

Instruction section defrosting, TBLZ-1-79

SILVER C PX 004-080

1. General

The section defrosting module is used to control the damper actuators for section defrosting of the plate heat exchanger in SILVER C PX 004-080.



2. Installation

Module

The module is mounted in an appropriate space close to the air handling unit.

Temperature sensor

Two temperature sensors of the type PT1000 are required, one for each heat exchanger section. Temperature sensor TBLZ-1-80 is available as an accessory, see separate instruction.

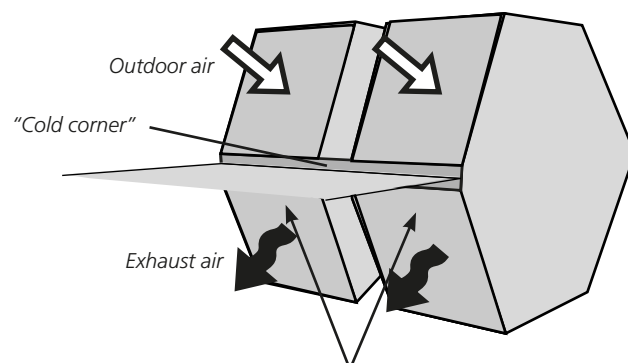
For SILVER C size 014 - 080 the temperature sensors are placed in the lower heat exchange sections.

The temperature sensors are placed in the heat exchanger's exhaust air side.

The temperature sensor's sensor element is **inserted into** the exhaust side in each heat exchanger section, approx. 100 mm down from the "cold corner" and centred sideways.

The temperature sensors are secured appropriately, for example with weatherproof tape.

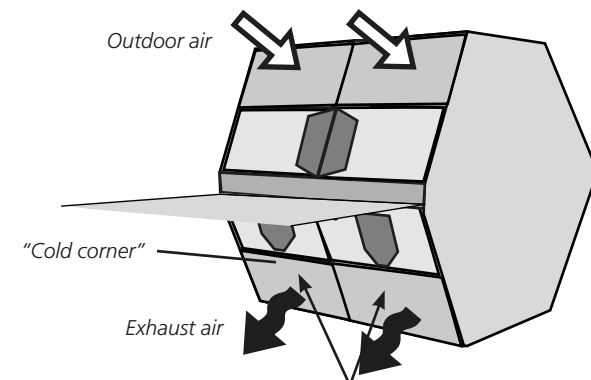
Size 04 - 12



Sensor placement, one sensor in each heat exchanger section (x 2) on the exhaust air side, 100 mm down from the cold corner and centred sideways.

Note: The sensors are inserted into the heat exchanger section!

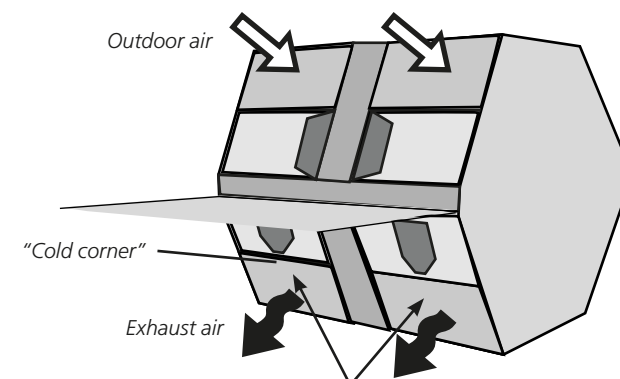
Size 40+ - 80



Sensor placement, one sensor in each heat exchanger section (x 2) on the exhaust air side, 100 mm down from the cold corner and centred sideways.

Note: The sensors are inserted into the heat exchanger section!

Size 14 - 40



Sensor placement, one sensor in each heat exchanger section (x 2) on the exhaust air side, 100 mm down from the cold corner and centred sideways.

Note: The sensors are inserted into the heat exchanger section!

3. Technical data

Supply voltage	24 VAC +/- 10%
Power consumption	< 100 mA
In-operation indication	green LED on the PCB flashes during test sequence
Air handling unit in operation	yellow LED on the PCB
Defrost. Indication	yellow LED on the PCB
DIP switches	setting of temperature, time and output signal during defrosting
Strapping JP1/JP2/JP3	to invert the output signal during normal operations
Ambient temperature	0...+50 °C
Weight	500 g
Dimensions, length x width x depth	250 x 180 x 80 mm
Degree of protection	IP54
Cable inputs	knockout holes, round enclosure

4. Function

The heat exchanger's damper actuator and temperature sensor (accessory TBLZ-1-80) are connected to the module.

The module is controlled by an external control signal, which can be inverted with a jumper for each damper actuator (JP1, JP2 and JP3).

Defrosting is initiated by temperature sensors 1 of 2 (accessory TBLZ-1-80). The section that initiates defrosting, is defrosted first. The defrosting temperature is adjustable and can be changed using the DIP switches 1-4.

Defrosting is carried out during the set time. The time can be set with DIP switch 5.

Output signal (0 or 10 V) for defrosting can be changed with DIP switches 6, 7 and 8.

Defrosting is activated in the event of a open circuit or a defective temperature sensor.

Test sequence

Pulse activation of DI2 (terminals 7 and 8) starts the test sequence. The test sequence first gives the output signal 0 V to all damper actuators for 3 minutes, it then gives the output signal 10 V for 3 minutes.

5. Electrical connections

DIP, position

Off On

1

2

3

4

5

6

7

8

DIP, number

1 2 3 4

-10

-9

-8

-7

-6

-5

-4

-3

-2

-1

0

+1

+2

+3

+4

+5

Temperature, °C

DIP 1 – 4: Temperature, see table (factory setting -3 °C).

DIP 5 Off = 7 minutes/section, On = 12 minutes/section

DIP 6 Output signal for defrosting JP1, Off = 0 V, On = 10 V

DIP 7 Output signal for defrosting JP2, Off = 0 V, On = 10 V

DIP 8 Output signal for defrosting JP3, Off = 0 V, On = 10 V

Diagram shows DIP switches in factory-preset position.

Table shows DIP-switches 1-4 for setting of the temperature. Off = 0, On = 1.

1	2	3	4
0	0	0	0
0	0	0	0
1	0	1	0
0	1	0	0
1	1	0	0
0	1	1	0
1	1	1	0
0	0	0	1
1	0	0	1
0	1	0	1
1	1	0	1
0	0	1	1
1	0	1	1
0	1	1	1
1	1	1	1

○ Operation. Flashing = test

○ Air handling unit in operation

○ Defrosting in progress

JP1 (Sect. 1)

JP2 (Bypass)

JP3 (Sect.) 2

Applies for normal operation

0V 10V 0V 10V 0V 10V

JP1, JP2 and JP3 denote, for normal operations, the output signal for a 10 V input signal (factory setting 0 V). JP1, JP2 and JP3 can be strapped, which means that the output signal becomes 10 V for a 10 V input signal.

1

2

3

4

5

6

7

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11

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27

28

29

30

G

G0

G

Y

U

G0

G

Y

U

G0

G

Y

U

nc

c

nc

nc

c

no

+

-

+

-

G0

G0

G0

G0

G0

G

Supply in, 24 VAC

Control in, 0 – 10 V AI

Air handling unit in operation DI1

Test sequence DI2

Sensor, temperature 1 PT1000 (accessory TBLZ-1-80)

Sensor, temperature 2 PT1000 (accessory TBLZ-1-80)

Indication, operation DO1

Indication, defrosting DO2

Damper, section 1

Damper, bypass Signal shared for PX40+, PX50/60+, PX70/80

Damper, section 2

4 www.swegon.com

We reserve the right to alter specifications.