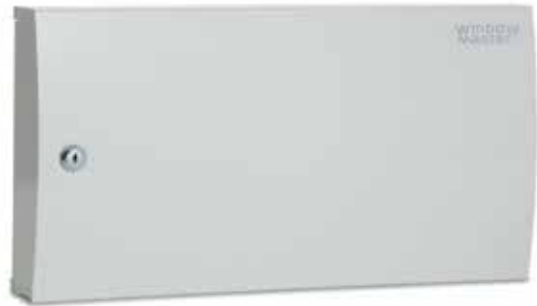


WEC 16M (230V AC)



WEC 16M UL (120V AC)

4.05

WEC 16M / WEC 16M UL MotorController KNX



Natural
ventilation



Rated voltage



Rated voltage



MotorLink®



KNX product



UL certification
– Controls

Application

- for 24 VDC window and espagnolette actuators with MotorLink®
- WEC 16M 040A KNX – 4 motorlines of 4A
- WEC 16M 080B KNX – 8 motorlines of 4A (total max. 16A)
- individual operation via keypads with KNX

The MotorController is used for control of 4 or 8 motorlines each with up to 4 MotorLink® window actuators.

The window actuators open and close automatically via the MotorController. It is possible to connect individual keypads, so a user at any time can open and close a window via a keypad if more or less fresh air is desired.

If the MotorController is connected to the control unit NV Comfort®, the windows can be operated manually via the NV Comfort® touch screen.

The MotorController is available in several versions:
230V without UL certification

- WEC 16M 040A KNX – 16A, 4 actuator groups
- WEC 16M 080B KNX – 16A, 8 actuator groups

120V with UL certification

- WEC 16M UL 040A KNX – 16A, 4 actuator groups
- WEC 16M UL 080B KNX – 16A, 8 actuator groups

The "040A" version has four motor lines and the "080B" version has eight motor lines. Each motor line can have a max load of 4A but the total maximum current consumption of all the motor lines must not exceed 16A.

The windows are controlled individually via the integrated KNX-module, one in the "040A" and two in the "080B".

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

Description

The MotorController controls the window actuators. The communication between the MotorController and the individual window actuators are done digitally via MotorLink® in a 3-core wire (power and communication wire).

The MotorController controls the window actuators in such a way that:

- the actuators have three different opening/closing speeds:
 - automatically control speed – actuators run slowly and almost soundlessly.
 - manual control speed – actuators run faster and more audibly.
 - H&S and safety control speed – actuators run fastest.
- the position of the windows 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 registers if a malfunction occurs on one of the actuators

The MotorController is by means of the matching ETS4 application integrated in KNX projects. In the application there are a number of communication objects and parameters, which are to ensure a flexible integration with other KNX products and control units.

- three opening/closing speeds for the window actuators
- position feedback
- control of the windows is to millimetre accuracy
- immediate recognition of possible actuator malfunction
- easy and flexible mounting

A program for setting the different parameters via KNX in the individual actuators can be supplied.

Specifications

- with integrated KNX modules
- to be used together with MotorLink® window actuators and espagnolette actuators
- 4 or 8 motor lines of 4A – total max of 16A (16A may not be exceeded)

Technical data				
Field bus	KNX TP1			
Engineering software tool	ETS 4 application			
Primary voltage	WEC 16M (not UL): 230 VAC, ±10%, 500VA, 50Hz			
	WEC 16M UL: 120 VAC ±10%, 620VA, 50-60Hz			
Secondary voltage	24 VDC, 4 or 8 motor lines with 4A per motor line however total max of 16A (see the combination table next page and the combination drawing on the last page)			
Inrush current	max. 20A < 5msec			
Standby consumption	ca. 7W (power consumption, when the actuator is not running)			
open circuit voltage	33V at 253V			
Ripple	5 Vpp at 24V = 10%			
Connection	primary side	screw joints up to:	4 mm² flexible cable 6 mm² solid cable	
	secondary side	screw joints up to:	Keypads	Actuators
			1.5 mm² flexible cable	4 mm² flexible cable
			2.5 mm² solid cable	6 mm² solid cable
	max voltage drop 2V however max 50m actuator cable			
Bus connection	KNX bus connection terminal			
Current consumption KNX	WEC 16M 040A / WEC 16M UL 040A: < 1 x 10mA (1 physical address) WEC 16M 080B / WEC 16M UL 080B: < 2 x 10mA (2 physical addresses)			
Safety transformer	the MotorController contains a safety transformer according to EN 61558			
Operating conditions	-5°C - +45°C, for indoor installation, the controller may not be covered			
Material	steel cabinet, lacquered			
Colour	white (RAL 9010)			
Size	455 x 240 x 88mm (W x H x D)			
Weight	7.5kg			
IP rating	IP20			
Certification	WEC 16M UL: certified according to UL Std. 325, Cert. to CAN/CSA C22.2 No. 247-14			
Delivery includes	MotorController. The UL certified version is not supplied with a key.			
Note	we reserve the right to make technical changes			

Items	Item no.
MotorController 230V, KNX, with 4 motor lines of 4A, max. 16A total. With key.	WEC 16M 040A KNX
MotorController 230V, KNX, with 8 motor lines of 4A, max. 16A total. With key.	WEC 16M 080B KNX
MotorController 120V, KNX, with 4 motor lines of 4A, max. 16A total, UL certified. Without key.	WEC 16M UL 040A KNX
MotorController 120V, KNX, with 8 motor lines of 4A, max. 16A total, UL certified. Without key.	WEC 16M UL 080B KNX

Accessories	Item no.
Keypad KNX – for one window / window group, connection via KNX	WEK 112
Keypad KNX – for two windows / window groups, connection via KNX	WEK 122

Combination table		
Window actuator type	Max. number of window actuators which can be connected	
	WEC 16M 040A KNX WEC 16M UL 040A KNX	WEC 16M 080B KNX WEC 16M UL 080B KNX
WMX 503/504/523/526-n*	16	32
WMX 803/804/823/826-n*	16	16
WMU 836-n*	16	16
WMU 861-n*	8	16
WMU 862-n*	8	8
WMU 863/864-1*	4	4
WMU 882-n*	8	8
WMU 883/884*	4	4
WMU 885-1*	**	**
WMS 306-n*	16	16
WMS 309-n*	16	16
WMS 409-n*	8	8
WMB 811-1x*	4	8
WMB 81n-2x*	8	16
<p>In the MotorController each motor line can have a max load of 4A. The total max current consumption of all motor lines must not exceed 16A.</p> <p>* Up to two locking actuators / espagnolette actuators WMB 811 or WMB 812 (one single or two double) can be connected to one window and each window must have its own motor line.</p> <p>** Please contact WindowMaster</p>		

MotorController KNX

Combination drawing: Actuator variants on one motor line

1. The MotorController WEC 16M 040A and WEC 16M UL 040A have 4 motor lines and the MotorController WEC 16M 080B and WEC 16M UL 080B KNX have 8 motor lines
2. When connecting window actuators one should pay attention to:
 - The max current load of the MotorControllers: the max load on the MotorController is 4A per motor line (simultaneously load). The simultaneously max current consumption of all motor lines must not exceed max 16A.
3. Aside from window actuators; espagnolette actuators type WMB 811 / WMX 812 (one single or two double actuators) can be connected to the window. When connecting an espagnolette actuator each window must have its own motor line.

