

# Actuators for ventilation dampers

Rotary actuators in ventilation are mainly used in air dampers, including fire dampers. In the case of fire protection solutions, the actuator is tested together with the damper for compliance with the harmonized standard and is a part of the damper. This means that another model cannot be used, replaced on site or retrofitted.

In the case of regulating dampers, the choice of actuator is less restricted, of course it must have the proper torque, site-specific voltage (230V or 24V) and / or project-required control (e.g., modbus protocol).

Selection of an actuator for ventilation dampers:

Torque	Max damper size		Alnor	Belimo	Siemens	
	m <sup>2</sup>	∅				
<b>Rotary actuators, with return spring:</b>						
4 Nm	0,8		500	DM-FL-05-24 DM-FL-05-230	LF24 LF230	GPC1xx.1A GPC3xx.1A
5 Nm	1,0		560	DM-FL-05-24 DM-FL-05-230		
10 Nm	2,0		710		NF24A NF230A	GMA1xx.1E GMA3xx.1E
20 Nm	4,0				SF24A SF230A	GCA1xx.1E GCA3xx.1E
<b>Rotary actuators, without return springj:</b>						
2 Nm	0,4		355		CM24 CM230	GSD1xx.1A GSD3xx.1A
5 Nm	1,0		560		LM24A LM230A LMC24A LMC230A	GDB1xx.1E GDB3xx.1E
6 Nm	1,2		560	DM-ML-06-24 DM-ML-06-230		
8 Nm	1,5		630	DM-ML-08-24 DM-ML-08-230		
10 Nm	2,0		710		NM24A NM230A	GLB1xx.1E GLB3xx.1E
20 Nm	4,0				SM24A SM230A	GBB1xx.1E GBB3xx.1E
<b>Additional options:</b>						
				S - auxiliary output	S - auxiliary output	
				SR - modulating control	SR - modulating control	
				L / R - direction of rotation (for CM series)	L / R - direction of rotation (for CM series)	
				C = fast (np. LMC)	C = fast (np. LMC)	

**Auxiliary output (S)** - means an auxiliary contact that can e.g. indicate the damper position after connecting it to the building's BMS control panel.

**ON / OFF or 3-point** - depending on the electrical connection, available positions are closed, open or 50% open (3-point connection). Standard option for DM-ML-08-24.

**Modulating control** – control system using an external 0..10V (or 0..20mA) signal, which enables a modulating (percentage) damper setting, e.g. a 2V signal means 20% open. This is the principle of operation of actuators in VAV regulators, i.e. variable flow. Examples = DM-ML-06-230-RS or LM24A-SR.

# Ventilation damper actuators

## DM-ML-06



### Description

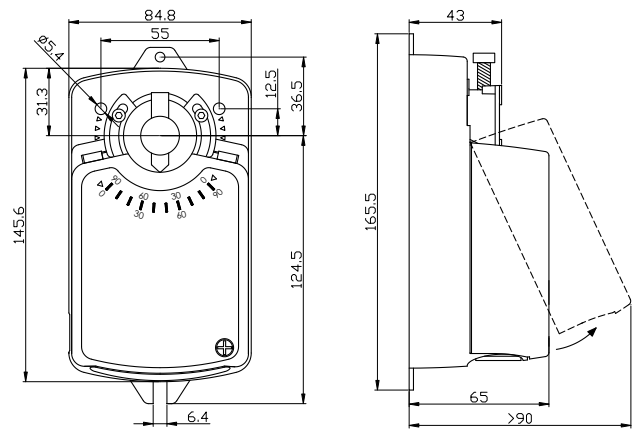
The DM-ML-06 actuator enables remote operation of a ventilation damper. The actuators with 6 Nm of torque are the most popular choice for ventilation dampers. The torque of 6 Nm allows opening dampers with the cross-sectional surface area up to 1.2 m<sup>2</sup>; they can be installed on ventilator dampers up to 400 mm in diameter. The DM-ML -...- S actuator has an additional limit switches, which can signal the damper position in the range of 0-10-80-90. Precise, variable control of damper position is obtained by mounting the DM-ML -...- RS actuator, which operates by means of current signal 0 (4) -20mA or voltage signal 0 (2) -10V.

#### Product code example

Product code: **DM-ML-06 - 230**

type \_\_\_\_\_  
voltage \_\_\_\_\_

### Dimensions



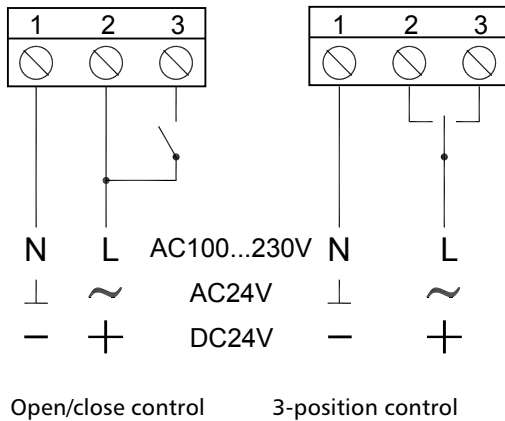
In order to correctly mount the DM-ML-06 actuator on the damper stem, an additional DM-TOL bushing is required to position the stem in the centre of the hole. The DM-TOL bushing is sold separately.



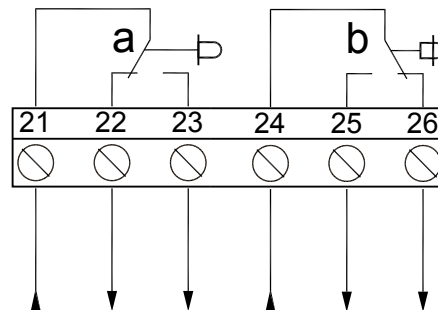
# DM-ML-06

## Technical specifications

DM-ML-06-24 / DM-ML-06-230

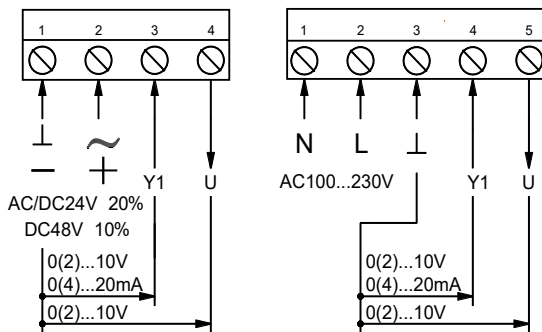


DM-ML-06-24-S / DM-ML-06-230-S



Resistive load: 3 A, 230 V  
Inductive load: 1.5 A, 230 V  
Actuator positions at 0°

DM-ML-06-24-RS / DM-ML-06-230-RS



	DM-ML-06-24 / DM-ML-06-24-S DM-ML-06-24-RS	DM-ML-06-230 / DM-ML-06-230-S DM-ML-06-230-RS
Power supply	AC 24 V 50/60 Hz DC 24 V	AC 230 V 50/60 Hz
Power consumption	3 W - nominal torque 0.5 W - holding	3 W - nominal torque 0.5 W - holding
Wiring size selection	4.4 VA	4.4 VA
Core size	max. 2.0 mm <sup>2</sup>	max. 2.0 mm <sup>2</sup>
Torque	6 Nm	6 Nm
Sense of rotation	selectable	selectable
Angle of rotation	0 to 90° (max. 95°)	0 to 90° (max. 95°)
Turning time	70 s	70 s
Sound level	45 dB (A)	45 dB (A)
Position indicator	mechanical	mechanical
Protection rating	IP44	IP44
Ambient temperature	-20 to +50 °C	-20 to +50 °C
Max. humidity	95% RH, w/o condensation, as per EN 60730-1	95% RH, w/o condensation, as per EN 60730-1
Overload protection	automatic	automatic

S - integrated aux. output contact, e.g. for full damper opening feedback  
RS - 2 to 10V analogue control for smooth opening and closing