GRUNER
Schalten und Bewegen

Technical data sheet

361-024-10

Spring return

Description

Spring-return Actuator for adjusting and regulating dampers and valves in air conditioning and ventilation.

- **Torque Motor** **10 Nm**
- **Torque Spring** **10 Nm**
- **Nominal Voltage** **24 VAC/DC**
- **Control** **2-Point**
- **valve size** **up to approx 2 m²**
- **Damper shaft** **Clamp**
  ◊ 9-18 mm / Ø 9-26 mm

Technical data

Nominal voltage	Nominal voltage	24 VAC (50/60 Hz), 24 VDC
	Nominal voltage range	19...29 VAC/DC
	Power consuption Motor (Motion)	5 W
	Power consuption Standby (end position)	2 W
	Wire sizing	7 VA
	Control	2-Point
	Position feedback	-
	Auxiliary switch	-
	Contact load	-
	Switching point	-
	Connection Motor	Cable 1000 mm, 2 x 0,75 mm² (halogen free)
	Connection Auxiliary switch	-
	Connection GUAC	
Functional data	Torque Motor	>10 Nm
	Torque Spring	>10 Nm
	Synchronised speed	±5%
	Direction of rotation	Selected by mounting
	Manual override	Manual operation
	Angle of rotation	0°...max.+95° Can be limited with adjustable mechanical end stop min 35°
	Running time Motor	<75 s / 90°
	Running time Spring	<20 s / 90°
	Sound power level Motor	<45 dB(A)
	Sound power level Spring	<65 dB(A)
	Damper coupling	Clamp ◊ 9...18 mm / Ø 9...26 mm
	Position indication	Mechanical with pointer

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Technical data

Functional data	Service life	>60.000 cycles (0°...+95°...0°)
Safety	Protection class	III (low voltage safety current)
	Degree of protection	IP54
	EMC	CE (2004/108/EG)
	LVD	CE (2006/95/EG)
	Mode of operation	Typ 1.AA B (EN60730-1)
	Rated impulse voltage	0,8 kV (EN60730-1)
	Control pollution degree	3 (EN60730-1)
	Ambient temperature Normal operation	-30°C...+50°C
	Storage temperature	-30°C...+80°C
	Ambient humidity	5...95% r.F., non- condensating (EN 60730-1)
	Maintenance	Maintenance-free
Dimensions/ Weight	Dimensions	188 x 96 x 60 mm
	Weight	ca. 1.800g

Operating mode / Properties

Operating mode

Through connecting the power supply to BU+BN (1+2), the actuator moves to position 1 while the pre-tensioned spring is wound up the same time. If the power supply is interrupted the actuator is moving back to position 0 by the spring power. The actuator is still maintaining the minimum torque at the damper spindle.

The actuator is overload-proof and requires no end switches. It automatically stops when the end stop is reached.

Direct mounting

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

Manual operation

The actuator can be operated only manually while the power supply is off. The supplied lever is to open and lock the damper position. The lock stays until the power supply is put on.

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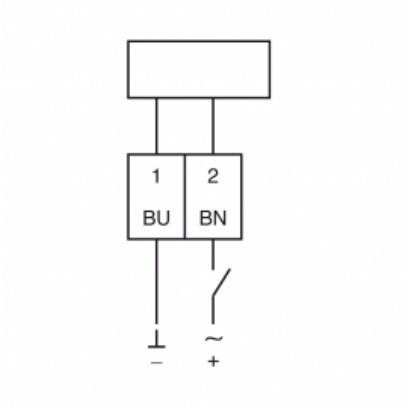
Connection / Safety remarks



Safety remarks

-Connect via safety isolation transformer
-The actuator is not allowed to be used outside the specified field of application, especially in airplanes.
-In may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
-The device may only be opened at the manufacturer´s site.
-When calculating the required torque, the specifications supplied by the damper manufacturers (cross- section, design, installation site), and the air flow conditions must be observed.
-The actuator is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

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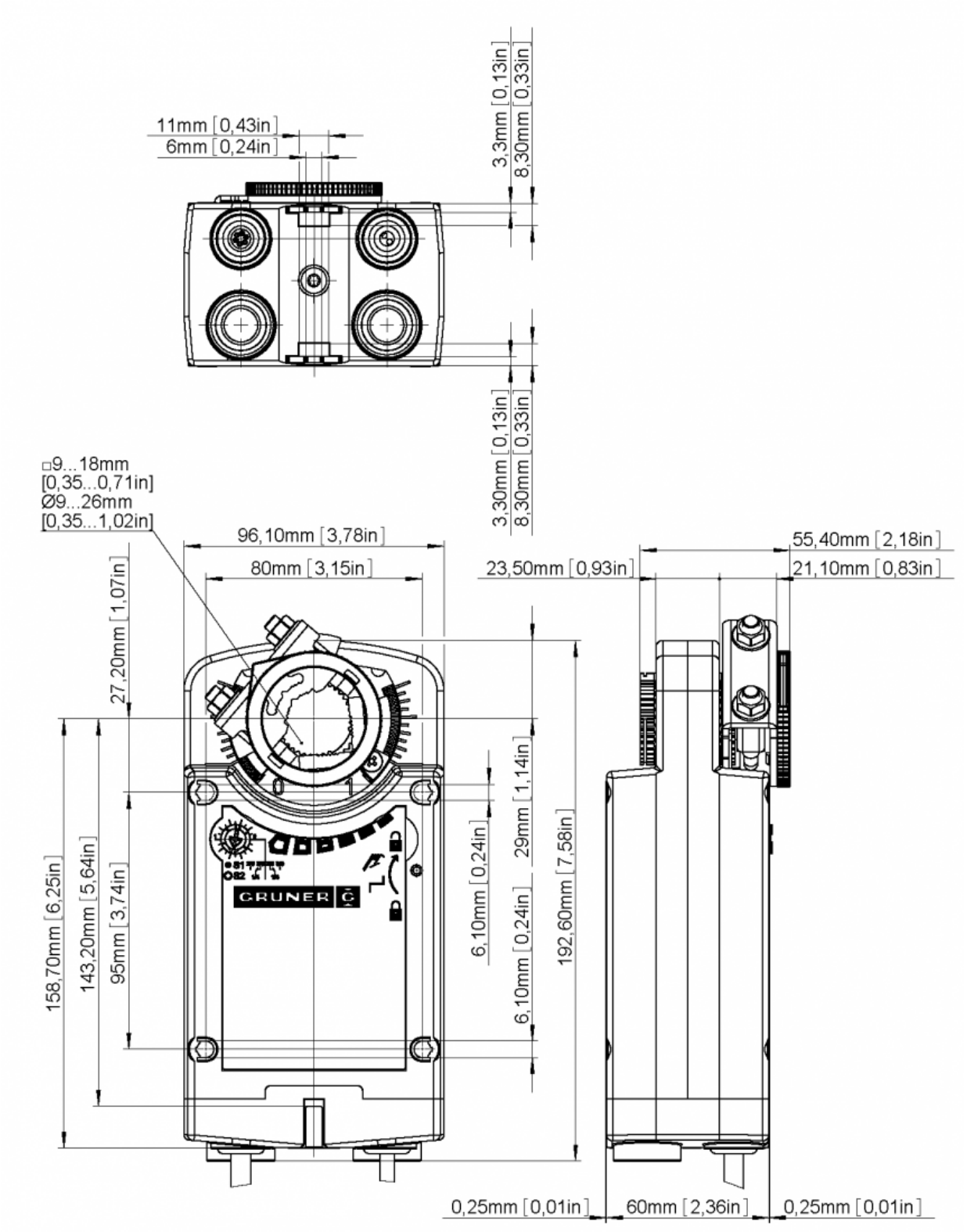
Technical drawing



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GRUNER
Schalten und Bewegen

Technical data sheet

361-230-10

Spring return

Description

Spring-return Actuator for adjusting and regulating dampers and valves in air conditioning and ventilation.

- **Torque Motor** **10 Nm**
- **Torque Spring** **10 Nm**
- **Nominal Voltage** **230 VAC/DC**
- **Control** **2-Point**
- **valve size** **up to approx 2 m²**
- **Damper shaft** **Clamp**
  ◊ 9-18 mm / Ø 9-26 mm

Technical data

Nominal voltage	Nominal voltage	230 VAC (50/60 Hz), 230 VDC
	Nominal voltage range	85...265 VAC/DC
	Power consuption Motor (Motion)	5,5 W
	Power consuption Standby (end position)	1,5 W
	Wire sizing	11,5 VA
	Control	2-Point
	Position feedback	-
	Auxiliary switch	-
	Contact load	-
	Switching point	-
	Connection Motor	Cable 1000 mm, 2 x 0,75 mm² (halogen free)
	Connection Auxiliary switch	-
	Connection GUAC	
Functional data	Torque Motor	>10 Nm
	Torque Spring	>10 Nm
	Synchronised speed	±5%
	Direction of rotation	Selected by mounting
	Manual override	Manual operation
	Angle of rotation	0°...max.+95° Can be limited with adjustable mechanical end stop min 35°
	Running time Motor	<75 s / 90°
	Running time Spring	<20 s / 90°
	Sound power level Motor	<45 dB(A)
	Sound power level Spring	<65 dB(A)
	Damper coupling	Clamp ◊ 9...18 mm / Ø 9...26 mm
	Position indication	Mechanical with pointer

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Technical data

Functional data	Service life	>60.000 cycles (0°...+95°...0°)
Safety	Protection class	II (double insulation)
	Degree of protection	IP54
	EMC	CE (2004/108/EG)
	LVD	CE (2006/95/EG)
	Mode of operation	Typ 1.AA B (EN60730-1)
	Rated impulse voltage	4 kV (EN60730-1)
	Control pollution degree	3 (EN60730-1)
	Ambient temperature Normal operation	-30°C...+50°C
	Storage temperature	-30°C...+80°C
	Ambient humidity	5...95% r.F., non- condensating (EN 60730-1)
	Maintenance	Maintenance-free
Dimensions/ Weight	Dimensions	188 x 96 x 60 mm
	Weight	ca. 1.800g

Operating mode / Properties

Operating mode

Through connecting the power supply to BU+BN (1+2), the actuator moves to position 1 while the pre-tensioned spring is wound up the same time. If the power supply is interrupted the actuator is moving back to position 0 by the spring power. The actuator is still maintaining the minimum torque at the damper spindle.

The actuator is overload-proof and requires no end switches. It automatically stops when the end stop is reached.

Direct mounting

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

Manual operation

The actuator can be operated only manually while the power supply is off. The supplied lever is to open and lock the damper position. The lock stays until the power supply is put on.

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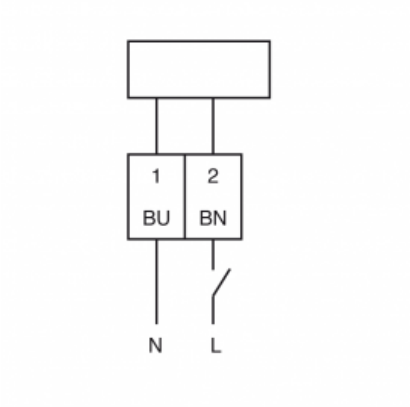
Connection / Safety remarks



Safety remarks

-Attention mains voltage
-The actuator is not allowed to be used outside the specified field of application, especially in airplanes.
-In may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
-The device may only be opened at the manufacturer´s site.
-When calculating the required torque, the specifications supplied by the damper manufacturers (cross- section, design, installation site), and the air flow conditions must be observed.
-The actuator is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

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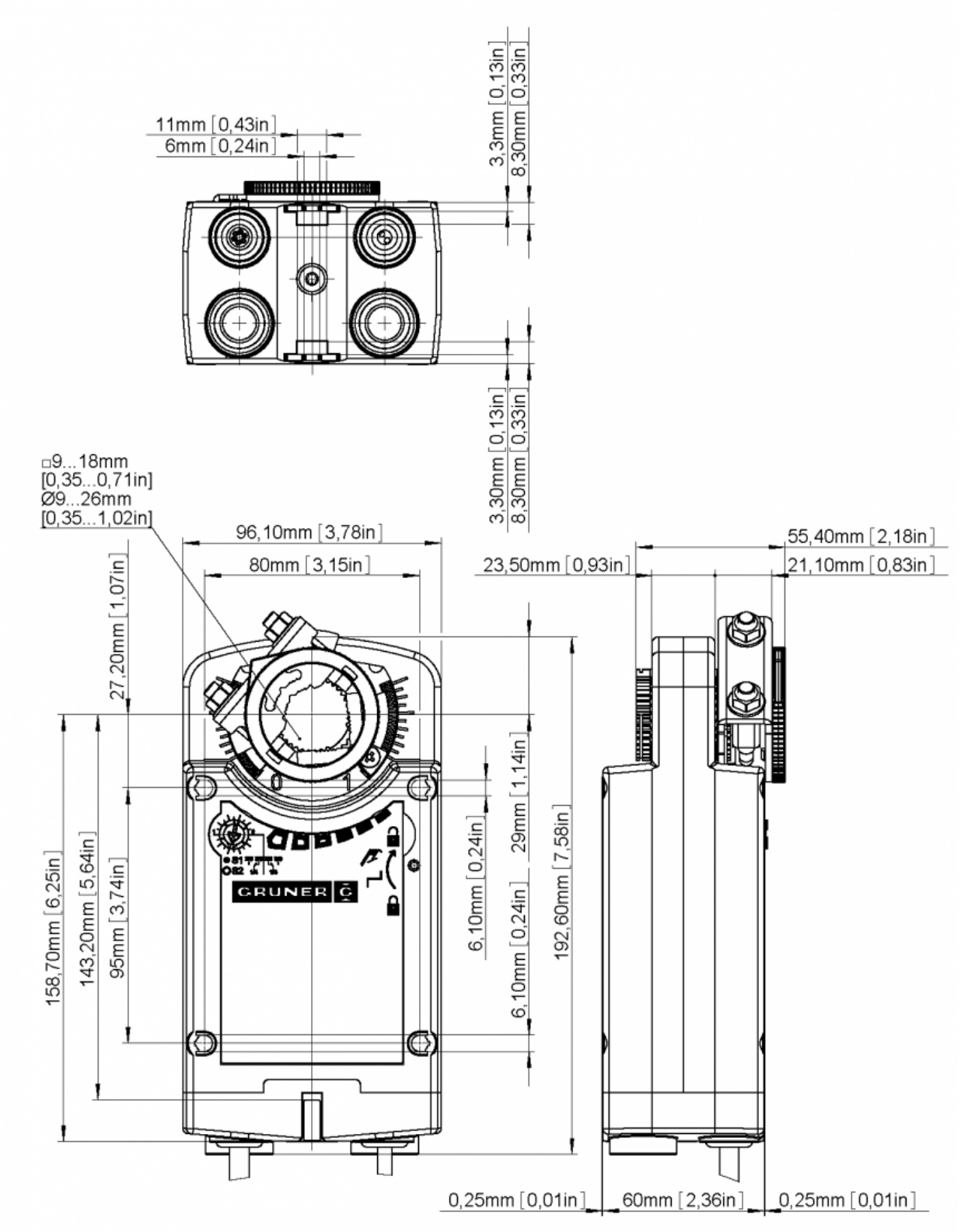
Technical drawing



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GRUNER
Schalten und Bewegen

Technical data sheet

361-024-10-S2

Spring return

Description

Spring-return Actuator for adjusting and regulating dampers and valves in air conditioning and ventilation.

- **Torque Motor** **10 Nm**
- **Torque Spring** **10 Nm**
- **Nominal Voltage** **24 VAC/DC**
- **Control** **2-Point**
- **Auxiliary switch** **2 x freely adjustable**
- **valve size** **up to approx 2 m²**
- **Damper shaft** **Clamp**
  ◊ 9-18 mm / Ø 9-26 mm

Technical data

Nominal voltage	Nominal voltage	24 VAC (50/60 Hz), 24 VDC
	Nominal voltage range	19...29 VAC/DC
	Power consuption Motor (Motion)	5 W
	Power consuption Standby (end position)	2 W
	Wire sizing	7 VA
	Control	2-Point
	Position feedback	-
	Auxiliary switch	2 x SPDT (Ag)
	Contact load	5 (2,5) A, 250 VAC
	Switching point	0°...95°
	Connection Motor	Cable 1000 mm, 2 x 0,75 mm² (halogen free)
	Connection Auxiliary switch	Cable 1000 mm, 6 x 0,75 mm² (halogen free)
	Connection GUAC	
Functional data	Torque Motor	>10 Nm
	Torque Spring	>10 Nm
	Synchronised speed	±5%
	Direction of rotation	Selected by mounting
	Manual override	Manual operation
	Angle of rotation	0°...max.+95° Can be limited with adjustable mechanical end stop min 35°
	Running time Motor	<75 s / 90°
	Running time Spring	<20 s / 90°
	Sound power level Motor	<45 dB(A)
	Sound power level Spring	<65 dB(A)
	Damper coupling	Clamp ◊ 9...18 mm / Ø 9...26 mm
	Position indication	Mechanical with pointer

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Technical data

Functional data	Service life	>60.000 cycles (0°...+95°...0°)
Safety	Protection class	III (low voltage safety current)
	Degree of protection	IP54
	EMC	CE (2004/108/EG)
	LVD	CE (2006/95/EG)
	Mode of operation	Typ 1.AA B (EN60730-1)
	Rated impulse voltage	0,8 kV (EN60730-1)
	Control pollution degree	3 (EN60730-1)
	Ambient temperature Normal operation	-30°C...+50°C
	Storage temperature	-30°C...+80°C
	Ambient humidity	5...95% r.F., non- condensating (EN 60730-1)
	Maintenance	Maintenance-free
Dimensions/ Weight	Dimensions	188 x 96 x 60 mm
	Weight	ca. 1.800g

Operating mode / Properties

Operating mode

Through connecting the power supply to BU+BN (1+2), the actuator moves to position 1 while the pre-tensioned spring is wound up the same time. If the power supply is interrupted the actuator is moving back to position 0 by the spring power. The actuator is still maintaining the minimum torque at the damper spindle.

The actuator is overload-proof and requires no end switches. It automatically stops when the end stop is reached.

Direct mounting

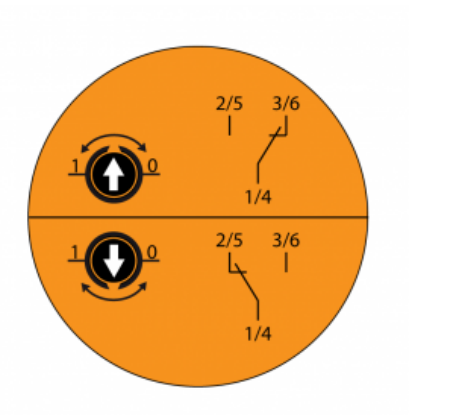
Simple direct mounting on the damper spindle with a universal spindle clamp, supplied with an anti-rotation strap to prevent the actuator from rotating.

Signaling

The two integrated auxiliary switches are freely adjustable in the angle of 0 – 95°. These are activated corresponding to the adjusted angle. The damper position can be checked by the mechanical pointer.

Manual operation

The actuator can be operated only manually while the power supply is off. The supplied lever is to open and lock the damper position. The lock stays until the power supply is put on.



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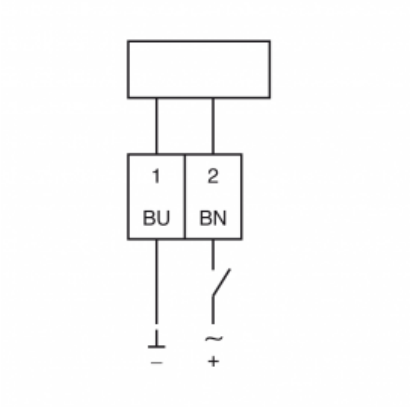
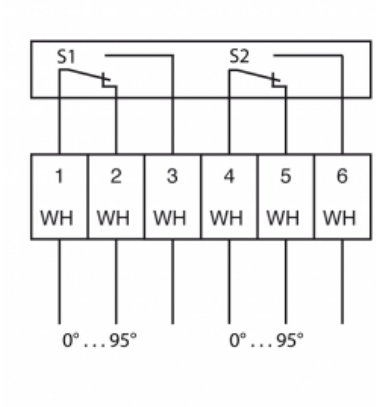
Connection / Safety remarks





Safety remarks

-Connect via safety isolation transformer
-The actuator is not allowed to be used outside the specified field of application, especially in airplanes.
-In may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
-The device may only be opened at the manufacturer´s site.
-When calculating the required torque, the specifications supplied by the damper manufacturers (cross- section, design, installation site), and the air flow conditions must be observed.
-The actuator is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

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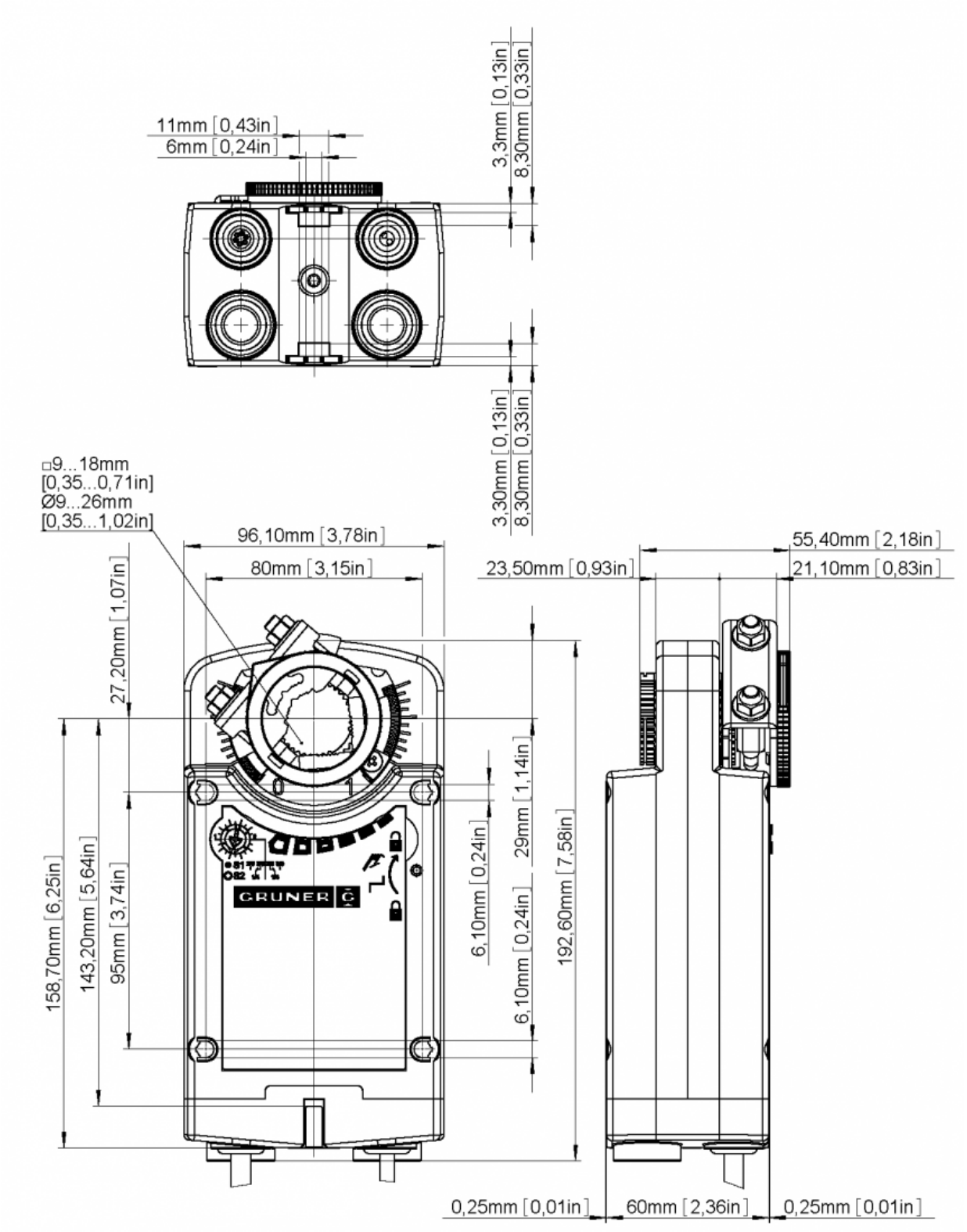
Technical drawing



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GRUNER
Schalten und Bewegen

Technical data sheet

361-230-10-S2

Spring return

Description

Spring-return Actuator for adjusting and regulating dampers and valves in air conditioning and ventilation.

- **Torque Motor** **10 Nm**
- **Torque Spring** **10 Nm**
- **Nominal Voltage** **230 VAC/DC**
- **Control** **2-Point**
- **Auxiliary switch** **2 x freely adjustable**
- **Valve size** **up to approx 2 m²**
- **Damper shaft** **Clamp**
  ◊ 9-18 mm / Ø 9-26 mm

Technical data

Nominal voltage	Nominal voltage	230 VAC (50/60 Hz), 230 VDC
	Nominal voltage range	85...265 VAC/DC
	Power consuption Motor (Motion)	5,5 W
	Power consuption Standby (end position)	1,5 W
	Wire sizing	11,5 VA
	Control	2-Point
	Position feedback	-
	Auxiliary switch	2 x SPDT (Ag)
	Contact load	5 (2,5) A, 250 VAC
	Switching point	0°...95°
	Connection Motor	Cable 1000 mm, 2 x 0,75 mm² (halogen free)
	Connection Auxiliary switch	Cable 1000 mm, 6 x 0,75 mm² (halogen free)
	Connection GUAC	
Functional data	Torque Motor	>10 Nm
	Torque Spring	>10 Nm
	Synchronised speed	±5%
	Direction of rotation	Selected by mounting
	Manual override	Manual operation
	Angle of rotation	0°...max.+95° Can be limited with adjustable mechanical end stop min 35°
	Running time Motor	<75 s / 90°
	Running time Spring	<20 s / 90°
	Sound power level Motor	<45 dB(A)
	Sound power level Spring	<65 dB(A)
	Damper coupling	Clamp ◊ 9...18 mm / Ø 9...26 mm
	Position indication	Mechanical with pointer

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Technical data

Functional data	Service life	>60.000 cycles (0°...+95°...0°)
Safety	Protection class	II (double insulation)
	Degree of protection	IP54
	EMC	CE (2004/108/EG)
	LVD	CE (2006/95/EG)
	Mode of operation	Typ 1.AA B (EN60730-1)
	Rated impulse voltage	4 kV (EN60730-1)
	Control pollution degree	3 (EN60730-1)
	Ambient temperature Normal operation	-30°C...+50°C
	Storage temperature	-30°C...+80°C
	Ambient humidity	5...95% r.F., non- condensating (EN 60730-1)
	Maintenance	Maintenance-free
Dimensions/ Weight	Dimensions	188 x 96 x 60 mm
	Weight	ca. 1.800g

Operating mode / Properties

Operating mode

Through connecting the power supply to BU+BN (1+2), the actuator moves to position 1 while the pre-tensioned spring is wound up the same time. If the power supply is interrupted the actuator is moving back to position 0 by the spring power. The actuator is still maintaining the minimum torque at the damper spindle.

The actuator is overload-proof and requires no end switches. It automatically stops when the end stop is reached.

Direct mounting

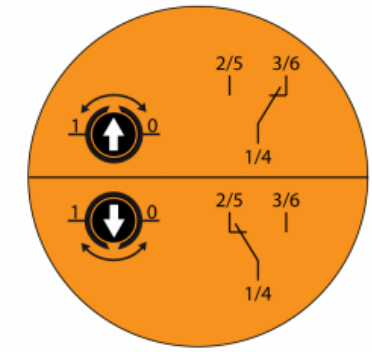
Simple direct mounting on the damper spindle with a universal spindle clamp, supplied with an anti-rotation strap to prevent the actuator from rotating.

Manual operation

The actuator can be operated only manually while the power supply is off. The supplied lever is to open and lock the damper position. The lock stays until the power supply is put on.

Signaling

The two integrated auxiliary switches are freely adjustable in the angle of 0 – 95°. These are activated corresponding to the adjusted angle. The damper position can be checked by the mechanical pointer.



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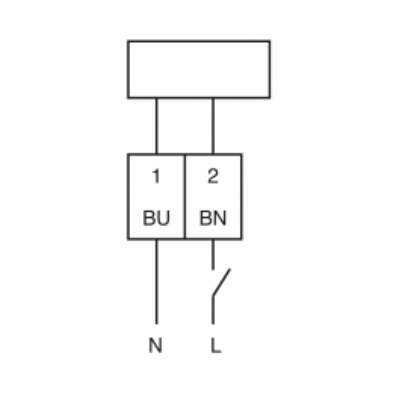
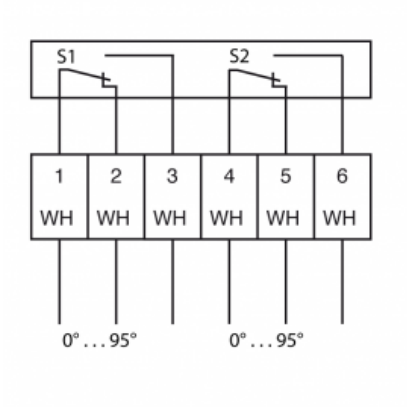
Connection / Safety remarks





Safety remarks

-Attention mains voltage
-The actuator is not allowed to be used outside the specified field of application, especially in airplanes.
-In may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
-The device may only be opened at the manufacturer´s site.
-When calculating the required torque, the specifications supplied by the damper manufacturers (cross- section, design, installation site), and the air flow conditions must be observed.
-The actuator is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

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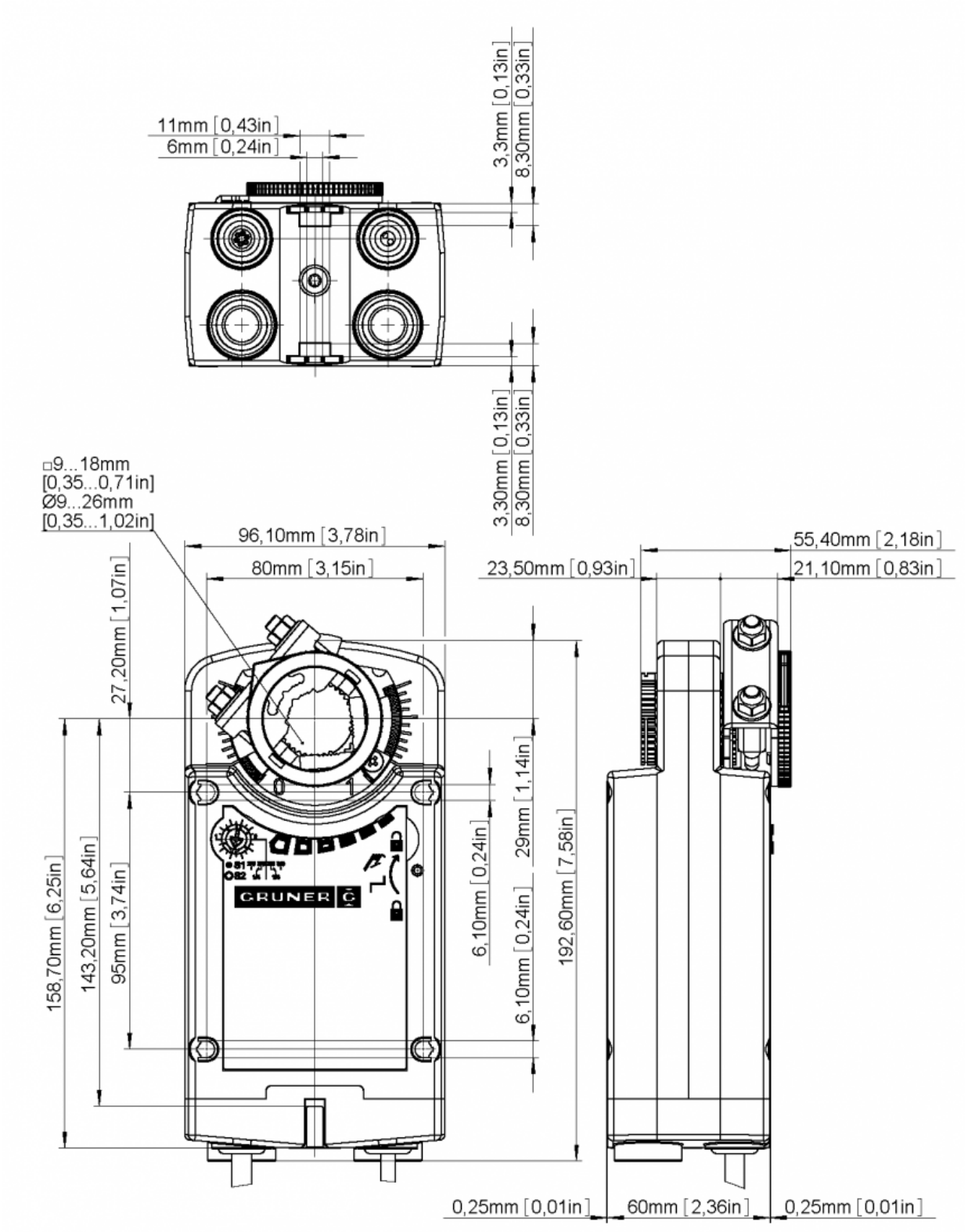
Technical drawing



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GRUNER
Schalten und Bewegen

Technical data sheet

361C-024-10

Continuous control of Spring return

Description

Spring-return Actuator for adjusting and regulating dampers and valves in air conditioning and ventilation.

- **Torque Motor** **10 Nm**
- **Torque Spring** **10 Nm**
- **Nominal Voltage** **24 VAC/DC**
- **Control** **Continuous 0(2)...10 VDC**
- **valve size** **up to approx 2 m²**
- **Damper shaft** **Clamp**
  ◊ 9-18 mm / Ø 9-26 mm

Technical data

Nominal voltage	Nominal voltage	24 VAC (50/60 Hz), 24 VDC
	Nominal voltage range	19...29 VAC/DC
	Power consuption Motor (Motion)	5 W
	Power consuption Standby (end position)	2 W
	Wire sizing	8 VA
	Control	Continuous 0(2)..10 VDC / (0)4...20 mA
	Position feedback	0(2)...10VDC, max. 5 mA
	Auxiliary switch	-
	Contact load	-
	Switching point	-
	Connection Motor	Cable 1000 mm, 4 x 0,75 mm² (halogen free)
	Connection Auxiliary switch	-
	Connection GUAC	
Functional data	Torque Motor	>10 Nm
	Torque Spring	>10 Nm
	Synchronised speed	±5%
	Direction of rotation	Selected by mounting
	Manual override	Manual operation
	Angle of rotation	0°...max.+95° Can be limited with adjustable mechanical end stop min 35° Adaption of operating range to match the mechanical angle of rotation.
	Running time Motor	<150 s / 90°
	Running time Spring	<20 s / 90°
	Sound power level Motor	<35 dB(A)
	Sound power level Spring	<65 dB(A)

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Technical data

Functional data	Damper coupling	Clamp ◊ 9...18 mm / Ø 9...26 mm
	Position indication	Mechanical with pointer
	Service life	>60'000 cycles (0° - 95° - 0°) >1'000'000 partial cycles (max. ±5°)
Safety	Protection class	III (low voltage safety current)
	Degree of protection	IP54
	EMC LVD	CE (2004/108/EG) CE (2006/95/EG)
	Mode of operation	Typ 1.AA B (EN60730-1)
	Rated impulse voltage	0,8 kV (EN60730-1)
	Control pollution degree	3 (EN60730-1)
	Ambient temperature Normal operation	-30°C...+50°C
	Storage temperature	-30°C...+80°C
	Ambient humidity	5...95% r.F., non- condensating (EN 60730-1)
	Maintenance	Maintenance-free
Dimensions/ Weight	Dimensions	188 x 96 x 60 mm
	Weight	ca. 1.800g

Operating mode / Properties

Operating mode

Through connecting the power supply to BU+BN (1+2) and a reference signal Y to BK (3) of 0(2)…10VDC, moves the actuator to its specified position. The actual damper position 0…100% is a feedback signal U for example to share the signal with other actuators. If the power supply is interrupted the actuator is moving to position 0 by spring power. The actuator is still maintaining the minimum torque at the damper spindle

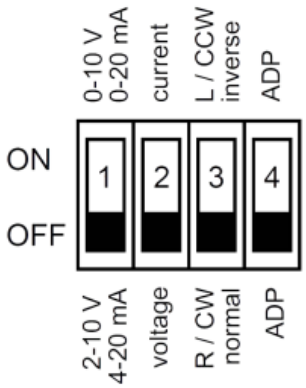
The actuator is overload-proof and requires no end switches. It automatically stops when the end stop is reached.

Direct mounting

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

Manual operation

The actuator can be operated only manually while the power supply is off. The supplied lever is to open and lock the damper position. The lock stays until the power supply is put on.



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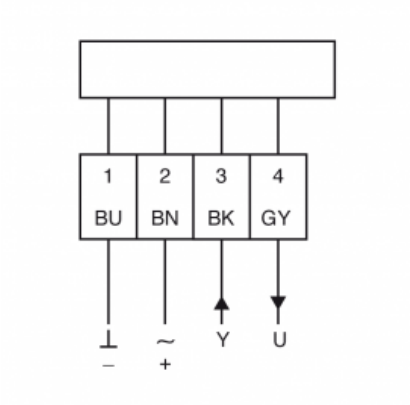
Connection / Safety remarks



Safety remarks

-Connect via safety isolation transformer
-The actuator is not allowed to be used outside the specified field of application, especially in airplanes.
-In may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
-The device may only be opened at the manufacturer´s site.
-When calculating the required torque, the specifications supplied by the damper manufacturers (cross- section, design, installation site), and the air flow conditions must be observed.
-The actuator is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

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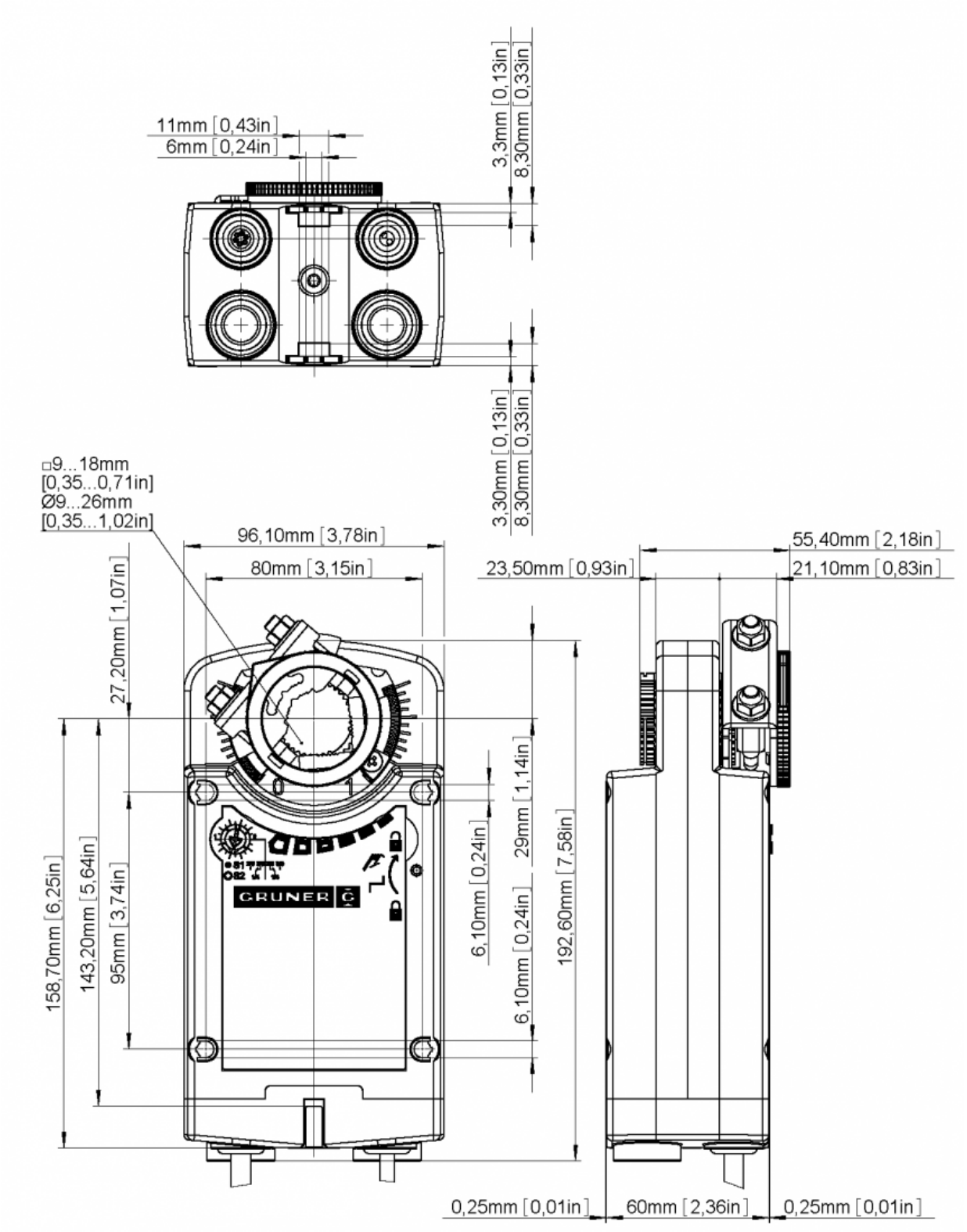
Technical drawing



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