

Overview

This actuator is specially designed for precise control of dampers in HVAC systems and equipment. It ensures reliable operation, easy installation, and flexible configuration for various damper sizes and control modes.

Features

- Easy installation with self-centering adapter for different shaft sizes
- Adjustable mechanical limit and freely adjustable position indicator
- Manual operation available during power outage or signal loss
- Multi-function knob for selecting control signal, rotation direction, and operating mode
- Fail-safe function: maintains operation to preset position using internal capacitors during power failure
- Optional standard or medium operating speed
- Built-in overload protection with automatic stop at full stroke
- Removable terminal cover for easy wiring and installation
- Robust industrial design ensuring reliable, long-term performance

Applications

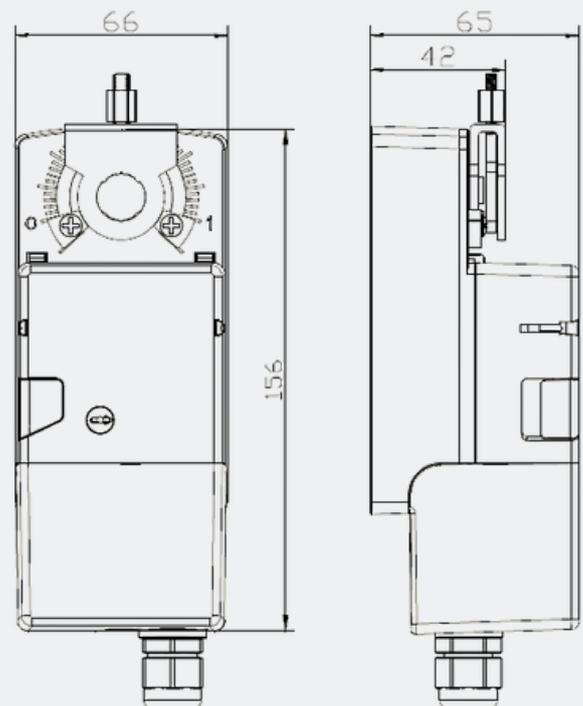
- HVAC and air handling units (AHUs).
- Air dampers, valves, and ventilation systems.

DAM03S

Fail-safe Damper Actuator, 3Nm



Dimensions



Specifications

DAM03S Fail-safe Damper Actuator

Item	Specification / Details
Torque	3 Nm
Damper size	≤ 0.5 m ² (see details in the manual)
Direction of rotation	Set by knob
Position indicator	Mechanical
Manual override	Set by push button
Angle of rotation	Max. 95°
Running time	Standard 100 s, optional medium speed 60 s
Connected shaft	Circular Φ6~14 mm, square 4.5~10 mm, min. length 45 mm
Driver	Brushless DC motor (BLDC)
Power supply	19.2~28.8 V AC/DC
Power consumption	Act: 0.8 W, Hold: 0.4 W, Charge: 3 W
Power protection	Class III – low voltage safe
Control signal	On/off, 3-position; 0–10 V (input impedance 250 kΩ); 4–20 mA (input impedance 200 Ω); RS485/Modbus
Internal feedback	0(2)–10 VDC (max output 1 mA); 4–20 mA (max load 500 Ω); RS485/Modbus-RTU
Internal switch	2×SPDT, 0.5 A / 30 VDC
Fail-safe position	Zero or full scale, set by DIP switch
Fail-safe delay time	2 s
Fail-safe running time	< 30 s
Capacitor charge time	< 6 min

Specifications

DAM03S Fail-safe Damper Actuator

Item	Specification / Details
Capacitor service life	> 10 years
Electrical connection	Screw terminal
Service life	100,000 cycles (full stroke, standard speed)
Mode of operation	Type 1 to EN60730-1
Working temperature	-30 ~ 50 °C, 95% RH, non-condensing
Storage temperature	-40 ~ 80 °C
Noise level	≤ 35 dB
Protection class	IP54
Weight	0.7 kg
Approval	CE
Fail-safe position	Zero or full scale, set by DIP switch

Selection Code:

Code and description		Remark
DAM03S	Fail-safe Damper Actuator,3Nm	Model
1	on/off, 3-pos	Control signal
V10	0(2)~10VDC	
A	4~20mA	
RS	RS485/Modbus RTU	
1	N/A	Internal feedback
V10	0(2)~10VDC	
A	4~20mA	
RS	RS485/Modbus RTU	
1	N/A	Internal switch
2	2xSPDT, 0.5A/30VDC	

- When control signal is 1, feedback should be 1. If control signal is V10, feedback may be 1 or V10. If control signal is A, feedback may be 1 or A. If control signal is RS, feedback may be 1 or RS.
- If select medium speed 60s, add suffix M to the model.

Overview

Compact and reliable actuator designed for precise control of air dampers in HVAC systems. Ensures easy installation, flexible setup, and dependable performance.

Features

- Easy installation with self-centering adapter for different shaft sizes
- Adjustable mechanical limit and position indicator
- Manual operation available during power loss or signal absence
- Multi-function knob for selecting control signal, rotation direction, and operating mode
- Built-in fail-safe function with internal capacitors for power failure operation
- Optional standard or medium speed models
- Overload protection with automatic stop at full stroke (no limit switch required)
- Removable terminal cover for convenient wiring and installation
- Durable industrial design ensuring stable and long-lasting performance
- Optional external position switch with adjustable setpoint and flexible wiring direction

Applications

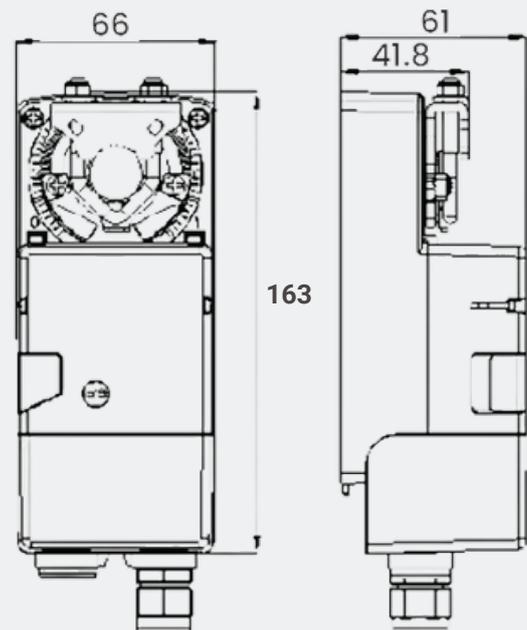
- Air handling units (AHUs)
- Ventilation and air distribution systems
- Damper and valve control in HVAC equipment

DAM05S

Fail-safe Damper Actuator, 5Nm



Dimensions



Specifications

DAM05S Fail-safe Damper Actuator

Item	Specification / Details
Torque	5 Nm
Damper size	≤ 1 m ² (see details in the manual)
Direction of rotation	Set by knob
Position indicator	Mechanical
Manual override	Set by push button
Angle of rotation	Max. 95°
Running time	Standard 120 s, optional medium speed 75 s
Connected shaft	Circular Φ6~15 mm, square 4.5~11 mm, min. length 43 mm
Driver	Brushless DC motor (BLDC)
Power	19.2~28.8 V AC/DC
Power consumption	Act: 1 W, Hold: 0.5 W, Charge: 3 W
Power protection	Class III – low voltage safe
Control signal	On/off, 3-position; 0–10 V (input impedance 250 kΩ); 4–20 mA (input impedance 200 Ω); RS485/Modbus
Internal feedback	0(2)–10 VDC (max output 1 mA); 4–20 mA (max load 500 Ω); RS485/Modbus-RTU
Internal switch	2×SPDT, 0.5 A / 30 VDC
External position switch	1 or 2, SPDT, 0.5 A / 250 VAC (ordered separately)
Fail-safe position	Zero or full scale, set by DIP switch
Fail-safe delay time	2 s
Fail-safe running time	< 32 s

Specifications

DAM05S Fail-safe Damper Actuator

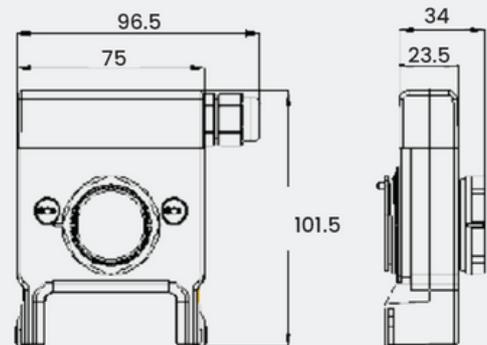
Item	Specification / Details
Capacitor charge time	< 6 min
Capacitor service life	> 10 years
Electrical connection	Screw terminal
Service life	100,000 cycles (full stroke, standard speed)
Mode of operation	Type 1 to EN60730-1
Working temperature	-30 ~ 50 °C, 95% RH, non-condensing
Storage temperature	-40 ~ 80 °C
Noise level	≤ 35 dB
Protection	IP54
Weight	0.78 kg
Approval	CE

External Position Switch

(must be ordered separately):

The external position switch provides feedback on the actuator's position. It is suitable for on-site installation, can replace the internal switch function, and allows flexible adjustment of the position setpoint.

Dimensions



External Position Switch

Item	Specification / Details
Model	SW1 (1×SPDT, 0.5A/250VAC); SW2 (2×SPDT, 0.5A/250VAC)
Work condition	-30 ~ 50 °C, 0 ~ 95% RH, non-condensing (EN60730-1)
Storage temperature	-40 ~ 80 °C
Power protection	Class II – totally insulated
Enclosure protection	IP54
Weight	0.12 kg

Selection Code:

Code and description		Remark
DAM05S	Fail-safe Damper Actuator,5Nm	Model
1	on/off, 3-pos	Control signal
V10	0(2)~10VDC	
A	4~20mA	
RS	RS485/Modbus RTU	
1	N/A	Internal feedback
V10	0(2)~10VDC	
A	4~20mA	
RS	RS485/Modbus RTU	
1	N/A	Internal switch
2	2xSPDT, 0.5A/30VDC	

- When control signal is 1, feedback should be 1. If control signal is V10, feedback may be 1 or V10. If control signal is A, feedback may be 1 or A. If control signal is RS, feedback may be 1 or RS.
- If select medium speed 75s, add suffix M to the model.

Overview

The actuator is specially designed for precise control of dampers in various HVAC systems and equipment. It offers reliable performance, easy installation, and flexible operation under different working conditions.

Features

- Easy installation with self-centering adapter for different shaft sizes
- Adjustable mechanical limits and position indicator
- Manual operation available during power loss or signal absence
- Multi-function knob for control signal, rotation direction, and mode selection
- Fail-safe operation using internal capacitors during power failure
- Optional standard or medium speed models
- Overload protection with automatic stop at full stroke
- Removable terminal cover for easy wiring
- Durable industrial design ensuring stable, long-term performance
- Optional external position switch with adjustable setpoint and flexible wiring direction

Applications

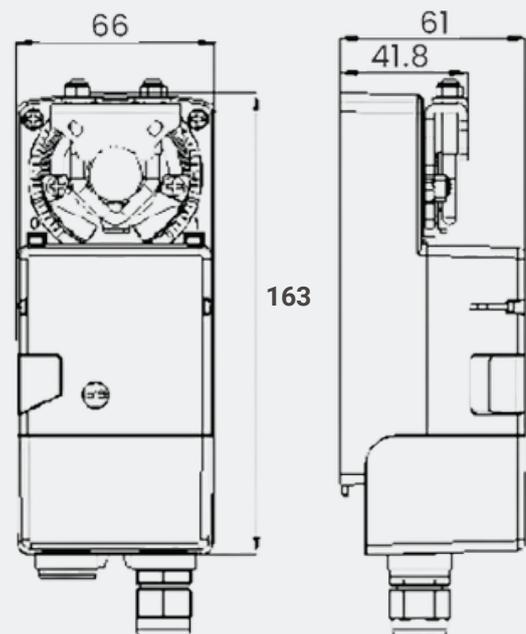
- Suitable for air handling units, ventilation systems, and other HVAC equipment requiring damper control.

DAM10S

Fail-safe Damper Actuator, 10Nm



Dimensions



Specifications

DAM10S Fail-safe Damper Actuator

Item	Specification / Details
Torque	10 Nm
Damper size	≤ 2 m ² (see details in the manual)
Direction of rotation	Set by knob
Position indicator	Mechanical
Manual override	Set by push button
Angle of rotation	Max. 95°
Running time	Standard 120s, medium speed 75s optional
Connected shaft	Circular Ø8~17mm, square 5.8~12mm, minimum length 43mm
Driver	Brushless DC Motor (BLDC)
Power supply	19.2~28.8V AC/DC
Power consumption	Act 1.5W, Hold 0.5W, Charge 3W
Power protection	Class III – low voltage safe
Control signal	on/off, 3-position; 0~10V (input impedance 250kΩ); 4~20mA (input impedance 200Ω); RS485/Modbus
Internal feedback	0(2)~10VDC (max output 1mA); 4~20mA (max load 500Ω); RS485/Modbus
Internal switch	2 × SPDT, 0.5A/30VDC
External position switch	1 or 2 × SPDT, 0.5A/250VAC (ordered separately)
Fail-safe position	Zero or Full scale, set by DIP switch
Fail-safe delay time	2 seconds
Fail-safe running time	< 32 seconds

Specifications

DAM10S Fail-safe Damper Actuator

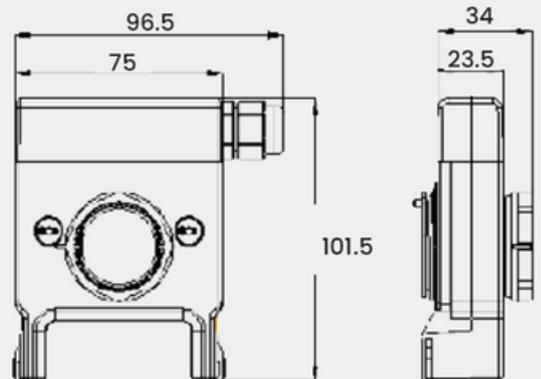
Item	Specification / Details
Capacitor charge time	< 6 minutes
Capacitor service life	> 10 years
Electrical connection	Screw terminal
Storage temperature	-40°C ~ +80°C
Operating temperature	-30°C ~ +50°C, 95% RH, non-condensing (EN60730-1)
Noise level	≤ 40 dB
Protection class	IP54
Weight	0.84 kg
Service life	100,000 cycles (full stroke, standard speed)
Mode of operation	Type 1 according to EN60730-1
Approval	CE

External Position Switch

(must be ordered separately):

The external position switch provides feedback on the actuator's position. It is suitable for on-site installation, can replace the internal switch function, and allows flexible adjustment of the position setpoint.

Dimensions



External Position Switch

Item	Specification / Details
Model	SW1 (1×SPDT, 0.5A/250VAC); SW2 (2×SPDT, 0.5A/250VAC)
Work condition	-30 ~ 50 °C, 0 ~ 95% RH, non-condensing (EN60730-1)
Storage temperature	-40 ~ 80 °C
Power protection	Class II – totally insulated
Enclosure protection	IP54
Weight	0.12 kg

Selection Code:

Code and description		Remark
DAM10S	Fail-safe Damper Actuator, 10Nm	Model
1	on/off, 3-pos	Control signal
V10	0(2)~10VDC	
A	4~20mA	
RS	RS485/Modbus RTU	
1	N/A	Internal feedback
V10	0(2)~10VDC	
A	4~20mA	
RS	RS485/Modbus RTU	
1	N/A	Internal switch
2	2xSPDT, 0.5A/30VDC	

- When control signal is 1, feedback should be 1. If control signal is V10, feedback may be 1 or V10. If control signal is A, feedback may be 1 or A. If control signal is RS, feedback may be 1 or RS.
- If select medium speed 75s, add suffix M to the model.

Overview

The actuator is specially designed for precise control of dampers in various HVAC systems and equipment. It provides easy installation, flexible operation, and reliable performance under different working conditions.

Features

- Simple assembly with self-centering adapter for different shaft sizes
- Adjustable mechanical limit and position indicator
- Manual operation via push button when power or control signal is unavailable
- Multi-function knob for selecting control signal, rotation direction, and operation mode
- Fail-safe function: operates to preset position using internal capacitors during power failure
- Optional standard or medium speed versions
- Overload protection with automatic stop at full stroke (no limit switch required)
- Removable terminal cover for quick installation and wiring
- Robust industrial design ensuring stable, long service life
- Optional external position switch with adjustable setpoint and left/right wiring flexibility

Applications

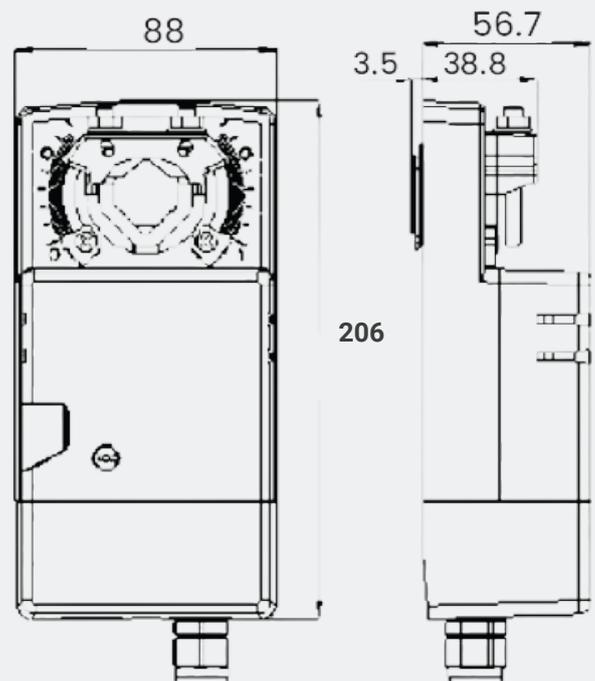
Used in air handling units, ventilation systems, and other HVAC equipment requiring accurate damper control.

DAM20S

Fail-safe Damper Actuator, 20Nm



Dimensions



Specifications

DAM20S Fail-safe Damper Actuator

Item	Specification / Details
Torque	20 Nm
Damper size	≤ 4 m ² (see details in the manual)
Direction of rotation	Set by knob
Position indicator	Mechanical
Manual override	Set by push button
Angle of rotation	Max. 95°
Running time	Standard 150 s, medium speed 90 s optional
Connected shaft	Circular Φ10 ~ 20 mm, square 8 ~ 14 mm, minimum length 43 mm
Driver	Brushless DC Motor (BLDC)
Power supply	19.2 ~ 28.8 V AC/DC
Power consumption	Act 3.5 W, Hold 0.8 W, Charge 4 W
Power protection	Class III – low voltage safe
Control signal	on/off, 3-position; 0 ~ 10 V (input impedance 250 kΩ); 4 ~ 20 mA (input impedance 200 Ω); RS485/Modbus
Internal feedback	0(2) ~ 10 VDC (max output 1 mA); 4 ~ 20 mA (max load 500 Ω); RS485/Modbus-RTU
Internal switch	2 × SPDT, 0.5 A / 30 VDC
External position switch	1 or 2 × SPDT, 0.5 A / 250 VAC (ordered separately)
Fail-safe position	Zero or Full scale, set by DIP switch
Fail-safe delay time	2 seconds
Fail-safe running time	< 36 s (-20 ~ 50 °C)

Specifications

DAM20S Fail-safe Damper Actuator

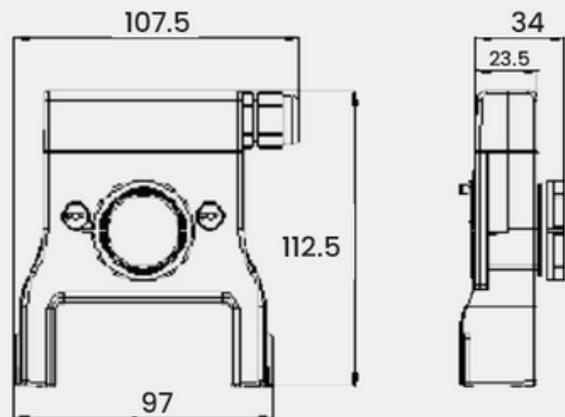
Item	Specification / Details
Capacitor charge time	< 15 minutes
Capacitor service life	> 10 years
Electrical connection	Screw terminal
Service life	100 000 cycles (full stroke, standard speed)
Mode of operation	Type 1 to EN 60730-1
Work temperature	-30 ~ 50 °C, 95 % RH, non-condensing (EN 60730-1)
Storage temperature	-40 ~ 80 °C
Noise level	≤ 40 dB
Protection class	IP54
Weight	1.2 kg
Approval	CE

External Position Switch

(must be ordered separately):

The external position switch provides feedback on the actuator's position. It is suitable for on-site installation, can replace the internal switch function, and allows flexible adjustment of the position setpoint.

Dimensions



External Position Switch

Item	Specification / Details
Model	SW1A (1 × SPDT, 0.5 A / 250 VAC); SW2A (2 × SPDT, 0.5 A / 250 VAC)
Working temperature	-30 ~ 50 °C, 0 ~ 95% RH, non-condensing (EN60730-1)
Storage temperature	-40 ~ 80 °C
Power protection	Class II – totally insulated
Enclosure protection	IP54
Weight	0.13 kg

Selection Code:

Code and description

Remark

DAM20S

Fail-safe Damper Actuator,20Nm

Model

1

on/off, 3-pos

V10

0(2)~10VDC

A

4~20mA

RS

RS485/Modbus RTU

Control
signal

1

N/A

V10

0(2)~10VDC

A

4~20mA

RS

RS485/Modbus RTU

Internal
feedback

1

N/A

2

2xSPDT, 0.5A/30VDC

Internal
switch

- When control signal is 1, feedback should be 1. If control signal is V10, feedback may be 1 or V10. If control signal is A, feedback may be 1 or A. If control signal is RS, feedback may be 1 or RS.
- If select medium speed 90s, add suffix M to the model.

Overview

This actuator is specially designed for controlling dampers in various HVAC systems and equipment. It ensures precise performance, easy installation, and long-term reliability.

Features

- Easy installation with self-centering adapter for different shaft sizes
- Adjustable mechanical limit and freely settable position indicator
- Manual operation available during power loss or absence of control signal
- Multi-function knob for selecting control signal, rotation direction, and operation mode
- Fail-safe function: automatically moves to preset position using internal capacitors during power failure
- Available in standard or medium speed models
- Built-in overload protection with automatic stop at full stroke (no limit switch needed)
- Removable terminal cover for quick and safe wiring
- Durable industrial design for stable, long-lasting operation
- Optional external position switch with adjustable setpoint and left/right wiring flexibility

Applications

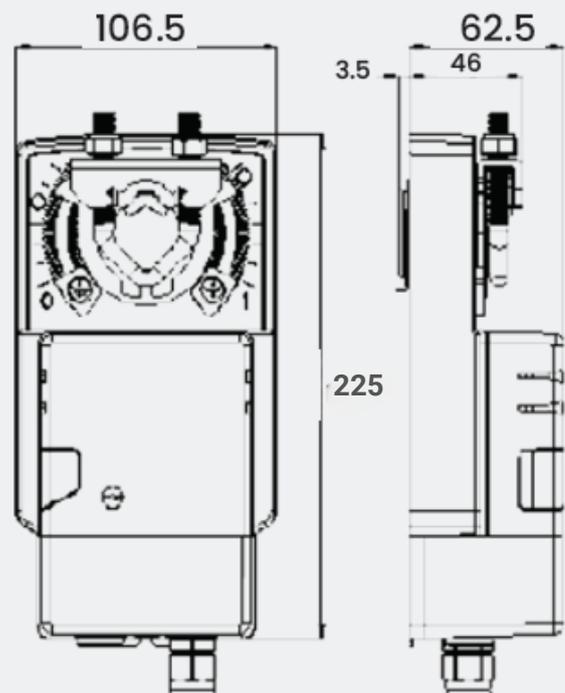
Ideal for ventilation systems, air handling units, and other HVAC applications requiring efficient damper control.

DAM40S

Fail-safe Damper Actuator, 40Nm



Dimensions



Specifications

DAM40S Fail-safe Damper Actuator

Item	Specification / Details
Torque	40 Nm
Damper size	≤ 8 m ² (see details in the manual)
Direction of rotation	Set by knob
Position indicator	Mechanical
Manual override	Set by push button
Angle of rotation	Max. 95°
Running time	Standard 150 s, medium speed 75 s optional
Connected shaft	Circular Φ12 ~ 26.7 mm, square 12 ~ 18 mm, min. length 50 mm
Driver	Brushless DC Motor (BLDC)
Power supply	19.2 ~ 28.8 V AC/DC
Power consumption	Act 8.5 W, Hold 1.5 W, Charge 4 W
Power protection	Class III – low voltage safe
Control signal	on/off, 3-position; 0 ~ 10 V (input impedance 250 kΩ); 4 ~ 20 mA (input impedance 200 Ω); RS485/Modbus
Internal feedback	0(2) ~ 10 VDC (max output 1 mA); 4 ~ 20 mA (max load 500 Ω); RS485/Modbus-RTU
Internal switch	2 × SPDT, 0.5 A / 30 VDC
External position switch	1 or 2 × SPDT, 0.5 A / 250 VAC (ordered separately)
Fail-safe position	Zero or Full scale, set by DIP switch
Fail-safe delay time	2 seconds
Fail-safe running time	< 45 seconds

Specifications

DAM40S Fail-safe Damper Actuator

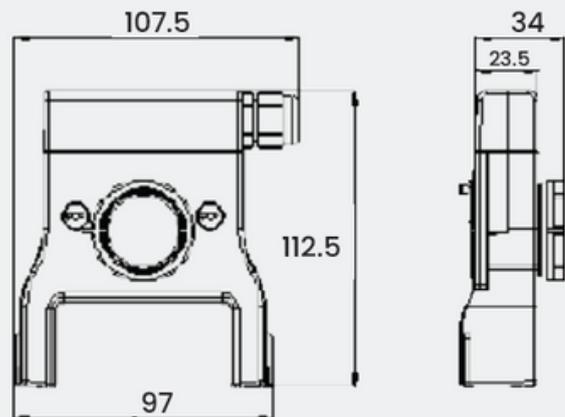
Item	Specification / Details
Capacitor charge time	< 15 minutes
Capacitor service life	> 10 years
Electrical connection	Screw terminal
Service life	100 000 cycles (full stroke, standard speed)
Mode of operation	Type 1 to EN 60730-1
Working temperature	-30 ~ 50 °C, 95 % RH, non-condensing (EN 60730-1)
Storage temperature	-40 ~ 80 °C
Noise level	≤ 45 dB
Protection class	IP54
Weight	1.9 kg
Approval	CE

External Position Switch

(must be ordered separately):

The external position switch provides feedback on the actuator's position. It is suitable for on-site installation, can replace the internal switch function, and allows flexible adjustment of the position setpoint.

Dimensions



External Position Switch

Item	Specification / Details
Model	SW1A (1 × SPDT, 0.5 A / 250 VAC); SW2A (2 × SPDT, 0.5 A / 250 VAC)
Working temperature	-30 ~ 50 °C, 0 ~ 95 % RH, non-condensing (EN60730-1)
Storage temperature	-40 ~ 80 °C
Power protection	Class II – totally insulated
Enclosure protection	IP54
Weight	0.13 kg

Selection Code:

Code and description

Remark

DAM40S

Fail-safe Damper Actuator,40Nm

Model

1

on/off, 3-pos

V10

0(2)~10VDC

A

4~20mA

RS

RS485/Modbus RTU

Control signal

1

N/A

V10

0(2)~10VDC

A

4~20mA

RS

RS485/Modbus RTU

Internal feedback

1

N/A

2

2xSPDT, 0.5A/30VDC

Internal switch

- When control signal is 1, feedback should be 1. If control signal is V10, feedback may be 1 or V10. If control signal is A, feedback may be 1 or A. If control signal is RS, feedback may be 1 or RS.
- If select medium speed 90s, add suffix M to the model.

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For technical support please contact: support@neowave.tech