Catalogue of main products range

Actuators for air, fire and smoke dampers



HEMAH

2025

Contents

5 General-purpose actuators — Non-spring-return

General selection chart 6

LM... (5 Nm)

LM230
LM230-S2 8
Open/closed;
3-point 230 V~

LM24
LM24-S2 10
Open/closed;
3-point 24 V =/~

LM230-SRA
LM230-SRA-S2 12
Control modulating
(230V~): (0)2...10 V=, (0)4...20mA

LM24-SRA
LM24-SRA-S2 14
Control modulating
(24V =/~): (0)2...10 V=, (0)4...20mA

NM... (10 Nm)

NM230
NM230-S2 16
Open/closed;
3-point 230 V~

NM24
NM24-S2 18
Open/closed;
3-point 24 V =/~

NM230-SRA
NM230-SRA-S2 20
Control modulating
(230V~): (0)2...10 V=, (0)4...20mA

NM24-SRA
NM24-SRA-S2 22
Control modulating
(24V =/~): (0)2...10 V=, (0)4...20mA

SM... (20 Nm)

SM230
SM230-S2 24
Open/closed;
3-point 230 V~

SM24
SM24-S2 26
Open/closed;
3-point 24 V =/~

SM230-SRA
SM230-SRA-S2 28
Control modulating
(230V~): (0)2...10 V=, (0)4...20mA

SM24-SRA
SM24-SRA-S2 30
Control modulating
(24V =/~): (0)2...10 V=, (0)4...20mA

GM... (40 Nm)

GM230
GM230-S2 32
Open/closed;
3-point 230 V~

GM24
GM24-S2 34
Open/closed;
3-point 24 V =/~

GM230-SRA
GM230-SRA-S2 36
Control modulating
(230V~): (0)2...10 V=, (0)4...20mA

GM24-SRA
GM24-SRA-S2 38
Control modulating
(24V =/~): (0)2...10 V=, (0)4...20mA

41 General-purpose actuators — With spring return

General selection chart 42

TF... (3 Nm)

TF230-3
TF230-S2-3 44
Open/closed 230 V~

TF24-3
TF24-S2-3 46
Open/closed 24V =/~

LF... (5 Nm)

LF230-5
LF230-S2-5 48
Open/closed 230 V~

LF24-5
LF24-S2-5 50
Open/closed 24V =/~

LF24-SR-5
LF24-SRZ-5 62
Control modulating
(0)2...10 V=

NF... (10 Nm)

NF230
NF230-S2 34
Open/closed 230 V~

NF24
NF24-S2 56
Open/closed 24V =/~

NF24-SR
NF24-SRZ 58
Control modulating
(0)2...10 V=

SF... (20 Nm)

SF230
SF230-S2 60
Open/closed 230 V~

SF24
SF24-S2 62
Open/closed 24V =/~

SF24-SR
SF24-SRZ 64
Control modulating
(0)2...10 V=

67 For fire dampers

Spring–return actuators for installation on normally open fire (fire-retardant) dampers of air-conditioning, general, local and process ventilation

BLF24-3
3 Nm; 24 V=/~
BLF230-3 48
3 Nm; 230 V~

BLF24-3-T
3 Nm; 24 V =/~
with thermal release switch
BLF230-3-T 70
3 Nm; 230V~
with thermal release switch

BLF24-5
5 Nm; 24 V=/~
BLF230-5 72
5 Nm; 230 V~

BLF24-5-T
5 Nm; 24 V =/~
with thermal release switch
BLF230-5-T 74
5 Nm; 230V~
with thermal release switch

BF24-10
10 Nm; 24 V=/~
BF230-10 76
10 Nm; 230 V~

BF24-10-T
10 Nm; 24 V =/~
with thermal release switch
BF230-10-T 78
10 Nm; 230V~
with thermal release switch

BFG24-20
20 Nm; 24 V=/~
BFG230-20 80
20 Nm; 230 V~

BFG24-20-T
20 Nm; 24 V =/~
with thermal release switch
BFG230-20-T 82
20 Nm; 230V~
with thermal release switch

85 For smoke dampers

Non–spring–return actuators for installation on normally closed fire dampers and smoke dampers of smoke-exhaust ventilation systems

BLE24-10
10 Nm; 24 V =/~
BLE230-10 86
10 Nm; 230 V~

BLE24-15
15 Nm; 24 V =/~
BLE230-15 88
15 Nm; 230 V~

BE24-40
40 Nm; 24 V =/~
BE230-40 90
40 Nm; 230 V~

General-purpose

Non-spring-return



LM... (5 Nm)

LM230
LM230-S2
LM24
LM24-S2
LM230-SRA
LM230-SRA-S2
LM24-SRA
LM24-SRA-S2

NM... (10 Nm)

NM230
NM230-S2
NM24
NM24-S2
NM230-SRA
NM230-SRA-S2
NM24-SRA
NM24-SRA-S2

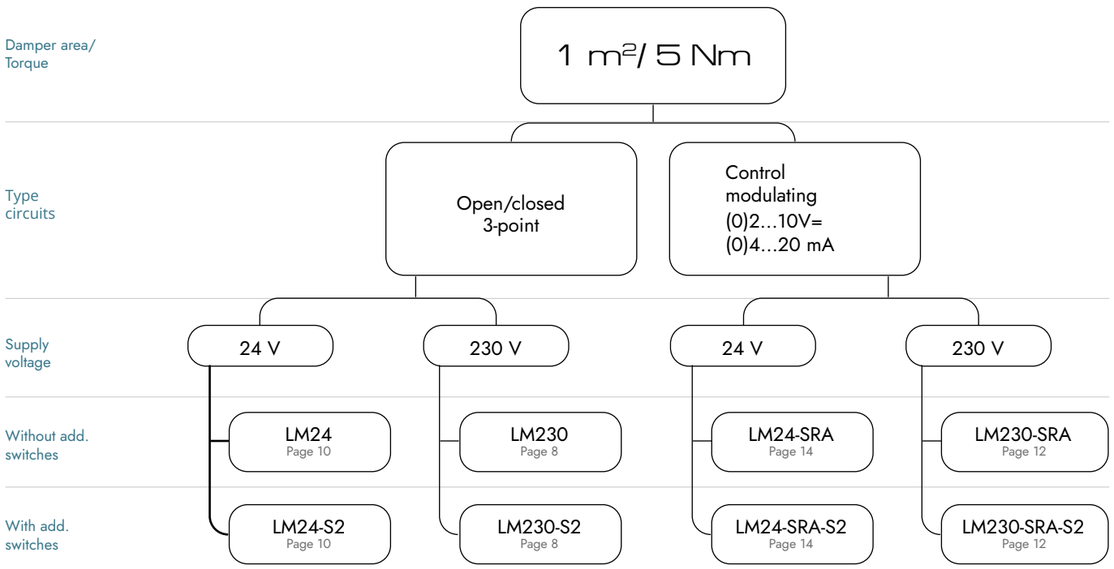
SM... (20 Nm)

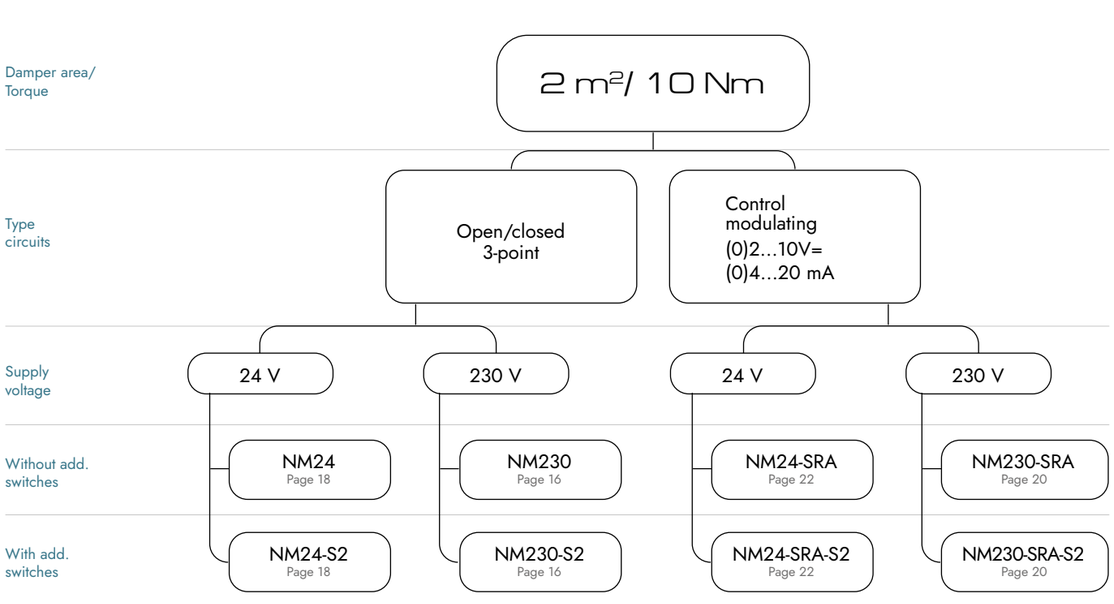
SM230
SM230-S2
SM24
SM24-S2
SM230-SRA
SM230-SRA-S2
SM24-SRA
SM24-SRA-S2

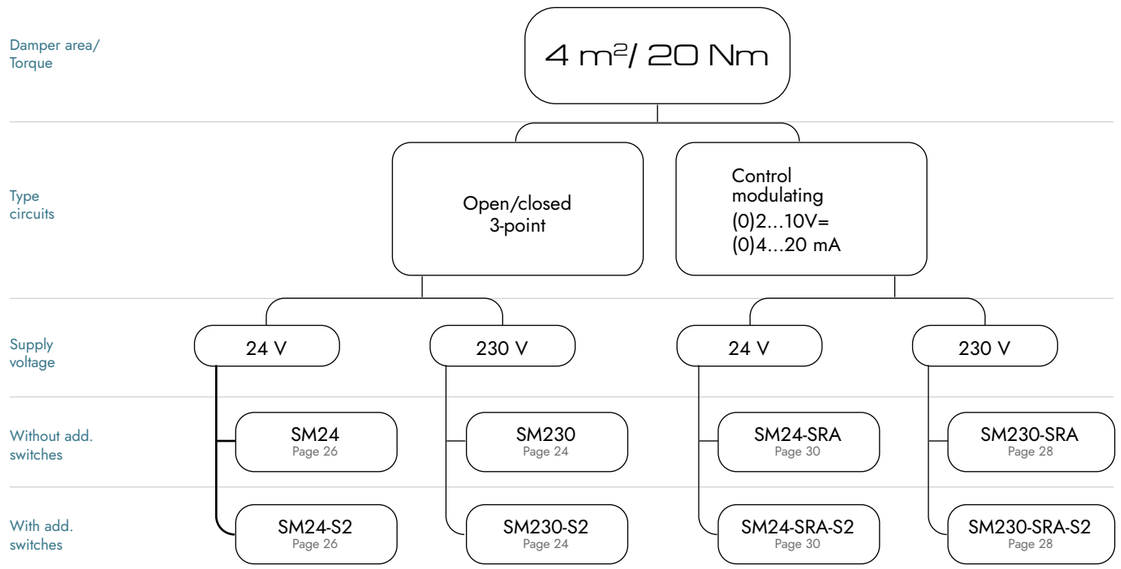
GM... (40 Nm)

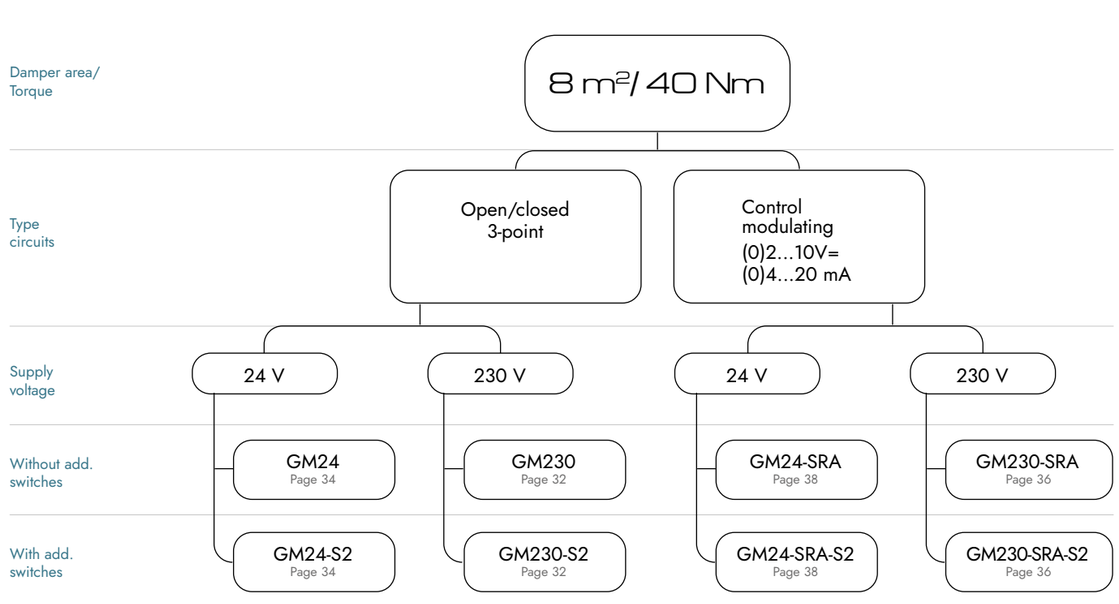
GM230
GM230-S2
GM24
GM24-S2
GM230-SRA
GM230-SRA-S2
GM24-SRA
GM24-SRA-S2

General selection chart









Torque requirements

In the torque calculation, there shall be taken into account the damper manufacturer's data regarding the cross-sectional area, design, installation method and air flow conditions.

The above damper areas are approximate provided that they are made of aluminum and the air flow rate is no higher than 5 m/s.

Torque requirements

In the torque calculation, there shall be taken into account the damper manufacturer's data regarding the cross-sectional area, design, installation method and air flow conditions.

The above damper areas are approximate provided that they are made of aluminum and the air flow rate is no higher than 5 m/s.

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LM230
LM230-S2

Actuator of air damper

Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers with an area up to ~1 m²

Torque 5 Nm

Rated voltage 230 V~

Control open/closed or three-point

2 integrated auxiliary switches
For LM230-S2



Technical data

Electrical parameters	
Rated voltage	230 V~, 50/60 Hz
Rated voltage range	85... 265V~
Power consumption for wire sizing	7 VA
Power consumption	
In operation	3 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 3 × 0.5 mm²
Aux. switches	Cable 1 m, 6 x 0.5 mm² For LM230-S2
Auxiliary switches for LM230-S2	2×SPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data	
Torque rated	Min. 5 Nm
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<60 s / 90°
Noise level	45 dB

Safety	
Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

Attention: voltage 230 V~!

The cable shall not be removed from the actuator.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

High functional reliability

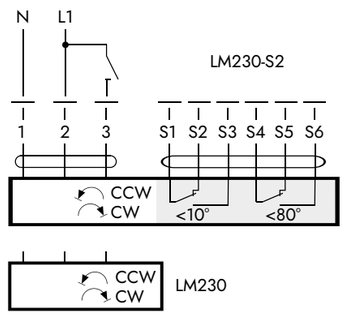
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

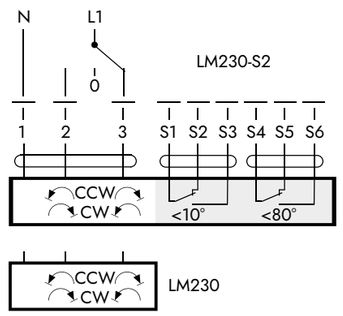
Actuator LM230-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection

Control open/closed



3-way control



Direction of rotation CW CCW

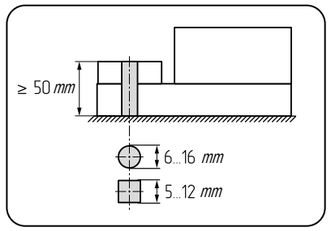
Wire colors

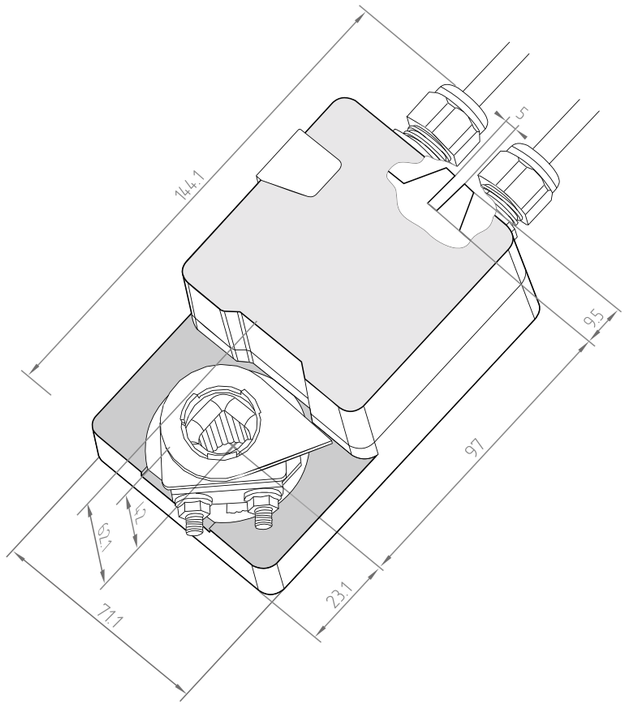
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = white	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Warning: 230 V!

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





LM24
LM24-S2

Actuator of air damper

Designed to control
air dampers in ventilation
and air conditioning systems
of buildings.

To control air dampers with an area up to ~1 m²

Torque 5 Nm

Rated voltage 24 V~/=

Control
Open/closed
Three-point

2 integrated auxiliary switches
For LM24-S2



Technical data

Electrical parameters

Nominal Voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2 ... 28.8 V~/=
Power consumption for wire sizing	7 VA
Power consumption	
In operation	3 W at rated torque
In rest position	1 W
Auxiliary switches for LM24-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~
Connection	
Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For LM24-S2

Functional data

Torque	Min. 5 Nm
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<60 s / 90
Noise level	45 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

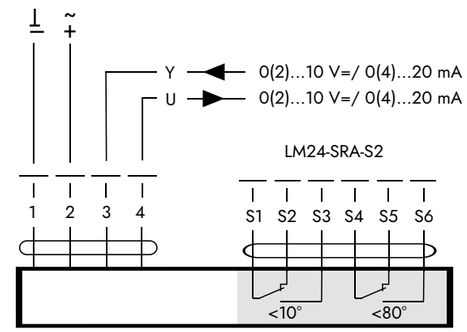
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator LM24-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



Wire colors

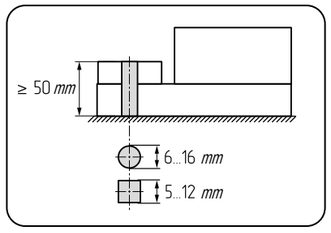
1 = black	S1 = yellow
2 = red	S2 = green
3 = yellow	S3 = blue
4 = green	S4 = violet
	S5 = gray
	S6 = white

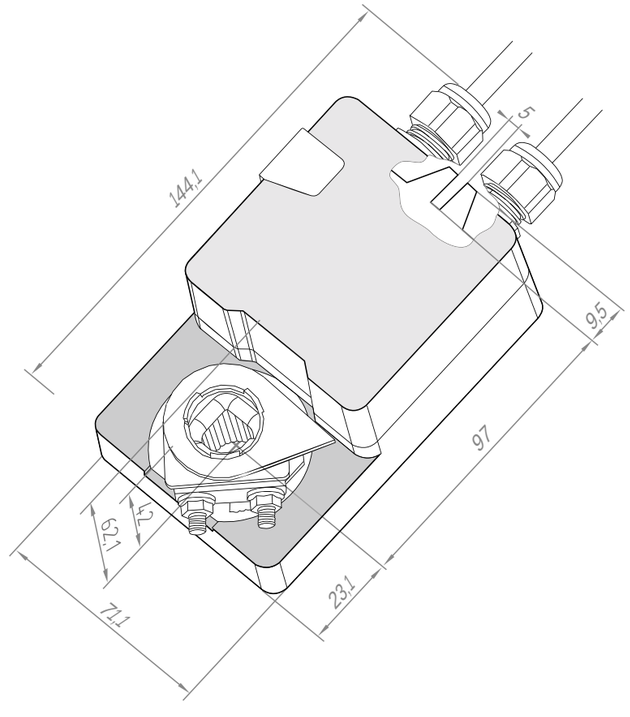
By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





LM230-SRA
LM230-SRA-S2

Actuator of air damper

Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers
with an area up to ~1 m²

Torque 5 Nm

Rated voltage 230 V~

Control:
Control modulating
0(2)...10 V= / 0(4)...20 mA
Feedback
0(2)...10 V= / 0(4)...20 mA

2 integrated
auxiliary switches
For LM230-SRA-S2



Technical data

Electrical parameters

Rated voltage	230 V~, 50/60 Hz
Rated voltage range	85... 265V~
Power consumption for wire sizing	7 VA
Power consumption	
In operation	3
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 5 x 0.5 mm²
Aux. switches	Cable 1 m, 6 x 0.5 mm² For LM230-SRA-S2
Auxiliary switches for LM230-SRA-S2	2×SPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque rated	Min. 5 Nm
Control	
Control signal Y	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10V=
Feedback U	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10 V=
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<60 s / 90°
Noise level	45 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

Attention: voltage 230 V~!

The cable shall not be removed from the actuator.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard control signal 0(2)...10 V= / 0(4)...20 mA. It opens to the position dictated by the signal. Feedback signal U allows displaying electrically the actual position of the actuator, as well as controlling the other actuators.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

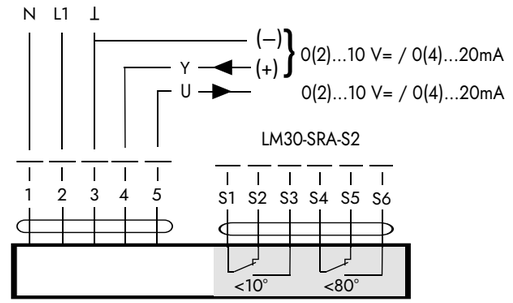
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.h

Position indication

Actuator LM230-SRA-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



Wire colors

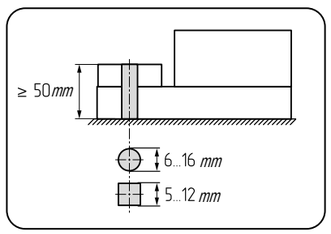
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = black	S3 = blue
4 = yellow	S4 = violet
5 = green	S5 = gray
	S6 = white

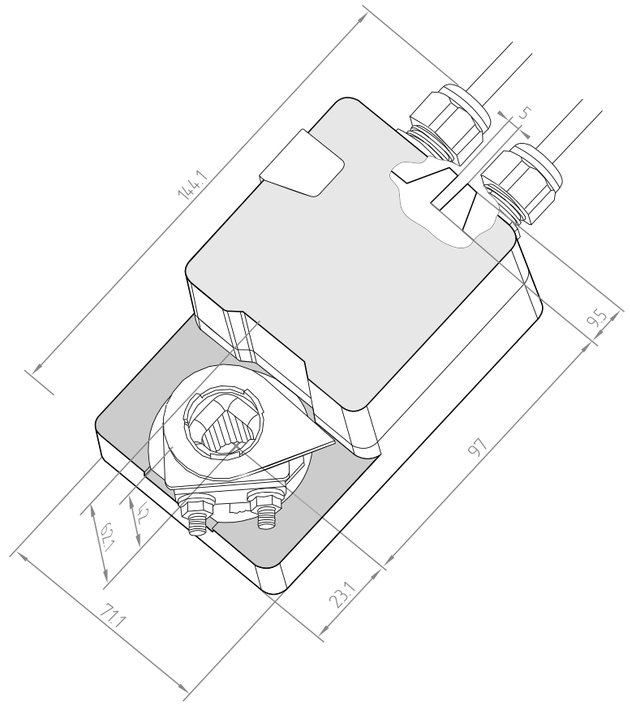
By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





LM24-SRA
LM24-SRA-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers
with an area up to ~1 m²

Torque 5 Nm

Rated voltage 24 V~/=

Control:
Control modulating
0(2)...10 V= / 0(4)...20 mA
Feedback
0(2)...10 V= / 0(4)...20 mA

2 integrated
auxiliary switches
For LM24-S2

Technical data

Electrical parameters

Rated voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2 ... 28.8 V~/=
Power consumption for wire sizing	7 VA
Power consumption	
In operation	3 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 4 × 0.5 mm²
Aux. switches	Cable 1 m, 6 x 0.5 mm² For LM24-SRA-S2
Auxiliary switches for LM24-SRA-S2	2×SPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque rated	Min. 5 Nm
Control	
Control signal Y	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10V=
Feedback U	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10 V=
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<60 s / 90°
Noise level	45 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard control signal 0(2)...10 V= / 0(4)...20 mA. It opens to the position dictated by the signal. Feedback signal U allows displaying electrically the actual position of the actuator, as well as controlling the other actuators.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator LM24-SRA-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



Wire colors

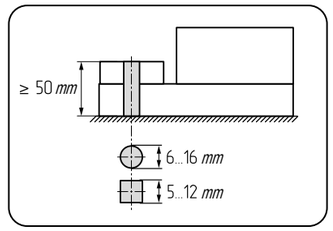
1 = black	S1 = yellow
2 = red	S2 = green
3 = yellow	S3 = blue
4 = green	S4 = violet
	S5 = gray
	S6 = white

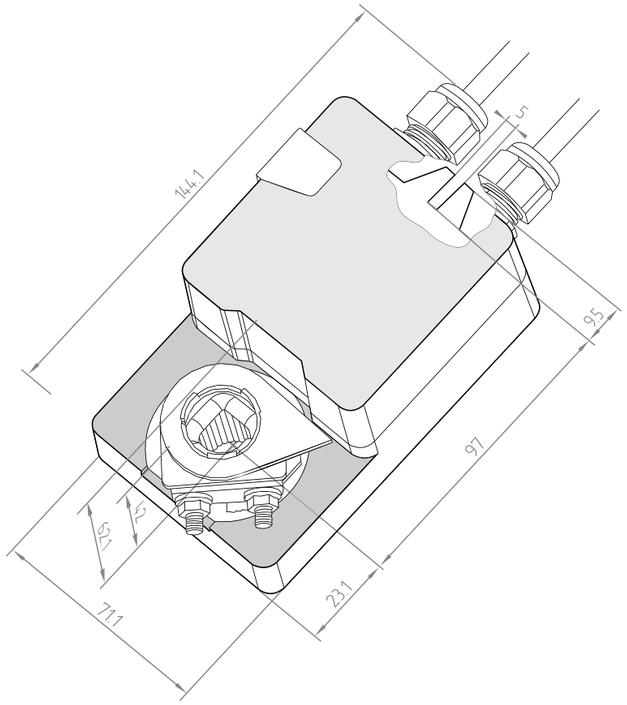
By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





NM230
NM230-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers with an area up to ~2 m²

Torque 10 Nm

Rated voltage 230 V~

Control: open/closed or three-point

2 integrated auxiliary switches
For NM230-S2

Technical data

Electrical parameters

Rated voltage	230 V~, 50/60 Hz
Rated voltage range	85... 265V~
Power consumption for wire sizing	10 VA
Power consumption	
In operation	4.5 W
In rest position	1 W©
Connection	
Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For NM230-S2
Auxiliary switches for NM230-S2	2×SPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque rated	Min. 10 Nm
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<60 s / 90°
Noise level	45 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1100 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

Attention: voltage 230 V~!

The cable shall not be removed from the actuator.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

High functional reliability

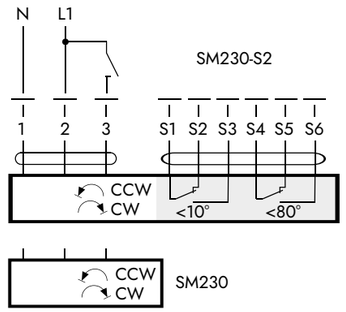
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

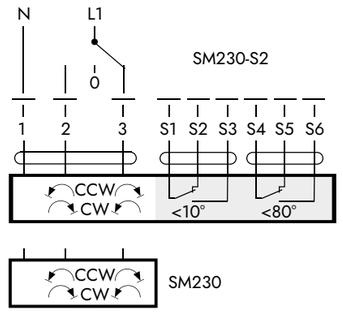
Actuator NM230-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection

Control open/closed



3-way control



Direction of rotation CW CCW

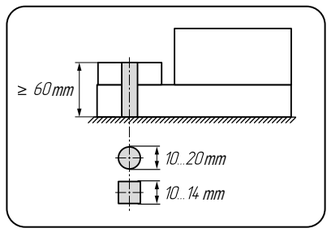
Wire colors

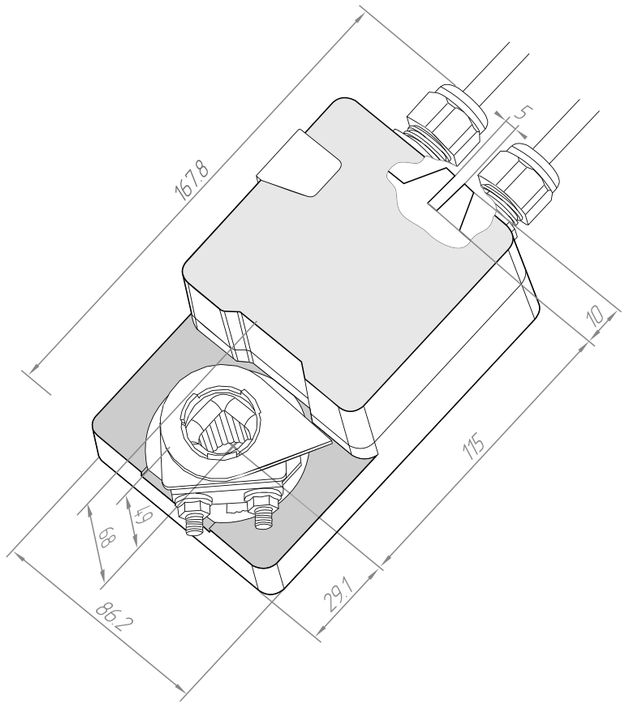
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = white	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Warning: 230 V!

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





NM24
NM24-S2

Actuator of air damper

Designed to control
air dampers in ventilation
and air conditioning systems
of buildings.

To control air dampers with an area up to ~2 m²

Torque 10 Nm

Rated voltage 24 V~/=

Control
Open/closed
Three-point

2 integrated
auxiliary switches
For NM24-S2



Technical data

Electrical parameters

Nominal Voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2 ... 28.8 V~/=
Power consumption for wire sizing	10 VA
Power consumption	
In operation	4.5 W
In rest position	1 W
Auxiliary switches for NM24-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~
Connection	
Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For NM24-S2

Functional data

Torque	Min. 10 Nm
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<60 s / 90°
Noise level	45 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	−30...+50 °C
Storage temperature	−30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1100 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

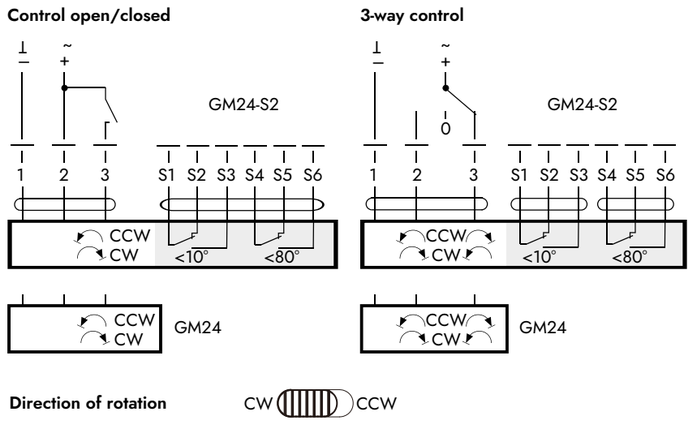
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator NM24-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



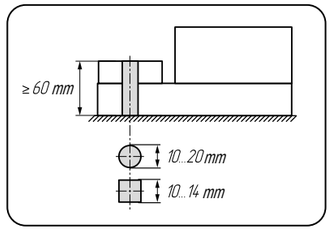
Wire colors

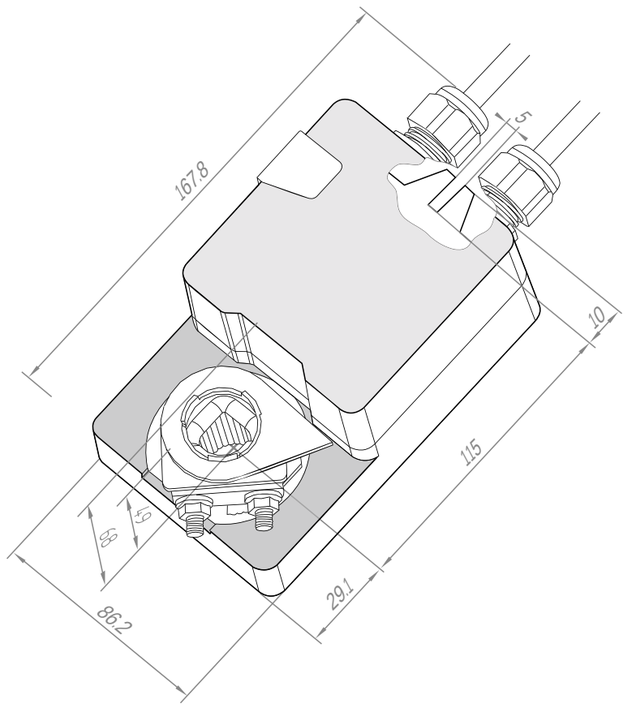
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = white	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





NM230-SRA
NM230-SRA-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers
with an area up to ~2 m²

Torque 10 Nm

Rated voltage 230 V~

Control:
Control modulating
0(2)...10 V= / 0(4)...20 mA
Feedback
0(2)...10 V= / 0(4)...20 mA

2 integrated
auxiliary switches
For NM230-SRA-S2

Technical data

Electrical parameters

Rated voltage	230 V~, 50/60 Hz
Rated voltage range	85... 265V~
Power consumption for wire sizing	10 VA
Power consumption	
In operation	4.5 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 5×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For NM230-SRA-S2
Auxiliary switches for NM230-SRA-S2	2×SPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque **Rated**	Min. 10 Nm
Control	
Control signal Y	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10V=
Feedback U	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10 V=
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<60 s / 90°
Noise level	45 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1100 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

Attention: voltage 230 V~!

The cable shall not be removed from the actuator.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard control signal 0(2)...10 V= / 0(4)...20 mA. It opens to the position dictated by the signal. Feedback signal U allows displaying electrically the actual position of the actuator, as well as controlling the other actuators.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

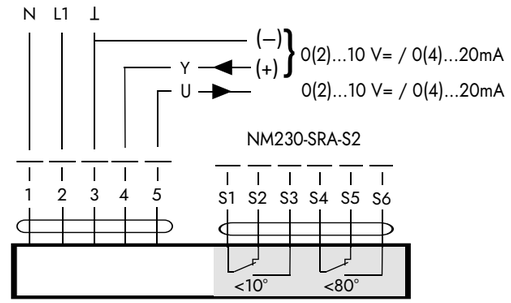
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator NM230-SRA-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



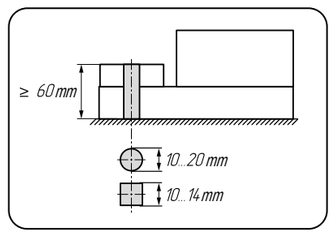
Wire colors

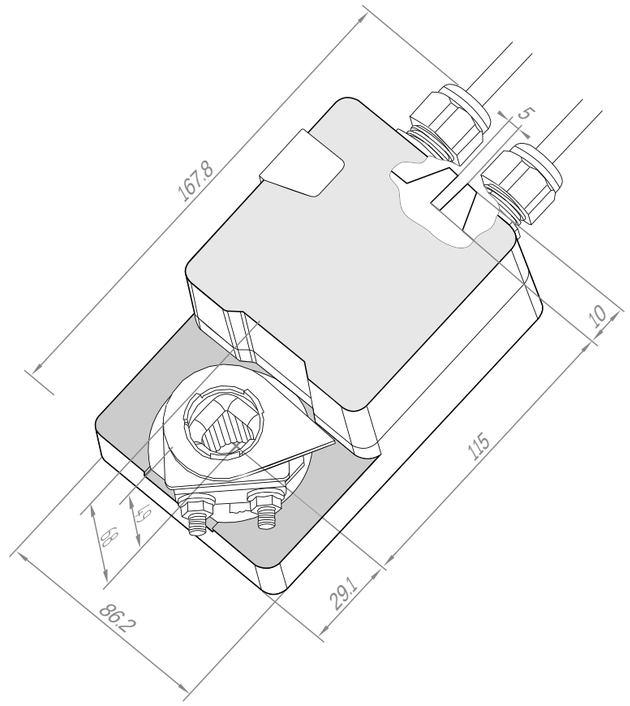
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = black	S3 = blue
4 = yellow	S4 = violet
5 = green	S5 = gray
	S6 = white

By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





NM24-SRA
NM24-SRA-S2

Actuator of air damper

Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers
with an area up to ~2 m²

Torque 10 Nm

Rated voltage 24 V~/=

Control:
Control modulating
0(2)...10 V= / 0(4)...20 mA
Feedback
0(2)...10 V= / 0(4)...20 mA

2 integrated
auxiliary switches
For NM24-SRA-S2



Technical data

Electrical parameters	
Rated voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2 ... 28.8 V~/=
Power consumption for wire sizing	10 VA
Power consumption	
In operation	4.5 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 4 × 0.5 mm²
Aux. switches	Cable 1 m, 6 x 0.5 mm² For NM24-SRA-S2
Auxiliary switches for NM24-SRA-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data	
Torque rated	Min. 10 Nm
Control	
Control signal Y	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10V=
Feedback U	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10 V=
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<60 s / 90°
Noise level	45 dB

Safety	
Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight	
Dimensions	See on the next page Dimensions Section
Weight	~1100 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard control signal 0(2)...10 V= / 0(4)...20 mA. It opens to the position dictated by the signal. Feedback signal U allows displaying electrically the actual position of the actuator, as well as controlling the other actuators.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

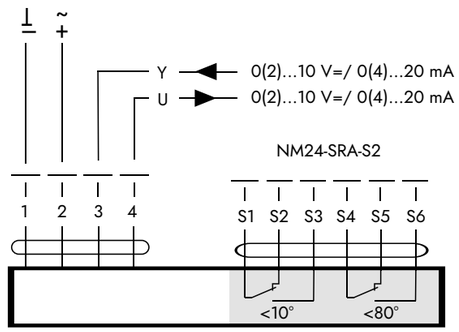
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator NM24-SRA-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



Wire colors

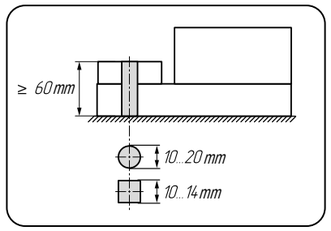
1 = black	S1 = yellow
2 = red	S2 = green
3 = yellow	S3 = blue
4 = green	S4 = violet
	S5 = gray
	S6 = white

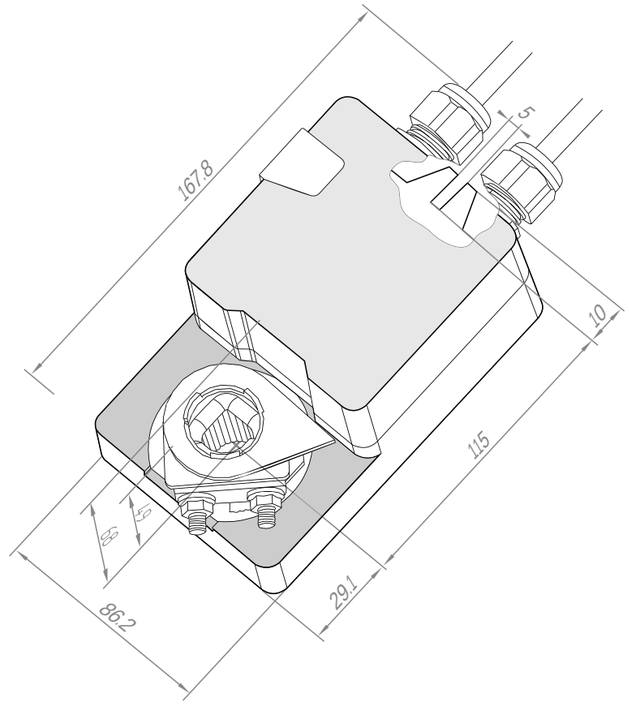
By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





SM230
SM230-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers with an area up to ~4 m²

Torque 20 Nm

Rated voltage 230 V~

Control:
open/closed
or three-point

2 integrated
auxiliary switches
For SM230-S2

Technical data

Electrical parameters

Rated voltage	230 V~, 50/60 Hz
Rated voltage range	85... 265V~
Power consumption for wire sizing	10 VA
Power consumption	
In operation	4.5 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For SM230-S2
Auxiliary switches for SM230-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque Rated	Min. 20 Nm
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<150 s / 90°
Noise level	45 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1400 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

Attention: voltage 230 V~!

The cable shall not be removed from the actuator.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

High functional reliability

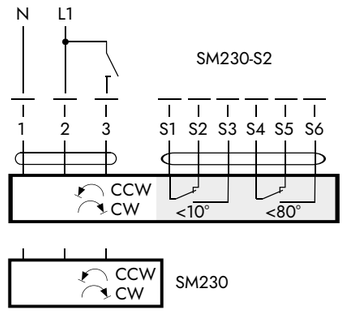
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

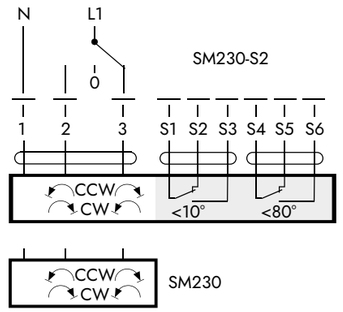
Actuator SM230-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection

Control open/closed



3-way control



Direction of rotation CW CCW

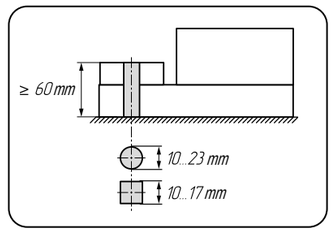
Wire colors

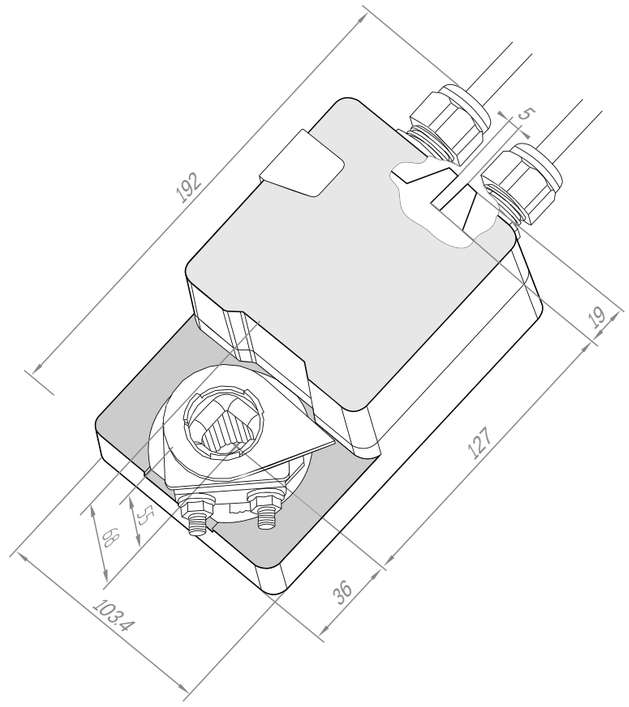
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = white	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Warning: 230 V!

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





SM24
SM24-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings.

To control air dampers with an area up to ~4 m²

Torque 20 Nm

Rated voltage 24 V~/=

Control
Open/closed
Three-point

2 integrated auxiliary switches
For SM24-S2

Technical data

Electrical parameters

Nominal Voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2 ... 28.8 V~/=
Power consumption for wire sizing	10 VA
Power consumption	
In operation	4.5 W
In rest position	1 W
Auxiliary switches for SM24-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~
Connection	
Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For SM24-S2

Functional data

Torque	Min. 20 Nm
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<150 s / 90°
Noise level	45 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1400 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

High functional reliability

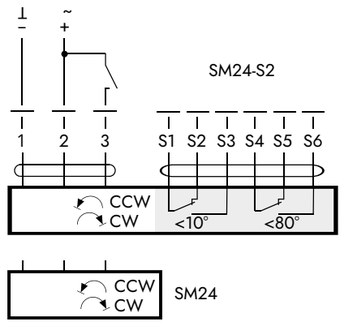
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

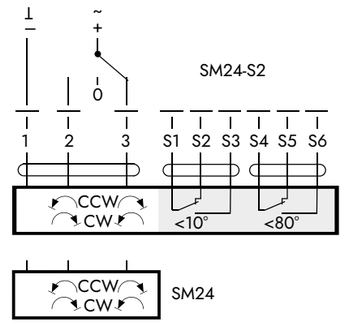
Actuator SM24-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection

Control open/closed



3-way control



Wire colors

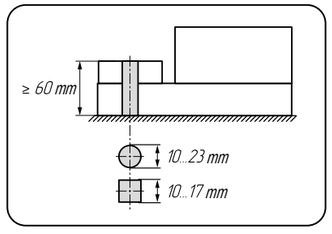
1 = black	S1 = yellow
2 = red	S2 = green
3 = white	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

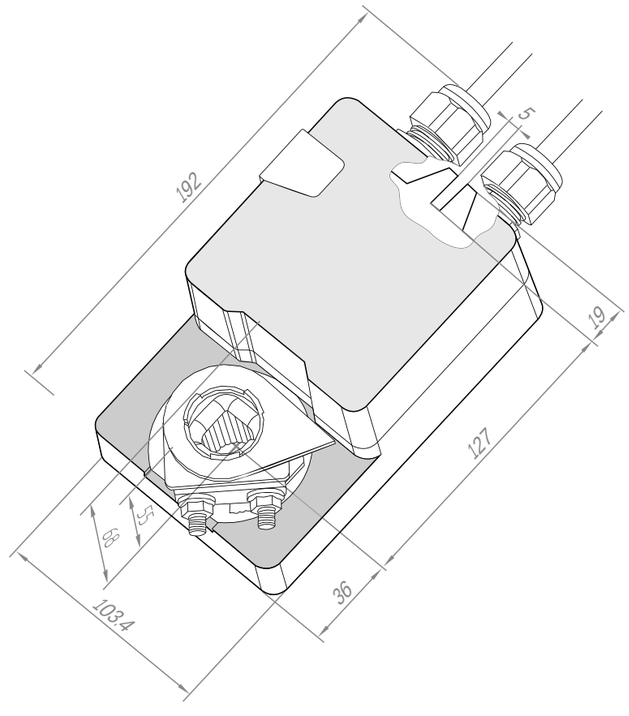
Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Direction of rotation CW CCW

Dimensions, mm





SM230-SRA
SM230-SRA-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers
with an area up to ~4 m²

Torque 20 Nm

Rated voltage 230 V~

Control:
Control modulating
0(2)...10 V= / 0(4)...20 mA
Feedback
0(2)...10 V= / 0(4)...20 mA

2 integrated
auxiliary switches
For SM230-SRA-S2

Technical data

Electrical parameters

Rated voltage	230 V~, 50/60 Hz
Rated voltage range	85... 265V~
Power consumption for wire sizing	10 VA
Power consumption	
In operation	4.5 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 5x0.5 mm²
Aux. switches	Cable 1 m, 6x0.5 mm² For SM230-SRA-S2
Auxiliary switches for SM230-SRA-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque Rated	Min. 20 Nm
Control	
Control signal Y	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10V=
Feedback U	0(2)...10 V= / 0(4)...20 mA
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<150 s /90°
Noise level	45 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1400 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

Attention: voltage 230 V~!

The cable shall not be removed from the actuator.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard control signal 0(2)...10 V= / 0(4)...20 mA. It opens to the position dictated by the signal. Feedback signal U allows displaying electrically the actual position of the actuator, as well as controlling the other actuators.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

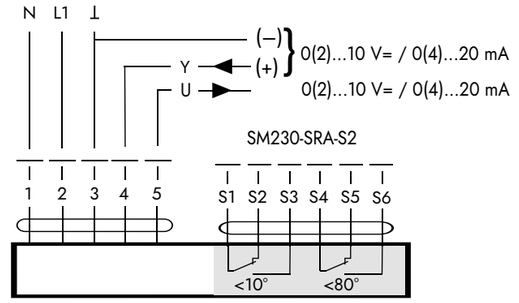
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator SM230-SRA-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



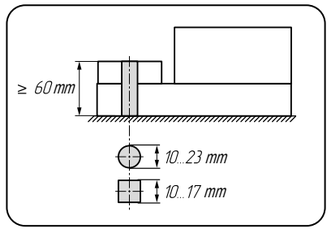
Wire colors

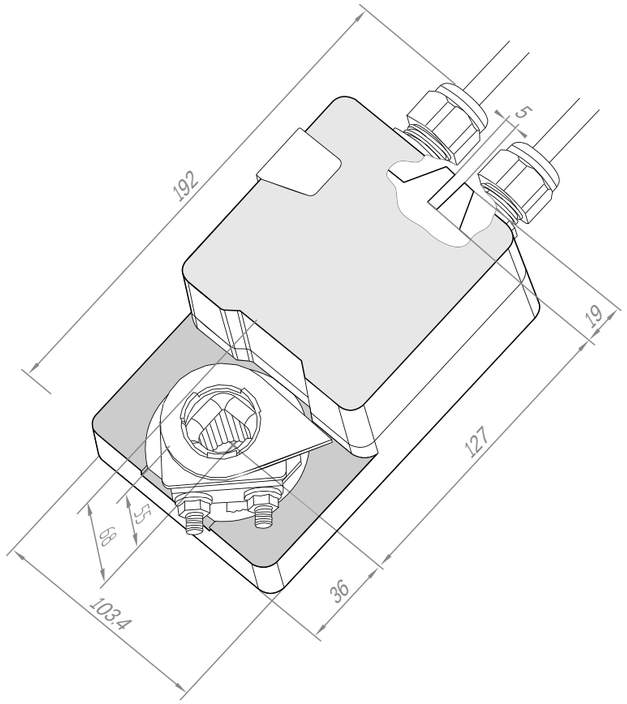
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = black	S3 = blue
4 = yellow	S4 = violet
5 = green	S5 = gray

By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





SM24-SRA
SM24-SRA-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers
with an area up to ~4 m²

Torque 20 Nm

Rated voltage 24 V~/=

Control:
Control modulating
0(2)...10 V= / 0(4)...20 mA
Feedback
0(2)...10 V= / 0(4)...20 mA

2 integrated
auxiliary switches
For SM24-SRA-S2

Technical data

Electrical parameters

Rated voltage	24 V~, 50/60 Hz 24 V DC
Rated voltage range	19.2 ... 28.8 V~/=
Power consumption for wire sizing	10 VA
Power consumption	
In operation	4.5 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 4×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For SM24-SRA-S2
Auxiliary switches for SM24-SRA-S2	2×SPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque rated	Min. 20 Nm
Control	
Control signal Y	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10V=
Feedback U	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10 V=
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<150 s /90°
Noise level	45 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1400 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard control signal 0(2)...10 V= / 0(4)...20 mA. It opens to the position dictated by the signal. Feedback signal U allows displaying electrically the actual position of the actuator, as well as controlling the other actuators.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

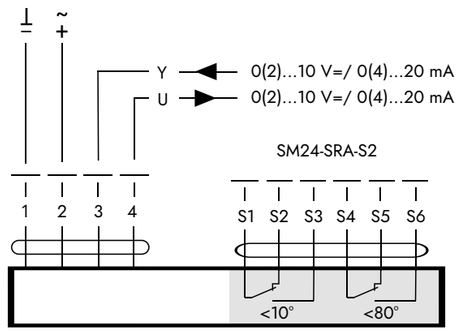
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator SM24-SRA-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



Wire colors

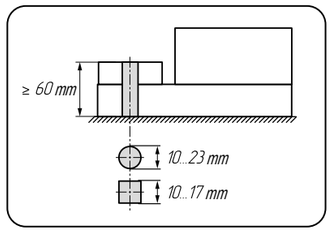
1 = black	S1 = yellow
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3 = yellow	S3 = blue
4 = green	S4 = violet
	S5 = gray
	S6 = white

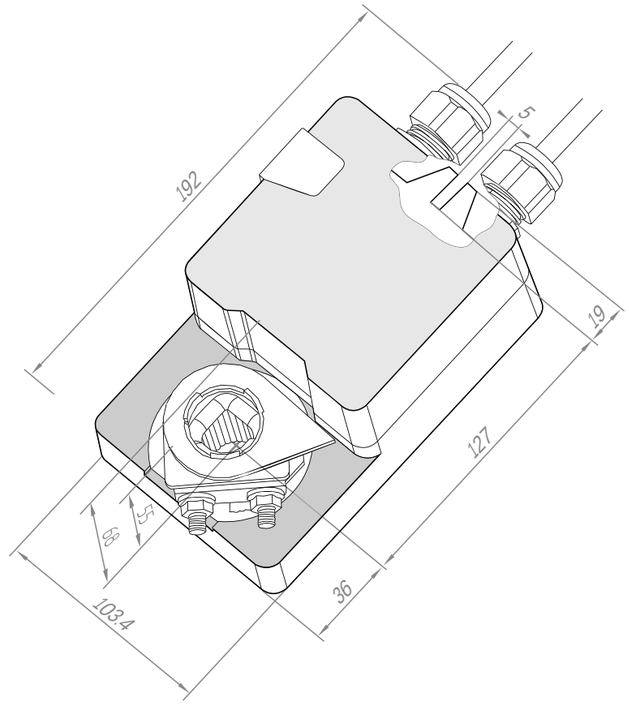
By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





GM230
GM230-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers with an area up to ~8 m²

Torque 40 Nm

Rated voltage 230 V~

Control:
open/closed
or three-point

2 integrated
auxiliary switches
For GM230-S2

Technical data

Electrical parameters

Rated voltage	230 V~, 50/60 Hz
Rated voltage range	85... 265V~
Power consumption for wire sizing	12 VA
Power consumption	
In operation	5 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 3x0.5 mm²
Aux. switches	Cable 1 m, 6x0.5 mm² For GM230-S2
Auxiliary switches for GM230-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque rated	Min. 40 Nm
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<150 s / 90°
Noise level	45 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1500 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

Attention: voltage 230 V~!

The cable shall not be removed from the actuator.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

High functional reliability

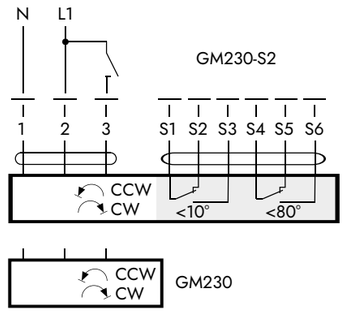
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

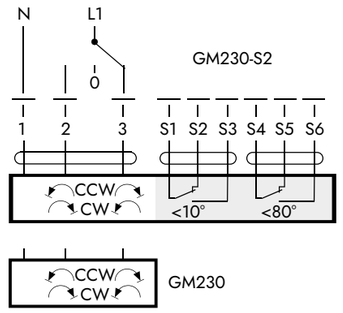
Actuator GM230-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection

Control open/closed



3-way control



Direction of rotation

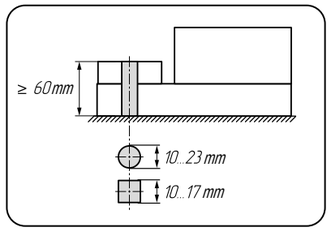
Wire colors

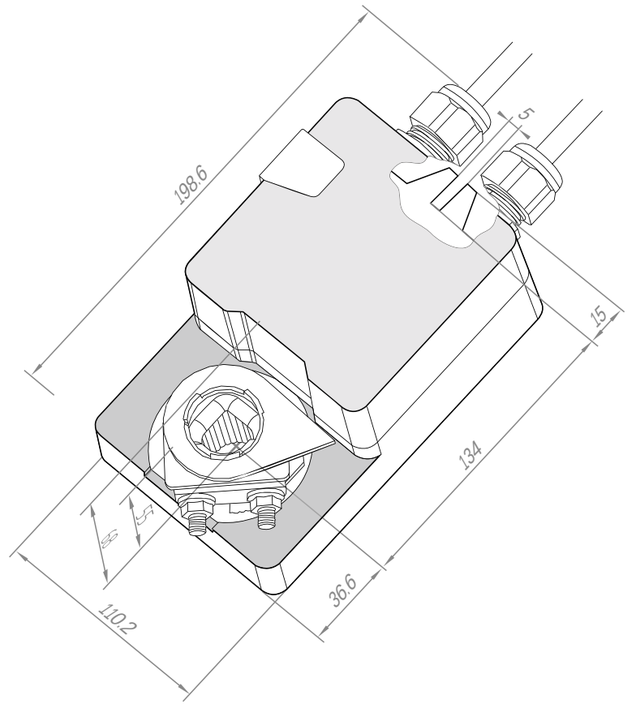
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = white	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Warning: 230 V!

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





GM24
GM24-S2

Actuator of air damper

Designed to control
air dampers in ventilation
and air conditioning systems
of buildings.

To control air dampers with an area up to ~8 m²

Torque 40 Nm

Rated voltage 24 V~/=

Control
Open/closed
Three-point

2 integrated auxiliary switches
For GM24-S2



Technical data

Electrical parameters

Nominal Voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2 ... 28.8 V~/=
Power consumption for wire sizing	12 VA
Power consumption	
In operation	5 W
In rest position	1 W
Auxiliary switches for GM24-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~
Connection	
Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For GM24-S2

Functional data

Torque	Min. 40 Nm
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<150 s / 90°
Noise level	45 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1500 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

High functional reliability

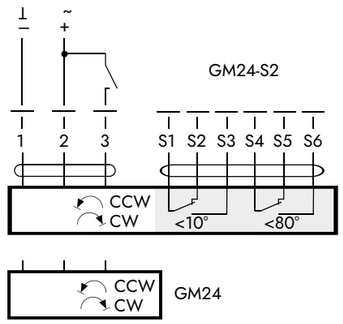
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

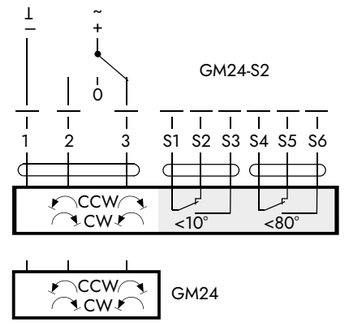
Actuator GM24-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection

Control open/closed



3-way control



Wire colors

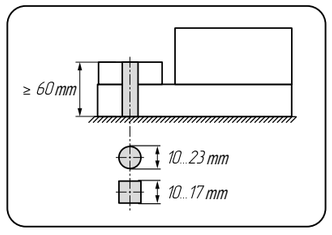
1 = blue	S1 = yellow
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3 = white	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

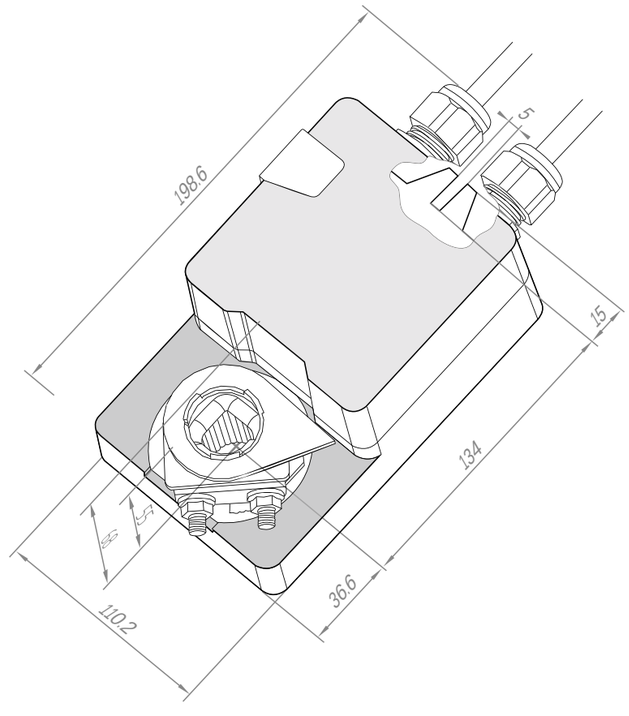
Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Direction of rotation CW CCW

Dimensions, mm





GM230-SRA
GM230-SRA-S2

Actuator of air damper

Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers
with an area up to ~8 m²

Torque 40 Nm

Rated voltage 230 V~

Control:
Control modulating
0(2)...10 V= / 0(4)...20 mA
Feedback
0(2)...10 V= / 0(4)...20 mA

2 integrated
auxiliary switches
For GM230-SRA-S2



Technical data

Electrical parameters

Rated voltage	230 V~, 50/60 Hz
Rated voltage range	85... 265V~
Power consumption for wire sizing	12 VA
Power consumption	
In operation	5 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 5×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For GM230-SRA-S2
Auxiliary switches for GM230-SRA-S2	2xSPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque Rated	Min. 40 Nm
Control	
Control signal Y	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10V=
Feedback U	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10 V=
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<150 s /90°
Noise level	45 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1500 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

Attention: voltage 230 V~!

The cable shall not be removed from the actuator.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard control signal 0(2)...10 V= / 0(4)...20 mA. It opens to the position dictated by the signal. Feedback signal U allows displaying electrically the actual position of the actuator, as well as controlling the other actuators.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

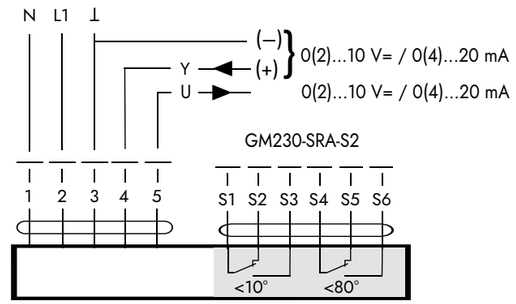
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator GM230-SRA-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



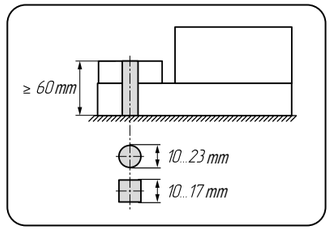
Wire colors

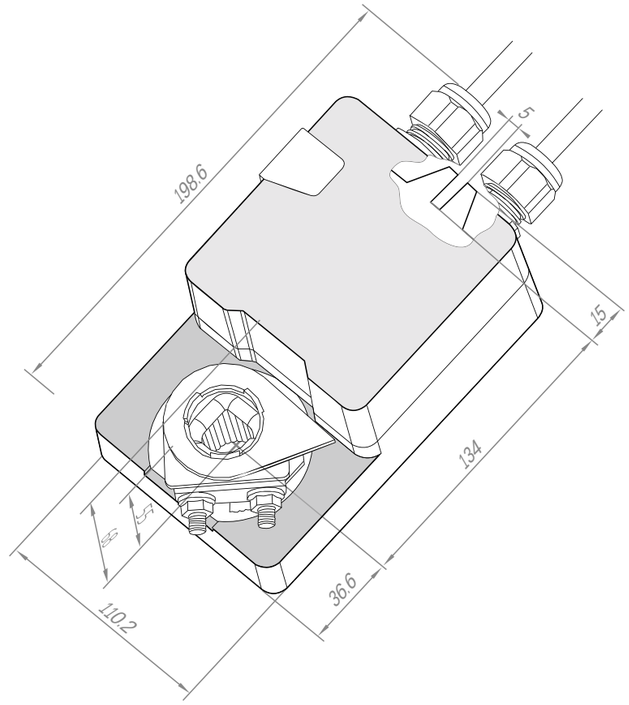
1 = blue	S1 = yellow
2 = brown	S2 = green
3 = black	S3 = blue
4 = yellow	S4 = violet
5 = green	S5 = gray
	S6 = white

By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





GM24-SRA
GM24-SRA-S2

Actuator of air damper



Designed to control
air dampers in ventilation
and air conditioning systems
of buildings

To control air dampers
with an area up to ~8 m²

Torque 40 Nm

Rated voltage 24 V~/=

Control:
Control modulating
0(2)...10 V= / 0(4)...20 mA
Feedback
0(2)...10 V= / 0(4)...20 mA

2 integrated
auxiliary switches
For GM24-SRA-S2

Technical data

Electrical parameters

Rated voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2 ... 28.8 V~/=
Power consumption for wire sizing	12 VA
Power consumption	
In operation	5 W
In rest position	1 W
Connection	
Power supply/control	Cable 1 m, 4×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm² For GM24-SRA-S2
Auxiliary switches for GM24-SRA-S2	2×SPDT, 1 mA... 3 (1.5) A, 250 V~

Functional data

Torque	Min. 40 Nm
Rated	
Control	
Control signal Y	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10V=
Feedback U	0(2)...10 V= / 0(4)...20 mA Factory setting 0...10 V=
Direction of rotation	Reversible by means of CW/CCW switch
Manual control	Gearbox is disengaged using momentary-contact-type button
Position indication	Mechanical indicator Removable
Angle of rotation	Max. 90° Limitation on both sides using adjustable mechanical stops
Running time	<150 s /90°
Noise level	45 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+80 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1500 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard control signal 0(2)...10 V= / 0(4)...20 mA. It opens to the position dictated by the signal. Feedback signal U allows displaying electrically the actual position of the actuator, as well as controlling the other actuators.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Manual control

Manual control is possible using a momentary-contact-type button (when the button is held pressed, the gearbox is disengaged).

Adjustable rotation angle

The rotation angle is adjusted using mechanical stops.

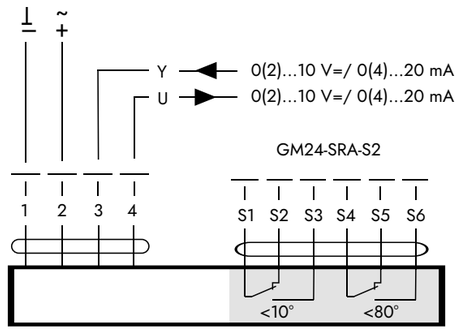
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator GM24-SRA-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



Wire colors

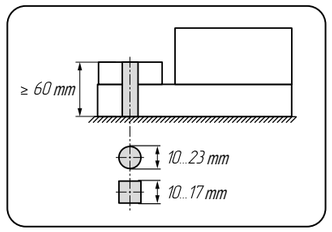
1 = black	S1 = yellow
2 = red	S2 = green
3 = yellow	S3 = blue
4 = green	S4 = violet
	S5 = gray
	S6 = white

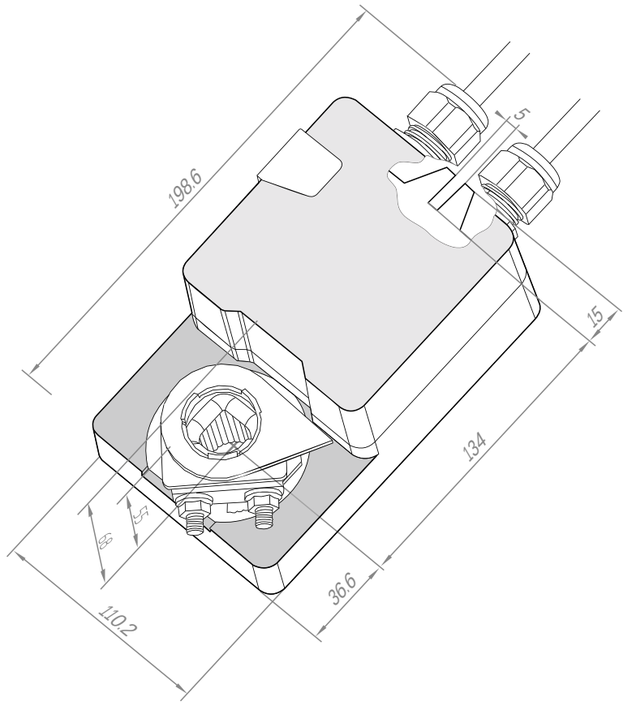
By default, the factory setting of the control and feedback signal is 0...10 V=
Any change may be made by qualified personnel only

Connection via isolating transformer

Other electrical drives may be connected in parallel taking into account the power level

Dimensions, mm





General-purpose

With spring return



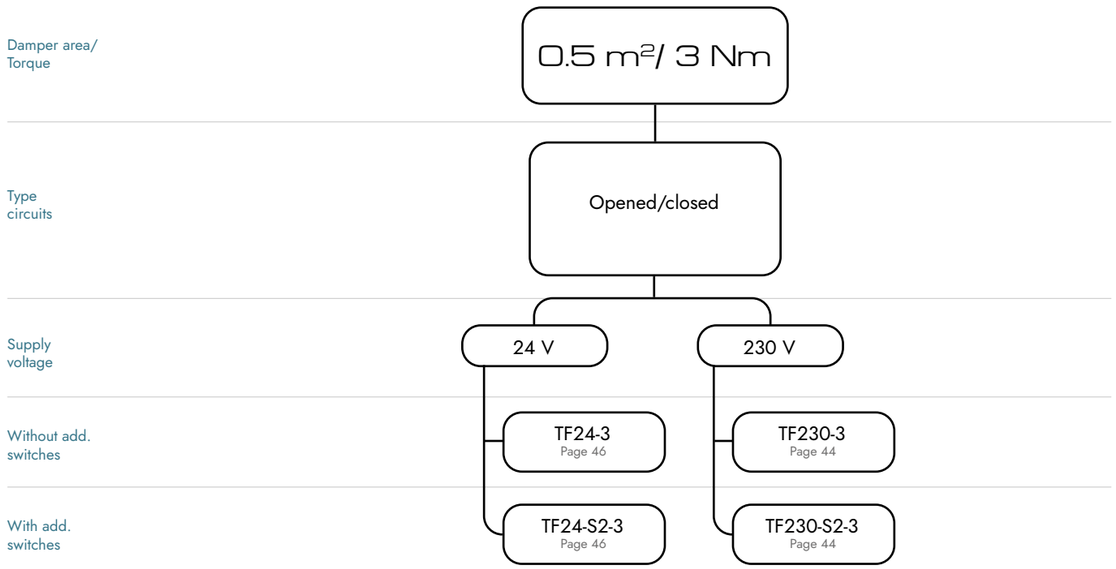
TF... (3 Nm)
TF230-3
TF230-S2-3
TF24-3
TF24-S2-3

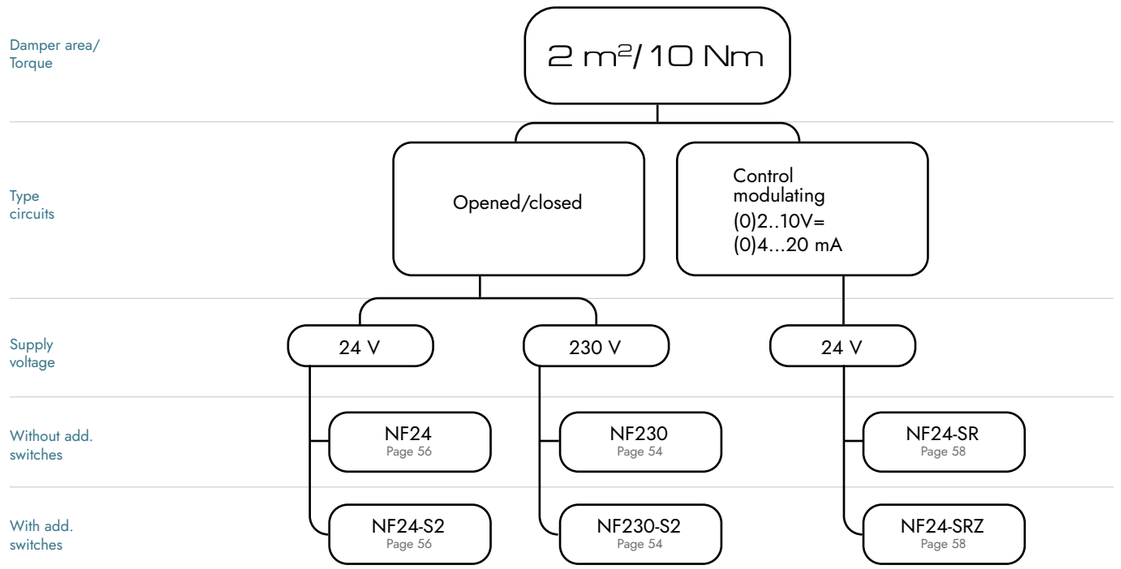
LF... (5 Nm)
LF230-5
LF230-5-S2
LF24-5
LF24-S2-5
LF24-SR-5
LF24-SRZ-5

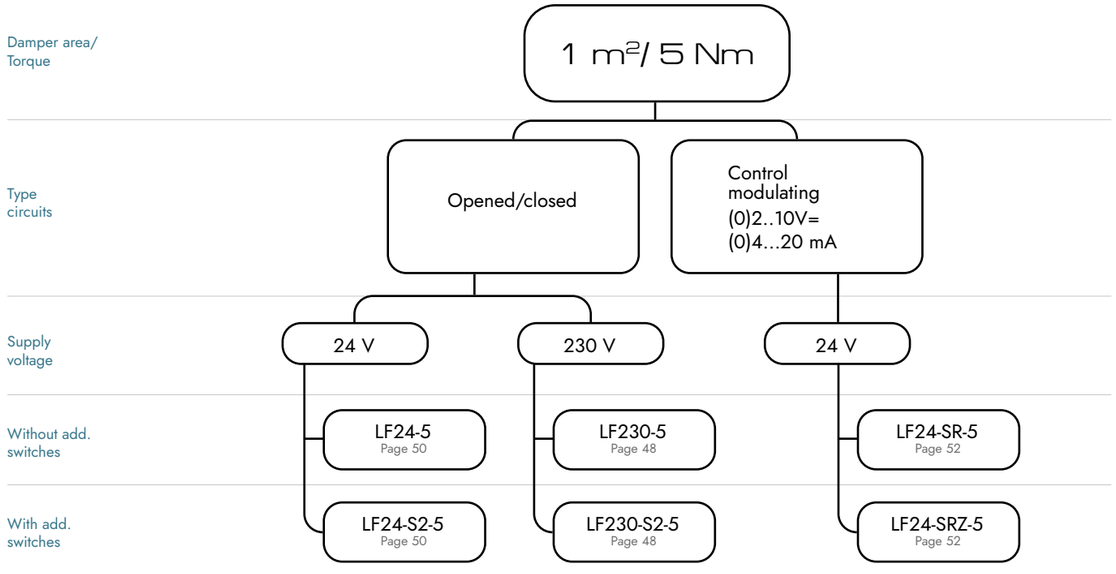
NF... (10 Nm)
NF230
NF230-S2
NF24
NF24-S2
NF24-SR
NF24-SRZ

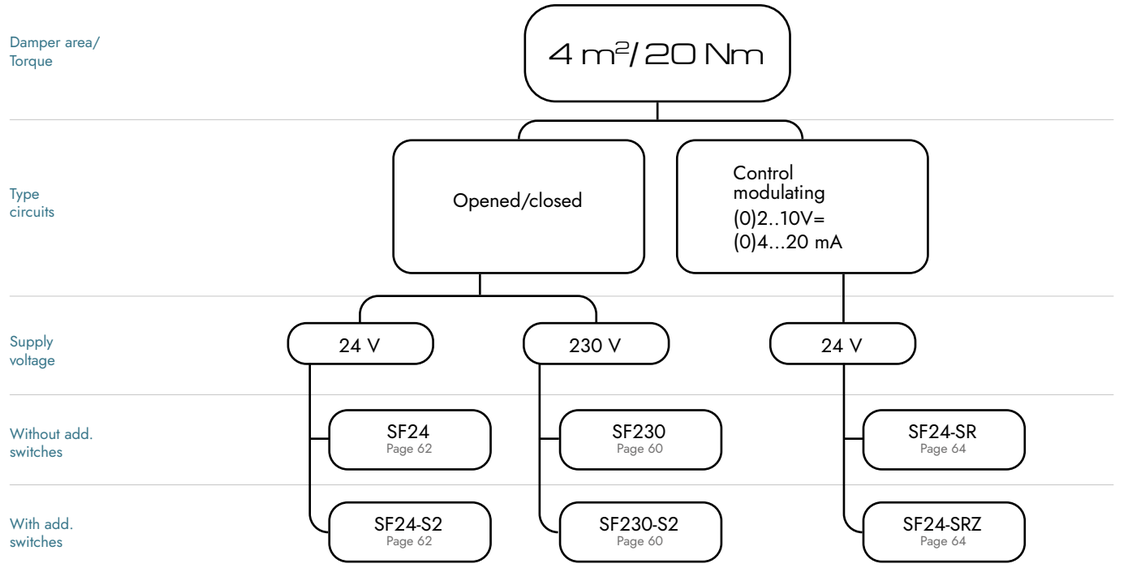
SF... (20 Nm)
SF230
SF230-S2
SF24
SF24-S2
SF24-SR
SF24-SRZ

General selection chart









Torque requirements

In the torque calculation, there shall be taken into account the damper manufacturer's data regarding the cross-sectional area, design, installation method and air flow conditions.

The above damper areas are approximate provided that they are made of aluminum and the air flow rate is no higher than 5 m/s.

Torque requirements

In the torque calculation, there shall be taken into account the damper manufacturer's data regarding the cross-sectional area, design, installation method and air flow conditions.

The above damper areas are approximate provided that they are made of aluminum and the air flow rate is no higher than 5 m/s.

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TF230-3
TF230-S2-3

Spring-return actuator



Designed to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~0.5 m²

Torque 3 Nm

Rated voltage 230 V~

Control
Open/closed

Integrated auxiliary switch
For TF230-S2-3

Technical data

Electrical parameters

Nominal Voltage	230 V~, 50/60 Hz
Rated voltage range	198...264 V~
Power consumption for wire sizing	7 VA
Power consumption	
In operation	5 W
In rest position	3.5 W
Connection	
Power supply/control	1 m, 2×0.5 mm²
Aux. switches	1 m, 6×0.5 mm² For TF230-S2-3
Auxiliary switch for TF230-S2-3	2xSPDT, 1 mA...3 A (0.5), 5 V=...250 V ~
Switching point	5°/ 85°

Functional data

Torque	
Motor	Min. 3 Nm
Fail-safe	Min. 3 Nm
Rotation direction	Selected by L/R setting
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Running time	
Motor	<25...45 s / 90°
Fail-safe	<15 s at –20...+50 °C <60 s at –30 °C
Noise level	
Motor	40 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1200 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

Attention: voltage 230 V~!

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by operational service teams.

Cable may not be detached from the device.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Operating principle

The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

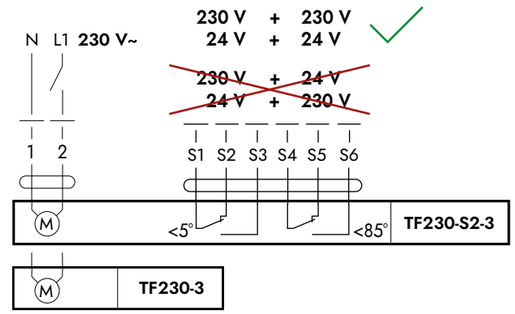
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator TF230-S2-3 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



Wire colors:

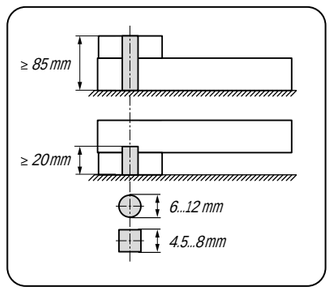
1 = blue
2 = brown

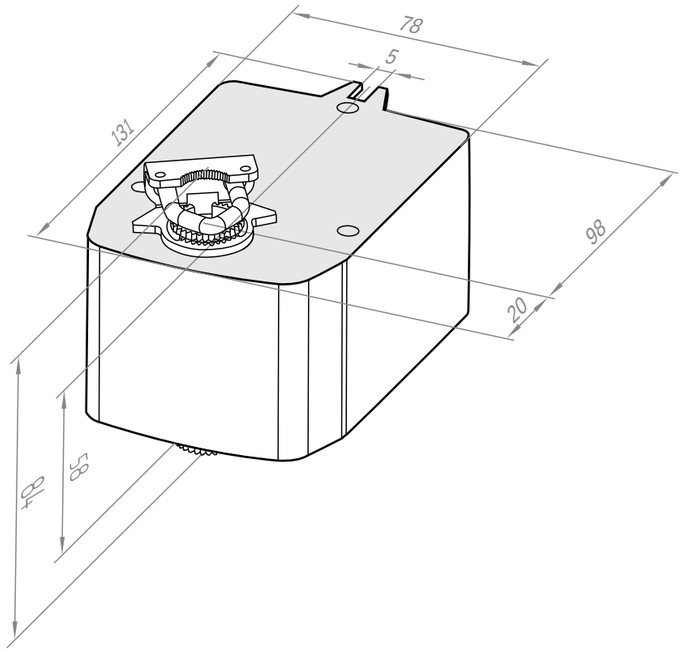
S1 = yellow
S2 = green
S3 = blue
S4 = violet
S5 = gray
S6 = white

Other actuators may be connected in parallel taking into account the power level

High and low voltages shall not be used at the auxiliary switches at the same time

Dimensions, mm





TF24-3
TF24-S2-3

Spring-return actuator



Designed to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~0.5 m²

Torque 3 Nm

Rated voltage 24 V~/=

Control
Open/closed

Integrated auxiliary switch
For TF24-S2-3

Technical data

Electrical parameters

Nominal Voltage	24 V~/= 50/60 Hz
Rated voltage range	20.4...27.6 V~ 21.6...27.6 V=
Power consumption for wire sizing	7 VA
Power consumption	
In operation	5 W
In rest position	3.5 W
Connection	
Power supply/control	1 m, 2×0.5 mm²
Aux. switches	1 m, 6×0.5 mm² For TF24-S2-3
Auxiliary switches for TF24-S2-3	2×SPDT, 1 mA...3 A (0.5), 5 V=...250 V ~
Switching point	5°/ 85°

Functional data

Torque	
Motor	Min. 3 Nm
Fail-safe	Min. 3 Nm
Rotation direction	Selected by L/R setting
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Running time	
Motor	<25...45 s / 90°
Fail-safe	<15 s at –20...+50°C <60 s at –30 °C
Noise level	
Motor	50 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30... +60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1200 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Operating principle

The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

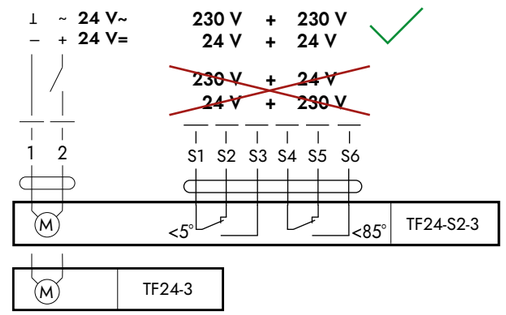
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator TF24-S2-3 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



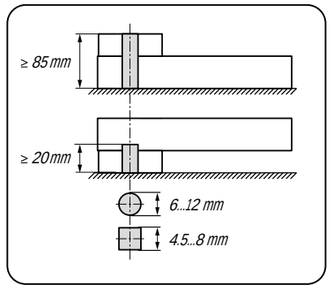
Wire colors:

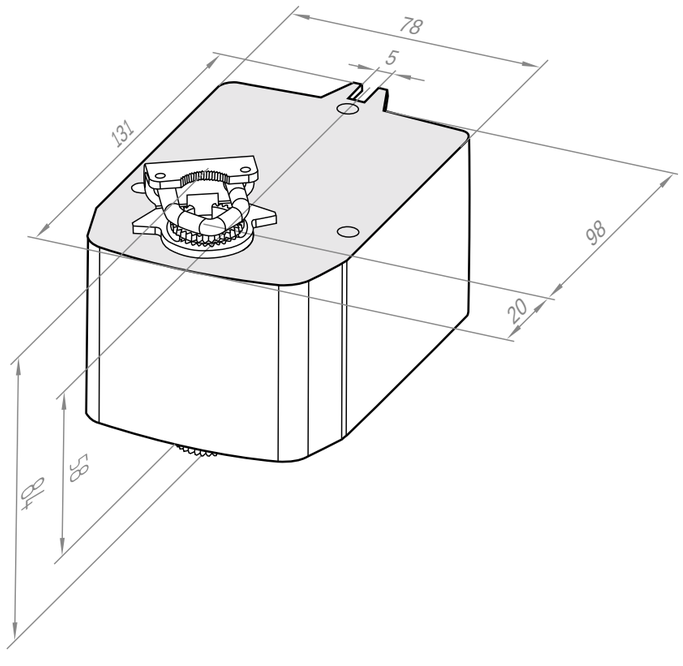
1 = black	S1 = yellow
2 = red	S2 = green
	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





LF230-5
LF230-S2-5

Spring-return actuator



Designed to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~1 m²

Torque 5 Nm

Rated voltage 230 V~

Control
Open/closed

Integrated auxiliary switch
For LF230-S2-5

Technical data

Electrical parameters

Nominal Voltage	230 V~, 50/60 Hz
Rated voltage range	198...264 V~
Power consumption for wire sizing	6 VA
Power consumption	
In operation	5 W
In rest position	2.5 W
Connection	
Power supply/control	1 m, 2×0.5 mm²
Aux. switches	1 m, 6×0.5 mm² For LF230-S2-5
Auxiliary switch for LF230-S2-5	2xSPDT, 1 mA...3 A, 5 V=...250 V ~
Switching point	5°/ 80°

Functional data

Torque	
Motor	Min. 5 Nm
Fail-safe	Min. 5 Nm
Rotation direction	Selected by L/R setting
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Running time	
Motor	<70 s /90°
Fail-safe	<20 s at –20...+50°C <60 s at –30 °C
Noise level	
Motor	50 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1900 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

Attention: voltage 230 V~!

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by operational service teams.

Cable may not be detached from the device.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

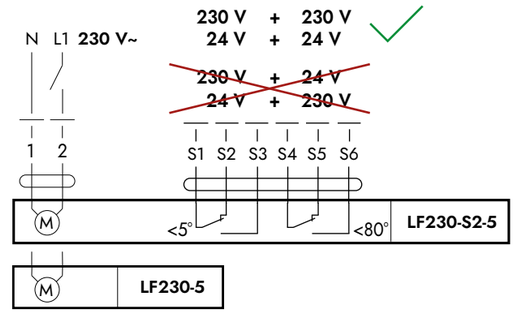
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator LF230-S2-5 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



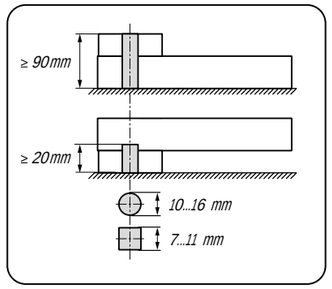
Wire colors:

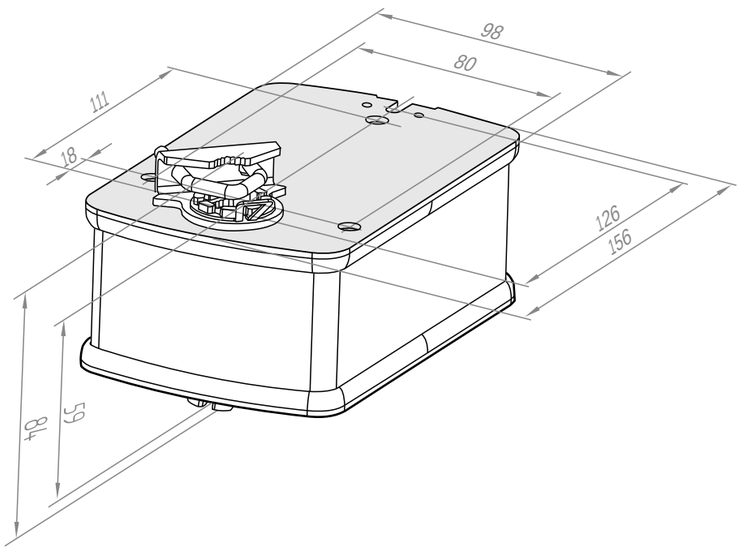
1 = blue	S1 = yellow
2 = brown	S2 = green
	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Other actuators may be connected in parallel taking into account the power level

High and low voltages shall not be used at the auxiliary switches at the same time

Dimensions, mm





LF24-5
LF24-S2-5

Spring-return actuator

Designed to control the air dampers
that perform the protective functions
in ventilation and air conditioning systems
of buildings (for example, freezing protection)

To control air dampers with an area up to ~1 m²

Torque 5 Nm

Rated voltage 24 V~/=

Control
Open/closed

Integrated
auxiliary switch
For LF24-S2-5



Technical data

Electrical parameters

Nominal Voltage	24 V~/= 50/60 Hz
Rated voltage range	19.2...28.8 V~ 21.6...28.8 V=
Power consumption for wire sizing	6 VA
Power consumption	
In operation	5 W
In rest position	2.5 W
Connection	
Power supply/control	1 m, 2×0.5 mm²
Aux. switches	1 m, 6×0.5 mm² For LF24-S2-5
Auxiliary switches for LF24-S2-5	2xSPDT, 1 mA...3 A, 5 V=...250 V ~
Switching point	5°/ 80°

Functional data

Torque	
Motor	Min. 5 Nm
Fail-safe	Min. 5 Nm
Rotation direction	Selected by L/R setting
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Running time	
Motor	<70 s /90°
Fail-safe	<20 s at –20...+50°C <60 s at –30 °C
Noise level	
Motor	50 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

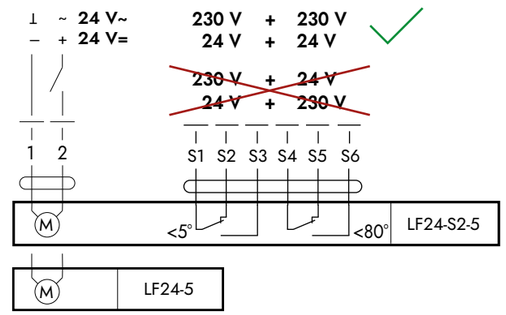
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator LF24-S2-5 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



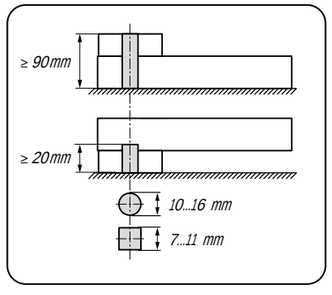
Wire colors:

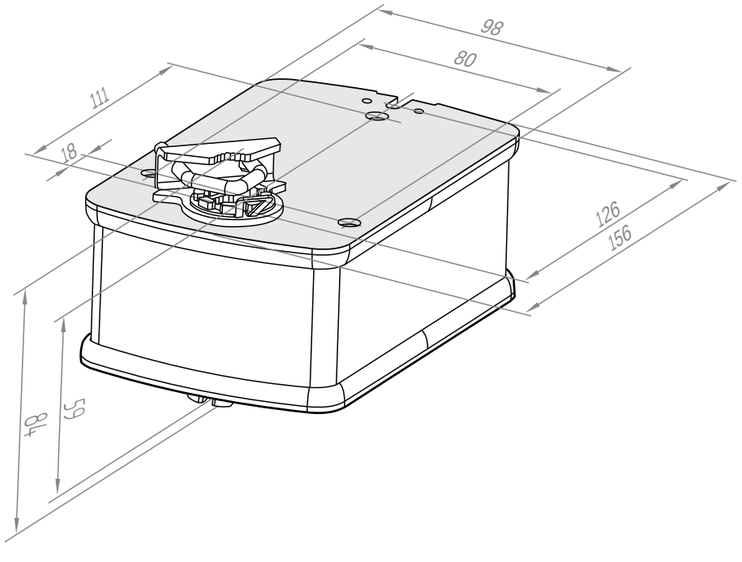
1 = black	S1 = yellow
2 = red	S2 = green
	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





LF24-SR-5
LF24-SRZ-5

Spring-return actuator



Designed to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~1 m²

Torque 5 Nm

Rated voltage 24 V~/=

Control
2...10 V= For LF24-SR-5
0...10 V= For LF24-SRZ-5

Feedback
2...10 V= For LF24-SR-5
0...10 V= For LF24-SRZ-5

Technical data

Electrical parameters

Rated voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2...28.8 V~ 21.6...28.8 V=
Power consumption for wire sizing	10 VA
Power consumption	
In operation	5 W
In rest position	3 W
Connection	Cable 1 m, 4×0.5 mm²
Control signal	2...10 V= For LF24-SR-5 0...10 V= For LF24-SRZ-5
Feedback voltage U	2...10 V= For LF24-SR-5 0...10 V= For LF24-SRZ-5

Functional data

Torque	
Motor	Min. 5 Nm
Fail-safe	Min. 5 Nm
Rotation direction	
Motor	Selected by 0/1 switch
Fail-safe	Selected by L/R setting
Running time	
Motor	<100 s /90°
Fail-safe	<20 s at –20...+50 °C <60 s at –30 °C
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Noise level	
Motor	50 dB

Safety

Protection class	III Safety Extra-Low Voltage
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1900 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by operational service teams.

Cable may not be detached from the device.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard signal 2...10 V= or 0...10 V= depending on the actuator type. The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

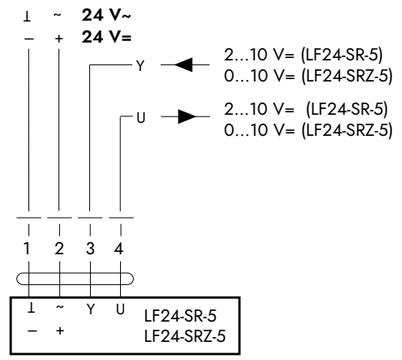
High functional reliability

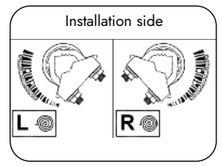
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

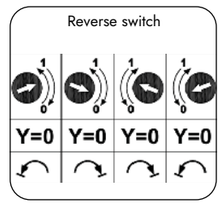
Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

Electrical connection





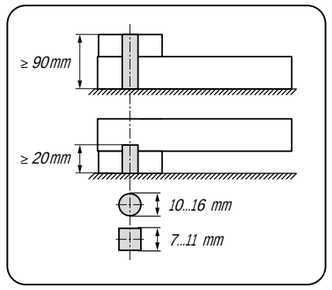


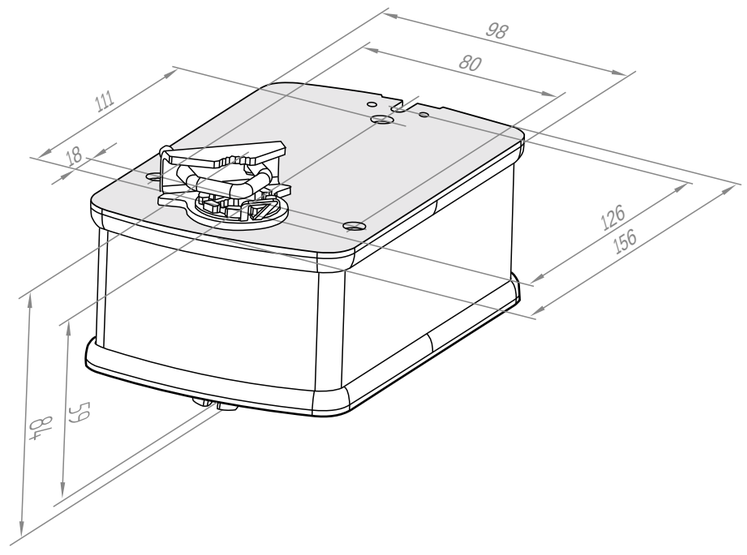
Wire colors:
1 = black
2 = red
3 = yellow
4 = green

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





NF230
NF230-S2

Spring-return actuator



Designed to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~2 m²

Torque 10 Nm

Rated voltage 230 V~

Control
Open/closed

Integrated auxiliary switch
For NF230-S2

Technical data

Electrical parameters

Nominal Voltage	230 V~, 50/60 Hz
Rated voltage range	198...264 V~
Power consumption for wire sizing	10 VA
Power consumption	
In operation	5 W
In rest position	3 W
Connection	
Power supply/control	1 m, 2×0.5 mm²
Aux. switches	1 m, 6×0.5 mm² For NF230-S2
Auxiliary switch for NF230-S2	2×SPDT, 1 mA...3 A, 5 V=...250 V ~
Switching point	5°/ 85°

Functional data

Torque	
Motor	Min. 10 Nm
Fail-safe	Min. 10 Nm
Rotation direction	Selected by L/R setting
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Running time	
Motor	<100 s /90°
Fail-safe	<25 s at –20...+50°C <60 s at –30 °C
Noise level	
Motor	50 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2300 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

Attention: voltage 230 V~!

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by operational service teams.

Cable may not be detached from the device.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

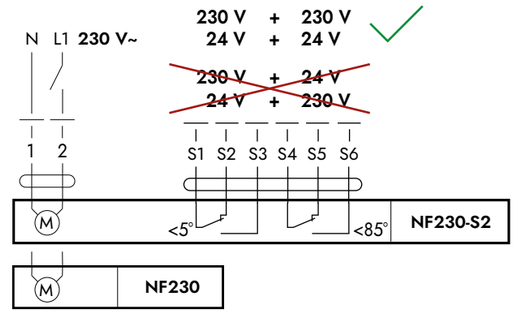
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator NF230-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



Wire colors:

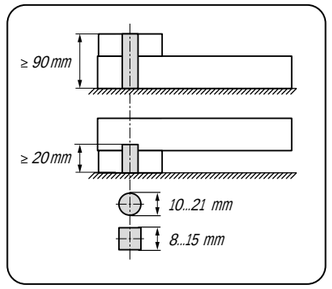
1 = blue
2 = brown

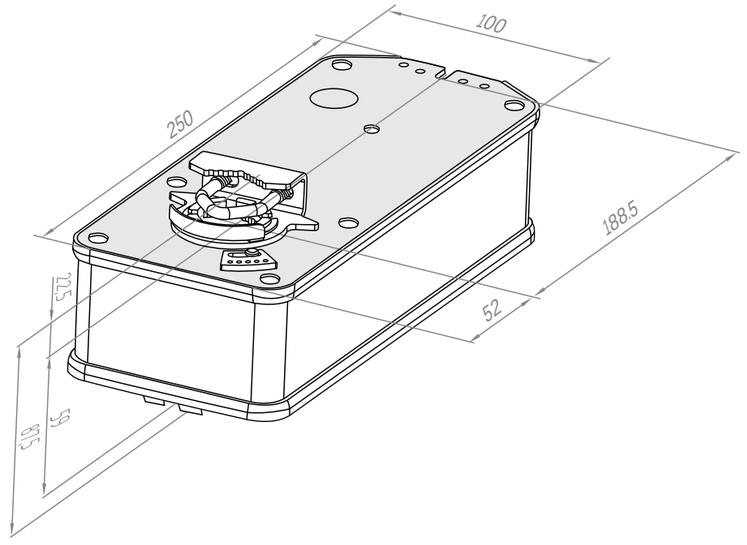
S1 = yellow
S2 = green
S3 = blue
S4 = violet
S5 = gray
S6 = white

Other actuators may be connected in parallel taking into account the power level

High and low voltages shall not be used at the auxiliary switches at the same time

Dimensions, mm





NF24
NF24-S2

Spring-return actuator



Designed to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~2 m²

Torque 10 Nm

Rated voltage 24 V~/=

Control
Open/closed

Integrated auxiliary switch
For NF24-S2

Technical data

Electrical parameters

Nominal Voltage	24 V~/= 50/60 Hz
Rated voltage range	19.2...28.8 V~ 21.6...28.8 V=
Power consumption for wire sizing	10 VA
Power consumption	
In operation	5 W
In rest position	3 W
Connection	
Power supply/control	1 m, 2×0.5 mm²
Aux. switches	1 m, 6×0.5 mm² For NF24-S2
Auxiliary switches for NF24-S2	2×SPDT, 1 mA...3 A, 5 V=...250 V ~
Switching point	5°/ 85°

Functional data

Torque	
Motor	Min. 10 Nm
Fail-safe	Min. 10 Nm
Rotation direction	Selected by L/R setting
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Running time	
Motor	<100 s /90°
Fail-safe	<25 s at –20...+50°C <60 s at –30 °C
Noise level	
Motor	50 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2300 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

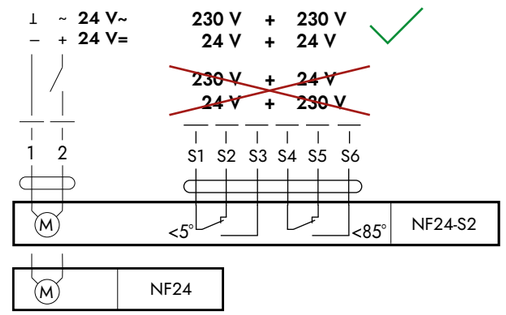
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator NF24-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



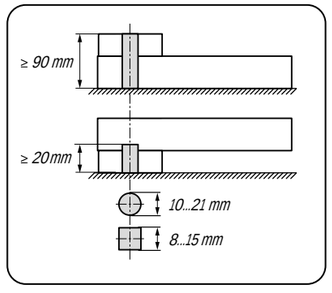
Wire colors:

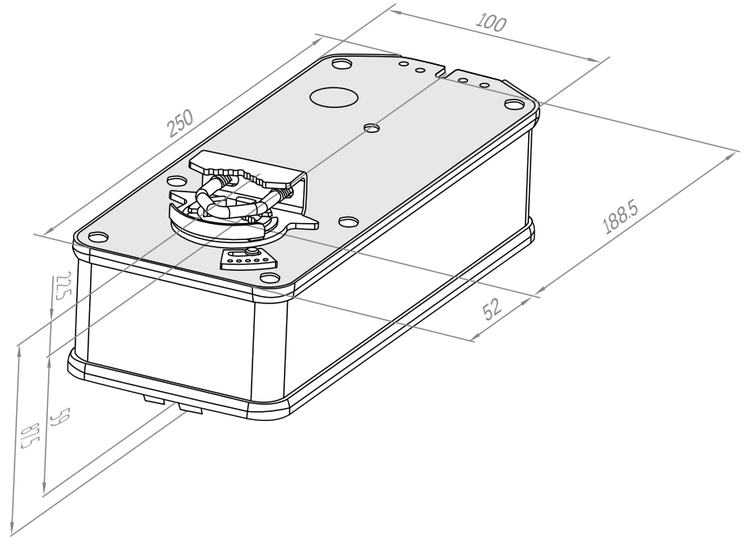
1 = black	S1 = yellow
2 = red	S2 = green
	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





NF24-SR
NF24-SRZ

Spring-return actuator

Actuator with control modulating to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~2 m²

Torque 10 Nm

Rated voltage 24 V~/=

Control
2...10 V= For NF24-SR
0...10 V= For NF24-SRZ

Feedback
2...10 V= For NF24-SR
0...10 V= For NF24-SRZ



Technical data

Electrical parameters

Rated voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2...28.8 V~ 21.6...28.8 V=
Power consumption for wire sizing	12 VA
Power consumption	
In operation	6 W
In rest position	3 W
Connection	Cable 1 m, 4×0.5 mm²
Control signal	2...10 V= For NF24-SR 0...10 V= For NF24-SRZ
Feedback voltage U	2...10 V= For NF24-SR 0...10 V= For NF24-SRZ

Functional data

Torque	
Motor	Min. 10 Nm
Fail-safe	Min. 10 Nm
Rotation direction	
Motor	Selected by 0/1 switch
Fail-safe	Selected by L/R setting
Running time	
Motor	<120 s /90°
Fail-safe	<25 s at –20...+50 °C <60 s at –30 °C
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Noise level	
Motor	50 dB

Safety

Protection class	III Safety Extra-Low Voltage
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~3000 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by operational service teams.

Cable may not be detached from the device.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard signal 2...10 V= or 0...10 V= depending on the actuator type. The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

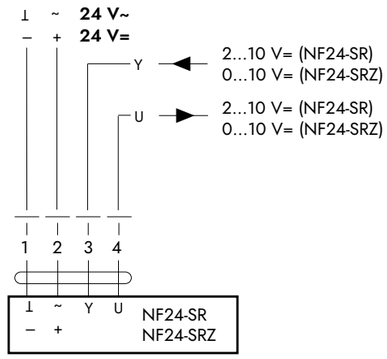
High functional reliability

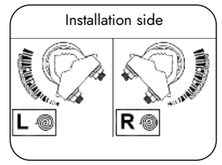
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

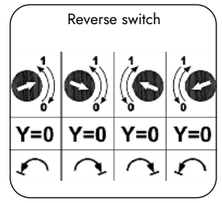
Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

Electrical connection





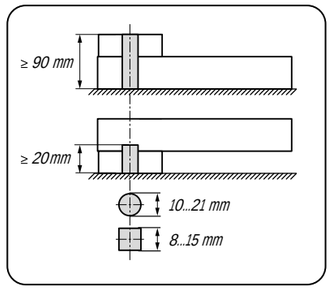


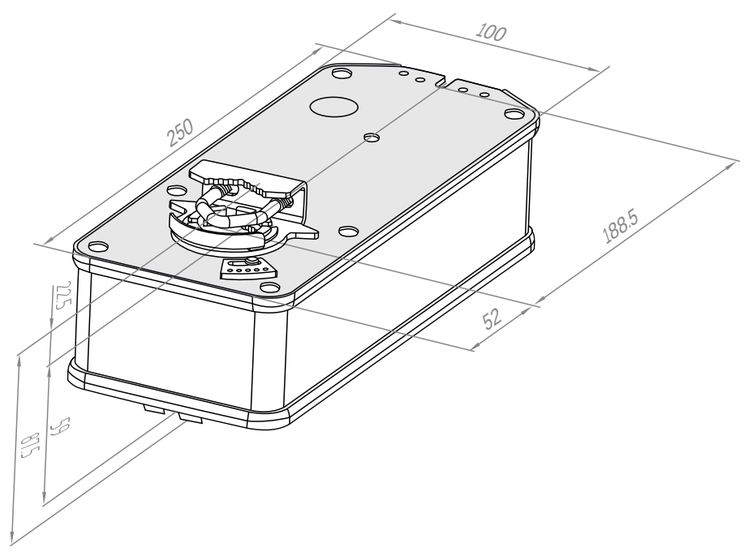
Wire colors:
1 = black
2 = red
3 = yellow
4 = green

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





SF230
SF230-S2

Spring-return actuator

Designed to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~4 m²

Torque 20 Nm

Rated voltage 230 V~

Control
Open/closed

Integrated auxiliary switch
For SF230-S2



Technical data

Electrical parameters

Nominal Voltage	230 V~, 50/60 Hz
Rated voltage range	198...264 V~
Power consumption for wire sizing	14 VA
Power consumption	
In operation	14 W
In rest position	8 W
Connection	
Power supply/control	1 m, 2×0.5 mm²
Aux. switches	1 m, 6×0.5 mm² For SF230-S2
Auxiliary switch for SF230-S2	2×SPDT, 1 mA...3 A (0.5), 5 V=...250 V ~
Switching point	5°/ 85°

Functional data

Torque	
Motor	Min. 20 Nm
Fail-safe	Min. 20 Nm
Rotation direction	Selected by L/R setting
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Running time	
Motor	<50...70 s / 90°
Fail-safe	<35 s at –20...+50 °C <60 s at –30 °C
Noise level	
Motor	55 dB

Safety

Protection class	II Reinforced insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

Attention: voltage 230 V~!

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by operational service teams.

Cable may not be detached from the device.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

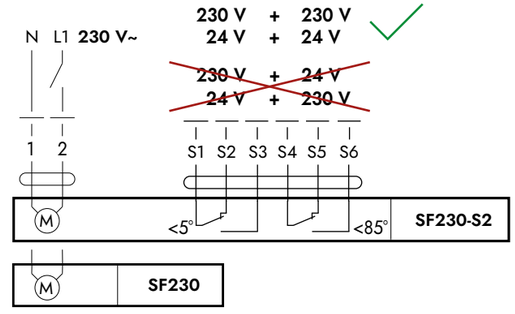
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator SF230-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



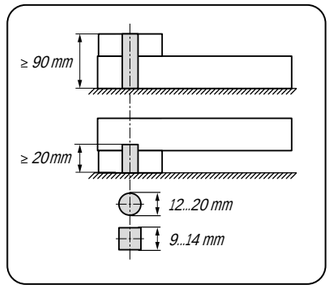
Wire colors:

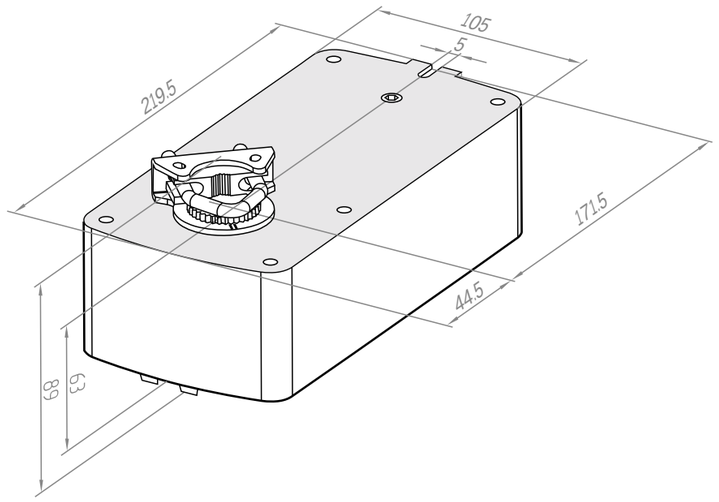
1 = blue
2 = brown
S1 = yellow
S2 = green
S3 = blue
S4 = violet
S5 = gray
S6 = white

Other actuators may be connected in parallel taking into account the power level

High and low voltages shall not be used at the auxiliary switches at the same time

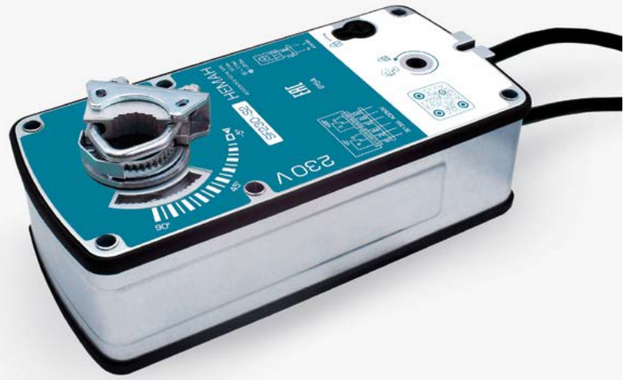
Dimensions, mm





SF24
SF24-S2

Spring-return actuator



Designed to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~4 m²

Torque 20 Nm

Rated voltage 24 V~/=

Control
Open/closed

Integrated auxiliary switch
For SF24-S2

Technical data

Electrical parameters

Nominal Voltage	24 V~/= 50/60 Hz
Rated voltage range	20.4...27.6 V~ 21.6...27.6 V=
Power consumption for wire sizing	14 VA
Power consumption	
In operation	14 W
In rest position	8 W
Connection	
Power supply/control	1 m, 2×0.5 mm²
Aux. switches	1 m, 6×0.5 mm² For SF24-S2
Auxiliary switches for SF24-S2	2×SPDT, 1 mA...3 A (0.5), 5 V=...250 V ~
Switching point	5°/ 85°

Functional data

Torque	
Motor	Min. 20 Nm
Fail-safe	Min. 20 Nm
Rotation direction	Selected by L/R setting
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Running time	
Motor	<50...70 s / 90°
Fail-safe	<35 s at –20...+50 °C <60 s at –30 °C
Noise level	
Motor	55 dB

Safety

Protection class	
Power supply/control	III Safety Extra-Low Voltage
For aux. switches	II Protective insulation
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially on aircraft.

The device may only be opened at the manufacturing factory. It contains no parts that can be repaired or replaced by the user.

The cable shall not be removed from the actuator.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

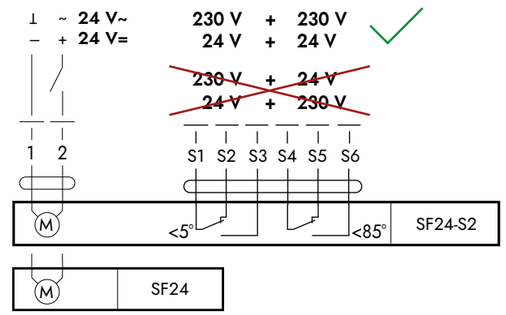
High functional reliability

The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Position indication

Actuator SF24-S2 has two fixed microswitches to signal the end positions of the damper shutter. The contacts of the microswitches have a coating that makes it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents.

Electrical connection



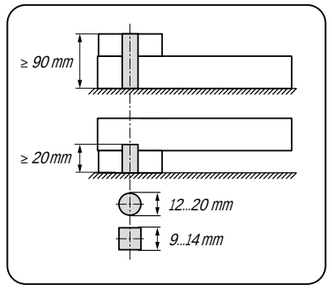
Wire colors:

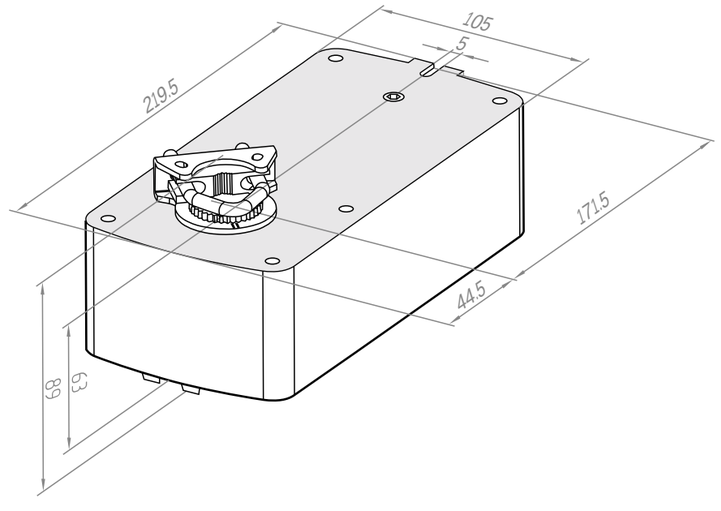
1 = black	S1 = yellow
2 = red	S2 = green
	S3 = blue
	S4 = violet
	S5 = gray
	S6 = white

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

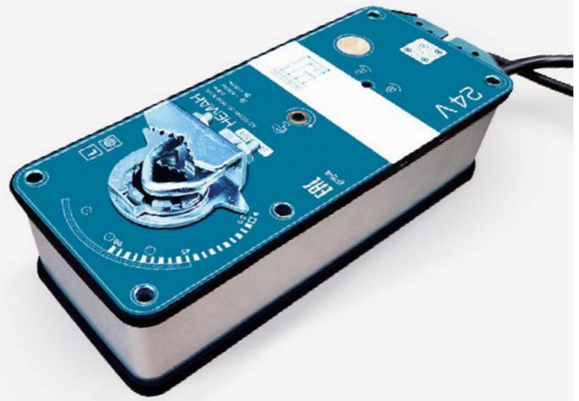
Dimensions, mm





SF24-SR
SF24-SRZ

Spring-return actuator



Actuator with control modulating to control the air dampers that perform the protective functions in ventilation and air conditioning systems of buildings (for example, freezing protection)

To control air dampers with an area up to ~4 m²

Torque 20 Nm

Rated voltage 24 V~/=

Control
2...10 V= For SF24-SR
0...10 V= For SF24-SRZ

Feedback
2...10 V= For SF24-SR
0...10 V= For SF24-SRZ

Technical data

Electrical parameters

Rated voltage	24 V~, 50/60 Hz 24 V=
Rated voltage range	19.2...28.8 V~ 21.6...28.8 V=
Power consumption for wire sizing	20 VA
Power consumption	
In operation	10 W
In rest position	3 W
Connection	Cable 1 m, 4×0.5 mm²
Control signal	2...10 V= For SF24-SR 0...10 V= For SF24-SRZ
Feedback voltage U	2...10 V= For SF24-SR 0...10 V= For SF24-SRZ

Functional data

Torque	
Motor	Min. 20 Nm
Fail-safe	Min. 20 Nm
Rotation direction	
Motor	Selected by 0/1 switch
Fail-safe	Selected by L/R setting
Running time	
Motor	<150 s / 90°
Fail-safe	<25 s at –20...+50 °C <60 s at –30 °C
Angle of rotation	Max. 95° Limitation 37...100% using integrated mechanical stop
Noise level	
Motor	50 dB

Safety

Protection class	III Safety Extra-Low Voltage
Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~3000 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by operational service teams.

Cable may not be detached from the device.

In the torque calculation, there shall be taken into account the shutter manufacturer's data (cross-sectional area, design, installation site), as well as the air flow conditions.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

The actuator is controlled by a standard signal 2...10 V= or 0...10 V= depending on the actuator type. The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the safety position by spring energy when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on a damper shaft with a universal shaft clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

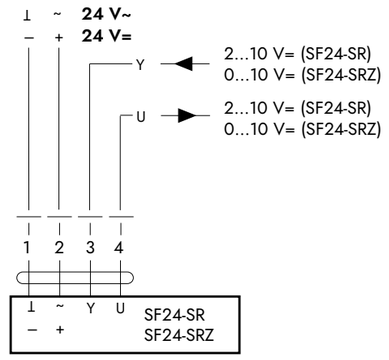
High functional reliability

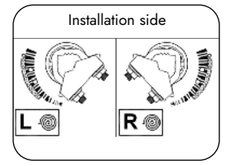
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

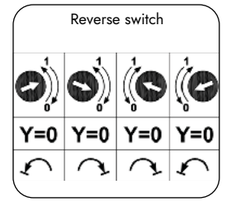
Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

Electrical connection





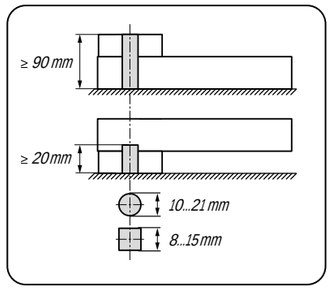


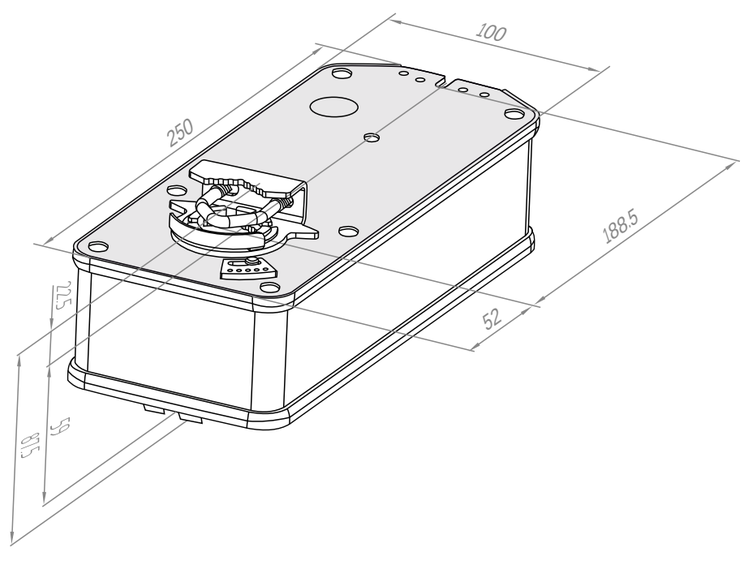
Wire colors:
1 = black
2 = red
3 = yellow
4 = green

Connection via isolating transformer

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





For fire dampers

Spring–return actuators for installation on normally open fire (fire-retardant) dampers of air-conditioning, general, local and process ventilation



BLF24-3
BLF230-3
BLF24-3-T
BLF230-3-T

BLF24-5
BLF230-5
BLF24-5-T
BLF230-5-T

BF24-10
BF230-10
BF24-10-T
BF230-10-T

BFG24-20
BFG230-20
BFG24-20-T
BFG230-20-T

BLF24-3
BLF230-3

Spring-return actuator

Designed to control normally open fire (fire-retardant) dampers of small dimensions installed in air-conditioning, general, local and process ventilation.

Torque 3 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm



Technical data

Electrical parameters

Nominal Voltage

BLF24-3	**BLF230-3**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BLF24-3	**BLF230-3**
20.4...27.6 V~ 21.6...27.6 V=	198...264 V~

Power consumption for wire sizing

BLF24-3	**BLF230-3**
7 VA	7 VA

Power consumption
When the motor is running

BLF24-3	**BLF230-3**
5 W	5 W

During holding

BLF24-3	**BLF230-3**
3.5 W	3.5 W

Connection

Power supply/control	Cable 1 m, 2×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²
Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 85°

Functional data

Torque	
Motor	Min. 3 Nm
Fail-safe	Min. 3 Nm
Direction of rotation	Selected by L/R setting
Manual control	With position fixed
Angle of rotation	Max. 95°
Position indication	Mechanical indicator
Rotation of shutter	Form fit 12x12 mm, continuous hollow shaft
Service life	Min. 60,000 safety positions
Running time	
Motor	25...45 s / 90°
Fail-safe	<15 s at –10...+50 °C <60 s at –30...-10 °C
Noise level	
Motor	<40 dB
Fail-safe	<55 dB

Safety

Protection class
Power supply/control

BLF24-3	**BLF230-3**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BLF24-3	**BLF230-3**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1200 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Contains 2 groups of auxiliary switches, which are designed to operate both at high and low voltage. Combining different voltages on the switches of the same actuator is not allowed.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

When the damper shutter moves to the normal operating position, the return spring is retracted in the actuator. When the power supply stops, the energy stored in the spring returns the shutter to the protective position.

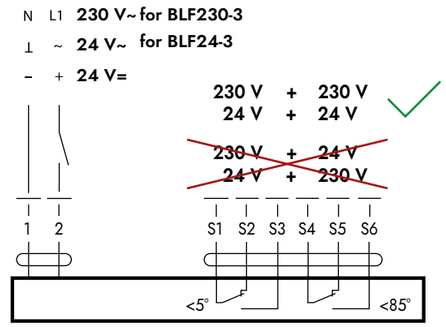
Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

Position indication

Actuator BLF... has two fixed microswitches to signal the end positions of the damper. The contacts of the microswitches make it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents. The intermediate position of the damper shutter is determined by the mechanical indicator on the actuator.

Electrical connection



Wire colors:

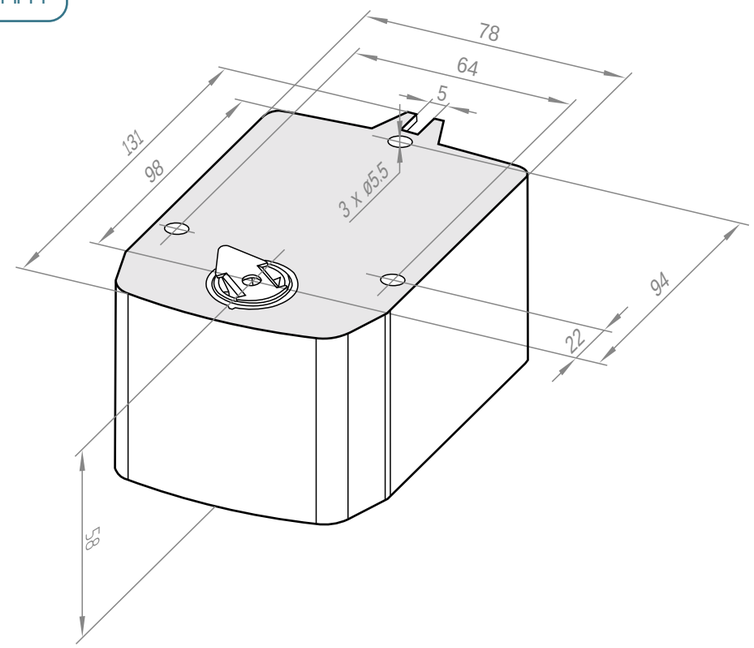
BLF24-3	S1 = yellow
1 = black	S2 = green
2 = red	S3 = blue
	S4 = violet
BLF230-3	S5 = gray
1 = blue	S6 = white
2 = brown	

BLF24-3: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BLF24-3-T
BLF230-3-T

Spring-return actuator

Designed to control normally open fire (fire-retardant) dampers of small dimensions installed in air-conditioning, general, local and process ventilation. Combined with thermal release switch arrangement (72 °C).

Torque 3 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm



Technical data

Electrical parameters

Nominal Voltage

BLF24-3-T	**BLF230-3-T**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BLF24-3-T	**BLF230-3-T**
20.4...27.6 V~ 21.6...27.6 V=	198...264 V~

Power consumption for wire sizing

BLF24-3-T	**BLF230-3-T**
7 VA	7 VA

Power consumption
When the motor is running

BLF24-3-T	**BLF230-3-T**
5 W	5 W

During holding

BLF24-3-T	**BLF230-3-T**
3.5 W	3.5 W

Connection	
Power supply/control	Cable 1 m, 2×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²
Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 85°
Cable length with switching thermal release switch arrangement	1 m

Functional data

Torque	
Motor	Min. 3 Nm
Fail-safe	Min. 3 Nm
Direction of rotation	Selected by L/R setting
Manual control	With position fixed
Angle of rotation	Max. 95°
Position indication	Mechanical indicator
Rotation of shutter	Form fit 12×12 mm, continuous hollow shaft
Service life	Min. 60,000 safety positions
Running time	
Motor	25...45 s / 90°
Fail-safe	<15 s at –10...+50 °C <60 s –30...–10 °C
Noise level	
Motor	<40 dB
Fail-safe	<55 dB

Safety

TRS operation temperature	
Outside the air duct	72°C
Inside the air duct	72°C
Protection class Power supply/control	

BLF24-3-T	**BLF230-3-T**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BLF24-3-T	**BLF230-3-T**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1200 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Contains 2 groups of auxiliary switches, which are designed to operate both at high and low voltage. Combining different voltages on the switches of the same actuator is not allowed.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

When the damper shutter moves to the normal operating position, the return spring is retracted in the actuator. When the power supply stops, the energy stored in the spring returns the shutter to the protective position.

Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

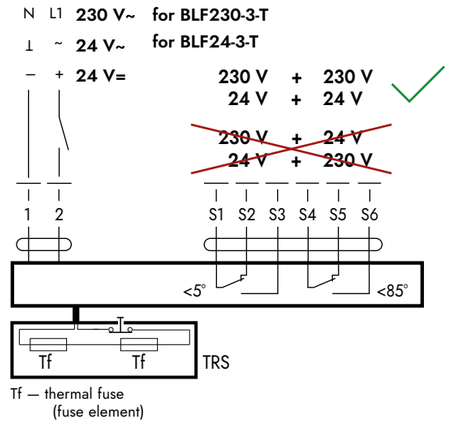
Position indication

Actuator BLF... has two fixed microswitches to signal the end positions of the damper. The contacts of the microswitches make it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents. The intermediate position of the damper shutter is determined by the mechanical indicator on the actuator.

Thermal release switch (TRS)

One fuse (fuse element) trips if the ambient temperature exceeds 72° C. The other fuse trips if a temperature inside the air duct exceeds 72° C. Both devices keep the power supply continuously switched off so that the actuator can no longer be switched on. The TRS functioning is only guaranteed when the actuator is connected to the electrical mains.

Electrical connection



Wire colors:

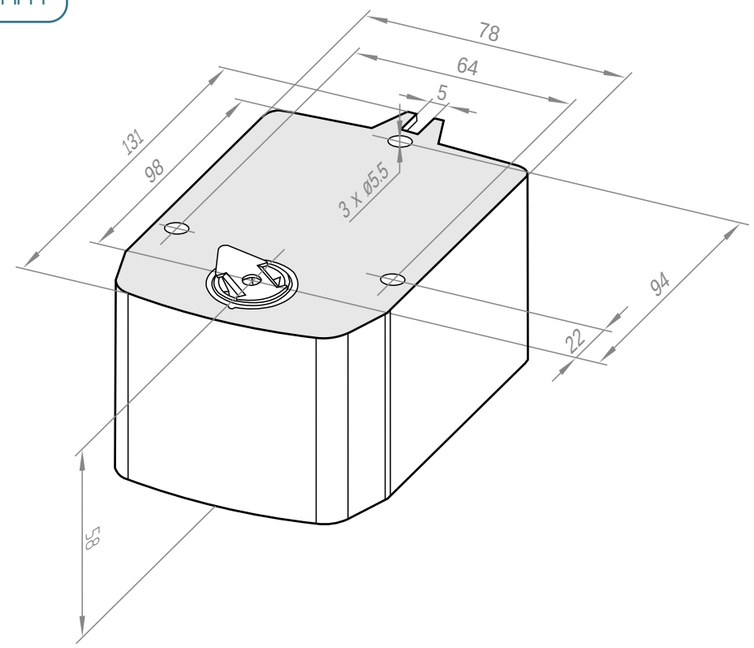
BLF24-3-T	S1 = yellow
1 = black	S2 = green
2 = red	S3 = blue
	S4 = violet
BLF230-3-T	S5 = gray
1 = blue	S6 = white
2 = brown	

BLF24-3-T: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BLF24-5
BLF230-5

Spring-return actuator



Designed to control
normally open fire (fire-retardant)
dampers of small dimensions installed
in air-conditioning,
general, local and process ventilation.

Torque 5 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated
auxiliary switches

Form fit
12×12 mm

Technical data

Electrical parameters

Nominal Voltage

BLF24-5	**BLF230-5**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BLF24-5	**BLF230-5**
19.2...28.8 V~ 21.6...28.8 V=	198...264 V~

Power consumption for wire sizing

BLF24-5	**BLF230-5**
6 VA	6 VA

Power consumption
When the motor is running

BLF24-5	**BLF230-5**
5 W	5 W

During holding

BLF24-5	**BLF230-5**
2.5 W	2.5 W

Connection

Power supply/control	Cable 1 m, 2×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²

Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 80°

Functional data

Torque	
Motor	Min. 5 Nm
Fail-safe	Min. 5 Nm
Direction of rotation	Selected by L/R setting
Manual control	With position fixed
Angle of rotation	Max. 95°
Position indication	Mechanical indicator
Rotation of shutter	Form fit 12x12 mm, continuous hollow shaft
Service life	Min. 60,000 safety positions
Running time	
Motor	<70 s /90°
Fail-safe	20 s at –10...+50 °C <60 s at –30...-10 °C
Noise level	
Motor	50 dB
Fail-safe	<62 dB

Safety

Protection class
Power supply/control

BLF24-5	**BLF230-5**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BLF24-5	**BLF230-5**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2000 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Contains 2 groups of auxiliary switches, which are designed to operate both at high and low voltage. Combining different voltages on the switches of the same actuator is not allowed.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

When the damper shutter moves to the normal operating position, the return spring is retracted in the actuator. When the power supply stops, the energy stored in the spring returns the shutter to the protective position.

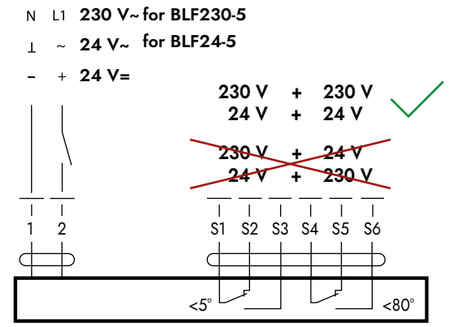
Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

Position indication

Actuator BLF... has two fixed microswitches to signal the end positions of the damper. The contacts of the microswitches make it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents. The intermediate position of the damper shutter is determined by the mechanical indicator on the actuator.

Electrical connection



Wire colors:

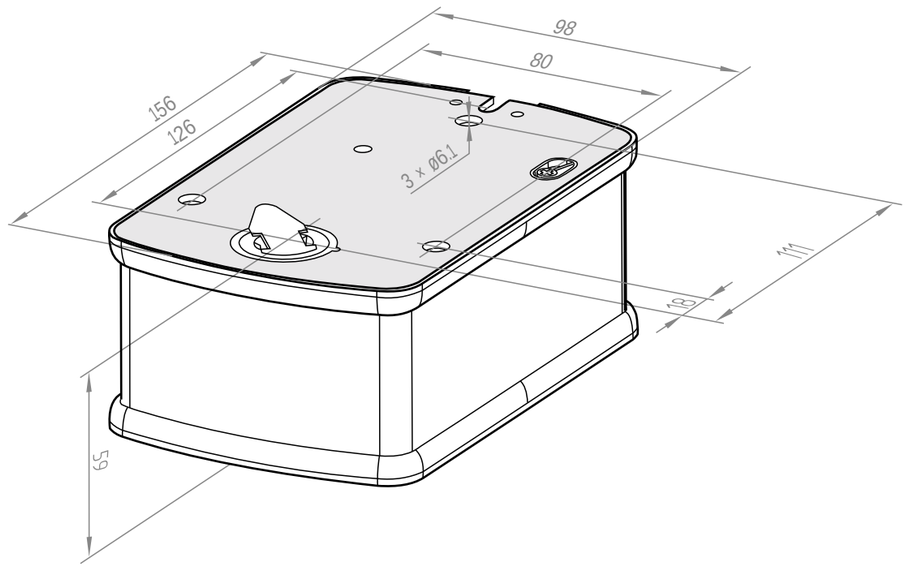
BLF24-5	S1 = yellow
1 = black	S2 = green
2 = red	S3 = blue
	S4 = violet
BLF230-5	S5 = gray
1 = blue	S6 = white
2 = brown	

for BLF24-5: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BLF24-5-T
BLF230-5-T

Spring-return actuator



Designed to control normally open fire (fire-retardant) dampers of small dimensions installed in air-conditioning, general, local and process ventilation. Combined with thermal release switch arrangement (72 °C).

Torque 5 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm

Technical data

Electrical parameters

Nominal Voltage

BLF24-5-T	**BLF230-5-T**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BLF24-5-T	**BLF230-5-T**
19.2...28.8 V~ 21.6...28.8 V=	198...264 V~

Power consumption for wire sizing

BLF24-5-T	**BLF230-5-T**
6 VA	6 VA

Power consumption
When the motor is running

BLF24-5-T	**BLF230-5-T**
5	5

During holding

BLF24-5-T	**BLF230-5-T**
2.5 W	2.5 W

Connection

Power supply/control	Cable 1 m, 2×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²

Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 80°
Cable length with switching thermal release switch arrangement	1 m

Functional data

Torque	
Motor	Min. 5 Nm
Fail-safe	Min. 5 Nm
Direction of rotation	Selected by L/R setting
Manual control	With position fixed
Angle of rotation	Max. 95°
Position indication	Mechanical indicator
Rotation of shutter	Form fit 12×12 mm, continuous hollow shaft
Service life	Min. 60,000 safety positions
Running time	
Motor	<70 s /90°
Fail-safe	20 s at –10...+50 °C <60 s at –30...-10 °C
Noise level	
Motor	50 dB
Fail-safe	<62 dB

Safety

TRS operation temperature

Outside the air duct	72°C
Inside the air duct	72°C

Protection class
Power supply/control

BLF24-5-T	**BLF230-5-T**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BLF24-5-T	**BLF230-5-T**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2000 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Contains 2 groups of auxiliary switches, which are designed to operate both at high and low voltage. Combining different voltages on the switches of the same actuator is not allowed.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

When the damper shutter moves to the normal operating position, the return spring is retracted in the actuator. When the power supply stops, the energy stored in the spring returns the shutter to the protective position.

Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

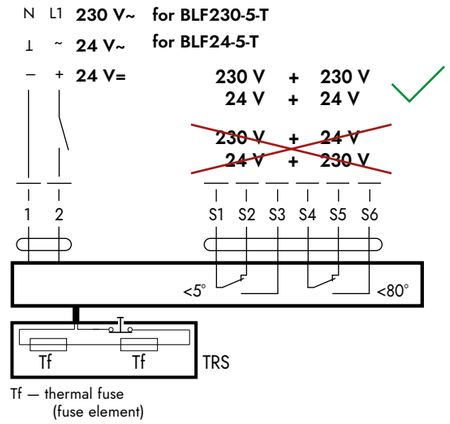
Position indication

Actuator BLF... has two fixed microswitches to signal the end positions of the damper. The contacts of the microswitches make it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents. The intermediate position of the damper shutter is determined by the mechanical indicator on the actuator.

Thermal release switch (TRS)

One fuse (fuse element) trips if the ambient temperature exceeds 72° C. The other fuse trips if a temperature inside the air duct exceeds 72° C. Both devices keep the power supply continuously switched off so that the actuator can no longer be switched on. The TRS functioning is only guaranteed when the actuator is connected to the electrical mains.

Electrical connection



Wire colors:

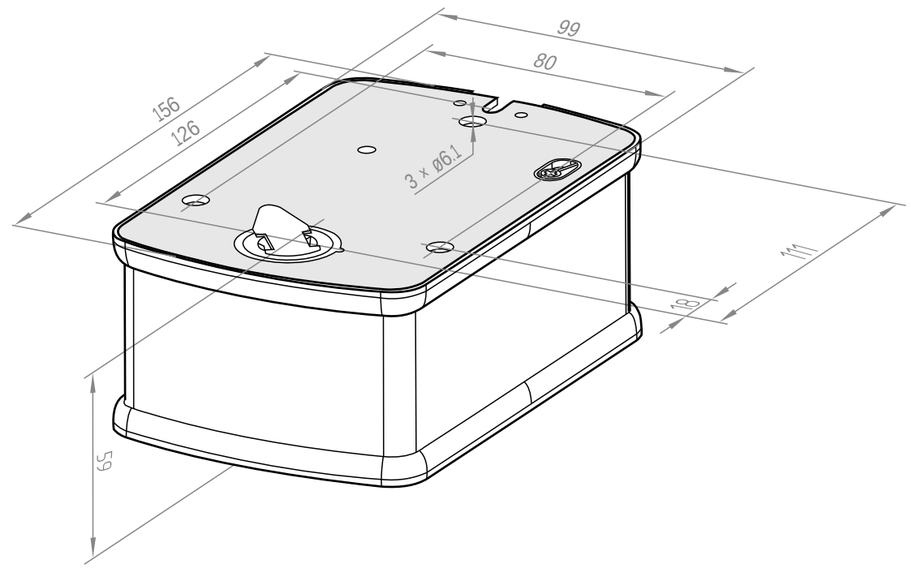
BLF24-5-T	S1 = yellow
1 = black	S2 = green
2 = red	S3 = blue
	S4 = violet
BLF230-5-T	S5 = gray
1 = blue	S6 = white
2 = brown	

BLF24-5-T: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BF24-10
BF230-10

Spring-return actuator

Designed to control normally open fire (fire-retardant) dampers of small dimensions installed in air-conditioning, general, local and process ventilation.

Torque 10 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm



Technical data

Electrical parameters

Nominal Voltage

BF24-10	**BF230-10**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BF24-10	**BF230-10**
19.2...28.8 V~ 21.6...28.8 V=	198...264 V~

Power consumption for wire sizing

BF24-10	**BF230-10**
10 VA	10 VA

Power consumption
When the motor is running

BF24-10	**BF230-10**
5 W	5 W

During holding

BF24-10	**BF230-10**
3 W	3 W

Connection

Power supply/control	Cable 1 m, 2×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²
Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V
Switching points	5°/ 85°

Functional data

Torque	
Motor	Min. 10 Nm
Fail-safe	Min. 10 Nm
Direction of rotation	Selected by L/R setting
Manual control	With position fixed
Angle of rotation	Max. 95°
Position indication	Mechanical indicator
Rotation of shutter	Form fit 12x12 mm, continuous hollow shaft
Service life	Min. 60,000 safety positions
Running time	
Motor	<100 s /90°
Fail-safe	25 s at –10...+50 °C <60 s –30...–10 °C
Noise level	
Motor	<55 dB
Fail-safe	<62 dB

Safety

Protection class
Power supply/control

BF24-10	**BF230-10**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BF24-10	**BF230-10**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2300 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Contains 2 groups of auxiliary switches, which are designed to operate both at high and low voltage. Combining different voltages on the switches of the same actuator is not allowed.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

When the damper shutter moves to the normal operating position, the return spring is retracted in the actuator. When the power supply stops, the energy stored in the spring returns the shutter to the protective position.

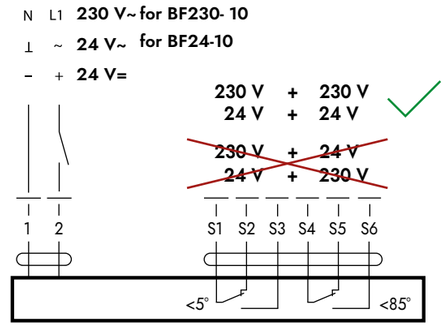
Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

Position indication

Actuator BF... has two fixed microswitches to signal the end positions of the damper. The contacts of the microswitches make it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents. The intermediate position of the damper shutter is determined by the mechanical indicator on the actuator.

Electrical connection



Wire colors:

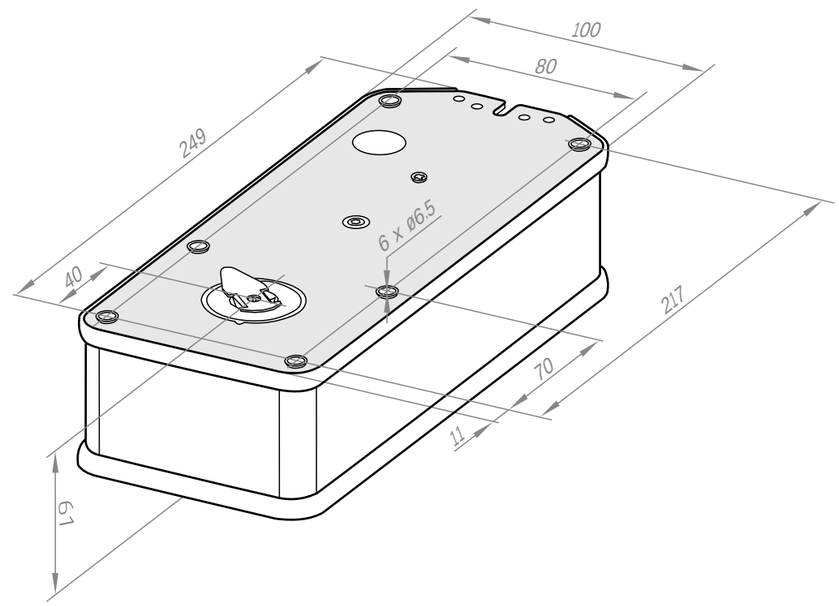
BF24-10	S1 = yellow
1 = black	S2 = green
2 = red	S3 = blue
	S4 = violet
BF230-10	S5 = gray
1 = blue	S6 = white
2 = brown	

BF24-10: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BF24-10-T
BF230-10-T

Spring-return actuator

Designed to control normally open fire (fire-retardant) dampers of small dimensions installed in air-conditioning, general, local and process ventilation. Combined with thermal release switch arrangement (72 °C).

Torque 10 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm



Technical data

Electrical parameters

Nominal Voltage

BF24-10-T	**BF230-10-T**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BF24-10-T	**BF230-10-T**
19.2...28.8 V~ 21.6...28.8 V=	198...264 V~

Power consumption for wire sizing

BF24-10-T	**BF230-10-T**
10 VA	10 VA

Power consumption
When the motor is running

BF24-10-T	**BF230-10-T**
5 W	5 W

During holding

BF24-10-T	**BF230-10-T**
3 W	3 W

Connection

Power supply/control	Cable 1 m, 2×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²

Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 85°
Cable length with switching thermal release switch arrangement	1 m

Functional data

Torque	
Motor	Min. 10 Nm
Fail-safe	Min. 10 Nm
Direction of rotation	Selected by L/R setting
Manual control	With position fixed
Angle of rotation	Max. 95°
Position indication	Mechanical indicator
Rotation of shutter	Form fit 12×12 mm, continuous hollow shaft
Service life	Min. 60,000 safety positions
Running time	
Motor	<100 s /90°
Fail-safe	25 s at –10...+50 °C <60 s at –30...-10 °C
Noise level	
Motor	<55 dB
Fail-safe	<62 dB

Safety

TRS operation temperature

Outside the air duct	72°C
Inside the air duct	72°C

Protection class
Power supply/control

BF24-10-T	**BF230-10-T**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BF24-10-T	**BF230-10-T**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2300 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Contains 2 groups of auxiliary switches, which are designed to operate both at high and low voltage. Combining different voltages on the switches of the same actuator is not allowed.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

When the damper shutter moves to the normal operating position, the return spring is retracted in the actuator. When the power supply stops, the energy stored in the spring returns the shutter to the protective position.

Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

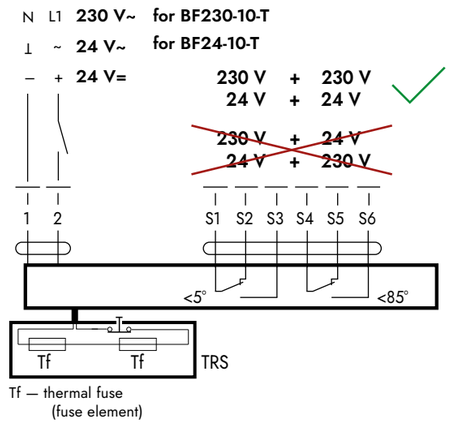
Position indication

Actuator BF... has two fixed microswitches to signal the end positions of the damper. The contacts of the microswitches make it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents. The intermediate position of the damper shutter is determined by the mechanical indicator on the actuator.

Thermal release switch (TRS)

One fuse (fuse element) trips if the ambient temperature exceeds 72° C. The other fuse trips if a temperature inside the air duct exceeds 72° C. Both devices keep the power supply continuously switched off so that the actuator can no longer be switched on. The TRS functioning is only guaranteed when the actuator is connected to the electrical mains.

Electrical connection



Tf — thermal fuse
(fuse element)

Wire colors:

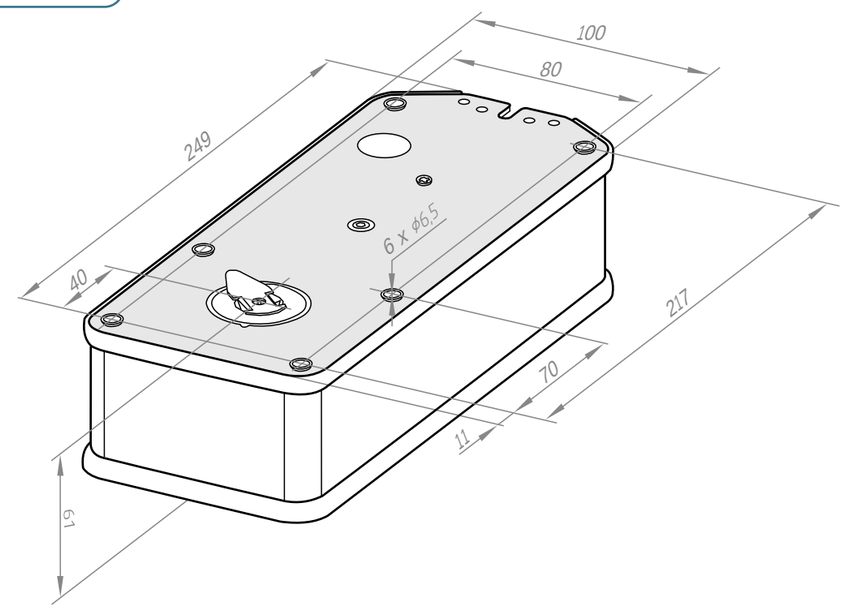
BF24-10-T	S1 = yellow
1 = black	S2 = green
2 = red	S3 = blue
	S4 = violet
BF230-10-T	S5 = gray
1 = blue	S6 = white
2 = brown	

BF24-10-T: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BFG24-20
BFG230-20

Spring-return actuator

Designed to control normally open fire (fire-retardant) dampers of small dimensions installed in air-conditioning, general, local and process ventilation.

Torque 20 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm



Technical data

Electrical parameters

Nominal Voltage

BFG24-20	**BFG230-20**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BFG24-20	**BFG230-20**
20.4...27.6 V~ 21.6...27.6 V=	198...264 V~

Power consumption for wire sizing

BFG24-20	**BFG230-20**
14 VA	14 VA

Power consumption
When the motor is running

BFG24-20	**BFG230-20**
14 W	14 W

During holding

BFG24-20	**BFG230-20**
8 W	8 W

Connection

Power supply/control	Cable 1 m, 2×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²

Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 85°

Functional data

Torque	
Motor	Min. 20 Nm
Fail-safe	Min. 20 Nm
Direction of rotation	Selected by L/R setting
Manual control	With position fixed
Angle of rotation	Max. 95°
Position indication	Mechanical indicator
Rotation of shutter	Form fit 12x12 mm, continuous hollow shaft
Service life	Min. 60,000 safety positions
Running time	
Motor	50...70 s / 90°
Fail-safe	<35 s at –10...+50 °C <60 s at –30...-10 °C
Noise level	
Motor	<60 dB
Fail-safe	<75 dB

Safety

Protection class
Power supply/control

BFG24-20	**BFG230-20**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BFG24-20	**BFG230-20**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Ambient humidity	95% rel., non-condensing
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Contains 2 groups of auxiliary switches, which are designed to operate both at high and low voltage. Combining different voltages on the switches of the same actuator is not allowed.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

When the damper shutter moves to the normal operating position, the return spring is retracted in the actuator. When the power supply stops, the energy stored in the spring returns the shutter to the protective position.

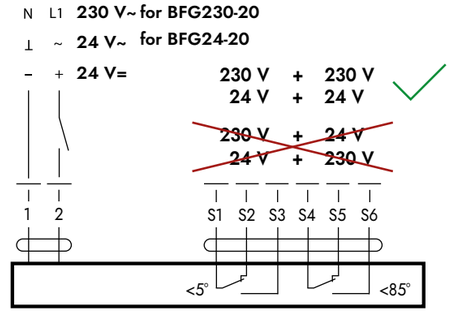
Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

Position indication

Actuator BFG... has two fixed microswitches to signal the end positions of the damper. The contacts of the microswitches make it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents. The intermediate position of the damper shutter is determined by the mechanical indicator on the actuator.

Electrical connection



Wire colors:

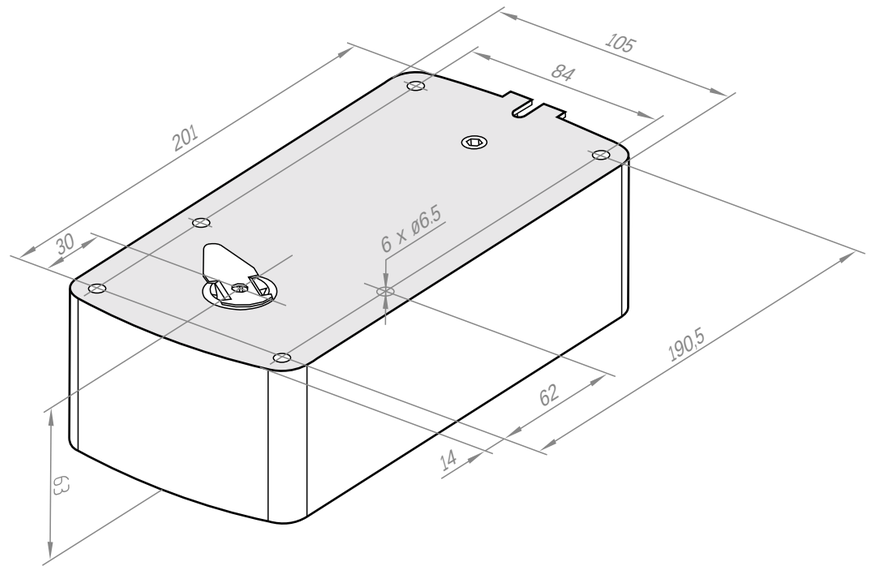
BFG24-20	S1 = yellow
1 = black	S2 = green
2 = red	S3 = blue
	S4 = violet
BFG230-20	S5 = gray
1 = blue	S6 = white
2 = brown	

BFG24-20: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BFG24-20-T
BFG230-20-T

Spring-return actuator

Designed to control normally open fire (fire-retardant) dampers of small dimensions installed in air-conditioning, general, local and process ventilation. Combined with thermal release switch arrangement (72 °C).

Torque 20 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm



Technical data

Electrical parameters

Nominal Voltage

BFG24-20-T	**BFG230-20-T**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BFG24-20-T	**BFG230-20-T**
20.4...27.6 V~ 21.6...27.6 V=	198...264 V~

Power consumption for wire sizing

BFG24-20-T	**BFG230-20-T**
14 VA	14 VA

Power consumption
When the motor is running

BFG24-20-T	**BFG230-20-T**
14 W	14 W

During holding

BFG24-20-T	**BFG230-20-T**
8 W	8 W

Connection

Power supply/control	Cable 1 m, 2×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²
Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 85°
Cable length with switching thermal release switch arrangement	1 m

Functional data

Torque	
Motor	Min. 20 Nm
Fail-safe	Min. 20 Nm
Direction of rotation	Selected by L/R setting
Manual control	With position fixed
Angle of rotation	Max. 95°
Position indication	Mechanical indicator
Rotation of shutter	Form fit 12×12 mm, continuous hollow shaft
Service life	Min. 60,000 safety positions
Running time	
Motor	50...70 s / 90°
Fail-safe	<35 s at –10...+50 °C <60 s –30...–10 °C
Noise level	
Motor	<60 dB
Fail-safe	<75 dB

Safety

TRS operation temperature	
Outside the air duct	72°C
Inside the air duct	72°C

Protection class
Power supply/control

BFG24-20-T	**BFG230-20-T**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BFG24-20-T	**BFG230-20-T**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Storage temperature	–30...+60 °C
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Contains 2 groups of auxiliary switches, which are designed to operate both at high and low voltage. Combining different voltages on the switches of the same actuator is not allowed.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

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Product features

Principle of operation

When the damper shutter moves to the normal operating position, the return spring is retracted in the actuator. When the power supply stops, the energy stored in the spring returns the shutter to the protective position.

Manual control

Without power supply, the actuator can be operated manually and fixed in any required position. It can be unlocked manually or automatically by applying the supply voltage.

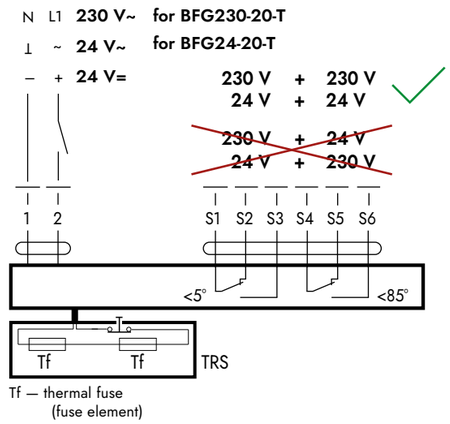
Position indication

Actuator BF... has two fixed microswitches to signal the end positions of the damper. The contacts of the microswitches make it possible to include them both in low-current circuits (mA-level) and in high-current circuits (A-level) based on the specification. It shall be taken into account that, after a high current has been supplied to them, the microswitches will no longer respond to low currents. The intermediate position of the damper shutter is determined by the mechanical indicator on the actuator.

Thermal release switch (TRS)

One fuse (fuse element) trips if the ambient temperature exceeds 72° C. The other fuse trips if a temperature inside the air duct exceeds 72° C. Both devices keep the power supply continuously switched off so that the actuator can no longer be switched on. The TRS functioning is only guaranteed when the actuator is connected to the electrical mains.

Electrical connection



Tf — thermal fuse
(fuse element)

Wire colors:

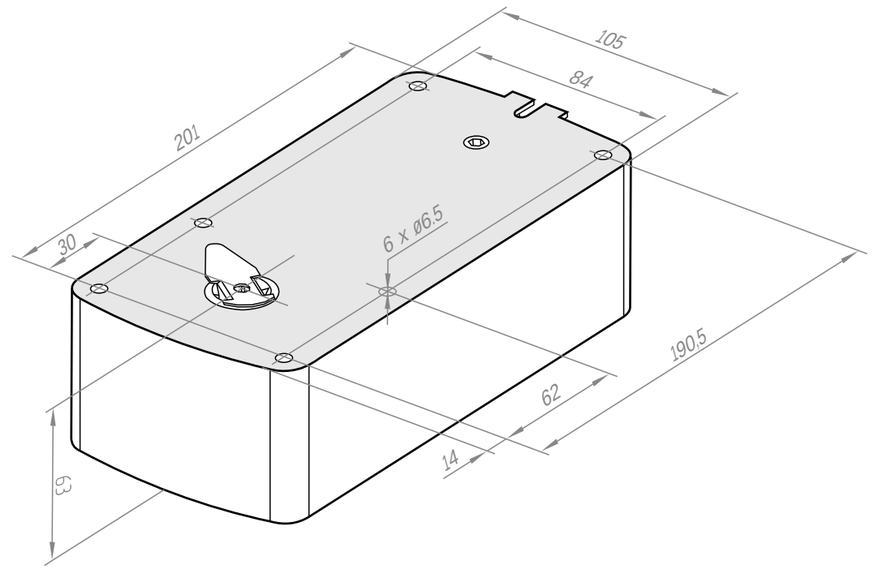
BFG24-20-T	S1 = yellow
1 = black	S2 = green
2 = red	S3 = blue
	S4 = violet
BFG230-20-T	S5 = gray
1 = blue	S6 = white
2 = brown	

BFG24-20-T: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other electrical drives may be connected in parallel taking into account the power level

Dimensions, mm



For smoke damper

Non–spring–return actuators for installation on normally closed fire dampers and smoke dampers of smoke-exhaust ventilation systems



BLE24-10
BLE230-10

BLE24-15
BLE230-15

BE24-40
BE230-40

BLE24-10
BLE230-10

Actuator



Designed for installation on normally closed fire dampers and smoke dampers of smoke-exhaust ventilation systems

Torque 10 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm

Technical data

Electrical parameters

Nominal Voltage

BLE24-10	**BLE230-10**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BLE24-10	**BLE230-10**
19.2...28.8 V~ 21.6...28.8 V=	198...264 V~

Threshold ON/OFF voltage

Min. ON voltage

BLE24-10	**BLE230-10**
19.2 V~ / 21.6 V=	198 V~

Max. OFF voltage

BLE24-10	**BLE230-10**
6.5 V~ / 6.5 V=	100 V~

Power consumption for wire sizing

BLE24-10	**BLE230-10**
10 VA	10 VA

Power consumption

When the motor is running

BLE24-10	**BLE230-10**
5 W	5 W

During holding

BLE24-10	**BLE230-10**
1 W	1 W

Connection

Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²
Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 80°

Functional data

Torque	10 Nm
Direction of rotation	Selected by L/R setting
Form fit	12×12 mm
Angle of rotation	Max. 95° Including add. angle of rotation at end positions
Position indication	Mechanical indicator
Running time	<30 s /90°
Noise level	45 dB

Safety

Protection class

Power supply/control

BLE24-10	**BLE230-10**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BLE24-10	**BLE230-10**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Ambient humidity	95% rel., non-condensing
Storage temperature	–30...+60 °C
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Cable may not be detached from the device.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

Actuators BLE... are only supplied to the manufacturers of fire-retardant and smoke dampers.

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Product features

Principle of operation

The two-position control is carried out by means of a two-wire circuit. The actuator is protected against overloads and therefore can be kept live at the end positions for a long time.

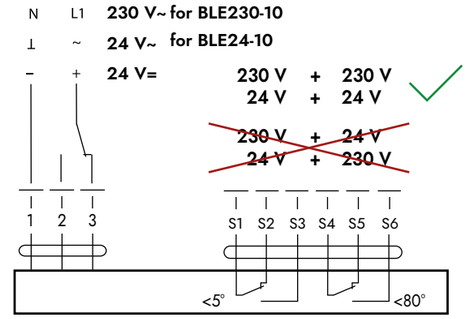
Position indication

The actuator has two fixed microswitches to signal the end positions of the damper. The intermediate position of the damper shutter is determined by the mechanical indicator.

Manual control

The metal arm supplied makes it possible to manually control the actuator, as well as to test the damper if there is no power supply at the facility.

Electrical connection



Wire colors:

BLE24-10
1 = black
2 = red
3 = white

BLE230-10
1 = green
2 = red
3 = yellow

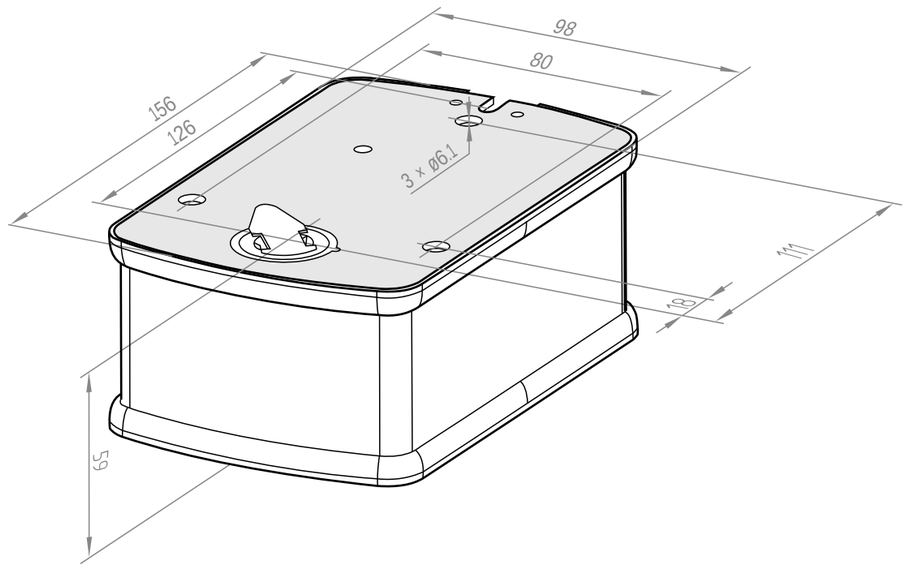
S1 = yellow
S2 = green
S3 = blue
S4 = violet
S5 = gray
S6 = white

BLE24-10: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BLE24-15
BLE230-15

Actuator



Designed for installation on normally closed fire dampers and smoke dampers of smoke-exhaust ventilation systems

Torque 15 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm

Technical data

Electrical parameters

Nominal Voltage

BLE24-15	**BLE230-15**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BLE24-15	**BLE230-15**
20.4...27.6 V~ 21.6...27.6 V=	198...264 V~

Threshold ON/OFF voltage:
Min. ON voltage

BLE24-15	**BLE230-15**
20.4 V~ / 21.6 V=	198 V~

Max. OFF voltage

BLE24-15	**BLE230-15**
6.5 V~ / 6.5 V=	100 V~

Power consumption for wire sizing	7 VA
Power consumption	
In operation	5 W
In rest position	0.5 W
Connection	
Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²
Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 85°

Functional data

Torque	15 Nm
Direction of rotation	Selected by L/R setting
Form fit	12×12 mm
Angle of rotation	Max. 95° Including add. angle of rotation at end positions
Position indication	Mechanical indicator
Running time	<30 s /90°
Noise level	45 dB

Safety

Protection class
Power supply/control

BLE24-15	**BLE230-15**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BLE24-15	**BLE230-15**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Ambient humidity	95% rel., non-condensing
Storage temperature	–30...+60 °C
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~1800 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Cable may not be detached from the device.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

Actuators BLE... are only supplied to the manufacturers of fire-retardant and smoke dampers.

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Product features

Principle of operation

The two-position control is carried out by means of a two-wire circuit. The actuator is protected against overloads and therefore can be kept live at the end positions for a long time.

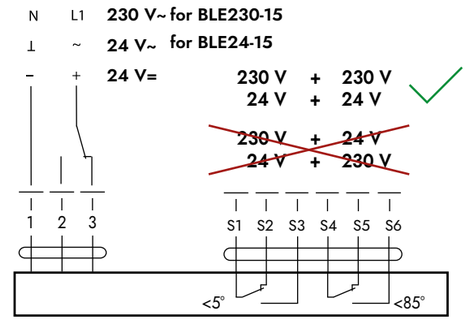
Position indication

The actuator has two fixed microswitches to signal the end positions of the damper. The intermediate position of the damper shutter is determined by the mechanical indicator.

Manual control

The metal arm supplied makes it possible to manually control the actuator, as well as to test the damper if there is no power supply at the facility.

Electrical connection



Wire colors:

BLE24-15
1 = black
2 = red
3 = white

BLE230-15
1 = blue
2 = brown
3 = white

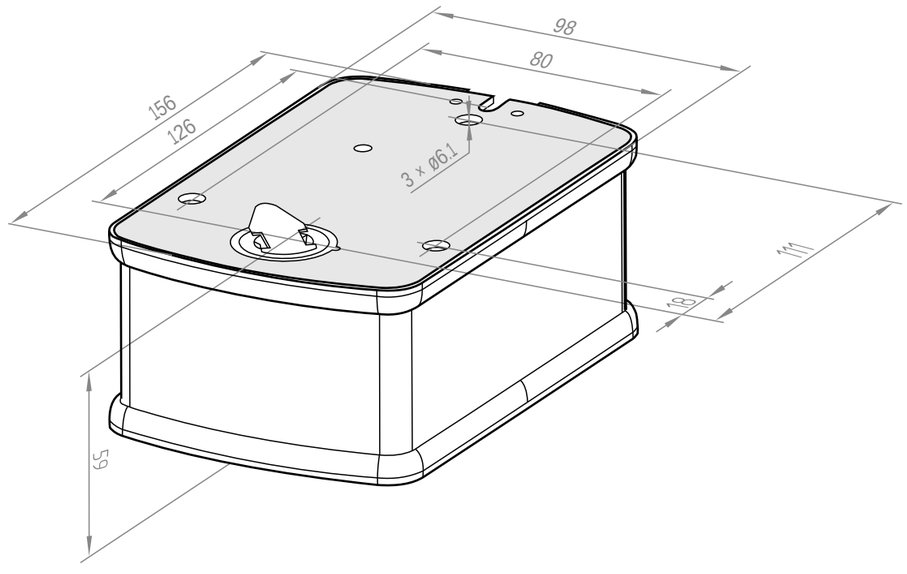
S1 = yellow
S2 = green
S3 = blue
S4 = violet
S5 = gray
S6 = white

BLE24-15: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm



BE24-40
BE230-40

Actuator



Designed for installation on normally closed fire dampers and smoke dampers of smoke-exhaust ventilation systems

Torque 40 Nm

Rated voltage
24 V ~/= or 230 V~

Control
open/closed

2 integrated auxiliary switches

Form fit
12×12 mm

Technical data

Electrical parameters

Nominal Voltage

BE24-40	**BE230-40**
24 V~ 50/60 Hz 24=	230 V~ 50/60 Hz

Rated voltage range

BE24-40	**BE230-40**
20.4...27.6 V~ 21.6...27.6 V=	198...264 V~

Threshold ON/OFF voltage

Min. ON voltage

BE24-40	**BE230-40**
20.4 V~ / 21.6 V=	198 V~

Max. OFF voltage

BE24-40	**BE230-40**
6.5 V~ / 6.5 V=	100 V~

Power consumption for wire sizing

BE24-40	**BE230-40**
30 VA	30 VA

Power consumption

When the motor is running

BE24-40	**BE230-40**
12 W	12 W

During holding

BE24-40	**BE230-40**
1.5 W	1.5 W

Connection

Power supply/control	Cable 1 m, 3×0.5 mm²
Aux. switches	Cable 1 m, 6×0.5 mm²
Auxiliary switches	2×SPDT, 1 mA...3 A (1.5 A), 250 V~
Switching points	5°/ 85°

Functional data

Torque	40 Nm
Direction of rotation	Selected by L/R setting
Form fit	12×12 mm
Angle of rotation	Max. 95° Including add. angle of rotation at end positions
Position indication	Mechanical indicator
Running time	<30 s /90°
Noise level	55 dB

Safety

Protection class

Power supply/control

BE24-40	**BE230-40**
III Safety Extra-Low Voltage	II Reinforced insulation

For aux. switches

BE24-40	**BE230-40**
II Protective insulation	II Protective insulation

Degree of protection	IP54
Ambient temperature	–30...+50 °C
Ambient humidity	95% rel., non-condensing
Storage temperature	–30...+60 °C
Maintenance	Not required

Dimensions / weight

Dimensions	See on the next page Dimensions Section
Weight	~2300 g

Safety notes

The actuator shall not be used in applications outside the specification, especially for aircraft applications.

This actuator is installed on the damper at the manufacturing factory only. The manufacturing factory shall be fully responsible for the functionality of the damper.

The device may only be opened at the manufacturing factory. It contains no parts that can be re-installed or repaired by users.

Cable may not be detached from the device.

The device contains electrical and electronic components and therefore shall not be disposed of with household waste. All applicable local regulations and instructions shall be observed.

Actuators BE... are only supplied to the manufacturers of fire-retardant and smoke dampers.

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Product features

Principle of operation

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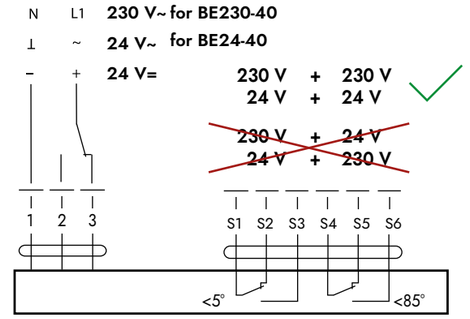
Position indication

The actuator has two fixed microswitches to signal the end positions of the damper. The intermediate position of the damper shutter is determined by the mechanical indicator.

Manual control

The metal arm supplied makes it possible to manually control the actuator, as well as to test the damper if there is no power supply at the facility.

Electrical connection



Wire colors:

BE24-40
1 = black
2 = red
3 = white

BE230-40
1 = green
2 = red
3 = yellow

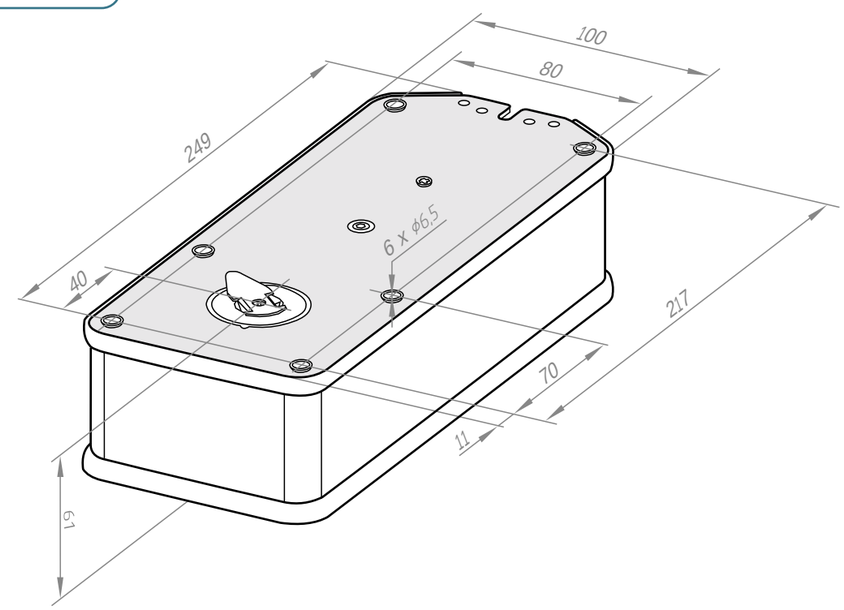
S1 = yellow
S2 = green
S3 = blue
S4 = violet
S5 = gray
S6 = white

BE24-40: Connection via isolating transformer

High and low voltages shall not be used at the auxiliary switches at the same time

Other actuators may be connected in parallel taking into account the power level

Dimensions, mm





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