Technical data sheet

HT24-SR-T

Rotary actuator in connection with a mounting kit for the motorisation of the most common mixing valves in HVAC systems

- Torque motor 10 Nm
- Nominal voltage AC/DC 24 V
- Control modulating 2...10 V
- Position feedback 2...10 V
- Running time motor 140 s



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Nominal voltage range AC 19.228.8 V / DC 19.228.8 V Power consumption in operation 1.5 W Power consumption for wire sizing 2.5 VA Connection supply / control Terminals 4 mm² (cable ø68 mm, 4-wire) 4 mm² Parallel operation Yes (note the performance data) Functional data Torque motor 10 Nm Operating range Y 210 V Operating range Y 010 V Position feedback U 210 V Position accuracy ±5% Direction of motion motor clockwise rotation Manual override temporary and permanent gear train disengagement with rotary knob on the housing Angle of rotation 90° Running time motor 140 s / 90° Duty cycle value 75% (= active time 140 s / operating time 187 s) Sound power level, motor 37 dB(A) Position indication Reversible scale plate Safety data Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control 0.8 kV Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature 050°C [32122°F] Storage temperature 3.080°C [-22176°F] Servicing maintenance-free Weight Weight 0.40 kg	Electrical data	Nominal voltage	AC/DC 24 V
Power consumption in operation 1.5 W Power consumption for wire sizing 2.5 VA Connection supply / control Terminals 4 mm² (cable ø68 mm, 4-wire) 4 mm² Parallel operation Yes (note the performance data) Functional data Torque motor 10 Nm Operating range Y 210 V Operating range Y 100 Operating range selectable 010 V or 210 V Position feedback U 210 V Position accuracy 45% Direction of motion motor clockwise rotation temporary and permanent gear train disengagement with rotary knob on the housing Angle of rotation 90° Running time motor 140 s / 90° Duty cycle value 75% (= active time 140 s / operating time 187 s) Sound power level, motor 37 dB(A) Position indication Reversible scale plate Safety data Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control 0.8 kV Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature 050°C [32122°F] Storage temperature 3-080°C [-22176°F] Servicing maintenance-free Weight Weight 0.40 kg		Nominal voltage frequency	50/60 Hz
Power consumption for wire sizing Connection supply / control Connection supply / control Terminals 4 mm² (cable ø68 mm, 4-wire) 4 mm² Parallel operation Yes (note the performance data) Functional data Torque motor Operating range Y Operating range Y Operating range Y oberating range selectable 010 V or 210 V Position feedback U Position accuracy ±5% Direction of motion motor Idockwise rotation Manual override Emporary and permanent gear train disengagement with rotary knob on the housing Angle of rotation Running time motor Duty cycle value Sound power level, motor Position indication Reversible scale plate Find Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control 0.8 kV Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature 5 on80°C [32122°F] Storage temperature 3 on80°C [22176°F] Servicing maintenance-free Weight Housing colours		Nominal voltage range	AC 19.228.8 V / DC 19.228.8 V
Connection supply / control Parallel operation Parallel operation Parallel operation Permittional data Torque motor Operating range Y 210 V Operating range Y 210 V Position feedback U Position feedback U Position of motion motor Manual override Angle of rotation Running time motor Duty cycle value Sound power level, motor Position indication Position indication Reversible scale plate Protection class IEC/EN Degree of protection IEC/EN EMC CE according to 2014/30/EU Type of action Rated impulse voltage supply / control Rated impulse voltage supply / control Rated impulse voltage supply / control Ambient temperature Storage temperature Servicing Weight Housing colours Functionel sas IEC (Passes) Function class IEC (Passes) Function degree Function de		Power consumption in operation	1.5 W
Functional data Functional data Torque motor Operating range Y Operating range selectable 010 V or 210 V Position feedback U Position of motion motor Idockwise rotation Manual override Manual override Manual override Angle of rotation Angle of rotation Outy cycle value Obusting Angle of rotation Type of action class IEC/EN Degree of protection IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control Rated impulse voltage supply / control Ambient temperature Storage temperature Storage temperature Servicing Weight Housing colours Housing colours		Power consumption for wire sizing	2.5 VA
Functional data Torque motor Operating range Y Operating range Y note Position feedback U Position accuracy Direction of motion motor Manual override Angle of rotation Running time motor Duty cycle value Sound power level, motor Position indication Safety data Protection class IEC/EN Degree of protection IEC/EN EMC Type of action Rated impulse voltage supply / control Pollution degree Ambient temperature Sorvicing Max. 95% RH, non-condensing Ambient temperature Servicing Meight Weight Housing colours Housing colours 10 Nm Operating value 210 V Operating range selectable 010 V or 210 V Poperating range Selectable 010 V or 210 V Poperating range Y 210 V Operating range selectable 010 V or 210 V Emby colouring estable o10 V or 210 V Emporating range Selectable 010 V Emporation degree 1145% Figure 145% Emporating range selectable 010 V Emporation degree 1145% Figure 145% Emporation 140 s / 90° Figure 140 s / 90°		Connection supply / control	
Operating range Y Operating range Y note Operating range y note Operating range selectable 010 V Position feedback U Position of motion motor Clockwise rotation Manual override Manual override Manual override Angle of rotation Running time motor Duty cycle value Sound power level, motor Position indication Safety data Protection class IEC/EN Degree of protection IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN Type of action Rated impulse voltage supply / control Rated impulse voltage supply / control Ambient temperature O50°C [32122°F] Storage temperature O60 kg Weight Housing colours Weight Housing colours		Parallel operation	Yes (note the performance data)
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Position feedback U 210 V Position accuracy ±5% Direction of motion motor clockwise rotation Manual override temporary and permanent gear train disengagement with rotary knob on the housing Angle of rotation 90° Running time motor 140 s / 90° Duty cycle value 75% (= active time 140 s / operating time 187 s) Sound power level, motor 37 dB(A) Position indication Reversible scale plate Safety data Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control 0.8 kV Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature 050°C [32122°F] Storage temperature -3080°C [-22176°F] Servicing maintenance-free Weight Weight 0.40 kg Housing colours		Operating range Y	210 V
Position accuracy Direction of motion motor Clockwise rotation Manual override Emporary and permanent gear train disengagement with rotary knob on the housing Angle of rotation Running time motor Duty cycle value 75% (= active time 140 s / operating time 187 s) Sound power level, motor Position indication Reversible scale plate Safety data Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control Rated impulse voltage supply / control O.8 kV Pollution degree 3 Ambient humidity Amx. 95% RH, non-condensing Ambient temperature O50°C [32122°F] Storage temperature -3080°C [-22176°F] Servicing maintenance-free Weight Weight Housing colours		Operating range Y note	Operating range selectable 010 V or 210 V
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Angle of rotation 90° Running time motor 140 s / 90° Duty cycle value 75% (= active time 140 s / operating time 187 s) Sound power level, motor 37 dB(A) Position indication Reversible scale plate Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control 0.8 kV Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature 050°C [32122°F] Storage temperature -3080°C [-22176°F] Servicing maintenance-free Weight Weight 0.40 kg Housing colours Housing cover orange		Direction of motion motor	clockwise rotation
Running time motor Duty cycle value 75% (= active time 140 s / operating time 187 s) Sound power level, motor 75% (= active time 140 s / operating time 187 s) Sound power level, motor 37 dB(A) Position indication Reversible scale plate Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control Rated impulse voltage supply / control Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature 050°C [32122°F] Storage temperature 3080°C [-22176°F] Servicing maintenance-free Weight Weight Housing cover orange		Manual override	disengagement with rotary knob on the
Duty cycle value Sound power level, motor Position indication Protection class IEC/EN Degree of protection IEC/EN Type of action Rated impulse voltage supply / control Rated impulse voltage supply / control Pollution degree Ambient humidity Ambient temperature Storage temperature Servicing Weight Weight Duty cycle value 75% (= active time 140 s / operating time 187 s) 75 (E active time 187 s) 75 (E ac		Angle of rotation	90°
Sound power level, motor Position indication Reversible scale plate Protection class IEC/EN Degree of protection IEC/EN EMC CE according to 2014/30/EU Type of action Rated impulse voltage supply / control Pollution degree Ambient humidity Ambient temperature Storage temperature Servicing Meight Weight Housing colours Are versible scale plate Reversible scale plate III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 CE according to 2014/30/EU Type 1 New York Amount Canada And		Running time motor	140 s / 90°
Position indication Reversible scale plate Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) Degree of protection IEC/EN IP40 EMC CE according to 2014/30/EU Type of action Type 1 Rated impulse voltage supply / control 0.8 kV Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature 050°C [32122°F] Storage temperature -3080°C [-22176°F] Servicing maintenance-free Weight Weight 0.40 kg Housing colours Housing cover orange		Duty cycle value	75% (= active time 140 s / operating time 187 s)
Safety data Protection class IEC/EN Degree of protection IEC/EN EMC Type of action Rated impulse voltage supply / control Pollution degree Ambient humidity Ambient temperature Storage temperature Servicing Weight Weight Protection class IEC/EN III, Safety Extra-Low Voltage (SELV) IP40 CE according to 2014/30/EU Type 1 0.8 kV Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature -3080°C [32122°F] Storage temperature -3080°C [-22176°F] Servicing Meight Ueight Housing colours Housing cover Orange		Sound power level, motor	37 dB(A)
Degree of protection IEC/EN EMC CE according to 2014/30/EU Type of action Rated impulse voltage supply / control Pollution degree 3 Ambient humidity Ambient temperature Storage temperature Servicing Weight Weight Max. 95% RH, non-condensing -3080°C [32122°F] Servicing maintenance-free Weight Weight Housing colours Housing cover orange		Position indication	Reversible scale plate
EMC Type of action Type 1 Rated impulse voltage supply / control Pollution degree Ambient humidity Ambient temperature Storage temperature Veight Weight Weight Housing colours EMC CE according to 2014/30/EU Type 1 0.8 kV POllution degree 3 Amsw 95% RH, non-condensing O50°C [32122°F] Storage temperature -3080°C [-22176°F] Servicing maintenance-free	Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
Type of action Rated impulse voltage supply / control Pollution degree Ambient humidity Ambient temperature Storage temperature Servicing Weight Weight Housing colours Type 1 0.8 kV 0.8 kV Max. 95% RH, non-condensing 050°C [32122°F] Storage temperature -3080°C [-22176°F] maintenance-free 0.40 kg		Degree of protection IEC/EN	IP40
Rated impulse voltage supply / control Pollution degree Ambient humidity Ambient temperature Storage temperature Servicing Weight Weight Max. 95% RH, non-condensing 050°C [32122°F] Storage temperature -3080°C [-22176°F] maintenance-free Weight Ueight Meight O.40 kg Housing colours		EMC	CE according to 2014/30/EU
Pollution degree 3 Ambient humidity Max. 95% RH, non-condensing Ambient temperature 050°C [32122°F] Storage temperature -3080°C [-22176°F] Servicing maintenance-free Weight Weight 0.40 kg Housing colours Housing cover orange		Type of action	Type 1
Ambient humidity Ambient temperature Storage temperature Servicing Weight Weight Max. 95% RH, non-condensing 050°C [32122°F] Storage temperature -3080°C [-22176°F] maintenance-free 0.40 kg Housing colours Housing cover orange		Rated impulse voltage supply / control	0.8 kV
Ambient temperature 050°C [32122°F] Storage temperature -3080°C [-22176°F] Servicing maintenance-free Weight Weight 0.40 kg Housing colours Housing cover orange		Pollution degree	3
Storage temperature Storage temperature Servicing Meight Weight Weight Mousing colours Housing colours Storage temperature -3080°C [-22176°F] maintenance-free 0.40 kg orange		Ambient humidity	Max. 95% RH, non-condensing
Servicing maintenance-free Weight Weight 0.40 kg Housing colours Housing cover orange		Ambient temperature	050°C [32122°F]
Weight Weight 0.40 kg Housing colours Housing cover orange		Storage temperature	-3080°C [-22176°F]
Housing colours Housing cover orange		Servicing	maintenance-free
	Weight	Weight	0.40 kg
Housing base orange	Housing colours	Housing cover	orange
		Housing base	orange



Safety notes



- This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- The actuator is to be protected against moisture. It is not suitable for outdoor applications.
- To calculate the torque required, the specifications supplied by the mixing valve manufacturer must be observed.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The correct functioning of the strain relief for the cable in the actuator housing is to be checked.
- The installer must check for correct principle of operation after installation.
- The switch for changing the direction of rotation and operating range may only be adjusted by authorised specialists. The direction of rotation may not be changed when frost protection control is applied.
- The device does not contain any parts that can be replaced or repaired by the user.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.
- Caution: Low voltage!

Product features

Mode of operation

The actuator is connected with a standard control signal of 0...10 V and drives to the position defined by the control signal.

Simple direct mounting

Simple direct mounting with only one screw. The stud bolt included in delivery serves as an antirotation device. The mounting position can be freely selected in steps of 90°.

Manual override

Manual override with lever possible. Temporary gear train disengagement by pushing the rotary knob. Permanent disengagement by pushing and simultaneous rotating the rotary knob clockwise 90°.

High functional reliability

The actuator is overload protected and automatically stops when the end stop is reached.

The actuator switches off for seven seconds in the case of blocking, then attempts to restart. If the blocked condition persists, the actuator attempts to restart once every two minutes a total of 15 times and subsequently only once every two hours.

Accessories

	Mechanical	accessories
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Description	Туре
Mounting kit for LK mixing valve	MS-NRA
Mounting kit for Barberi mixing valves	MS-NRB
Mounting kit for Honeywell/Centra DRMA mixing valves	MS-NRC
Mounting kit for Honeywell/Centra DRU mixing valves	MS-NRC1
Mounting kit for mixing valves with 12 mm round shaft	MS-NRE
Mounting kit for ESBE mixing valves VRG/VRB/VRH	MS-NRE6
Mounting kit for Hora mixing valves	MS-NRH
Mounting kit for Siemens/Landis&Stäfa mixing valves VCI/VBG/VBF	MS-NRL
Mounting kit for Lazzari mixing valves	MS-NRLA
Mounting kit for Lovato mixing valves	MS-NRLO
Mounting kit for Satchwell MB mixing valves	MS-NRS
Mounting kit for Satchwell MBF mixing valves	MS-NRSF

Electrical installation

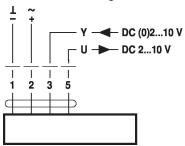


Supply from isolating transformer.

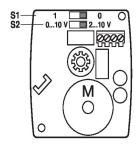


Wiring diagrams

AC/DC 24 V, modulating



Operating controls and indicators



0 *	7 50	Y = 0%	
1	14	Y = 0%	
S2			
2 10 V *	10V A 2 2 2 0 2	10V A	
0 10 V	0 0 10V		

Dimensions

