

Application

The type LF24-MFT2 is intended for the operation of air control dampers with safety function in ventilation and air-conditioning systems.

Mode of operation

The basic parameters for normal applications of the LF24-MFT2 actuator are assigned during manufacture at the factory. The actuator is controlled by a standard DC 2...10 V signal. The actuator runs to the position specified by the control signal while tensioning the return spring at the same time. If the power supply is interrupted, the energy stored in the spring moves the damper back to its safe position.

For making service adjustments to the system, these parameters can be changed when necessary using the MFT-Handy, or PC-Tool MFT-P (see Operating Instructions MFT-H).

Note: If the product bears an extra number (LFxxxxxx) in addition to the designation LF24-MFT2 it means that it is a special version of the LF24-MFT2 which has been parameterized at the factory. In this case the relevant technical data will be that on the attached Configuration Sheet.

Basic position

As soon as the actuator is powered up it automatically senses its safety position (zero initialising). The process takes approximately 8 seconds (while the actuator remains stationary). The actuator then runs to the position demanded by the control signal.

Simple direct mounting on the damper spindle by universal spindle clamp. An antirotation device is supplied to prevent unwanted rotation of the whole unit.

Adjustable angle of rotation with mechanical stops.

High functional reliability

The actuator is overload-proof, needs no limit switches and halts automatically at the end stops.

Note: When calculating the torque required to operate dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning cross sectional area, design, mounting and air flow conditions.

Danger: Power supply via safety isolating transformer. The enclosure of the actuator equipment must only be opened by the manufacturer. It contains no components which the user can replace or repair.

Technical data	Basic values for the LF24-MFT2
Nominal voltage	AC 24 V 50/60 Hz, DC 24 V
Nominal voltage range	AC 19.2...28.8 V, DC 21.6...35 V
For wire sizing	5 VA (I _{max} 5.8 A @ 5 ms)
Power consumption	running: 2.5 W, at rest: 1.2 W
Connecting cable	1 m long, 4 x 0.75 mm ²
Control signal Y	DC 0...10 V (0...32 V) @ Ri 100 kW
Operating range	DC 2...10 V
Function position feedback U ₅	DC 2...10 V @ max. 0.5 mA

Positioning accuracy	± 5%
Direction of rotation	
- Motor	selected with switch L / R
- Spring return	selected by L / R mounting
Direction of rotation (bei Y = 0 V) at switch position L resp. R	
Torque	- Motor 4 Nm (at rated voltage) - Spring return 4 Nm

Angle of rotation	max. 95° (adjustable 37...100%) with built-in mechanical stop
Running time: - Motor	150 s
- Spring return	∇ 20 s @ -20...50°C / max. 60 s @ -30°C

Angle of rotation adaption	Switching L-R twice or R-L-R triggers automatic adaption of running time, working range and measuring signal U to the MIN-MAX control range or the mechanical angle of rotation.
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Override control	MAX (Max. Position) = 100%
	MIN (Min. Position) = 0%
	ZS (Mid. position) = 50%

Sound power level	- Motor 30 dB (A) - Spring return ∇ 62 dB(A)
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Service life	min. 60 000 operations
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Position indication	mechanical
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Protection class	⊠ (safety low voltage)
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Degree of protection	IP 54
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Ambient temp. range	- 30...+ 50°C
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Non-operating temp.	- 40...+ 80°C
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Humidity test	to EN 60730-1
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EMC	CE according to 89/336/EEC
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Maintenance	maintenance-free
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Weight	1400 g
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variable	
These values can be adjusted with the MFT-Handy or MFT-P PC-Tool. Spec. Parameterized products please order according to P35 configuration datasheet.	
DC 0.5...32 V, Open/Close, 3-point @ Ri 1.5 kW	
Start	DC 0.5...30 V
Finish	DC 2.5...32 V
Measuring signal U ₅	
Start	DC 0.5...8 V
Finish	DC 2.5...10 V
Soft-switch S1	1...99% <
Soft-switch S2	1...99% <
Maintenance and fault alarms	

electronically reversible

electronic angle of rotation limiting 0...100%

* 75...300 s

No adaption
Automatic adaption is triggered at each power-up

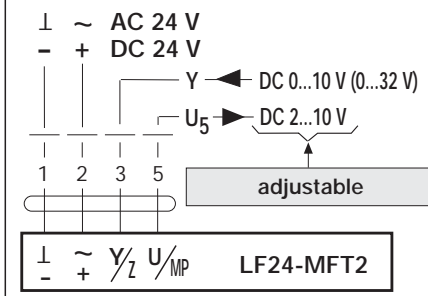
MAX 0...100% of <
MIN 0...100% of MAX
ZS 0...100% of MAX-MIN

*** Note!**
Remember that the sound power level can be changed too when the running time is changed (see diagrams in P21).

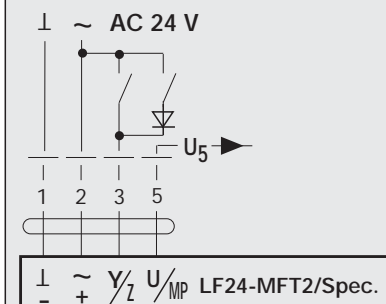
For further information on applications in bus systems refer to P31-34.

Wiring diagrams

Wiring diagram, modulating operation (basic value)



Wiring diagram, 3-point operation (spec. parameters)



Wiring diagram, Open/Close operation (spec. parameters)

