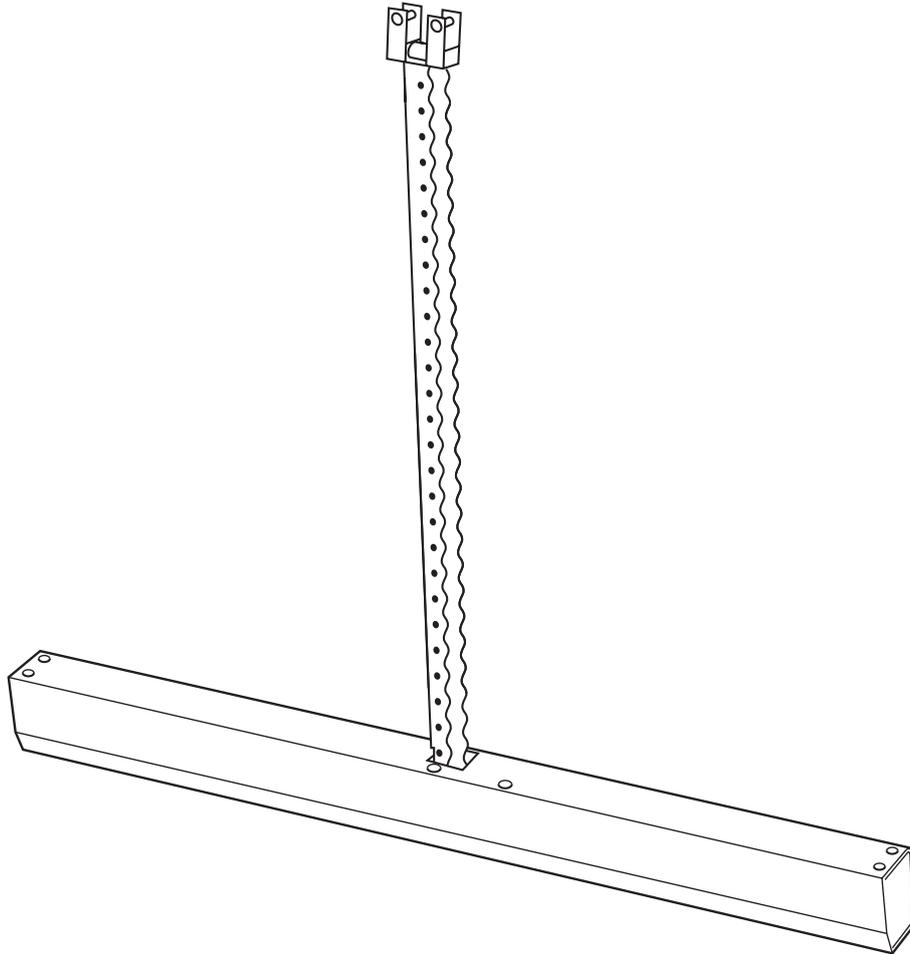


# Data Sheet

## Open System Chain Actuator



### WMU 88V

#### Application

The chain actuator WMU 88V for VELUX modular skylights can be used for both comfort and smoke ventilation (EN 12101-2:2003) and has a built in reversing function that extends the lifetime of the gaskets in the skylight sash.

#### Programmable actuator

The open system chain actuator can be programmed even after installation to suit specific needs, e.g. speed, tensile, compressive force and power consumption.

#### General

The chain actuator can, in addition to  $\pm 24$  V DC control, be integrated in common Building Automation field bus systems, i.e. KNX, BACnet, LON and Modbus, through the integrated MotorLink™ technology that enables e.g. exact position control and feedback, speed, pressure force, chain stroke and entrapment protection. The parameters for these functions can all be changed after installation via the communication wire (green) by a trained service technician.



Open system	
Material	Anodised aluminium housing with zinc cromate passivated steel chain
Weight	Max 5.5 kg
Control system	MotorLink™ or ±24 V DC
Supply cable	5 m grey silicone cable, 3 cord, 0.75 mm <sup>2</sup> (white brown green***)
Chain stroke	Up to 700 mm (depending on module size)*
Opening speed	13 mm/s (full load)*
Sound level	32 dB (min speed)****
Holding force (tractive)	3000 N (burglary strength) min
Pressure force	1000 Newton*
Tractive force	300-1000 Newton* Above 10 mm : 60 kg Below 10 mm : 30 kg
IP rating	IPX4
Operation conditions	-5°C - +75°C, max. 90% relative humidity (not condensing)
Nominal voltage	24 V DC (max 10% ripple)
Voltage	19-32 V DC
Max Voltage	32 V DC
Switch-on-duration	ED max 20% (2 minutes per 10 minutes)
Current consumption	Max. 5,5A with full load (SL) (Secondary side)
Service	It is recommended to carry out a function test of the actuator at least once a year and to make sure that the skylight opens correctly
CE marking	The product is tested with the original WindowMaster control units and complies with the EMC directive's requirements for use in residential, commercial and light commercial buildings
Reservation	The VELUX Group reserve the right to technical changes

\* Can be altered by a trained technician via MotorLink™

\*\*At standard ± 24 V DC connection maximum distances from venting skylight to power supply in accordance to calculation:

$$\text{Max cable length} = \frac{(\text{admissible voltage drop (UL)} \times \text{conductivity of copper (56)} \times \text{cable cross section (a)})}{(\text{total max.actuator current (I)} \text{ in amps} \times 2)}$$

Maximum voltage drop in the cable UL: 2V

\*\*\*Green = communication wire

\*\*\*\* The sound level can vary depending on the opening speed and building conditions



Maximum drive time for comfort ventilation		
Module length	Chain length [mm]	Drive time [sec]
1000	264	20
1200	317	24
1400	369	28
1600	410	32
1800	410	32
2000	410	32
2200	410	32
2400	410	32

Note: When using smoke ventilating modules for comfort ventilation, the maximum chain stroke must be limited to avoid excess stress on gaskets and to extend the lifetime on module and chain actuator. For comfort ventilation, the drive time must be set according to the values in the table, using default opening speed (13 mm/s).

## Safety

VELUX modular skylights have a recommended minimum installation height of 2.5 m above floor level. In case of installation below this level, measures must be applied to prevent personal injury caused by automatic closing. This could for example be a motion

sensor positioned in the vicinity of the modular skylights, which could disconnect power from the control unit in case of any movement.