

# **MultiPlexBox Touchscreen Controller**

Part No: 90001254

Manual on the correct usage, maintenance, and  
installation of the MultiPlexBox touchscreen controller

# 1. Contents

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## 1.0 General Information

To ensure complete and effective operation and for your own safety, all the following instructions should be read carefully and observed. The relevant national standards, safety regulations and instructions as well as the technical connection conditions of the energy supply company must be observed and applied. Keep the Installation and Operating Instructions as a reference with the unit. After the final assembly, the document must be handed out to the operator (tenant/owner).

**1.1 Warning: Safety instructions will be presented in a box such as this. All symbols must be followed and adhered to. To not do so will or could result in a dangerous situation.**

### 1.2 Warranty and Liability claims

To safeguard the guarantee and liability claims of the customer, the following must be observed: Installation and use according to the Installation and Operating Instruction manual. The use of accessories, which are not approved, recommended, or offered by Airflow Developments, is not permissible. Any damages are excluded from the guarantee. If these instructions are not observed, all warranty claims are excluded. This also applies to any liability claims extended to the manufacturer.

### 1.3 Regulations

If the product is installed correctly and used to its intended purpose, it conforms to all applicable regulations including UKCA and CE guidelines at its date of manufacture.

### 1.4 Receipt

Please check delivery immediately on receipt for accuracy and damage. If damaged, please notify the carrier immediately. In case of delayed notification, any possible claim may be void.

### 1.5 Storage

When storing for a prolonged time, the following steps are to be taken to avoid damaging influences: Protection by dry, air-dustproof packing (plastic bags with drying agent and moisture indicators). The storage place must be waterproof, vibration-free and free of temperature variations. Damages due to improper transportation, storage or commissioning must be verified and are not liable for warranty.

### 1.6 Area of application

The controller referenced in this manual is intended for controlling the MultiPlexBox by Airflow Developments. It is not a ready-to-use product and it may only be operated once the ventilation system has been properly installed and connected. The controller is designed for flush mounting in an empty socket with a diameter of 68mm. **Any use other than the intended use is prohibited!**

### 1.7 Disposal

Dispose of all components in an environmentally friendly manner in accordance with the local codes, practices, and environmental regulations in your area. An authorised specialist waste processing company must dispose of the unit or the individual components. The appointed contractor must ensure that:

- The components are separated according to material types and recycled where possible.
- The used operating materials are sorted and separated according to their respective properties. The controller contains batteries or accumulators.

We are obliged to point out the following: Batteries and accumulators are subject to regulation regarding their disposal. Please ensure all batteries are disposed of responsibly. Batteries or accumulators that contain harmful substances are labelled with the symbol of a crossed-out waste bin. The chemical symbol of the harmful substance is specified as such: Cd for Cadmium, Pb for Lead and Hg for Mercury.

## 1.8 Operating Modes

The controller allows user control of the ventilation unit. It is equipped with a temperature sensor for measuring the local room temperature which is displayed on the screen, A time control system and a USB interface. The control element has the following operating modes:

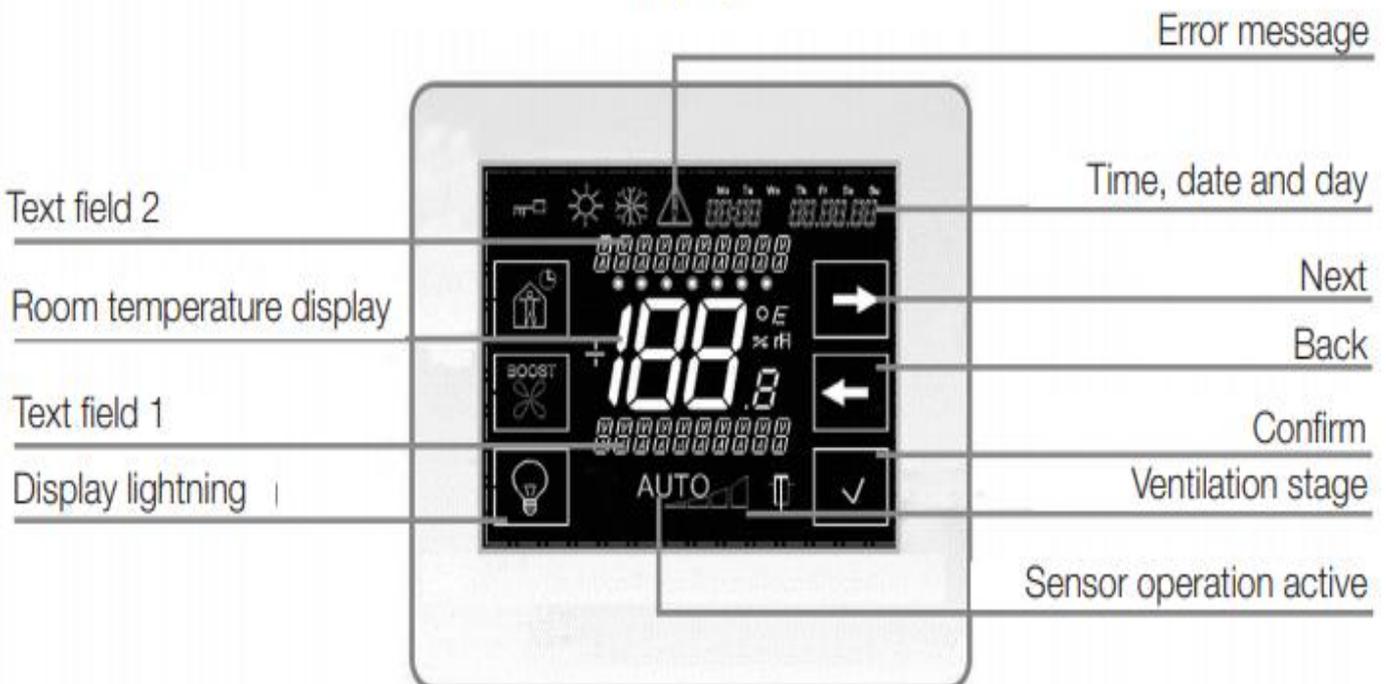
- Manual operation
- Automatic operation
- Time programme
- OFF (only if MultiPlexBox function configuration is activated)

The “operating mode” key can be used to select operating mode.

### Selection and Setting keys



### Display



## 1.9 Menu Functions

By pressing the “Next” key (arrow pointing right), the user will reach the first menu level. The following menu options can be selected:

- Edit time programme
- Copy time programme
- Settings
- Service

The menu is selected by pressing the “Confirm” key (tick).

All settings are adjusted according to the same principle:

Change to the next/previous menu level: → / ←

Increase/reduce value or change the setting: + / -

Select setting or confirm change: ✓ / **Set**

One step back: ↶

### 1.9.1 Operating Modes

**Manual operation** When manual operation is selected, the control panel for the ventilation level setting is also displayed. By pressing the “Ventilation stage” key, basic ventilation, ventilation level 1, ventilation level 2, ventilation level 3 and Off can be selected (the Off function is only possible when basic ventilation is deactivated in the Service menu of the software program). The selected ventilation stage is displayed in text field 1.

**Time programme (weekly time programme)** When the time programme option is selected, a clock is also shown in the “Operating mode” control panel (top right corner). The ventilation stages are set automatically according to the selected time programme. The active ventilation stage is displayed in the “Ventilation stage” display.

**Automatic operation** When automatic operation is selected, the ventilation stages are controlled automatically depending on the air quality. The measured air quality is shown in the display in the “Sensor” display. “AUTO” will also display with the current ventilation stage. The sensitivity of the sensor control can be adjusted in the “Settings” menu.

**OFF** (only possible when basic ventilation is deactivated) When “Off” mode is selected, the dampers will be closed and the air discharge/supply to the service unit will be interrupted.

### 1.9.2 Display Light

The display light is set using the “Light” control panel (lamp symbol). In this respect, hold the key for 5 seconds. Either “Continuous display” (lamp symbol without arrow) and “Automatic deactivation after 30 seconds” (lamp symbol with arrow) can be selected.

**The deactivated display can be reactivated by touching the bottom left corner of the screen.**

### 1.9.3 Time Programme

The weekday can be selected under “Edit time programme”. Select the desired weekday using the arrow keys. Then select the time segment, set the hours and minutes, and select the desired fan speed. You can also save other time segments (max. 6 segments per day). In addition, ventilation stage 0 (only if basic ventilation deactivated), ventilation stage G (basic ventilation) and ventilation stage A (automatic operation) can also be set in the time programme function.

#### **Example:**

Segment 1: 22:00 hrs, ventilation stage 1

Segment 2: 06:00 hrs, ventilation stage 2

Segment 3: 08:00 hrs, ventilation stage 1

The ventilation unit is active from 22:00 to 06:00 on ventilation stage 1, from 06:00 to 08:00 on ventilation stage 2 and from 08:00 until the next set time segment. If no time is set, the unit will continue basic ventilation (ventilation stage 1).

## Copy time programme

Select the weekday to be copied as a template. Confirm your selection and then select the target weekday and confirm this selection again. If necessary, repeat this step for the other weekdays.

### 1.9.4 Settings

The following options can be selected under the menu item "Settings":

- Date / Time
- Duration of Ventilation stage 3
- Sensor sensitivity
- Versions (software version)
- Language

#### Date/Time

Setting for current time and date. The summer/winter time is automatically adjusted.

#### Duration Ventilation stage 3

The set duration of the ventilation stage can be specified between 5 and 240 minutes in this menu item. If ventilation stage 3 is selected in "Manual operation" mode, the ventilation unit will switch back to ventilation stage 2 after the specified period.

#### Sensor Sensitivity in automatic operation

The detailed settings for sensor sensitivity on automatic operation (low/medium/high).

Parameters			
Sensor	Low	Medium	High
Humidity sensor [% r.F.]	50	45	40
	60	55	50
	70	65	60
Air quality sensor [ppm]			
	900	600	500
	1200	800	700
	1500	1000	900

#### Versions (software version)

The current software version of the controller is shown.

#### Language

The available menu languages are English and German.

### 1.9.5 Firmware Update

Download the MultiPlexBox configuration and commissioning software. After installation, start the programme "MultiPlex update". Connect the controller to your PC/Laptop using a Mini USB to USB A cable (not included in delivery).

Click on the 'Establish connection' button. The main update tool window will open. Now click on 'Select file', select the controller firmware in the window that opens and then 'Open'.

Click on 'Start', the firmware update will then be performed, and the progress will be displayed in a status bar. After a successful update, the "update complete" message will appear in the top right of the display window. You can then disconnect the controller from the USB cable and close the programme. Your controller firmware will now be up to date.

### 1.9.6 Service

Service menu only for factory customer service team and does not need to be adjusted in any circumstances.

### 1.9.7 Errors

In case of an error, an exclamation mark will flash in the display and the corresponding error code will appear in text field 2.

Error Group	Error Number	Description
0	0	No error
2	1	Error communication. Unable to set up communication between MultiPlexBox and touchscreen controller
2	3	Error communication internal sensor. Unable to communicate with configured sensor.
3	19	Error differential pressure sensor supply air. Unable to read sensor.
3	20	Error differential pressure sensor extracted air. Unable to read sensor.
4	1	Error memory system. Unable to load parameter data.

## 2.0 Installation

### 2.0 Technical Data

**Voltage:** 12 V

**Operating Stages:** 3

**Control Line:** J-Y(St) 2 x 2 x 0.6

**Protection Rating:** IP20

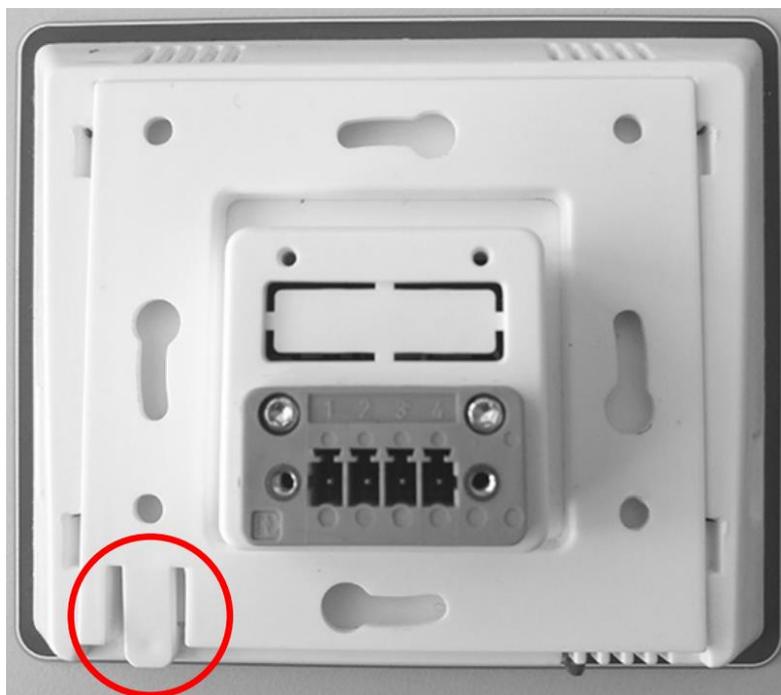
**Dim. (WxHxD) mm:** 110 x 93 x 19

**Ambient temperature / humidity:** 0-55°C 95% RH (not condensing)

**Weight:** 123g

### 2.1 Installation/removal

- Screw the mounting frame to the flush mounted box.
- Wire connector according to wiring diagram.
- Plug the connector into the device and the controller.
- Slide the controller into the frame, until snap-fit is re-engaged. - Removal: Press the snap-fit towards the wall and push the device upwards.



## 2.2 Wiring Diagram

Please wire the controller following the wiring diagram 1 below. Use the connection location as a reference.

**Warning!** Danger to life through electric shock. The electrical connection and installation work must only be carried out by a qualified electrician with the relevant legal authorisation. Do not attempt anything in this manual if you are unsure of the correct implementation safety measures.

### Controller Connection

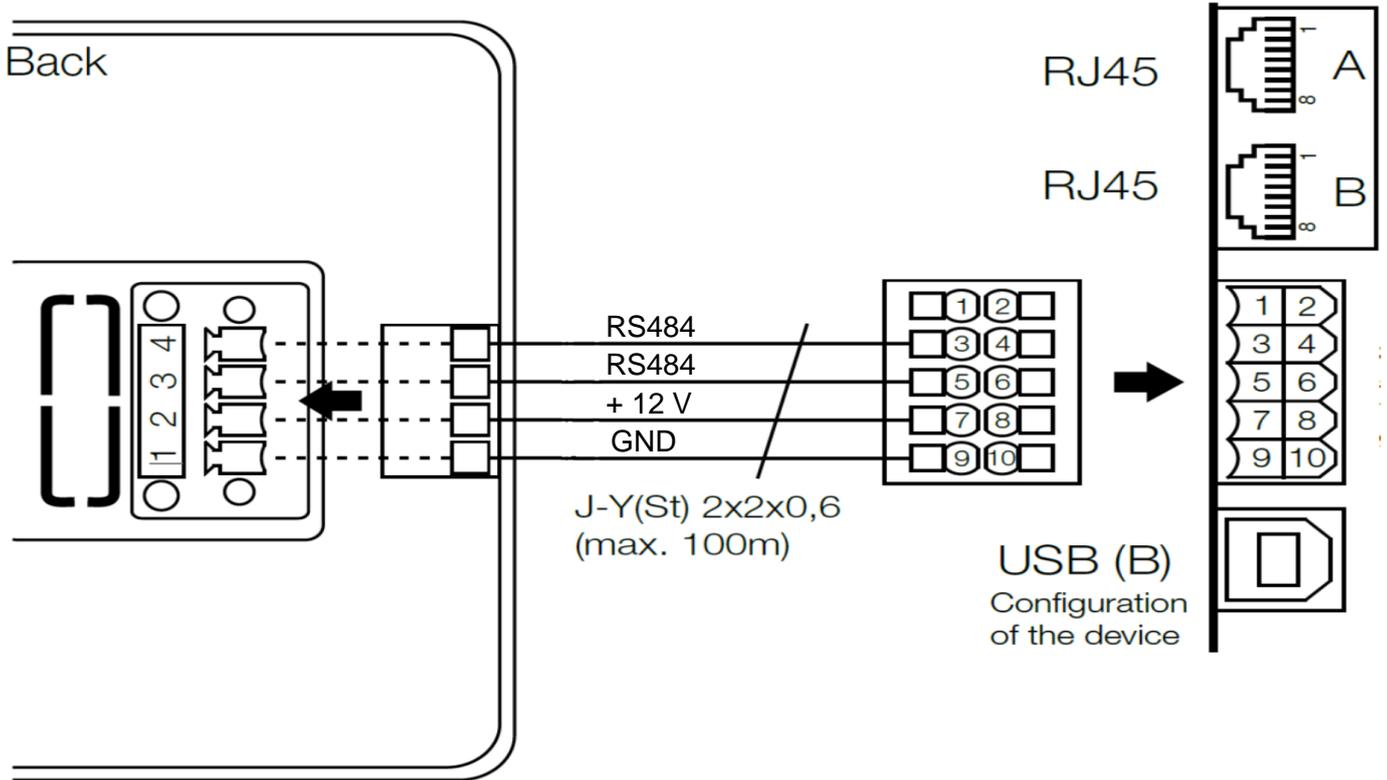
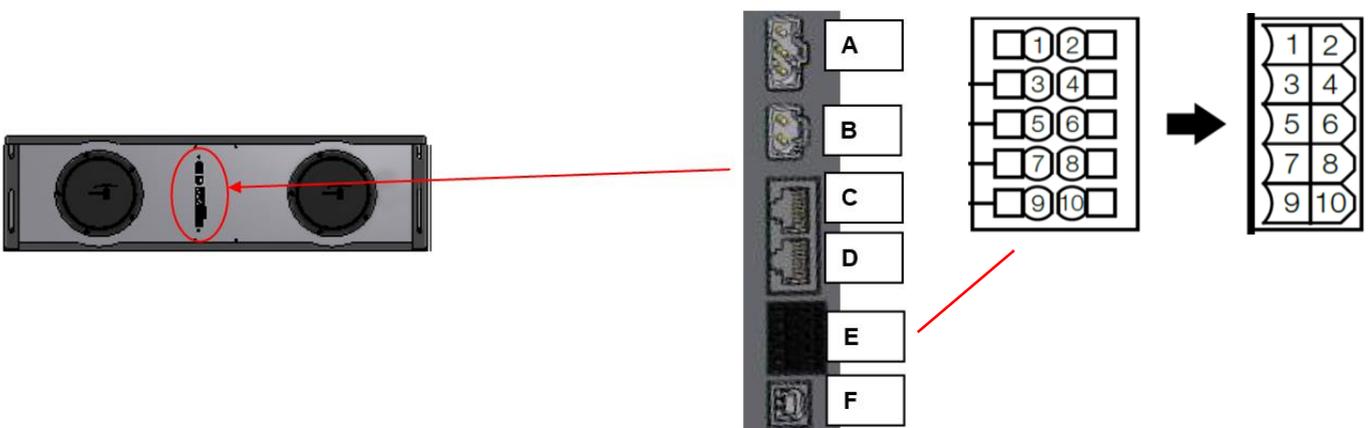


Diagram 1: Wiring of the touchscreen controller

### Location Reference



- A. Mains Voltage (230 V AC)
- B. Switching contact (potential-free max. 5 A)
- C. Modbus A
- D. Modbus B
- E. Control unit**
- F. USB (PC connection)



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