

WCC 310/320 PLUS

CONTROL UNIT

VOLTAGE

Input = 230V AC, Output = 24V DC

MOTOR LINES

2 (WCC 310-PLUS-2) (WCC-320-PLUS-2), 6 (WCC 310-PLUS-6) (WCC-320-PLUS-6) or 10 (WCC 310-PLUS-10) (WCC-320-PLUS-10)

MOTOR LOAD

10 A (WCC 310-PLUS-2/6/10) or 20 A (WCC 320-PLUS-2/6/10)



DESCRIPTION

For daily comfort ventilation to be used with $\pm 24V$ standard window actuators and window actuators with MotorLink®. 2, 6 or 10 motor lines. 10A or 20A can be expanded with field bus card with interface for KNX, BACnet IP MS/TP and Modbus TCP/RTU/RS485 with build-in touch screen for configuration. MotorController for the control of $\pm 24V$ DC standard actuators and actuators with MotorLink® for daily comfort ventilation. It can also control espagnolette / locking actuators. The MotorController is used for control of 2, 6 or 10 individual motor lines. The number of actuators, which can be connected on each motor line depends on the type of actuator – see the table “Max numbers of actuators per motor line and MotorController” for type and number.

INPUTS FOR

Switch
Key Switch
Thermostat
Wind Sensor
Rain Sensor
Co2 Sensor
Remote Transmitter
BMS (BACnet or KNX)

APPLICATION



DESCRIPTION (CONTINUED)

MotorController is supplied in 6 variants:

- With 10A: WCC 310 P 0202: 10A, 2 motor lines, 2 inputs
WCC 310 P 0612: 10A, 6 motor lines, 12 inputs
WCC 310 P 1012: 10A, 10 motor lines, 12 inputs
- With 20A: WCC 320 P 0202: 20A, 2 motor lines, 2 inputs
WCC 320 P 0612: 20A, 6 motor lines, 12 inputs
WCC 320 P 1012: 20A, 10 motor lines, 12 inputs

All versions can be expanded with field bus card. In the MotorController each motor line can have a max load of 10A. The total max current consumption of all motor lines must not exceed 10A / 20A. The MotorController is also supplied as a STANDARD version – please see the separate product sheet for further information.

Description

The MotorController controls (opens/closes) the window actuators based on the signals from the connected components e.g. keypads, room sensor, weather sensor and BUS commands. We recommend keypads are used in conjunction with ventilation automation to allow local manual user override.

Communication

The communication between the MotorController and each window actuator is done via a 2 or 3 wire cable this depends, if the actuator has MotorLink® or not.

Actuators without MotorLink®

The communication is controlled via a 2 wire cable. If a 3 wire cable is used, cable monitoring can be added and is to be selected on the touch screen in the MotorController. The positioning of the windows is based on time control with a limited precision.

Actuators with MotorLink®

The communication is controlled digitally via MotorLink® in a 3-core (power and communication wire). The position of the window is controlled with millimetre accuracy. This is done via the position feedback from the actuators to the MotorController. Via this communication the system continuously registers the extent of the window opening. The MotorController immediately reports if a malfunction occurs on one of the motor lines.

Actuator speeds

This MotorController gives the possibility of up to three window actuator speeds depending on the type of actuator connected:

±24V DC standard actuator – 1 speed (speed B)
MotorLink® actuator – 3 speeds (safety / manually operated / automatically)

The different speeds:

- A. automatically control speed – actuators run slowly and almost soundlessly.
- B. manual control speed – actuators run faster and more audibly.
- C. safety control speed – actuators run fastest.

Communication card

The MotorController can be expanded with a communication card (fieldbus card) thus daily comfort ventilation will be possible via bus communication KNX, BACnet IP MS/TP or Modbus TCP/RTU/RS485 together with comfort controls e.g. NV Comfort® and NV Advance®. The field bus card is to be ordered separately.

Card types

WCA 3FK: KNX interface
WCA 3FB: BACnet-IP key
WCA 3FM: BACnet MS/TP / Modbus RTU/RS485 interface
The MotorController is integrated into KNX and BACnet projects using the relevant application. In the application there are a number of communication objects and parameters, which help to ensure a flexible integration with other KNX/BACnet products and control units.

Configuring / commissioning / maintaining.

The MotorController PLUS is configured, commissioned and maintained via the built in LCD touch screen – easy and simple without the use of an external PC.

For easy commissioning and quick troubleshooting when maintaining the system, faults in the system will be displayed on the touch screen.

Configuration options

2 outputs as comfort group 1 respectively comfort group 2
wind speed sensor to be connected directly master/slave when linking with e.g. smoke control panels type WSC 310 or WSC 320 output when error input can be freely configured
speeds can be configured
sequence control ventilation timer
20A on one motor line (only WCC 320) event log.

Specifications

2, 6 or 10 motor lines (comfort ventilation groups) with up to 10A / 20A max. 10A/motor line automatically limited opening for comfort ventilation – no additional modules required
field bus cards are available for KNX, BACnet IP MS/TP and Modbus TCP/RTU/RS485 max. output voltage 27.6VDC @230VAC easy configuration at start up / expanding / rebuilding on the 2½" LCD built in touch screen in the panel – this can also be done on a PC without any additional modules
the touch screen is also used for quick troubleshooting when maintaining the system simple and fast installation.

Actuator and power supply cables are quickly and easily connected to the MotorController. The cable access can be made from the top or from underneath the MotorController, which can be mounted vertically or horizontally on the wall.

TECHNICAL DATA

| | |
|----------------------------|--|
| Primary Voltage (Input) | 230V AC |
| Secondary Voltage (Output) | 24V DC |
| Motor Load | 10 A (WCC 310-PLUS-2/6/10) or 20 A (WCC 320-PLUS-2/6/10) |
| Motor Lines | 2 (WCC 310-PLUS-2) (WCC-320-PLUS-2), 6 (WCC 310-PLUS-6) (WCC-320-PLUS-6) or 10 (WCC 310-PLUS-10) (WCC-320-PLUS-10) |
| Inputs | Switch, Thermostat, Wind Sensor, Rain Sensor, Co2 Sensor, Wireless Switch, Remote Transmitter, BMS (BACnet or KNX) |
| Operating Condition | -5°C - +45°C |
| Battery Backup | >72 hr |
| Size | 355 x 320 x 76mm |
| Protection Type | IP 20 |
| Delivery | 1 x Control Unit |

ACCESSORIES

| | |
|--------------|---------------------------------------|
| NV SOLO | - Control Unit & Weather Station |
| WCA3FB | - Fieldbus card BACnet-IP key |
| WCA3FK | - Fieldbus card KNX interface |
| WCA3FM | - Fieldbus card BACnet/MSTP interface |
| WLA110 | - Room Thermostat |
| WLA150 | - Co2 & Temperature Sensor |
| WLA330 | - Wind & Rain Sensor |
| WLA331 | - Rain Sensor |
| WSK100 | - Ventilation Keypad |
| WSK-RECEIVER | - Wireless Receiver |
| WSK-REMOTE | - Remote Transmitter 2-Channel |
| WSK-SWITCH | - Wireless Switch |

PART CODES

| | |
|----------------|---|
| WCC310-PLUS-2 | - WCC 310-PLUS Control Unit 24 V 10 A 2-Zone |
| WCC310-PLUS-6 | - WCC 310-PLUS Control Unit 24 V 10 A 6-Zone |
| WCC310-PLUS-10 | - WCC 310-PLUS Control Unit 24 V 10 A 10-Zone |
| WCC320-PLUS-2 | - WCC 320-PLUS Control Unit 24 V 20 A 2-Zone |
| WCC320-PLUS-6 | - WCC 320-PLUS Control Unit 24 V 20 A 6-Zone |
| WCC320-PLUS-10 | - WCC 320-PLUS Control Unit 24 V 20 A 10-Zone |

COMPATIBLE WITH



WMX 804
Chain Actuator



WMX 826
Chain Actuator



WMX 814
Chain Actuator



WMU 842
Chain Actuator

(Multiple 24V DC actuators, total load must not exceed 10 A (WCC 310) or 20 A (WCC 320) max.)