

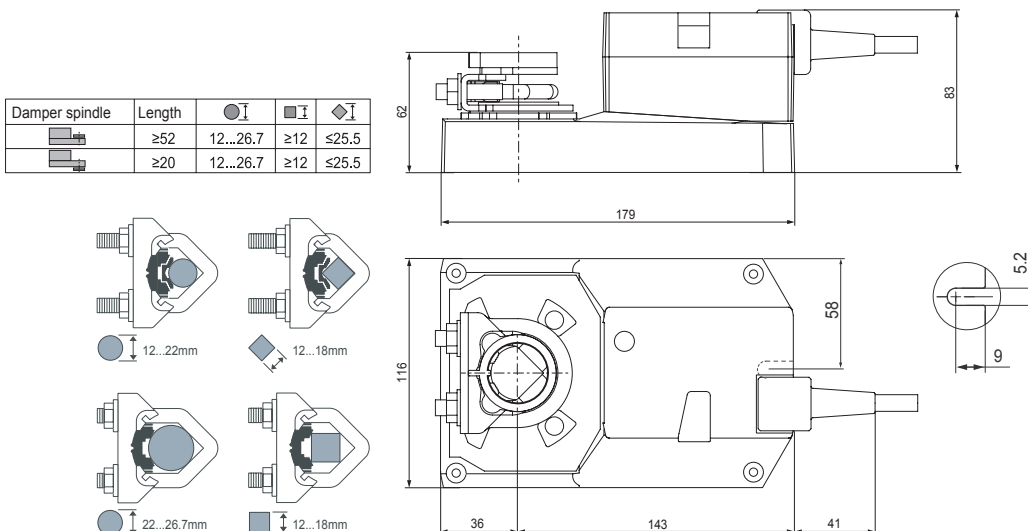
- For operation of air control dampers in HVAC system
- Torque: 16Nm
- Nominal voltage: AC/DC 24V
- Control: Open/Close (not made for 3-point applications)



**Technical data**

<b>Electrical data</b>	Nominal voltage	AC 24V 50/60Hz, DC 24V	
	Nominal voltage range	AC/DC 21.6...26.4V	
	Power consumption	15W @ nominal torque / 1.5W @ holding	
	For transformer sizing	26VA (Imax. 20A @ 5ms)	
	Connecting cable	Cable 1m, 3x0.75mm <sup>2</sup>	
<b>Functional data</b>	Torque	16Nm @ nominal voltage	
	Direction of rotation	Reversible with switch 0 ↺ or 1 ↻	
	Manual override	Gearing latch disengaged by push button, self-resetting	
	Angle of rotation	Max. 95°, adjustable by mechanical stops	
	Running time	7s	
	Automatic adjustment of operating range to match the mechanical angle of rotation	Manual triggering of the adaption by pressing the «Adaption» button	
	Sound power level	Max. 63dB(A)	
	Position indicator	Mechanical, remote visible	
	Negative torque	⚠ ≤ 50% from nominal torque (with restrictions)	
	<b>Working conditions</b>	Protection class	III (safety extra-low voltage)
Degree of protection		IP54	
EMC		CE according to 2004/108/EC	
Mode of operation		Type 1 (EN 60730-1)	
Ambient temp.		-30...+40°C (without restrictions) ⚠ +40...+50°C (with restrictions)	
Non-operation temp.		-40...+80°C	
Humidity		5...95% RH, non-condensing	
Maintenance		Maintenance-free	
<b>Dimensions / weight</b>		Dimensions (LxWxH)	See "Dimensions"
		Weight	1.7kg

**Dimensions [mm]**



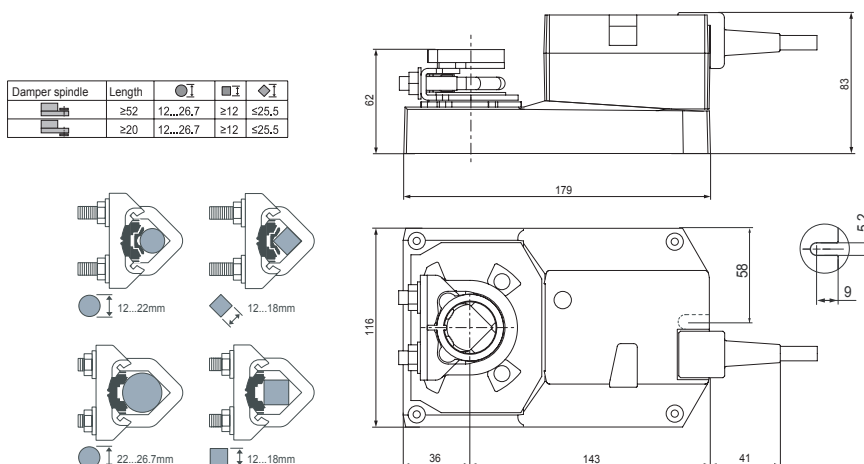
- For operation of air control dampers in HVAC system
- Torque: 16Nm
- Nominal voltage: AC/DC 24V
- Control signal: DC (0)2...10V
- Position feedback: DC 2...10V



**Technical data**

<b>Electrical data</b>	Nominal voltage	AC 24V 50/60Hz, DC 24V
	Nominal voltage range	AC/DC 21.6...26.4V
	Power consumption	15W @ nominal torque / 1.5W @ holding
	For transformer sizing	26VA (Imax. 20A @ 5ms)
	Connecting cable	Cable 1m, 4x0.75mm <sup>2</sup>
<b>Functional data</b>	Torque	16Nm @ nominal voltage
	Control signal Y	DC (0)2...10V @ input impedance 100kΩ
	Position feedback signal U	DC 2...10V @ max. 0.5mA
	Position accuracy	±5%
	Direction of rotation	Reversible with switch 0 or 1
	Direction of motion at Y=0V	At switch position 0 ↺ resp. 1 ↻
	Manual override	Gearing latch disengaged by push button, self-resetting
	Angle of rotation	Max. 95°, adjustable by mechanical stops
	Running time	7s
	Automatic adjustment of operating range and measuring signal U to match the mechanical angle of rotation	Manual triggering of the adaption by pressing the «Adaption» button
<b>Working conditions</b>	Sound power level	Max. 63dB(A)
	Position indicator	Mechanical, remote visible
	Negative torque	⚠ ≤ 50% from nominal torque (with restrictions)
	Protection class	III (safety extra-low voltage)
	Degree of protection	IP54
	EMC	CE according to 2004/108/EC
	Mode of operation	Type 1 (EN 60730-1)
	Ambient temp.	-30...+40°C (without restrictions) ⚠ +40...+50°C (with restrictions)
	Non-operation temp.	-40...+80°C
	Humidity	5...95% RH, non-condensing
<b>Dimensions / weight</b>	Maintenance	Maintenance-free
	Dimensions (LxWxH)	See "Dimensions"
	Weight	1.7kg

**Dimensions [mm]**



- For operation of air control dampers in HVAC system
- Torque: 16Nm
- Running time 20s
- Nominal voltage: AC 100...240V
- Control: Open/Close or 3-point



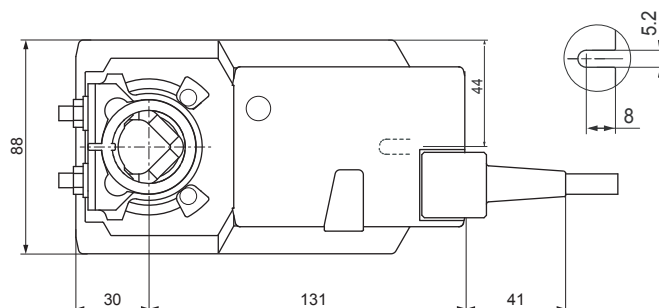
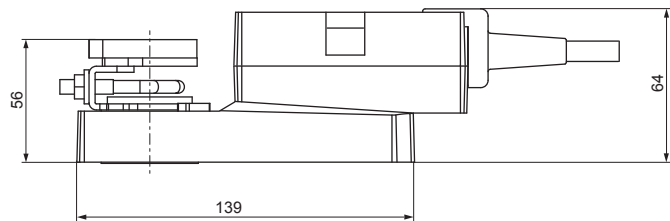
**Technical data**

<b>Electrical data</b>	Nominal voltage	AC 100...240V 50/60Hz
	Nominal voltage range	AC 85...265V
	Power consumption	4.5W @ nominal torque / 1W @ holding
	For transformer sizing	8VA
	Connecting cable	Cable 1m, 3x0.75mm <sup>2</sup>
<b>Functional data</b>	Torque	16Nm @ nominal voltage
	Direction of rotation	Reversible with switch 0 ↺ resp. 1 ↻
	Manual override	Gearing disengaged by pressing the push button, can be locked
	Angle of rotation	Max. 95°, can be limited with adjustable mechanical end stops
	Running time	20s
	Sound power level	Max. 55dB(A)
	Position indicator	Mechanical, remote visible
<b>Working conditions</b>	Protection class	II (Totally insulated)
	Degree of protection	IP54
	EMC	CE according to 2004/108/EC
	Low voltage directive	CE according to 2006/95/EC
	Mode of operation	Type 1 (EN60730-1)
	Rated impulse voltage	4kV
	Control pollution degree	3
	Ambient temp.	-30...+50°C
	Non-operation temp.	-40...+80°C
	Humidity	5...95% RH, non-condensing
Maintenance	Maintenance-free	
<b>Dimensions / weight</b>	Dimensions (LxWxH)	See "Dimensions"
	Weight	1kg

**Dimensions [mm]**

Damper spindle	Length	● I	■ I	◆ I
	≥48	10 ... 20 <sup>1)</sup>	≥10	≤20
	≥20	10 ... 20 <sup>1)</sup>	≥10	≤20

<sup>1)</sup> CrNi (INOX) 12 ... 20



Wiring diagrams: Open/Close actuators—parallel connection possible, please note the performance data.

**1-wire control**

AC 24V DC 24V Connection via safety isolated transformer

Direction of rotation (while direction of rotation reverses)

1 2 3 S1 S2 S3

LMU24-S, NMU24-S  
SMU24-S

0...100%

LMU24(-T/-F), NMU24(-T), SMU24  
GMU24, LMQU24, NMQU24, SMQU24

N L AC 100...240V

1 2 3 S1 S2 S3

LMU230-S, NMU230-S  
SMU230-S

0...100%

LMU230(-F), NMU230  
SMU230(-F), SMDU230, GMU230

**2-wire control**

AC 24V DC 24V Connection via safety isolated transformer

Direction of rotation (while direction of rotation reverses)

1 2 3 S1 S2 S3

LMU24-S, NMU24-S  
SMU24-S

0...100%

LMU24(-T/-F), NMU24(-T)  
SMU24, GMU24\*

N L AC 100...240V

1 2 3 S1 S2 S3

LMU230-S, NMU230-S  
SMU230-S

0...100%

LMU230(-F), NMU230(-F)  
SMU230(-F), SMDU230, GMU230\*

\*GMU.. only for Open/Close application.

Wiring diagram: Modulating actuators—parallel connection possible, please note the performance data.

AC 24V DC 24V Connection via safety isolated transformer

Y ← DC (0)2...10V  
U → DC 2...10V

1 2 3 5

LM(Q)U24-SR, NM(Q)U24-SR  
SM(Q)U24-SR, GMU24-SR

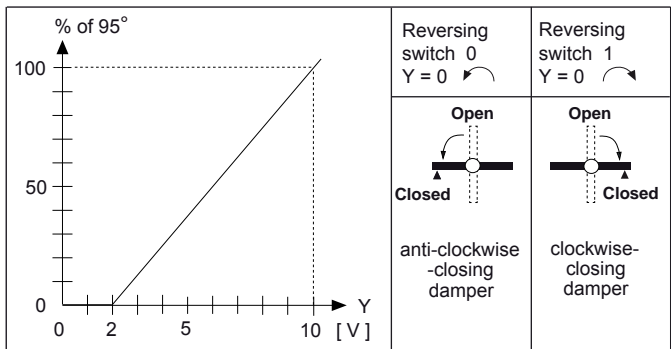
N L AC 100...240V

AC 24V power output

1 2 3 5

LMU230SR, NMU230SR  
SMU230SR

Position - signal voltage



Direction of rotation