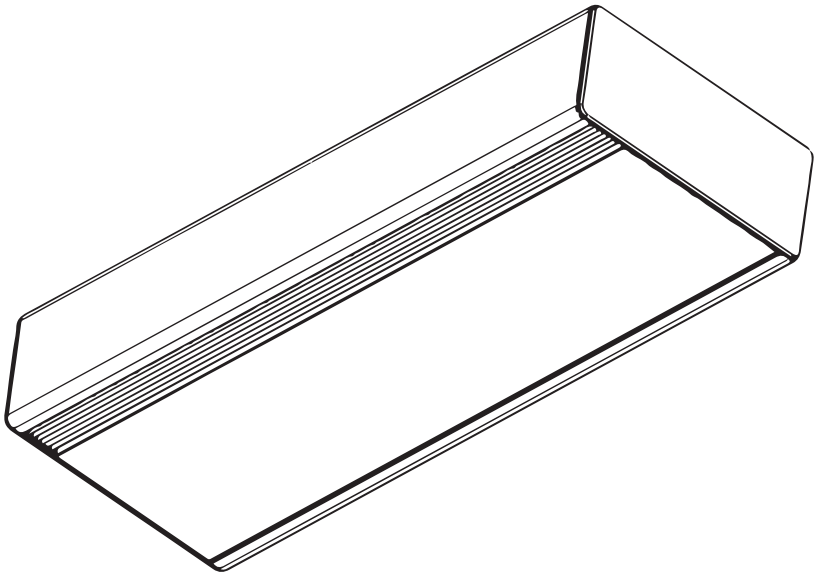


Installation manual
Windis Free

General Instructions
Read these instructions carefully before installation and use. Keep this installation manual for future reference. The product should only be used in accordance with the installation instructions. The warranty is valid only if the product is used as intended and in accordance with the instructions.

Application
Windis Free creates an effective temperature-separating air curtain for doorways. The device is ordered using the product code and manufactured accordingly.
The recommended installation height for the Windis Free 350 device is a maximum of 3.5 meters. The device's protection class is IP20.

Operation
Room air is drawn from above the device and blown downward to protect the doorway and minimize heat loss. To achieve the best air curtain effect, the device should cover the entire width of the doorway. The effectiveness of the air curtain depends on the air temperature, the pressure difference over the doorway, and any potential wind load.
Note! Building depressurization significantly reduces the effectiveness of the air curtain. Therefore, ventilation should be balanced.

Installation
The product must be installed to allow for future maintenance and servicing. Ensure that the service hatch is accessible and can be fully opened. The device's filters should be replaced at least once a year. The device must be de-energized for all maintenance, repair, and servicing work.

Opening the Unit
- Disconnect the power supply.
- Loosen the screws securing the service hatch and open it. To close the unit, shut the service hatch and secure it with screws.

Electrical Installation
The device is equipped with a plug connection.

Commissioning
Device commissioning is performed with a separate commissioning tool or alternatively via a computer. During commissioning, each device is configured with the following:

- Whether the device is a Master or Slave unit.
- Installation height.
- Bus settings.
- Communication bus settings between Master and Slave.
- The source of sensor data, i.e., whether the sensors are connected directly to the device or if sensor data is written from building automation.

Once each device's settings are configured, a functional test can be performed on the device. The functional test verifies correct device operation. A report is created from the functional test and stored in the handover documents.

Connecting the Water Coil
Only an authorized installer may perform the installation. The water coil consists of copper tubes and aluminum fins, and it is suitable for connection to a closed water heating system. The heating coil must not be connected to the domestic water network or an open water system. Note that a line control valve must be installed in the piping.
The water coil is connected using DN20 (3/4") internal thread connections. Pay attention to the distance between the water connections and the edge of the unit.
NOTE: The connections of the air curtain machine must have shut-off valves to enable trouble-free disconnection.
The device does not have air bleed valves. Air bleed valves should be installed at the highest point of the piping.

Filter
The device is equipped with a optional G4 filter. The filter should be cleaned at least once a year or as needed.

Maintenance
Since the fan motors and other components are maintenance-free, no additional maintenance is required other than cleaning. The need for cleaning may vary depending on local conditions. Clean the device at least twice a year. The supply and exhaust air grilles, fan blades, and heat exchanger can be vacuumed or wiped with a damp cloth. Use a brush when vacuuming to avoid damaging sensitive parts. Avoid using strong alkaline or acidic cleaning agents.

Replacing the Fan
Identify which fan is not functioning. If the device has issued a fan alarm, it is a general alarm for all fans, and the device does not distinguish the defective unit.
Disconnect the quick connector from the respective fan.
Remove the nuts used to secure the fan and lift the fan out.
Install the new fan in the reverse order of the above steps.

Replacing the Circuit Board
The circuit board is installed inside the unit between the fans. Label and disconnect the cables from the circuit board. Remove the screws used to secure the circuit board and lift it out.
Install the new circuit board in the reverse order of the above steps. After this, recommission the device and create a functional test report.

Troubleshooting
If the device is not functioning correctly, check the following:

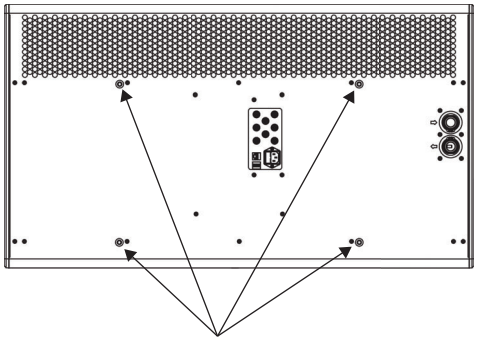
- Power supply
- Cleanliness of the filters; clean if necessary
- Intelligent controller unit settings; refer to the IC unit instructions

If there is insufficient heating output, check the following:
- There is no air in the water circulation
- Water flow and pressure are sufficient
- Incoming water temperature meets the design specification

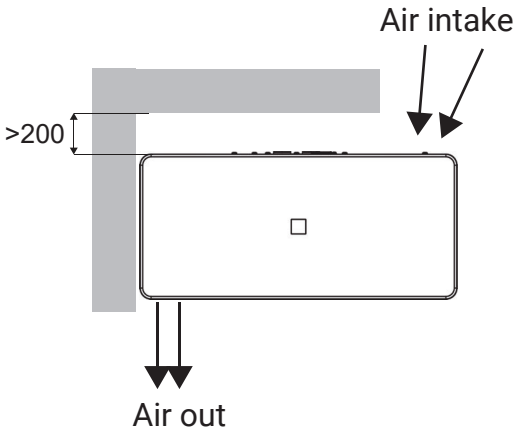
Packaging
The packaging materials are chosen with environmental considerations in mind and are therefore recyclable.

Product Disposal at End of Life
This product may contain substances necessary for its operation but potentially hazardous to the environment. It should not be disposed of with general waste; instead, it should be taken to a designated collection point for environmentally friendly recycling. Contact your local authority for information on the nearest collection point.

Mounting the unit

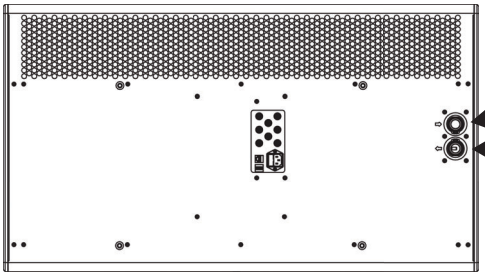


4x M8 internal thread



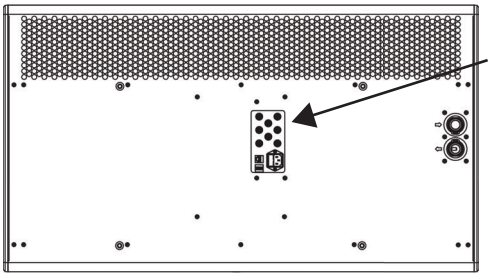
Device sizes 1m and 1.5m (4x)
Device sizes 2m and 2.5m (8x)
Check the exact locations of the mounting points and the weight information of the devices from the dimensional drawings.

Water connections



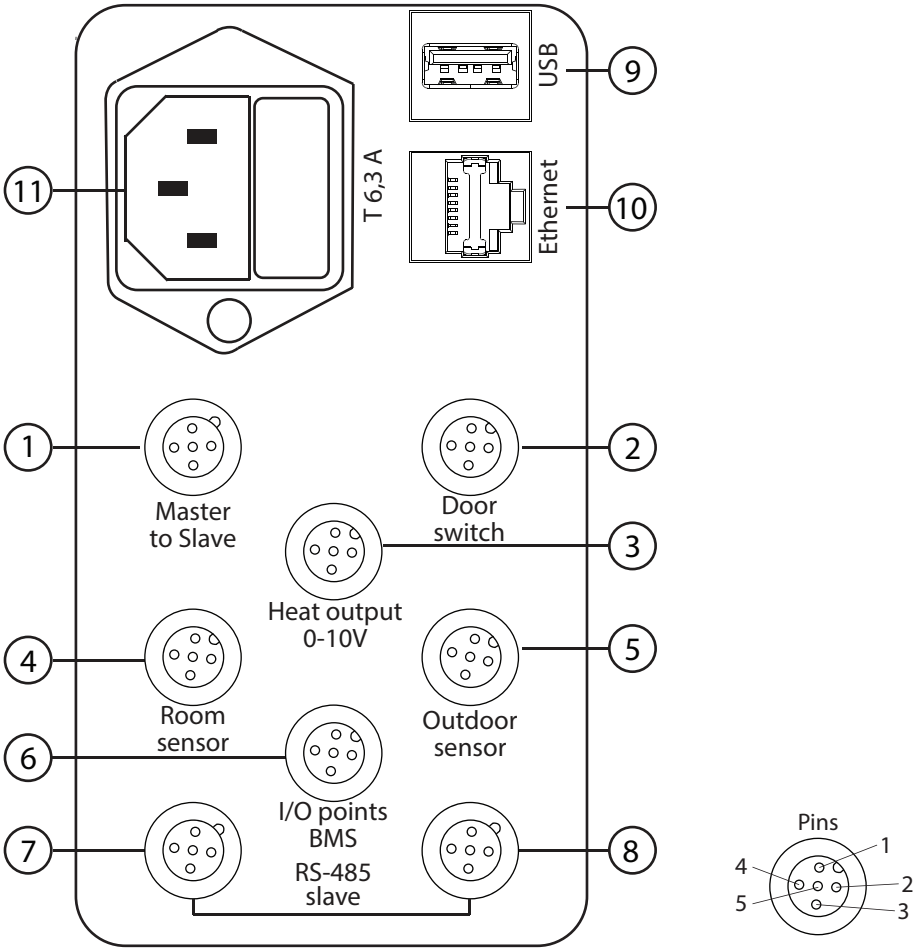
Water inlet DN20 G¾" internal thread
Water outlet DN20 G¾" internal thread

Electrical Connections



8 pcs. M12 5-pin female connectors
1 pc. Ethernet (Modbus TCP / BACnet IP)
1 pc. USB - power supply for commissioning tool
1 pc. 230V IEC C14 connector + 2 pcs. 5x20 6.3A fuse

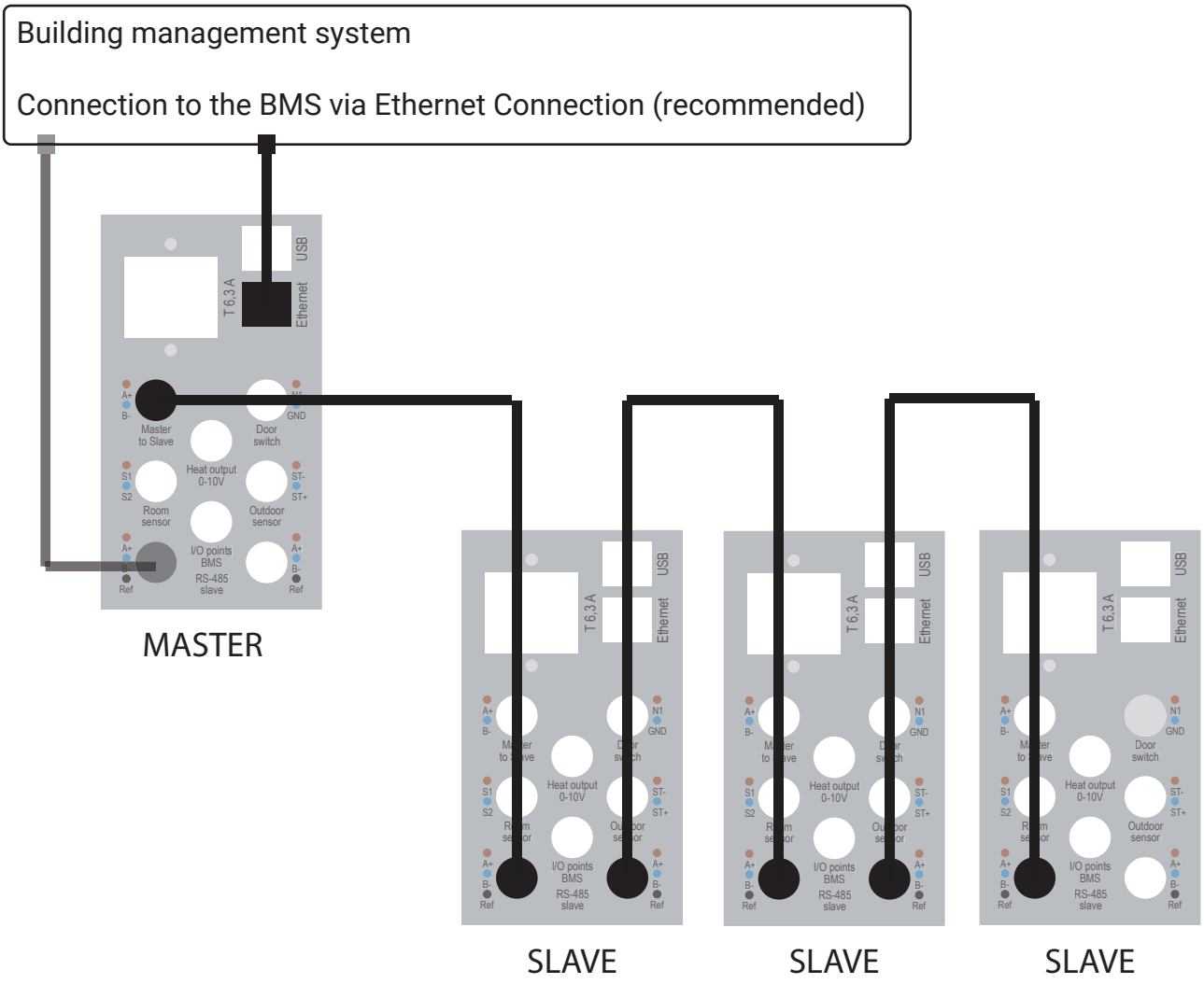
Electrical connection panel



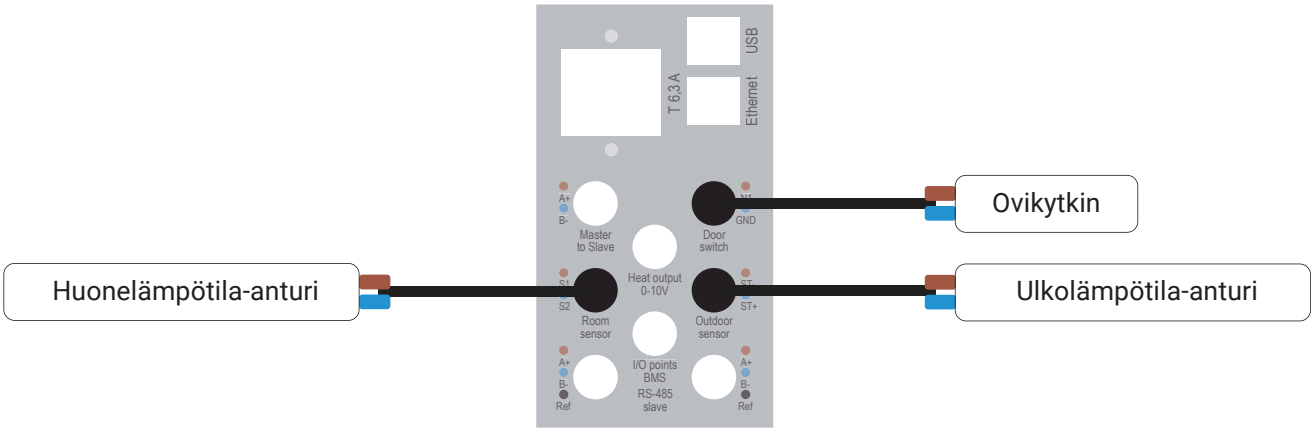
No.	Description	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Connector Type
1	Master to Slave Unit	A2+		B2-			M12 B-type, 5-pin
2	Ovikytkin	X2_1		gnd	+24V		M12 A-type, 5-pin
3	Lämmitys 0-10V output	X3_1		gnd	+24V		M12 A-type, 5-pin
4	Huoneanturi	X4_1	HA+	gnd	+24V	HB-	M12 A-type, 5-pin
5	Ulkoanturi X5_1	HA+	gnd	+24V	HB-	M12 A-type, 5-pin	
6	I/O pisteet BMS ohjaukseen	X6_1	X6_2	gnd		X6_5	M12 A-type, 5-pin
7	RS-485 Slave	A+		B-	REF		M12 B-type, 5-pin
8	RS-485 Slave	A+		B-	REF		M12 B-type, 5-pin

Room temperature sensor NTC10k
Outdoor temperature sensor NTC10k

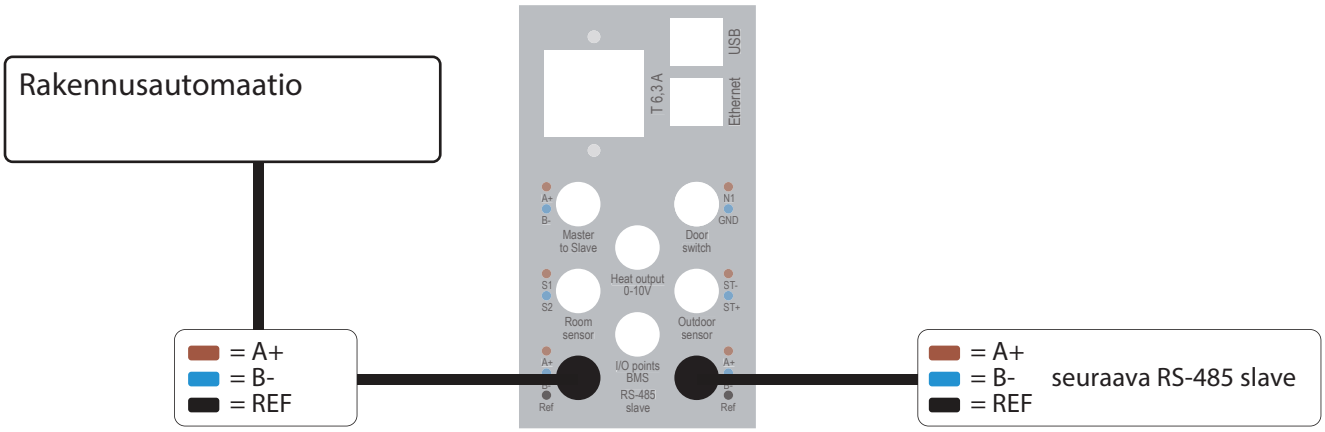
Wiring - Master/Slave



Wiring - External sensors

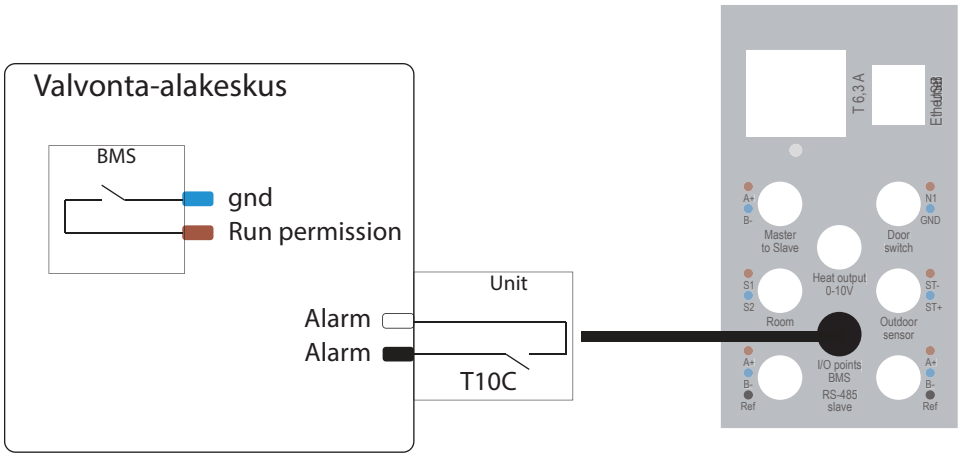


Wiring - RS-485



Wiring - Heating 0-10V Output

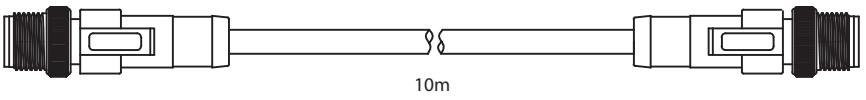
Wiring - I/O Control from Building Automation



Sensor cables

Master to Slave

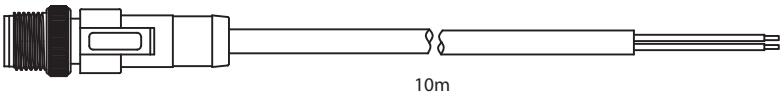
M12 B-type, 3-pin



M12 B-type, 3-pin

Door switch

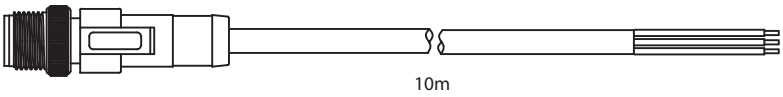
M12 A-type, 2-pin



Colors:
Brown, Blue

Heating Output 0-10V

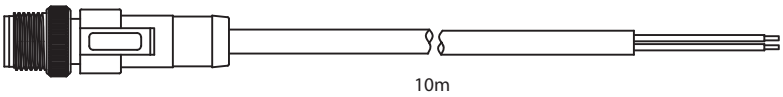
M12 A-type, 3-pin



Colors:
Brown, Blue, Black

Room temperature sensor

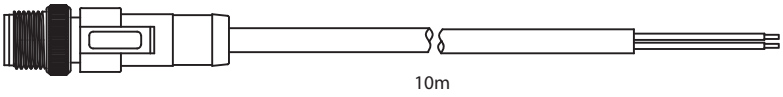
M12 A-type, 2-pin



Colors:
Brown, Blue

Outdoor temperature sensor

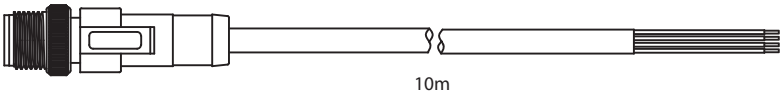
M12 A-type, 2-pin



Colors:
Brown, Blue

I/O Control for building automation system

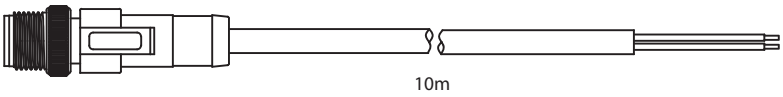
M12 A-type, 5-pin



Colors:
Brown, Blue,
White, Black, Gray

RS-485 Bus for building automation system

M12 B-type, 3-pin



Colors:
Brown, Blue

Pin	Color
1	Brown
2	White
3	Blue
4	Black
5	Gray

Type: UL2464
Conductor Thickness: 22 AWG
Conductor Insulation: PVC, outer diameter: 1.3 mm
Outer Jacket: Semi-gloss PVC, outer diameter: 4.6 mm
RoHS

Optional sensors

Passive Room Temperature Sensor, NTC10k (10k2),
PC, white, RAL 9003

Passive Outdoor Temperature Sensor, NTC10k (10k2)