Actuator for ball valve

AVS

Description

The AVS series provides on-off and proportional control in HVAC applications. The compact design of this actuator makes it suitable for installation in confined spaces, such as fan coil, chilled ceiling, manifolds, etc.
The AVS series actuator is designed for field mounting onto VS terminal unit valves.
Due to the innovative concept the AVS can be installed over most of the terminal unit valve in the market.

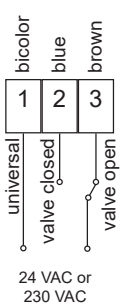
Technical specifications

Power supply	24 VAC or 230 VAC ±10%, 50 Hz
Power consumption	2 W or 3 W proportional version
Signal input	0 (2)...10 VDC / 0 (4)... 20 mA selectable by jumper
Feedback	0 (2)...10 VDC
Torque	See schedule
Action	on-off and proportional
Max stroke	90°
Electrical connection	50 cm cable length
Materials	PC cover, PA66 housing
Maintenance	Free
Protection degree	IP54
Protection class	I
Working range RH	5...95% no condense
Working range °C	-10...+50°C
Storage temperature	-40...+50°C
Fluid temperature	+5...95°C
Standards	CE-conformity, RoHS

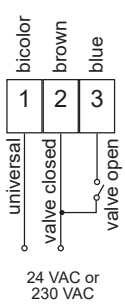
Models	Power supply	Torque	Action	Wiring	Running time
AVS2A2	24 VAC	2 Nm	ON-OFF	2-wire	40-50 sec.
AVS2A3	24 VAC	2 Nm	ON-OFF	3-wire	40-50 sec.
AVS2B2	230 VAC	2 Nm	ON-OFF	2-wire	40-50 sec.
AVS2B3	230 VAC	2 Nm	ON-OFF	3-wire	40-50 sec.
AVS3AM	24 VAC	3,5 Nm	proportional		40-50 sec.

Electrical wiring

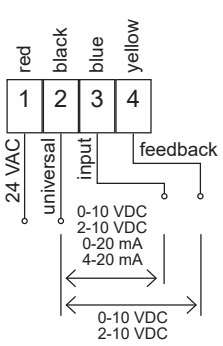
AVS2A2
AVS2B2



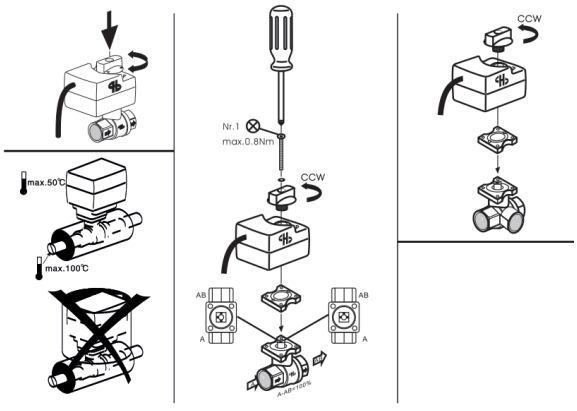
AVS2A3
AVS2B3



AVS3AM



Installation instructions



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Settings of proportional version

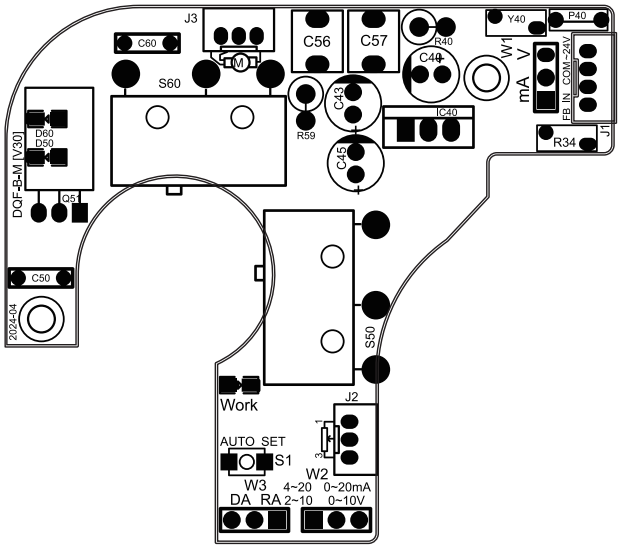
1. Function of each short-circuit socket: W1: mA /VDC. W2 to select the signal type of the input signal of socket J1 (COM VDC/mA). W2: 0-10 VDC (0-20 mA) 2 -10 VDC (4-20 mA). W1 to select the signal type of input signal J1. W3: DA (direct) RA (reverse). Select direct way: when the input signal of J1 increases, the valve opens gradually; when the signal decreases, the valve closes gradually. Select the reverse way: when the input signal of J1 increases, the valve closes gradually and when the signal decreases, the valve opens gradually.

2. Function of each J1: COM 24 VDC: power(24VAC) input terminal. COM VDC /mA: input signal, 0-10 VDC (0-20 mA) or 2-10 VDC (4-20 mA) COM FB: feedback signal output terminal, the value is 0-10 VDC or 2-10 VDC, which is equal to the input signal when the valve does not work. J2: 3 cores. Connected potentiometer gives the valve state. Phase 1, 2 and 3 of potentiometer and phase 1, 2 and 3 of J2 are connected respectively. J3: 3 cores. Connect to 24 VDC motor.

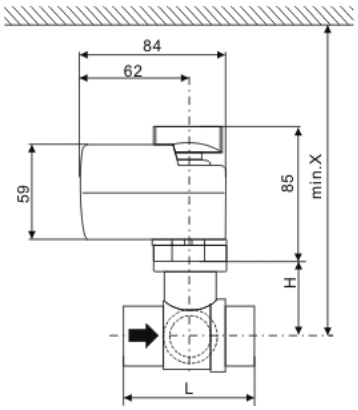
3. „Work“ indicator status: Normai working status: slow flashing (on in 1 second and off in 1 second). Adaptive working state: fast flashing (on in 0.25 second and off in 0.25 second). Adaptive failure status: lamp flashes twice quickly and is off for a long time (on/off twice in 0.25 second, off at 1.25 seconds).

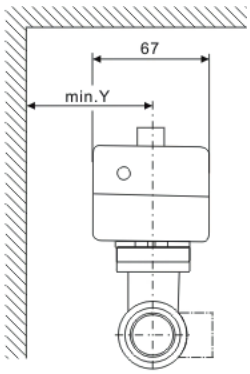
4. The motor rotation direction indicator: When D50 lamp is on, the valve turns to close. When the valve turns to the end, the microswitch S50 works and the lamp turns off automatically after the valve stops working in 25 seconds. When D60 lamp is on, the valve turns to be open. When the valve turns to the end, the microswitch S60 works and the lamp turns off automatically after the valve stops working in 25 seconds.

5. Process of „adaptive“ stroke: Adjust the position of the potentiometer to set the valve stroke in the middle of the potentiometer. Press and hold the „adaptive“ key for 3 seconds to enter the working status. The „work“ lamp flashes (on in 0.25 second and off in 0.25 second). The valve first moves in the closing direction until reaching the end. When the valve does not move for 25 seconds, it moves to the opening direction until reaching the end. If the valve does not move for 25 seconds, the adaptation process ends. If the adaptation is successful (the adaptive data replaces the previous data), it returns to the normal working state. If the adaptation fails (the adaptive data does not replace the previous data), it comes to the adaptation failure state. The „work“ lamp flashes twice and is off for a long time (on/off twice in 0.25 second, off at 1.25 seconds). User can press the „adaptive“ key for 3 seconds to enter the adaptive working state or turn off and then turn on to enter the normal working state.



AVS2





Dimensions (mm)

Valve	mm	in	L	H	X	Y
VS215	15	1/2	63	30	190	75
VS220	20	3/4	73	35	190	75
VS225	25	1	94	38	193	75
VS315	15	1/2	63	32	190	75
VS320	20	3/4	66	35	190	75
VS325	25	1	94	38	193	75

AVS3