

Attachments

Modulating actuators



For stepless adjustment and for the opening and closing of dampers in air conditioning systems

Modulating actuators for Type JZ and JZ-Low leakage multileaf dampers

- Various damper blade positions
- Supply voltage 24 V AC/DC
- Control input signal: Signal voltage 2 – 10 V for modulating actuators
- Mechanical stops
- Retrofit possible



Spring return actuator



Multileaf damper with actuator

1

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Description

Application

- Actuators for variable adjustment
- Variable adjustment of Type JZ and JZ-Low leakage multileaf dampers

Parts and characteristics

- Mechanical stops for limiting the damper blade positions
- Supply voltage 24 V AC/DC
- Overload protection
- Setpoint value signal 2 – 10 V DC
- Optional spring return actuator for damper blade safety function
- Release button or crank handle for manual operation

Any attachments are defined with the order code of the multileaf damper.

Actuators for the variable adjustment of multileaf dampers

Order code detail	Actuator		Torque	Supply voltage
	Part number	Type		
Z20	M466DF2	SM24A-SR	20 Nm	24 V
Z21	M466DG2	GM24A-SR	40 Nm	24 V
Z50	M466DT6	LM24A-SR-F	5 Nm	24 V
Z51	M466EN0	NM24A-SR	10 Nm	24 V

Spring return actuators for the variable adjustment of multileaf dampers

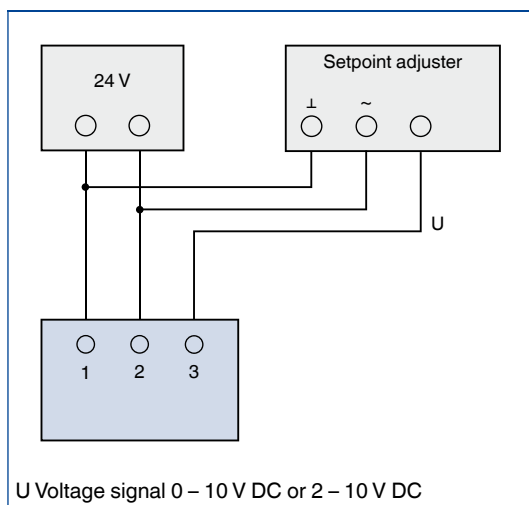
Order code detail	Actuator		Torque	Supply voltage
	Part number	Type		
ZF05	M466ET4	NF24A-SR	10 Nm	24 V
ZF10	M466ES0	SF24A-SR	20 Nm	24 V
ZF15	M466ET9	EF24A-SR	30 Nm	24 V

Function

Functional description

The actuator moves the blades of a multileaf damper to any position between the OPEN and CLOSED positions. The control input signal is a voltage signal.

Control initiated by a voltage signal



Description

/ Z20 /

Order code detail

Application

- Actuator SM24A-SR
- Stepless adjustment as well as opening and closing of multileaf dampers

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Setpoint value signal 2 – 10 V DC, corresponds to the total rotation range (90°), working range is limited by mechanical stops
- Output: Actual value signal 2 – 10 V
- Mechanical stops
- Direction of action can be reversed
- Release button to allow for manual operation

Technical data



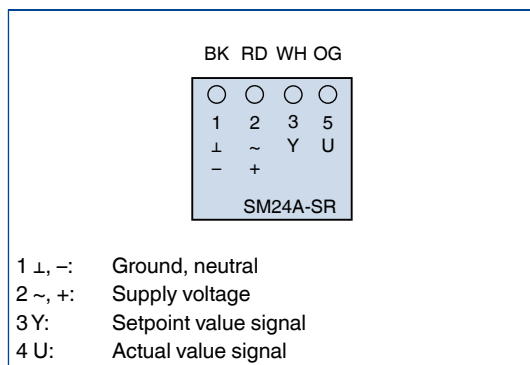
Actuator SM24A-SR

Actuator SM24A-SR

Supply voltage (AC)	24 V AC – 10 %, + 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ± 20 %
Power rating (AC)	4 VA max.
Power rating (DC)	2 W max.
Torque	20 Nm
Running time for 90°	150 s
Control signal	2 – 10 V DC, $R_a > 100 \text{ k}\Omega$
Connecting cable	4 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC according to 2004/108/EG
Operating temperature	–30 to 50 °C
Weight	1.1 kg

Wiring

Connecting cable core identification



Description

/ Z21 /

Order code detail

Application

- Actuator GM24A-SR
- Stepless adjustment as well as opening and closing of multileaf dampers

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Setpoint value signal 2 – 10 V DC, corresponds to the total rotation range (90°), working range is limited by mechanical stops
- Output: Actual value signal 2 – 10 V
- Mechanical stops
- Direction of action can be reversed
- Release button to allow for manual operation

Technical data



Actuator GM24A-SR

Actuator GM24A-SR

Supply voltage (AC)	24 V AC ± 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ± 20 %
Power rating (AC)	6.5 VA max.
Power rating (DC)	4.5 W max.
Torque	40 Nm
Running time for 90°	150 s
Control signal	2 – 10 V DC, R _a > 100 kΩ
Connecting cable	4 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC according to 2004/108/EG
Operating temperature	-30 to 50 °C
Weight	1.7 kg

Wiring

Connecting cable core identification

	BK	RD	WH	OG
	○	○	○	○
	1	2	3	5
	⊥	~	Y	U
	-	+		
	GM24A-SR			

1 ⊥, -: Ground, neutral
 2 ~, +: Supply voltage
 3 Y: Setpoint value signal
 4 U: Actual value signal

Description

/ Z50 /

Order code detail

Application

- Actuator LM24A-SR-F
- Stepless adjustment as well as opening and closing of multileaf dampers

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Setpoint value signal 2 – 10 V DC, corresponds to the total rotation range (90°), working range is limited by mechanical stops
- Output: Actual value signal 2 – 10 V
- Mechanical stops
- Direction of action can be reversed
- Positive lock connection with damper blade shaft
- Release button to allow for manual operation

Technical data



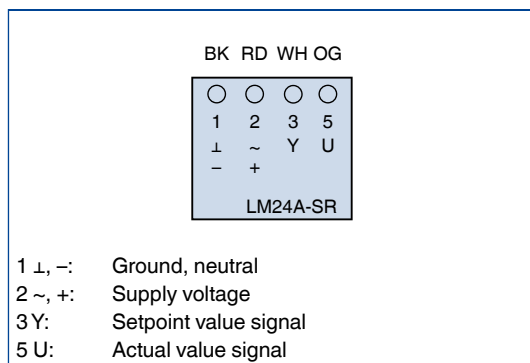
Actuator LM24A-SR-F

Actuators LM24A-SR and LM24A-SR-F

Supply voltage (AC)	24 V AC ± 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ± 20 %
Power rating (AC)	2 VA
Power rating (DC)	1 W
Torque	5 Nm
Running time for 90°	150 s
Control signal	2 – 10 V DC, R _a > 100 kΩ
Connecting cable	4 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC according to 2004/108/EG
Operating temperature	–30 to 50 °C
Weight	0.5 kg

Wiring

Connecting cable core identification



LM24A-SR and LM24A-SR-F

Description

/ Z51 /

Order code detail

Application

- Actuator NM24A-SR
- Stepless adjustment as well as opening and closing of multileaf dampers

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Setpoint value signal 2 – 10 V DC, corresponds to the total rotation range (90°), working range is limited by mechanical stops
- Output: Actual value signal 2 – 10 V
- Mechanical stops
- Direction of action can be reversed
- Release button to allow for manual operation

Technical data



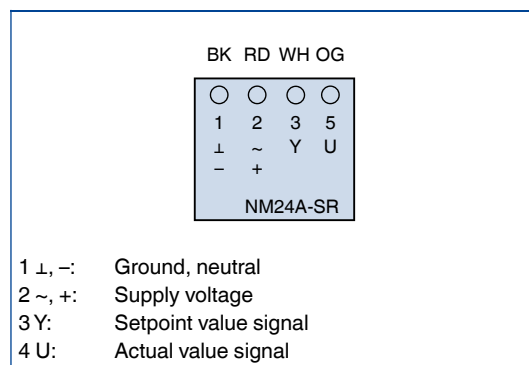
Actuator NM24A-SR

Actuator NM24A-SR

Supply voltage (AC)	24 V AC ± 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ± 20 %
Power rating (AC)	4 VA max.
Power rating (DC)	2 W max.
Torque	10 Nm
Running time for 90°	150 s
Control signal	2 – 10 V DC, R _a > 100 kΩ
Connecting cable	4 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC according to 2004/108/EG
Operating temperature	-30 to 50 °C
Weight	0.8 kg

Wiring

Connecting cable core identification



Description

/ ZF05 / NO

Order code detail

Application

- Spring return actuator NF24A-SR
- Stepless adjustment as well as opening and closing of multileaf dampers with safety function
- The multileaf damper safety function is defined with the order code

Variants

- NO: Power off to OPEN
- NC: Power off to CLOSE

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Setpoint value signal 2 – 10 V DC, corresponds to the total rotation range (90°), working range is limited by mechanical stops
- Output: Actual value signal 2 – 10 V
- Mechanical stops
- Manual operation using crank handle and position lock

Technical data



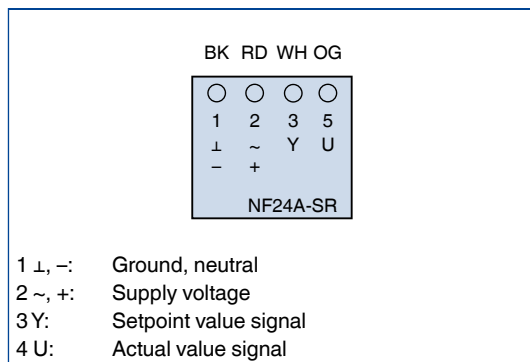
Actuator NF24A-SR

Actuator NF24A-SR

Supply voltage (AC)	24 V AC -10 %, + 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ± 20 %
Power rating (AC)	5.5 VA max.
Power rating (DC)	3.5 W max.
Torque	10 Nm
Motor running time for 90°	150 s
Spring return	20 s (for < -20 °C up to 60 s)
Control signal	2 – 10 V DC, R _a > 100 kΩ
Connecting cable	4 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC according to 2004/108/EG
Operating temperature	-30 to 50 °C
Weight	1.8 kg

Wiring

Connecting cable core identification



Description

/ ZF10 / NO

Order code detail

Application

- Spring return actuator SF24A-SR
- Stepless adjustment as well as opening and closing of multileaf dampers with safety function
- The multileaf damper safety function is defined with the order code

Variants

- NO: Power off to OPEN
- NC: Power off to CLOSE

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Setpoint value signal 2 – 10 V DC, corresponds to the total rotation range (90°), working range is limited by mechanical stops
- Output: Actual value signal 2 – 10 V
- Mechanical stops
- Manual operation using crank handle and position lock

Technical data



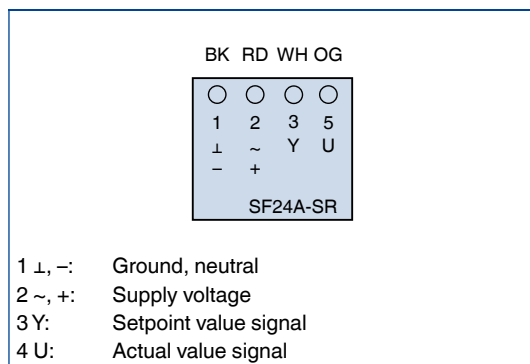
Actuator SF24A-SR

Actuator SF24A-SR

Supply voltage (AC)	24 V AC -10 %, + 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ± 20 %
Power rating (AC)	7 VA max.
Power rating (DC)	5 W max.
Torque	20 Nm
Motor running time for 90°	150 s
Spring return	20 s (for < -20 °C up to 60 s)
Control signal	2 – 10 V DC, R _a > 100 kΩ
Connecting cable	4 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC according to 2004/108/EG
Operating temperature	-30 to 50 °C
Weight	2.1 kg

Wiring

Connecting cable core identification



Description

/ ZF15 / NO

Order code detail

Application

- Spring return actuator EF24A-SR
- Stepless adjustment as well as opening and closing of multileaf dampers with safety function
- The multileaf damper safety function is defined with the order code

Variants

- NO: Power off to OPEN
- NC: Power off to CLOSE

Parts and characteristics

- Supply voltage 24 V AC/DC
- Control input signal: Setpoint value signal 2 – 10 V DC, corresponds to the total rotation range (90°), working range is limited by mechanical stops
- Output: Actual value signal 2 – 10 V
- Mechanical stops
- Manual operation using crank handle and position lock

Technical data



Actuator EF24A-SR

Actuator EF24A-SR

Supply voltage (AC)	24 V AC -10 %, + 20 %, 50/60 Hz
Supply voltage (DC)	24 V DC ± 20 %
Power rating (AC)	12 VA max.
Power rating (DC)	7 W max.
Torque	30 Nm
Motor running time for 90°	150 s
Spring return	20 s (for < -20 °C up to 60 s)
Control signal	2 – 10 V DC, R _a > 100 kΩ
Connecting cable	4 × 0.75 mm ² , 1 m long
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54
EC conformity	EMC according to 2004/108/EG
Operating temperature	-30 to 50 °C
Weight	4.3 kg

Wiring

Connecting cable core identification

