LR24A-SR

Modulating rotary actuator for ball valves
- **Nominal torque 5Nm**
- **Nominal voltage AC/DC 24V**
- **Control Modulating DC (0)2...10V**
- **Position feedback DC 2...10V**

Technical data

Electrical data	Nominal voltage	AC/DC 24V
	Nominal voltage frequency	50/60Hz
	Nominal voltage range	AC 19.2...28.8V / DC 19.2...28.8V
	Power consumption in operation	1.5W
	Power consumption in rest position	0.4W
	Power consumption for wire sizing	3VA
	Connection supply / control	Cable 1m, 4 x 0.75mm²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 5Nm
	Positioning signal Y	DC (0)2...10V
	Positioning signal Y note	Input impedance 100kΩ
	Operating range Y	DC 2...10V
	Position feedback U	DC 2...10V
	Position feedback U note	Max. 1mA
	Position accuracy	±5%
	Manual override	Gear disengagement with push-button, can be locked
	Running time motor	90s / 90°
	Sound power level motor max.	35dB(A)
	Position indication	Mechanically, pluggable
Safety	Protection class IEC/EN	III Safety extra-low voltage
	Protection class UL	UL Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage supply / control	0.8kV
	Control pollution degree	3
	Ambient temperature	-30...50°C
	Non-operating temperature	-40...80°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
Weight	Weight	Approx. 0.55kg

Safety notes

- This device has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The switch for changing the direction of rotation may only be operated by authorised specialists. The direction of rotation must not in particular be reversed in a frost protection circuit.
- The device may only be opened at the manufacturer‘s site. It does not contain any parts that can be replaced or repaired by the user.
- The cables must not be removed from the device.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

UL marked actuators is optional, please contact your local Sales Representative for details.

V8.3 04.2015•Subject to modification

Product features

Mode of operation
The actuator is connected with a standard modulating signal of DC (0)2...10V and travels to the position defined by the positioning signal. Measuring voltage U serves for the electrical display of the valve position 0...100% and as slave control signal for other actuators.

Simple direct mounting
Straightforward direct mounting on the ball valve with only one central screw. The assembly tool is integrated in the plug-in position indication. The mounting position in relation to the ball valve can be selected in 90° steps.

Manual override
Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).

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

Adjustable angle of rotation
Adjustable angle of rotation with mechanical end stops.

Accessories

Electrical accessories

Description	Type
Auxiliary switch, add-on, 1 x SPDT	S1A
Auxiliary switch, add-on, 2 x SPDT	S2A
Feedback potentiometer 140 Ohm, add-on	P140A
Feedback potentiometer 200 Ohm, add-on	P200A
Feedback potentiometer 500 Ohm, add-on	P500A
Feedback potentiometer 1 kOhm, add-on	P1000A
Feedback potentiometer 2.8 kOhm, add-on	P2800A
Feedback potentiometer 5 kOhm, add-on	P5000A
Feedback potentiometer 10 kOhm, add-on	P10000A

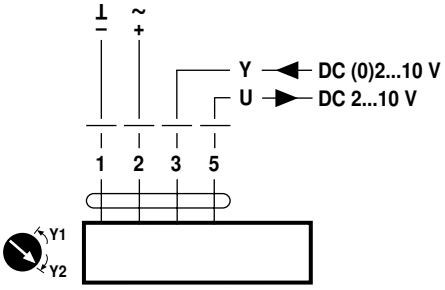
Electrical installation

Notes

- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.
- Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

Wiring diagrams

AC/DC 24V, modulating

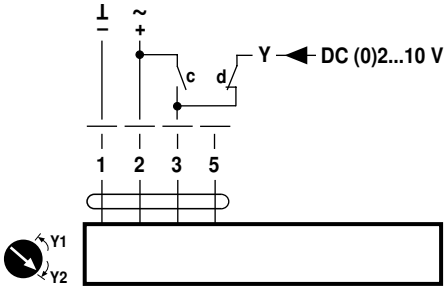


Cable colours:
1 = black
2 = red
3 = white
5 = orange

UL marked actuators is optional, please contact your local Sales Representative for details.

Electrical installation

Override control (frost protection circuit)

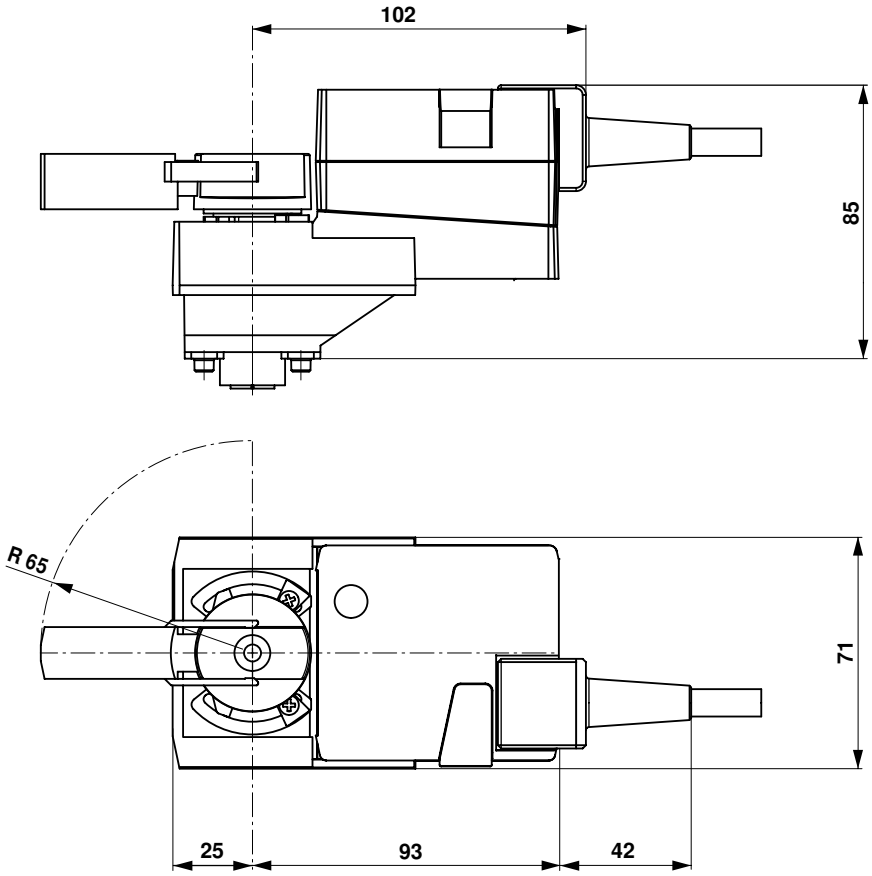


c	d	Y1 / Y2	
⌐	⌐	Y1	A – AB = 100%
⌐	⌐	Y2	A – AB = 0%
⌐	⌐	DC (0)2...10 V	

Cable colours:
1 = black
2 = red
3 = white
5 = orange

Dimensions [mm]

Dimensional drawings



UL marked actuators is optional, please contact your local Sales Representative for details.

V8.3 04.2015•Subject to modification

Rotary actuator for ball valves
- **Nominal torque 5Nm**
- **Nominal voltage AC/DC 24V**
- **Control Open-close, 3-point**

Technical data

Electrical data	Nominal voltage	AC/DC 24V
	Nominal voltage frequency	50/60Hz
	Nominal voltage range	AC 19.2...28.8V / DC 19.2...28.8V
	Power consumption in operation	1.5W
	Power consumption in rest position	0.2W
	Power consumption for wire sizing	2VA
	Connection supply / control	Cable 1m, 3 x 0.75mm²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 5Nm
	Manual override	Gear disengagement with push-button, can be locked
	Running time motor	90s / 90°
	Sound power level motor max.	35 dB(A)
	Position indication	Mechanically, pluggable
Safety	Protection class IEC/EN	III Safety extra-low voltage
	Protection class UL	UL Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage supply / control	0.8kV
	Control pollution degree	3
	Ambient temperature	-30...50°C
	Non-operating temperature	-40...80°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
Weight	Weight	Approx. 0.55kg

Safety notes

- This device has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The switch for changing the direction of rotation may only be operated by authorised specialists. The direction of rotation must not in particular be reversed in a frost protection circuit.
- The device may only be opened at the manufacturer‘s site. It does not contain any parts that can be replaced or repaired by the user.
- The cables must not be removed from the device.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

UL marked actuators is optional, please contact your local Sales Representative for details.

Product features

Simple direct mounting Straightforward direct mounting on the ball valve with only one central screw. The assembly tool is integrated in the plug-in position indication. The mounting position in relation to the ball valve can be selected in 90° steps.

Manual override Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).

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

Adjustable angle of rotation Adjustable angle of rotation with mechanical end stops.

Accessories

	Description	Type
Electrical accessories	Auxiliary switch, add-on, 1 x SPDT	S1A
	Auxiliary switch, add-on, 2 x SPDT	S2A
	Feedback potentiometer 140 Ohm, add-on	P140A
	Feedback potentiometer 200 Ohm, add-on	P200A
	Feedback potentiometer 500 Ohm, add-on	P500A
	Feedback potentiometer 1 kOhm, add-on	P1000A
	Feedback potentiometer 2.8 kOhm, add-on	P2800A
	Feedback potentiometer 5 kOhm, add-on	P5000A
	Feedback potentiometer 10 kOhm, add-on	P10000A

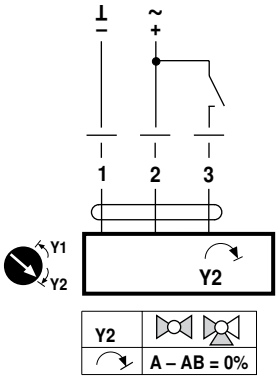
Electrical installation

Notes

- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.
- Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

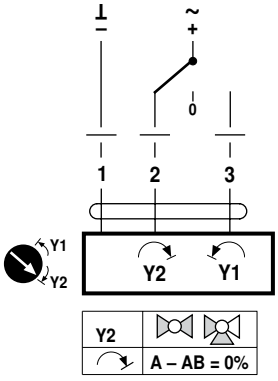
Wiring diagrams

AC/DC 24V, open-close



Cable colours:
1 = black
2 = red
3 = white

AC/DC 24V, 3-point



Cable colours:
1 = black
2 = red
3 = white

UL marked actuators is optional, please contact your local Sales Representative for details.

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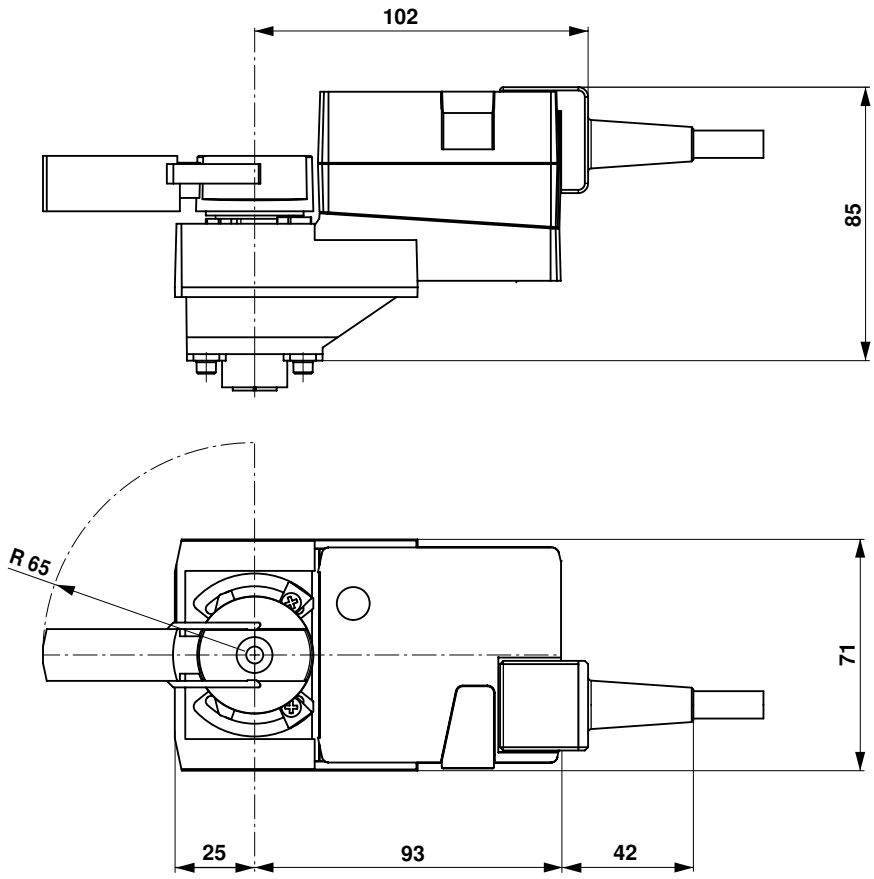
Dimensions [mm]

Dimensional drawings



UL marked actuators is optional, please contact your local Sales Representative for details.

LR24A-S

Rotary actuator for ball valves
- **Nominal torque 5Nm**
- **Nominal voltage AC/DC 24V**
- **Control Open-close, 3-point**
- **With integrated auxiliary switch**

Technical data

Electrical data	Nominal voltage	AC/DC 24V
	Nominal voltage frequency	50/60Hz
	Nominal voltage range	AC 19.2...28.8V / DC 19.2...28.8V
	Power consumption in operation	1.5W
	Power consumption in rest position	0.2W
	Power consumption for wire sizing	2VA
	Auxiliary switch	1 x SPDT, 0...100%
	Switching capacity auxiliary switch	1mA...3 (0.5) A, AC 250 V (II Protective insulated)
	Connection supply / control	Cable 1m, 3 x 0.75mm²
	Connection auxiliary switch	Cable 1m, 3 x 0.75mm²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 5Nm
	Manual override	Gear disengagement with push-button, can be locked
	Running time motor	90s / 90°
	Sound power level motor max.	35dB(A)
	Position indication	Mechanically, pluggable
Safety	Protection class IEC/EN	III Safety extra-low voltage
	Protection class UL	UL Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Low voltage directive	CE according to 2006/95/EC
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage supply / control	0.8kV
	Rated impulse voltage auxiliary switch	2.5kV
	Control pollution degree	3
	Ambient temperature	-30...50°C
	Non-operating temperature	-40...80°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
Weight	Weight	Approx. 0.6kg

Safety notes

- This device has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The switch for changing the direction of rotation may only be operated by authorised specialists. The direction of rotation must not in particular be reversed in a frost protection circuit.
- The device may only be opened at the manufacturer‘s site. It does not contain any parts that can be replaced or repaired by the user.
- The cables must not be removed from the device.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

UL marked actuators is optional, please contact your local Sales Representative for details.

Product features

Simple direct mounting — Straightforward direct mounting on the ball valve with only one central screw. The assembly tool is integrated in the plug-in position indication. The mounting position in relation to the ball valve can be selected in 90° steps.

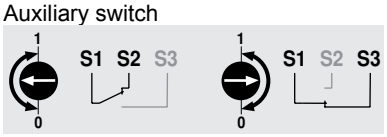
Manual override — Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).

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

Adjustable angle of rotation — Adjustable angle of rotation with mechanical end stops.

Flexible signalization — With adjustable auxiliary switch (0...100%)

Auxiliary switch



Accessories

Electrical accessories

Description	Type
Auxiliary switch, add-on, 1 x SPDT	S1A
Auxiliary switch, add-on, 2 x SPDT	S2A
Feedback potentiometer 140 Ohm, add-on	P140A
Feedback potentiometer 200 Ohm, add-on	P200A
Feedback potentiometer 500 Ohm, add-on	P500A
Feedback potentiometer 1 kOhm, add-on	P1000A
Feedback potentiometer 2.8 kOhm, add-on	P2800A
Feedback potentiometer 5 kOhm, add-on	P5000A
Feedback potentiometer 10 kOhm, add-on	P10000A

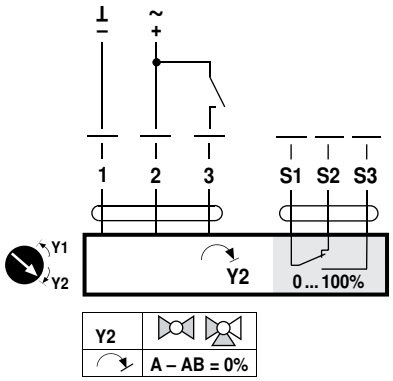
Electrical installation

Notes

- Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.
- Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

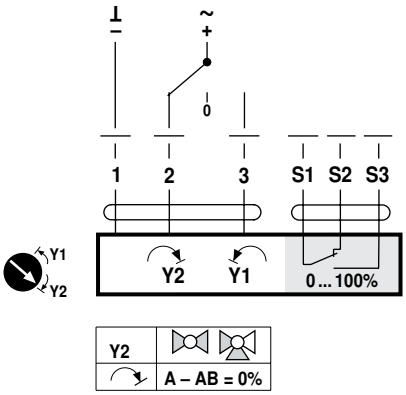
Wiring diagrams

AC/DC 24V, open-close



Cable colours:
1 = black
2 = red
3 = white
S1 = violet
S2 = red
S3 = white

AC/DC 24V, 3-point

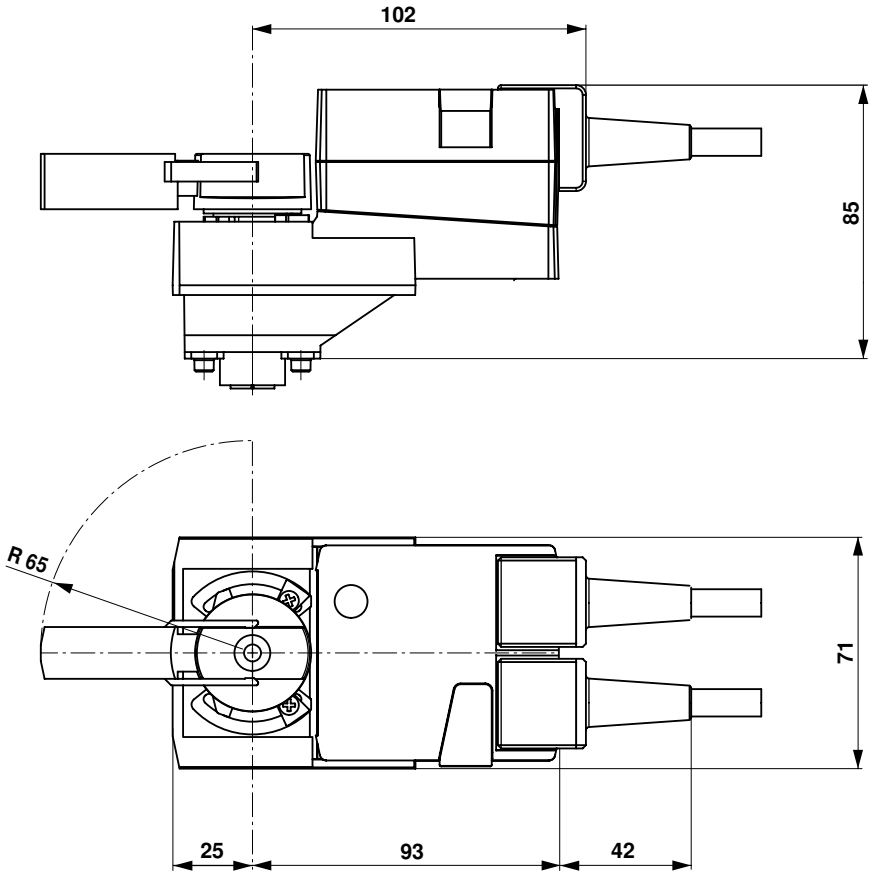


Cable colours:
1 = black
2 = red
3 = white
S1 = violet
S2 = red
S3 = white

UL marked actuators is optional, please contact your local Sales Representative for details.

Dimensions [mm]

Dimensional drawings



UL marked actuators is optional, please contact your local Sales Representative for details.

V8.3 04.2015•Subject to modification

Rotary actuator for ball valves
- **Nominal torque 5Nm**
- **Nominal voltage AC 230V**
- **Control Open-close, 3-point**

Technical data

Electrical data	Nominal voltage	AC 230V
	Nominal voltage frequency	50/60Hz
	Nominal voltage range	AC 85...265V
	Power consumption in operation	2W
	Power consumption in rest position	0.5W
	Power consumption for wire sizing	4VA
	Connection supply / control	Cable 1m, 3 x 0.75mm²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 5Nm
	Manual override	Gear disengagement with push-button, can be locked
	Running time motor	90s / 90°
	Sound power level motor max.	35dB(A)
	Position indication	Mechanically, pluggable
Safety	Protection class IEC/EN	II Protective insulated
	Protection class UL	II Protective insulated
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Low voltage directive	CE according to 2006/95/EC
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage supply / control	4kV
	Control pollution degree	3
	Ambient temperature	-30...50°C
	Non-operating temperature	-40...80°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
Weight	Weight	Approx. 0.55kg

Safety notes

- This device has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Caution: Power supply voltage!
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The switch for changing the direction of rotation may only be operated by authorised specialists. The direction of rotation must not in particular be reversed in a frost protection circuit.
- The device may only be opened at the manufacturer‘s site. It does not contain any parts that can be replaced or repaired by the user.
- The cables must not be removed from the device.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

UL marked actuators is optional, please contact your local Sales Representative for details.

Product features

Simple direct mounting Straightforward direct mounting on the ball valve with only one central screw. The assembly tool is integrated in the plug-in position indication. The mounting position in relation to the ball valve can be selected in 90° steps.

Manual override Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).

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

Adjustable angle of rotation Adjustable angle of rotation with mechanical end stops.

Accessories

	Description	Type
Electrical accessories	Auxiliary switch, add-on, 1 x SPDT	S1A
	Auxiliary switch, add-on, 2 x SPDT	S2A
	Feedback potentiometer 140 Ohm, add-on	P140A
	Feedback potentiometer 200 Ohm, add-on	P200A
	Feedback potentiometer 500 Ohm, add-on	P500A
	Feedback potentiometer 1 kOhm, add-on	P1000A
	Feedback potentiometer 2.8 kOhm, add-on	P2800A
	Feedback potentiometer 5 kOhm, add-on	P5000A
	Feedback potentiometer 10 kOhm, add-on	P10000A

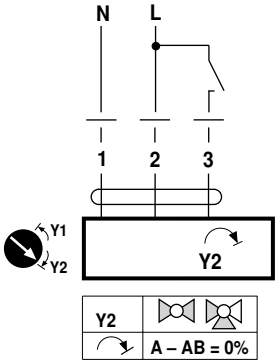
Electrical installation

Notes

- Caution: Power supply voltage!
- Parallel connection of other actuators possible. Observe the performance data.
- Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

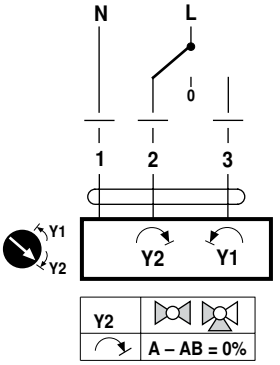
Wiring diagrams

AC 230V, open-close



Cable colours:
1 = blue
2 = brown
3 = white

AC 230V, 3-point



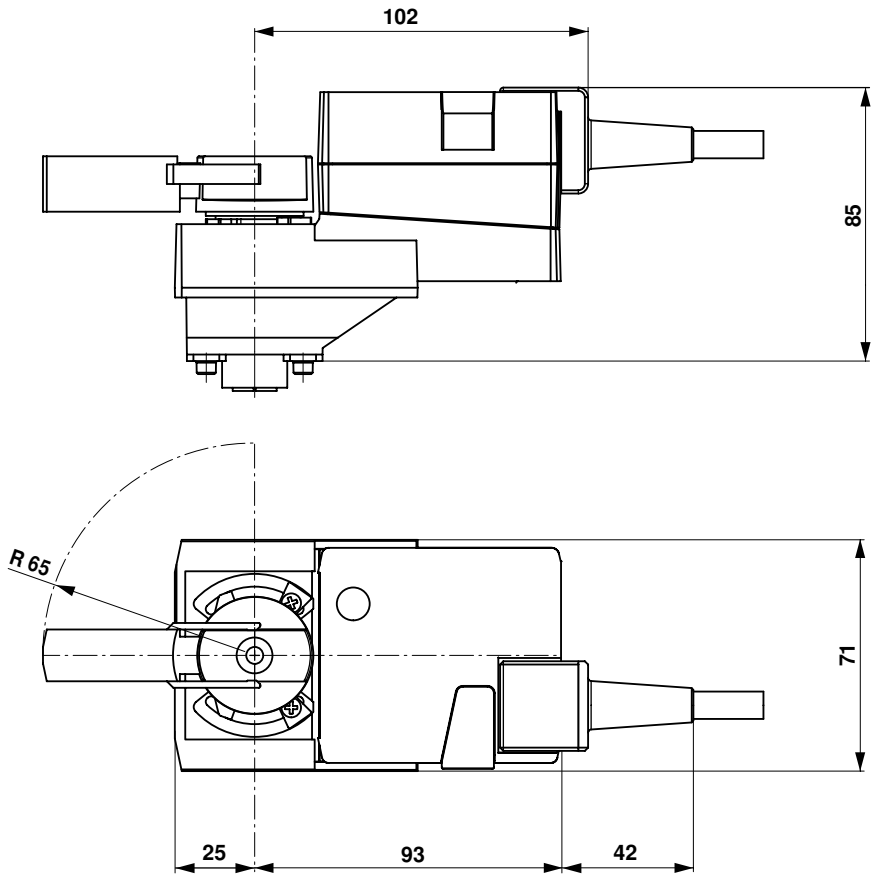
Cable colours:
1 = blue
2 = brown
3 = white

UL marked actuators is optional, please contact your local Sales Representative for details.

V8.3 04.2015•Subject to modification

Dimensions [mm]

Dimensional drawings



UL marked actuators is optional, please contact your local Sales Representative for details.

LR230A-S

Rotary actuator for ball valves
- **Nominal torque 5Nm**
- **Nominal voltage AC 230V**
- **Control Open-close, 3-point**
- **With integrated auxiliary switch**

Technical data

Electrical data	Nominal voltage	AC 230V
	Nominal voltage frequency	50/60Hz
	Nominal voltage range	AC 85...265V
	Power consumption in operation	2W
	Power consumption in rest position	0.5W
	Power consumption for wire sizing	4VA
	Auxiliary switch	1 x SPDT, 0...100%
	Switching capacity auxiliary switch	1mA...3 (0.5) A, AC 250V (II Protective insulated)
	Connection supply / control	Cable 1m, 3 x 0.75mm²
	Connection auxiliary switch	Cable 1m, 3 x 0.75mm²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	Min. 5Nm
	Manual override	Gear disengagement with push-button, can be locked
	Running time motor	90s / 90°
	Sound power level motor max.	35dB(A)
	Position indication	Mechanically, pluggable
Safety	Protection class IEC/EN	II Protective insulated
	Protection class UL	II Protective insulated
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Low voltage directive	CE according to 2006/95/EC
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage supply / control	4kV
	Rated impulse voltage auxiliary switch	2.5kV
	Control pollution degree	3
	Ambient temperature	-30...50°C
	Non-operating temperature	-40...80°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
Weight	Weight	Approx. 0.6kg

Safety notes

- This device has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Caution: Power supply voltage!
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The switch for changing the direction of rotation may only be operated by authorised specialists. The direction of rotation must not in particular be reversed in a frost protection circuit.
- The device may only be opened at the manufacturer‘s site. It does not contain any parts that can be replaced or repaired by the user.
- The cables must not be removed from the device.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

UL marked actuators is optional, please contact your local Sales Representative for details.

Product features

Simple direct mounting Straightforward direct mounting on the ball valve with only one central screw. The assembly tool is integrated in the plug-in position indication. The mounting position in relation to the ball valve can be selected in 90° steps.

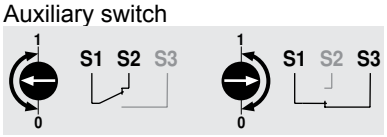
Manual override Manual override with push-button possible (the gear is disengaged for as long as the button is pressed or remains locked).

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

Adjustable angle of rotation Adjustable angle of rotation with mechanical end stops.

Flexible signalization With adjustable auxiliary switch (0...100%)

Auxiliary switch



Accessories

	Description	Type
Electrical accessories	Auxiliary switch, add-on, 1 x SPDT	S1A
	Auxiliary switch, add-on, 2 x SPDT	S2A
	Feedback potentiometer 140 Ohm, add-on	P140A
	Feedback potentiometer 200 Ohm, add-on	P200A
	Feedback potentiometer 500 Ohm, add-on	P500A
	Feedback potentiometer 1 kOhm, add-on	P1000A
	Feedback potentiometer 2.8 kOhm, add-on	P2800A
	Feedback potentiometer 5 kOhm, add-on	P5000A
	Feedback potentiometer 10 kOhm, add-on	P10000A

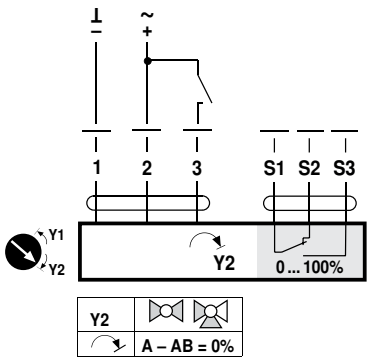
Electrical installation

Notes

- Caution: Power supply voltage!
- Parallel connection of other actuators possible. Observe the performance data.
- Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

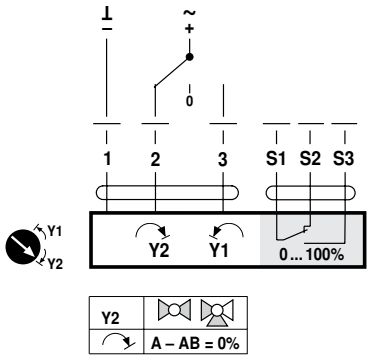
Wiring diagrams

AC 230V, open-close



Cable colours:
1 = blue
2 = brown
3 = white
S1 = violet
S2 = red
S3 = white

AC 230V, 3-point

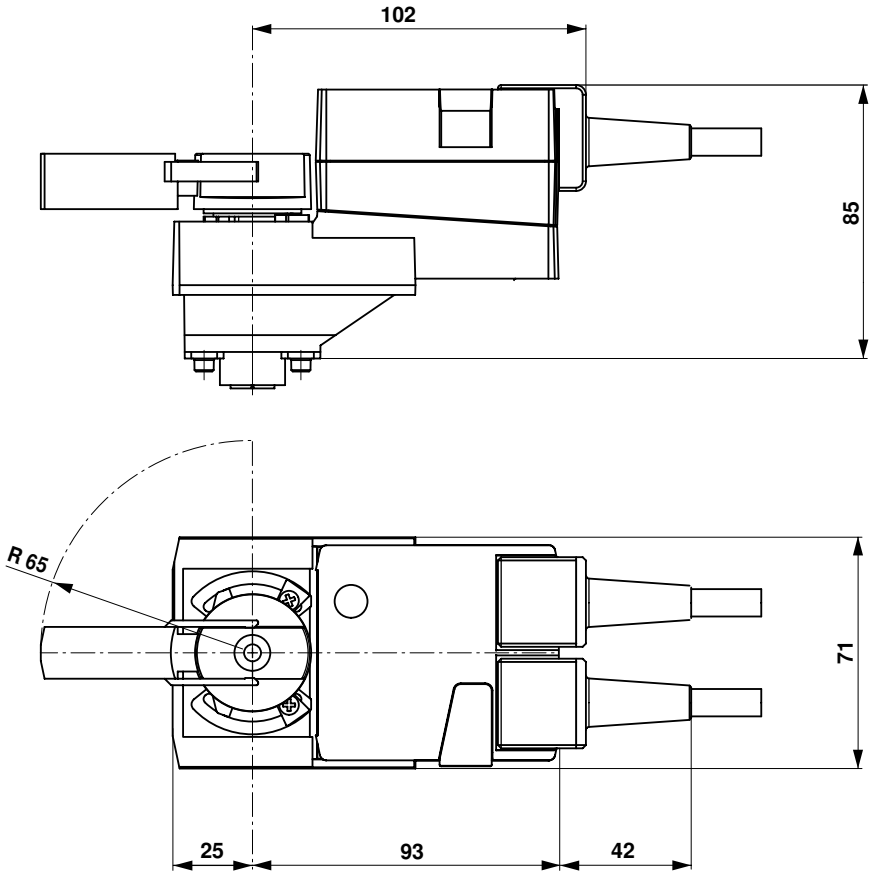


Cable colours:
1 = blue
2 = brown
3 = white
S1 = violet
S2 = red
S3 = white

UL marked actuators is optional, please contact your local Sales Representative for details.

Dimensions [mm]

Dimensional drawings



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V8.3 04.2015•Subject to modification