



**I EN Installation and Operating Manual**  
**Radio module FM-EO**  
 - Please pass on to the user -

**About this manual**

- Read this manual carefully and completely before assembly! Always observe the general safety instructions and the safety symbols with information in the text.
- Hand out this manual to the user (tenants, proprietors, property management etc.) after completing assembly.



This symbol warns you against risks of injury



This symbol warns you against risks of injury from electricity

**Safety instructions**



**Caution!** Any assembly work may only be carried out after disconnecting the supply voltage!



**Attention!** The electric connection may only be made by authorised qualified personnel and according to the applicable version of VDE 0100!

**Disposal**



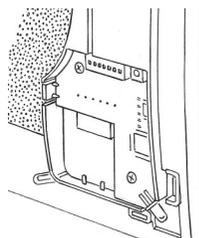
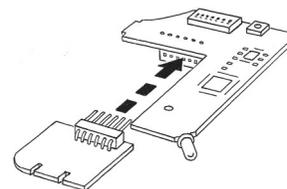
The packaging must be sorted before disposal. If you wish to dispose of the ventilation device, observe the currently applicable regulations. Pursuant to the German Electrical and Electronic Equipment Act (ElektroG) this device can be returned to your municipal collection point free of charge.

**Technical data FM-EO**

Operating voltage:	3.3V DC
Power consumption (module) :	< 1W
Radio frequency:	868 MHz, bidirectional
Range:	up to 40 meters (free field)
Operating temperature:	0°C / 40°C
EPP profile:	D2-50 (for coupling with radio control centre)
Dimensions:	47mm x 31mm x 5mm

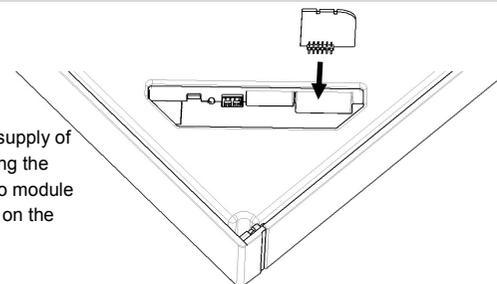
**Inserting the FM-EO radio module on the Silvento ec**

Unscrew the screw connection of the function board with the filter frame. Connect the FM-EO radio module to the function board 5/EC-FK or ZI as shown in the adjacent illustration.



Reinsert the function board with the FM-EO radio module plugged on into the receptacle in the filter frame and screw tight. Insert the antenna of the radio module into the groove of the filter frame provided for this purpose.

**Inserting the FM-EO on the Ne<sup>xt</sup>**



Disconnect the power supply of the Ne<sup>xt</sup> before inserting the module. Insert the radio module into the larger opening on the right as shown.

Remove the inner screen and disconnect the plug connection to the control element. Insert the module as shown into the opening provided for this purpose. The antenna must be led out of the opening. Make sure that the module is correctly and completely plugged in. Reconnect the control element and put the inner screen back in place.

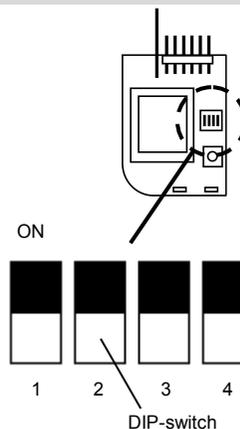
**DIP switches**

DIP switch 1:  
 ON: Slave mode  
 OFF: Stand-alone operation (standard)  
**Must be set before commissioning!**

DIP switch 2:  
 ON: Outdoor sensor  
 OFF: Indoor sensor (standard)

DIP switch 3:  
 ON: -  
 OFF: - (standard)

DIP switch 4:  
 ON: Transmit mode  
 OFF: Receive mode (standard)



**DIP-switches - Description**

DIP switch 1:

In stand-alone mode, buttons / sensors / other fans can be coupled as signal transmitters. Slave mode only in connection with a SmartHome central unit or an additional FM-EO module in master mode.

DIP switch 2:

Used to teach additional sensors (Silvento ec only)

DIP switch 3:

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DIP switch 4:

If ON is set, the radio module transmits the operating states such as ventilation stage and operating mode of Silvento ec or Ne<sup>xt</sup>. Receiving modules can be controlled using this function.

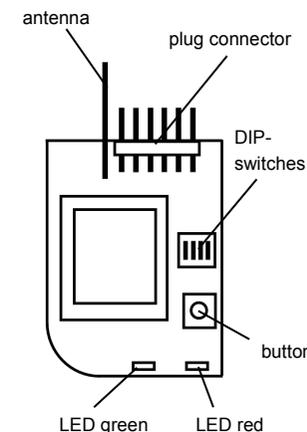
**Coupling mode on the Silvento ec**

To teach additional radio components to the Silvento ec with FM-EO radio module, it must be set to coupling mode.

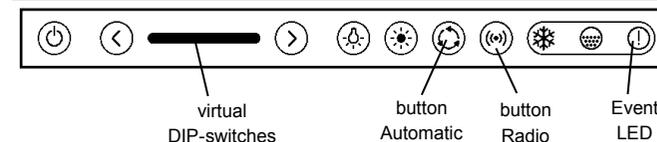
Press and hold the button for 5 seconds. To simplify matters, the LED lights up green every second during this time. Release the button after 5s.

The module is now in coupling mode, indicated by the red LED lighting up every second.

The coupling mode is automatically terminated after 30 s if no coupling process has taken place.



**Coupling mode on the Ne<sup>xt</sup>**



To teach additional radio components to the Ne<sup>xt</sup> with FM-EO radio module, it must be set to coupling mode.

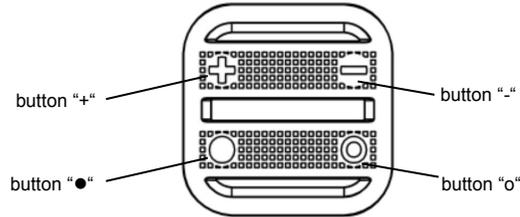
To do this, switch off the Ne<sup>xt</sup> and hold down the Radio button on the control element for 5 seconds. To simplify matters, the Event LED lights up every second during this time. Release the button after this time has elapsed. The LED of the button flashes every second and the virtual DIP switches light up. The module is now in coupling mode.

The coupling mode is automatically terminated after 30s if no coupling process has taken place.

### Coupling the radio remote control RC-EO

To couple the radio remote control RC-EO, the radio module FM-EO must be set to the device-specific coupling mode as described. Then press the "+" button on the RC-EO three times within 2 seconds.

If the coupling process to the FM-EO of the Silvento ec is successful, the red LED of the module will stop flashing.  
When used with the Ne<sup>xt</sup>, successful operation will stop the button "Radio" from flashing.



### Operation of Silvento ec and Ne<sup>xt</sup> via RC-EO

Button	Silvento ec	Ne <sup>xt</sup>
+	Regulated ventilation	Increase stage +1
-	Base load stage	Lower stage -1
●	Automatic operation (5/EC-FK)	Automatic operation ON/OFF
o	Reduced operation mode	Switch off the device
● +	-	Activate summer ventilation
o -	-	Deactivate summer ventilation

If the humidity-controlled automatic mode of the Ne<sup>xt</sup> is activated, a manually modified stage will be valid for one hour. After this time has elapsed, the Ne<sup>xt</sup> resumes control.

If a run-on time is configured on the function board of the Silvento ec, pressing the "-" button will not activate the base load stage until the run-on time has elapsed. The same applies if a switch-on delay has been configured.

The summer ventilation is automatically deactivated after eight hours.

### Coupling the humidity and temperature sensor SFT-EO

Before the SFT-EO sensor is coupled, it must be decided whether the sensor to be coupled is to be used as an outdoor or indoor sensor. Only one indoor sensor and one outdoor sensor can be coupled per FM-EO.

#### Silvento ec:

Depending on the intended location, DIP switch 2 of the radio module must be set to ON (outdoor sensor) or OFF (indoor sensor).

Now start the coupling mode as described overleaf.

#### Ne<sup>xt</sup>:

Start the coupling mode as described overleaf. The radio button flashes and the virtual DIP switches are visible. Here, LED OFF = 0 and LED ON = 1. Depending on the intended location, the DIP switch must be set by rolling the Radio button.

- 1-1-1-1 for indoor sensor and 1-0-0-0 for outdoor sensor

To couple the sensor to the Silvento ec or Ne<sup>xt</sup>, simply press the button on the bottom of the solar cell one time.

### Coupling the Silvento ec with radio module FM-EO to the Ne<sup>xt</sup> with FM-EO

For active exhaust air compensation, a Ne<sup>xt</sup> with FM-EO radio module can be coupled to the FM-EO radio module of a Silvento ec.

To do this, set DIP switch 4 of the FM-EO of the Silvento ec to ON and set the Ne<sup>xt</sup> to coupling mode as described overleaf. To couple the Silvento ec, now press the FM-EO button one time.

If the coupling process is successful, the Event LED will stop flashing and the bar display will go out. The Ne<sup>xt</sup> can now be switched on again.

If the Silvento ec is now switched to the regulated ventilation stage >30m<sup>3</sup>/h, the Ne<sup>xt</sup> will switch to supply air mode. If regulated ventilation is deactivated, the Ne<sup>xt</sup> will automatically return to heat recovery mode.

### Coupling Ne<sup>xt</sup> devices to one another with one FM-EO per device

Two or more Ne<sup>xt</sup> devices, each equipped with an FM-EO radio module, can be coupled to one another. Here you can choose between two different modes.

#### Mirroring:

In this mode, only two devices can be coupled to each other. For both radio modules, DIP switch 4 must be set to ON. Both devices can be operated and will always run synchronously in operating stage and operating mode.

#### Master-Slave mode:

Any number of additional Ne<sup>xt</sup> devices can be coupled to one Ne<sup>xt</sup>. For the Master device used for control, DIP switch 4 of the FM-EO module must be set to ON. For Slave devices, DIP switch 4 must be set to OFF. The operating stage and the operating mode of the Master device are transferred to the coupled Slave devices. The Slave device can still be operated, but has no effect on the Master device and will be overwritten by it when the operating stage or mode is changed the next time.

### Coupling of Ne<sup>xt</sup> A and Ne<sup>xt</sup> B (mirroring/Master-Slave mode)

#### Mirroring.

To couple two devices in mirror mode, Ne<sup>xt</sup> A must be set to coupling mode as described overleaf. Ne<sup>xt</sup> B must be switched off. Press the Radio button of Ne<sup>xt</sup> B one time in the deactivated state. If the coupling process is successful, the radio button on Ne<sup>xt</sup> A will stop flashing and the bar display will go out.

The procedure must now be repeated for the Ne<sup>xt</sup> B. Set the device to coupling mode as described overleaf. Switch off Ne<sup>xt</sup> A and press the Radio button on the device one time. Wait for confirmation.

#### Master-Slave mode:

In this mode, the Master device that is to be used for operation must be taught to all Slave devices. To do this, put the Slave device into the coupling mode as described overleaf, press the Radio button on the Master device one time. Wait for confirmation and, if required, couple additional Slave devices in the same way.

### Decoupling the external radio component from the FM-EO of the Ne<sup>xt</sup>

To decouple a radio component (button / sensor / remote control or similar) from the Ne<sup>xt</sup>, please proceed as follows.

Switch off the device and then press and hold the Radio and Automatic buttons for 5 seconds. During this time, the Event LED lights up red again every second.

Release the button. The Event LED continues to light up every second.

For decoupling

- UNI-EO und FM-EO (Silvento ec): Press button once
- FM-EO (Ne<sup>xt</sup>): Press Radio button once
- RC-EO: Press button "+" 3 times
- SFT-EO: Press button once

If the process is successful, the Event LED will stop flashing.

### Decoupling the radio component from the FM-EO of the Silvento ec

To decouple a radio component (button / sensor / remote control or similar) from the FM-EO of a Silvento ec, please proceed as follows.

Keep the button of the FM-EO pressed for 15s. During this time, the green LED lights up every second.

Release the button. The green LED continues to light up every second.

To decouple

- RC-EO: Press button "+" three times
- SFT-EO: Press button behind the solar cell one time

If the process is successful, the green LED will stop flashing. The red LED will confirm the process by lighting up five times.

### Notes