like the example above
6. What can you tell about the CO2 control

   ……..


iSii - Explorer
File Edit Extra Help
My iSii (Training-EN)
Hoogendoorn
Control Climate
Control General
Control Water
Energy Management
Boiler
CHP and TE
Controller
Heat discharge
iSii +CO2 Manifold
iSii +CO2 unit
Tank
Tank actual
Tank emptying
Tank fase
Tank measurements
Tank measurements act
Tank schedule CO2
Tank schedule store
Transport
CO2 manifold
Energy actual
Energy connections
Manifold energy
Manifold energy communicat
00 Meteo
10 Climate
11 Ventilation
12 Heating
13 Curtains
14 CO2
20 Irrigation
30 Tank
Tank schedule CO2
00 Meteo 10 Climate 11 Ventilation 12 Heating 13 Curtains 14 CO2 20 Irrigation 30 Tank
My iSii - Tank schedule CO2 - Gr 1
File Edit View Options Help
Settings Status Alarms Measure & Actuate Service
Settings
Unit
Value
selection tank schedule
Selection
average tank temperature CO2: ViP
°C
95
tank control on
Yes
Press F1 for help
My iSii (Training-EN)
V.8
3:17 PM
4/15/2016

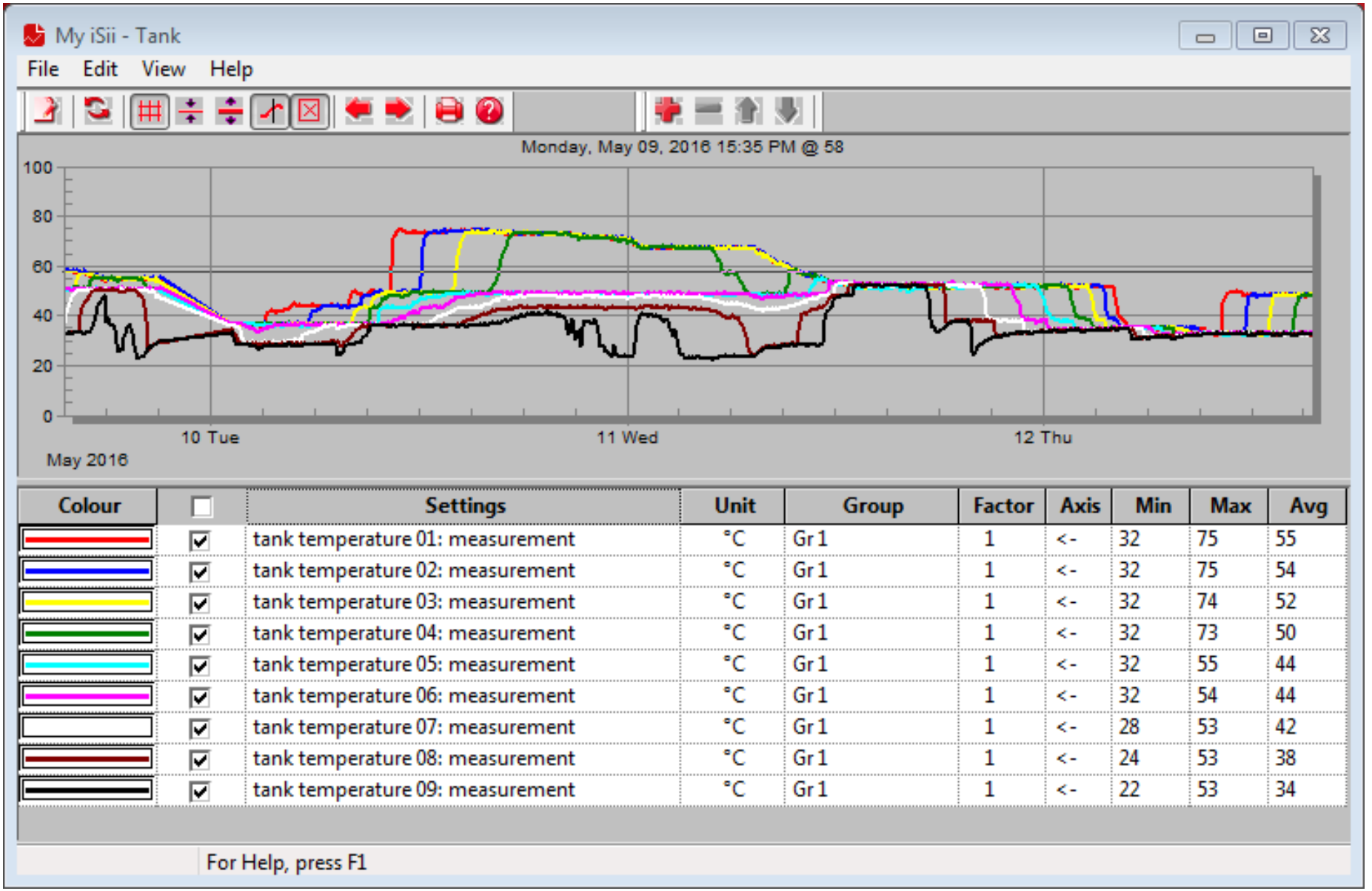
Task 29. Tank control – folder and worksheet

1. Create the folder “30 Tank” just like the example above
2. Drag and drop the definitions from the Hoogendoorn explorer to your own explorer
3. Create the worksheet “30 Tank” just like the example
4. Drag and drop the definitions from your own explorer to the worksheet
5. Adapt the setting list like the example above


Gr 1
100
90
80
70
60
50
40
Sunrise
Sunset
3AM
6AM
9AM
12PM
3PM
6PM
9PM
16 Sat
15 Fri Apr 2016
average tank temperature CO2: ViP - °C
Period state
On
On
Off
Start time
00:00
00:00
00:00
Relative to
Sunrise
Sunset
Clock
Baseline average
Change
08:30
00:00
00:00
62
Value
95
95
40
0
Influence
From
To
Now
1
2
3
No influence

Task 30. Tank control – settings

1. Change the setting like the example above



Colour		Settings	Unit	Group	Factor	Axis	Min	Max	Avg
	☑	tank temperature 01: measurement	°C	Gr 1	1	<-	32	75	55
	☑	tank temperature 02: measurement	°C	Gr 1	1	<-	32	75	54
	☑	tank temperature 03: measurement	°C	Gr 1	1	<-	32	74	52
	☑	tank temperature 04: measurement	°C	Gr 1	1	<-	32	73	50
	☑	tank temperature 05: measurement	°C	Gr 1	1	<-	32	55	44
	☑	tank temperature 06: measurement	°C	Gr 1	1	<-	32	54	44
	☑	tank temperature 07: measurement	°C	Gr 1	1	<-	28	53	42
	☑	tank temperature 08: measurement	°C	Gr 1	1	<-	24	53	38
	☑	tank temperature 09: measurement	°C	Gr 1	1	<-	22	53	34

For Help, press F1

Task 31. Tank control – check graph

1. Add a new graph to folder “30 Tank”
2. Enter name “Tank”
3. Drag and drop the graph to worksheet “30 Tank”
4. Change the period between 09-05-2016 00:00:00 and 12-05-2016 00:00:00
5. Add the graph lines like the example above
6. How many tank layers are filled on Tuesday? …….