



## WCC 106BT

# MotorController with bluetooth remote control



Comfort ventilation



Operating voltage



±24V DC actuators



MotorLink®



Bluetooth

### Application

- for daily comfort ventilation
- for controlling ±24V DC standard window actuators and window actuators with MotorLink®
- up to 2 comfort ventilation groups with a max total power consumption of 6A
- may be combined with external temperature and time automated BMS
- opening/closing of windows via bluetooth remote control

MotorController for controlling ±24V DC standard actuators and MotorLink® actuators for daily comfort ventilation. It can also control locking actuators. The number of actuators that may be connected to the motor line depends on the type of actuator – see the table, “Maximum number of actuators per MotorController” for type/number.

### Description

The MotorController controls (opens/closes) the window actuators based on a signal from the included remote control or the connected component(s) e.g. room sensors and weather sensors.

In addition to the supplied remote control, it is also possible to connect comfort keypads.

Connecting a room thermostat to the MotorController, gives the option for incremental opening / closing of the windows when the temperature setpoint is exceeded.

Up to 10 MotorControllers can be connected as part of a larger solution and may be connected to the same weather station.

The MotorController is also supplied in a 6A version and a 3A version without remote control.

### Prioritised inputs

The actuators may be overridden via three prioritised inputs. All switches must be potential free.

- common CLOSE ALL/safety (rain) function (highest priority)
- hand operation of the motor line
- automated control of the motor line (lowest priority)

### Power supply for external units

When connecting sensors the auxiliary power from the built-in 24V DC 500mA power supply can be used

## Specifications

- up to 2 motor groups with up to total max power consumption of 6A
- Max output voltage 24VDC at 230VAC
- simple and quick installation
- up to 10 MotorControllers may be linked
- rain/wind sensors can be connected
- roomthermostat can be connected
- 3 prioritised inputs
- Bluetooth remote control

The MotorController may either be mounted horizontally or vertically on a wall.

The remote control has an operation range up to 50m outside and 10m inside. Physical barriers such as walls, cabinets etc. will reduce the operation range.

## Configuration

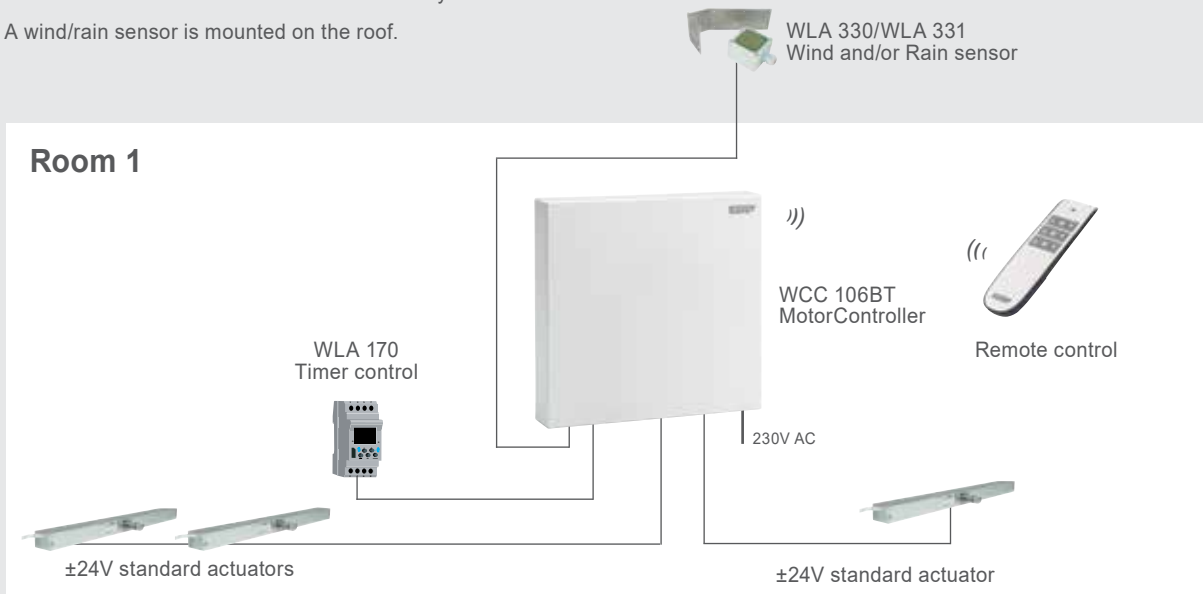
The MotorController has 8 DIP switches for configuration. The factory setting for all the DIP switches is OFF.

DIP-switch		
Switch	Description	ON / OFF function
1	Maintained action	ON: the actuators open/close completely when the comfort keypad is pressed. OFF: the actuators run for as long as the comfort keypad is being pressed.
2	Rain delay	ON: the rain signal must be active min. 60 sec. before the actuators begin to close. OFF: the actuators begin to close as soon as the rain signal is activated.
3	Extended hand timer	ON: after manuel override the actuators are locked for 2 hours (except rain/safety signals). OFF: after manuel override the actuators are locked for 30min (except rain/safety signals).
4	Surveillance	ON: activate cable surveillance on input X10.1 (rain). The Input must be terminated with 10k resistor. OFF: no cable surveillance.
5	MotorLink®	ON: MotorLink® motors are connected to the MotorController. OFF: ±24V standard motors are connected to the MotorController.
6	100% speed	ON: actuators run with 100% speed, when run manually. OFF: actuators run with 75% speed, when run manually.
7	Accumulated step	ON: actuators open/close in steps, when a thermostat e.g. WLA 110 is connected to the MotorController and the setpoint ist exceeded. Opening step: 5% for every 5min Closing step: 10% for every 10min OFF: actuators open/close completely when a thermostat e.g. WLA 110 is connected to the MotorController and the setpoint is exceeded
8	Motor line 2, motors run independently	ON: the actuators on motor line 2 are controlled individually via input X2, X3, X4 and X5. Up to 4 actuators can be connected to motor line 2 and all actuators must be single / -1 actuators. The actuator's serial number determines, which input controls which actuator, the serial number is automatically identified by the firmware in the MotorController. X2 – controls the actuator with the highest serial number X3 – controls the actuator with the second-highest serial number X4 – controls the actuator with the second-lowest serial number X5 – controls the actuator with the lowest serial number  The actuators can be identified by activating the different inputs. The serial number can also be read on the product label on the actuator.  Actuators on motor line 1 are controlled together via input X10. Up to 4 actuators can be connected to motor line 1. All actuators on motor line 1 must be of the same type, incl. team size and chain length. The actuators must be either single /-1 or quad /-4.  All connected actuators on both motor lines must be MotorLink® actuators and DIP switch #5 must also be set to ON. This DIP switch setting does not influence how the actuators on the two motor lines are controlled via the remote control. OFF: 2 Motor groups with a motor line each

### Example 1: WCC 106BT with timer control and wind/rain sensor

In the room 3 pcs.  $\pm 24V$  standard actuators are connected.  
 The remote control is used for operation of the windows.  
 A timer control is fitted that opens / closes the windows in the room at preset times, e.g. open and close at start and end of a lunch break and "close all" at the end of the day.

A wind/rain sensor is mounted on the roof.

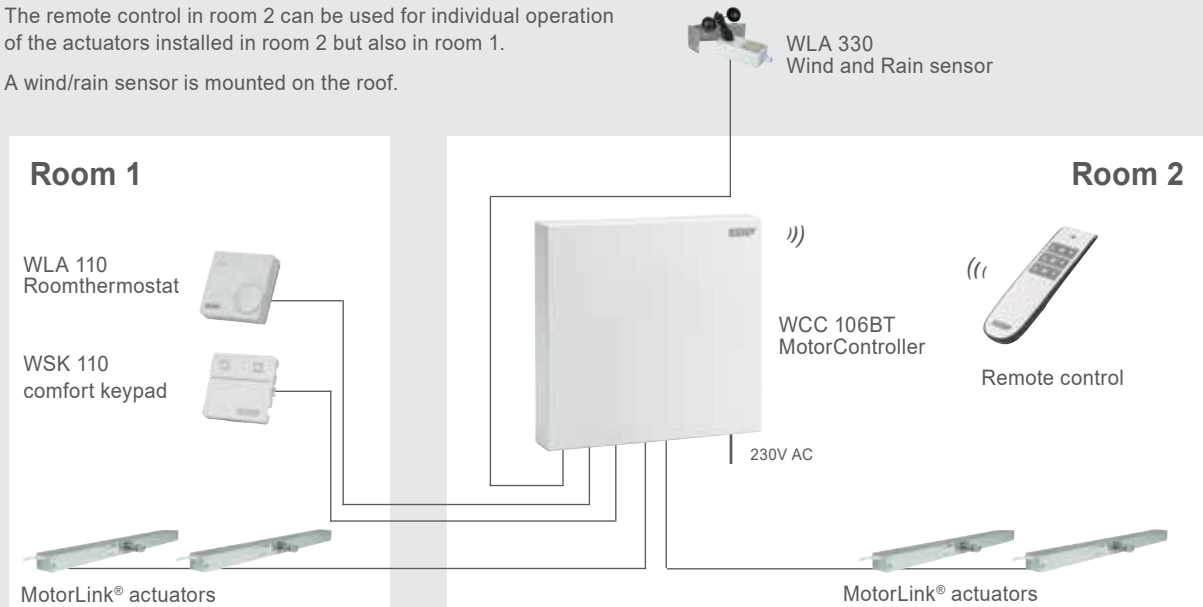


### Example 2: WCC 106BT with room thermostat and comfort keypads

In both rooms MotorLink<sup>®</sup> actuators are connected.  
 In room 1 a room thermostat is connected for automatic opening/ closing of the window based on the room temperature. Comfort keypads are installed for individual operation of the actuators installed in room 1.

The remote control in room 2 can be used for individual operation of the actuators installed in room 2 but also in room 1.

A wind/rain sensor is mounted on the roof.



Technical specifications							
Output current	6A incl. load on X7 (max 0.5A)						
Motor groups / Motor lines	Up to 2 motor groups with each 1 motor line. Either $\pm 24V$ standard actuators or MotorLink® actuators can be connected to the MotorController						
Primary voltage	MotorController: 100-240 VAC 1.7A 50/60Hz Remote control: 2 x AAA alkaline batteries (1.5V)						
Actuator secondary voltage	<table border="1"> <tr> <td>Nominal voltage</td> <td>24V DC (<math>\pm 15\%</math>)</td> </tr> <tr> <td>Open circuit voltage at 230V AC (no load)</td> <td>24V DC @ 20°C</td> </tr> <tr> <td>Ripple at max load</td> <td>200mVp-p</td> </tr> </table>	Nominal voltage	24V DC ( $\pm 15\%$ )	Open circuit voltage at 230V AC (no load)	24V DC @ 20°C	Ripple at max load	200mVp-p
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Open circuit voltage at 230V AC (no load)	24V DC @ 20°C						
Ripple at max load	200mVp-p						
Power consumption	Idling < 0.5W Max load 150W						
Inrush current on primary side	60A < 5ms v. 230V Max. 3 x WCC 106BT per 10A power supply group. Circuit breaker "C" characteristic.						
AUX	24V DC, 500mA						
Operating conditions	-5°C - +45°C, for indoor installation, the controller may not be covered						
Switch-on duration	ED 40% (4 min. per 10 min.)						
Connection cable	<p><b>Actuators</b> Flexible max 6mm<sup>2</sup> / solid max 10mm<sup>2</sup>, max 2V voltage drop.</p> <p><b>Other components</b> Min 0.2mm<sup>2</sup> / max 1.5mm<sup>2</sup></p>						
Operation range between MotorController and remote control	<p>The used Bluetooth technology (Bluetooth 4) has the following operation range:</p> <ul style="list-style-type: none"> <li>- Outside: up to 50m in radius</li> <li>- Inside: up to 10m in radius</li> </ul> <p>Physical barriers such as walls, cabinets etc. will reduce the range.</p>						
Size	MotorController: 215 x 206 x 37mm (W x H x D) Remote control: 41 x 18 x 144mm (B x H x L)						
Material	Plastic						
Colour	White (RAL 9016)						
Weight	MotorController: 0.92kg Remote control: 61g (incl. batteries)						
IP rating	IP20						
Safety class	I (with PE)						
Delivery includes	Standard version: MotorController with 1.2 m cable with Schuko plug and remote control UK version: MotorController with 1.2 m cable with Schuko plug with UK network adapter and remote control						
Note	We reserve the right to make technical changes						

## Max number of actuators per MotorController

The following table shows the maximum number of actuators, based on actuator type ( $\pm 24V$  standard or MotorLink<sup>®</sup>) that can be connected to the MotorController. Total power consumption for all connected actuators may not exceed 6A.

Actuator type	Per Motor line		Per MotorController	
	$\pm 24V$ actuators	MotorLink <sup>®</sup> actuators	$\pm 24V$ actuators	MotorLink <sup>®</sup> actuators (2 motor lines)
WMD 820-1	6	4	6	6
WMD 820-2	6	2	6	4
WMD 820-3	6	3	6	6
WMD 820-4	4	4	4	4
WMS 306 / 309-1	6	2	6	4
WMS 306 / 309-2	6	2	6	4
WMS 306 / 309-3	6	3	6	6
WMS 306 / 309-4	4	4	4	4
WMS 409 xxxx 01	3	0	3	0
WMS 409-1	3	3	3	3
WMS 409-2	2	2	2	2
WMS 409-3	3	3	3	3
WMU 831 / 836 / 851-1	6	4	6	6
WMU 831 / 836 / 851-2	6	2	6	4
WMU 831 / 836 / 851-3	6	3	6	6
WMU 831 / 836 / 851-4	4	4	4	4
WMU 852-1	3	3	3	3
WMU 852-2	2	2	2	2
WMU 852-3	3	3	3	3
WMU 861-1	2	2	2	2
WMU 861-2	2	2	2	2
WMU 842 / 862 / 882-1	2	2	2	2
WMU 842 / 862 / 882-2	2	2	2	2
WMU 863 / 883-1	2	2	2	2
WMU 863 / 883-2	2	2	2	2
WMU 864 / 884-1	1	1	1	1
WMU 885 / 895-1	1	1	1	1
WMX 503 / 504 / 523 / 526-1	12	4	12	8
WMX 503 / 504 / 523 / 526-2	12	2	12	4
WMX 503 / 504 / 523 / 526-3	12	3	12	6
WMX 503 / 504 / 523 / 526-4	12	4	12	8
WMX 803 / 804 / 813 / 814 / 823 / 826-1	6	4	6	6
WMX 803 / 804 / 813 / 814 / 823 / 826-2	6	2	6	4
WMX 803 / 804 / 813 / 814 / 823 / 826-3	6	3	6	6
WMX 803 / 804 / 813 / 814 / 823 / 826-4	4	4	4	4
WML 820 / 825	6	0	6	0
WML 860-1	6	4	6	6
WML 860-2	6	2	6	4
WML 860-3	6	3	6	6
WML 860-4	4	4	4	4
WMB 801 / 802	Actuators with a total max of 4A can be connected to the locking actuator			
WMB 811 / 812 / 815 / 816 / 817 / 818*	6	2	6	2

\* When having two locking actuators on one motor line use: 1 x WMB 811 and 1 x WMB 812, 1 x WMB 815 and 1 x WMB 816 or 1 x WMB 817 and 1 x WMB 818

WCC 106BT

# MotorController

Variants	Item number
MotorController 6A	WCC 106BT 0101
MotorController 6A, UK version	WCC 106BT 0401

Accessories	Item number
Comfort keypad, for fitting	WSK 100 1161
Comfort keypad, 1 window or 1 window group	WSK 110 0A0B
Comfort keypad, 2 windows or 2 window groups	WSK 120 0A0B 0A0B
Comfort keypad, for fitting (CH version)	WSK 300
Room thermostat: temperature	WLA 110
Wind/rain sensor	WLA 330
Rain sensor	WLA 331