ELECTRIC ROTARY GEAR MOTOR

Series AG8....

The electric actuator belonging to AG8 series is designed to operate gas valves and air dampers in ventilation and air conditioning systems. The compact design and universal adapter fitted with limitation of rotation angle make this actuator highly versatile. The AG8 actuators comply with the EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.

TECHNICAL FEATURES

Nominal and maintaining torque	:	8 Nm	Supply voltage	:	230Vac or 24Vac / Vdc ± 20% / Vdc ± 10%
Running time OPEN	:	30 seconds	Frequency	:	50 – 60 Hz
Running time CLOSE	:	30 seconds	Power consumption	:	2,5 W running
Rotation angle	:	standard 90°			0.5 - 0.3 W at end position
Rotation limit	:	5°…85° in 5° steps	Nominal load	:	3.6 VA/0.5 A @ 2 ms or
Life time	:	60.000 rotations			6.0 VA/ 3.6 A @ 2 ms
Noise level	:	45 dB [A]	Control signal	:	ON/OFF, floating or
Ambient temperature	:	-20 ÷+50°C /IEC 721-3-3			0 ÷ 10 Vdc / Ri 250 kΩ or
Enclosure	:	IP54 acc. to IEC 529			4 ÷ 20 mA / Ri 388 Ω
Cable gland	:	M16 x 1,5	Aux. switches rating	:	3 (1.5) A, 230Vac

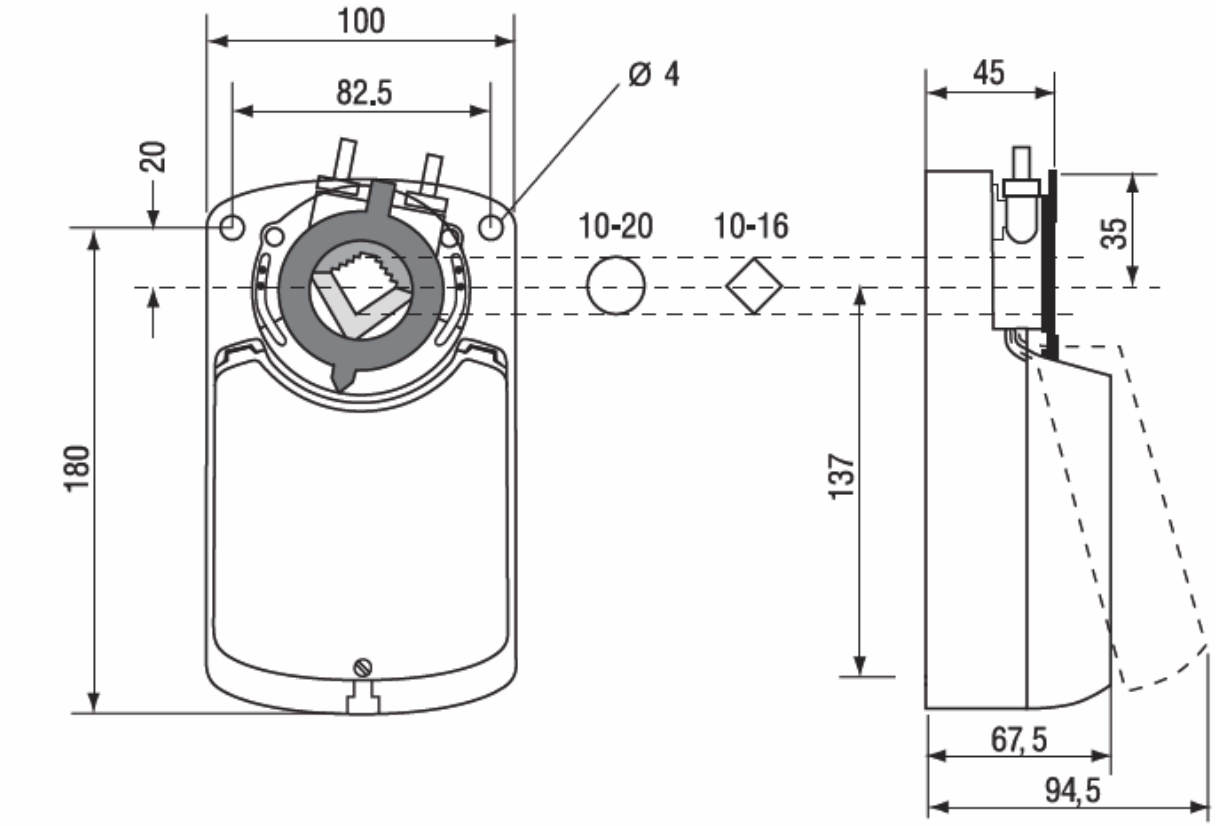
FEATURES

- ON/OFF and floating control or proportional
- Load-independent running time
- 1000 ohm potentiometer [only on electric version]
- Plug-in terminal block connection
- Simple direct-mount with universal adapter
  - on 10...20 mm Ø round axis
  - 10...16 mm square shaft
  - 48 mm minimum damper/valve shaft length
- Direction of rotation selectable
- Limitation of rotation angle
- Manual release button
- Automatic shut-off at end position (overload switch)

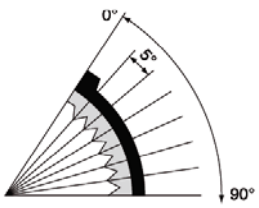
MODELS

	Electric motor AG8C2130-S	Electronic motor AG8A2002-SE2	Electronic motor AG8C2002-SE2
Supply voltage	230Vac / 50-60 Hz	24Vac/Vdc ± 20% / Vdc ± 10% / 50-60 Hz	230Vac / 50-60 Hz
Power consumption	2.5 W running	2.5 W running	5.5 W running
	0.5 W at end position	0.3 W at end position	0.6 W at end position
Wire sizing	3.6 VA / 0.5 A @ 2 ms	6,0 VA / 3,6 A @ 2 ms	3.6 VA / 0.5 A @ 2 ms
Potentiometer	1000 ohm, 0.5 W ± 10%	not applicable	not applicable
Control signal	ON/OFF or floating	4 ÷ 20 mA / Ri 388 Ω or 0 ÷ 10 Vdc / Ri 250 kΩ	4 ÷ 20 mA / Ri 388 Ω or 0 ÷ 10 Vdc / Ri 250 kΩ
Feedback signal	not applicable	0 ÷ 10 Vdc	0 ÷ 10 Vdc
Weight	1,20 kg	1,10 kg	1,20 kg
Rating of auxiliary switches	not applicable	3(1.5) A, 230Vac	3(1.5) A, 230Vac

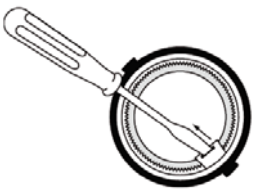
DIMENSION



Limitation of rotation angle



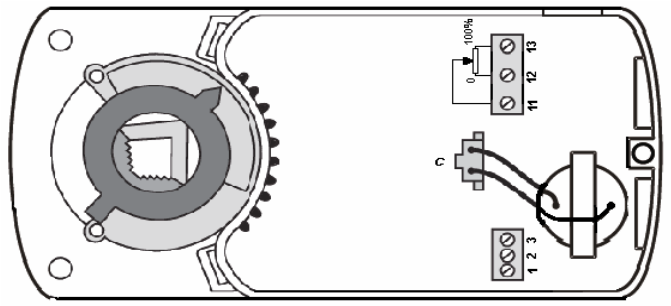
The limitation of rotation angle can be set in 5° steps by moving the adapter.



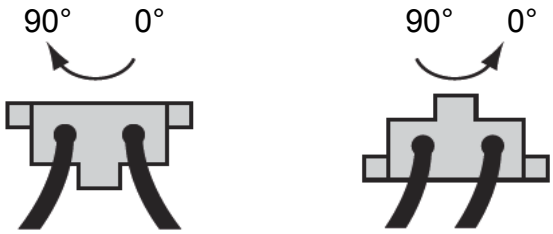
Adapter can be removed by pressing the adapter clip on the bottom of the actuator simply.

ROTATION ADJUSTMENT & WIRING DIAGRAM

ELECTRIC MOTOR AG8C2130-S

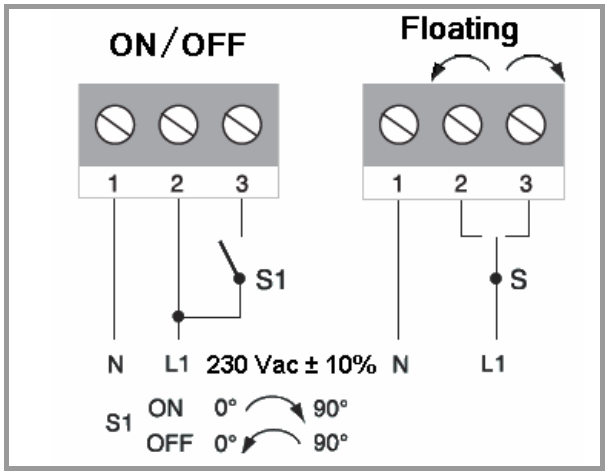


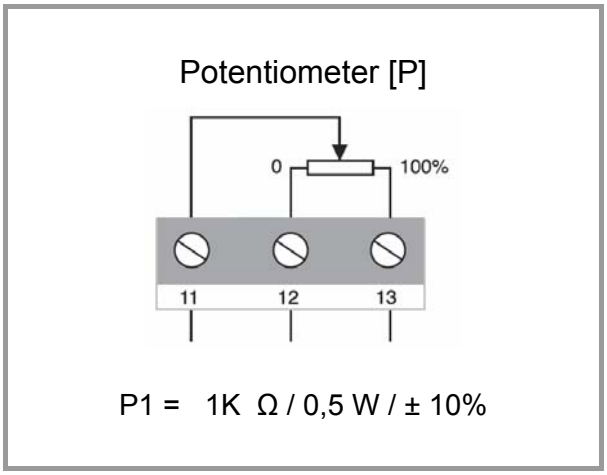
Set of rotation direction



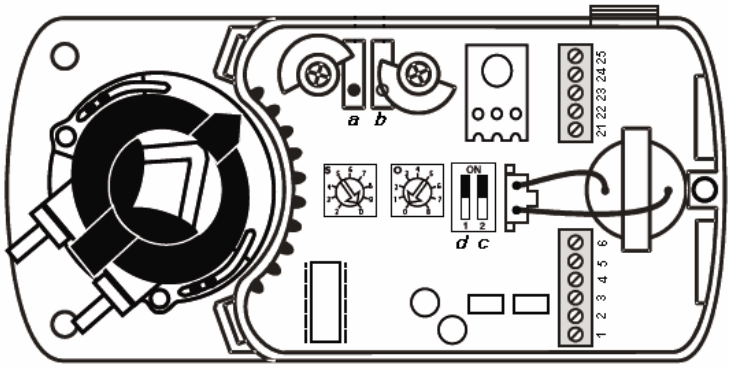
The rotation is factory set as above. To change direction, reverse plug “c”.

Wiring Diagram

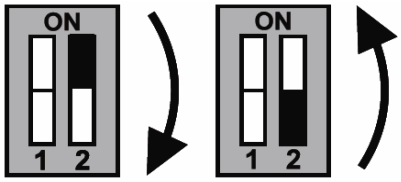




ELECTRONIC MOTOR AG8A2002-SE2 / AG8C2002-SE2

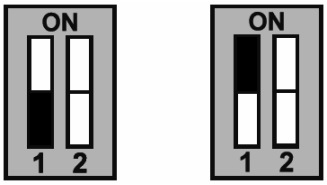


Set of rotation direction



Set of control signal

Deactivated Activated



d c d c

The rotation is factory set as above. To change direction, move switch "c" onto the bottom. By switching dip-switch “d” onto ON position, the control signal 0 - 10 Vdc or 4 - 20 mA will be adjusted to chosen rotation angle. Dip-switch “d” is self-adapting.

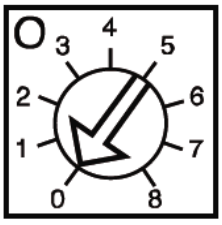
Control signal Y1 0…10 Vdc / Ri 250 kΩ
Control signal Y2 4…20 mA / Ri 388 Ω
Position signal U 0…10 Vdc / > 50 kΩ

Trimmer

Trimmers O and S help control signals Y1 and Y2 to match required sets:

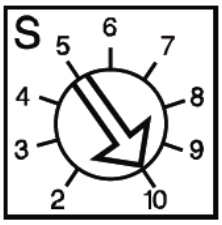
	Control signal	Working voltage	Setting	
			Starting point	Working range
Example 1	Y1	2 ÷ 10 Vdc	O = 2	S = 8
Example 2	Y2	6 ÷ 18 mA	O = 3	S = 6

Starting point



Scale O	0	1	2	3	4	5	6	7	8
for Y1 [Vdc]	0	1	2	3	4	5	6	7	8
for Y2 [mA]	0	2	4	6	8	10	12	14	16

Working range

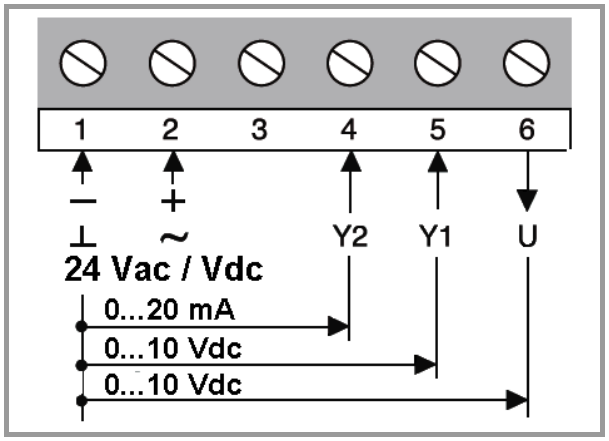


Scale S	2	3	4	5	6	7	8	9	10
for Y1 [Vdc]	2	3	4	5	6	7	8	9	10
for Y2 [mA]	4	5	8	10	12	14	16	18	20

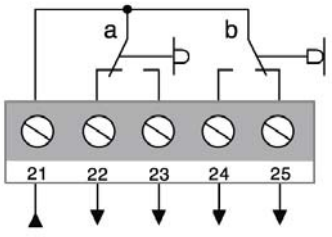
Auxiliary microswitches

Auxiliary switches are factory set at 10° [***a***] and at 80° [***b***]. To change the switching position manually, turn the ratchet to required position.

Electric diagram



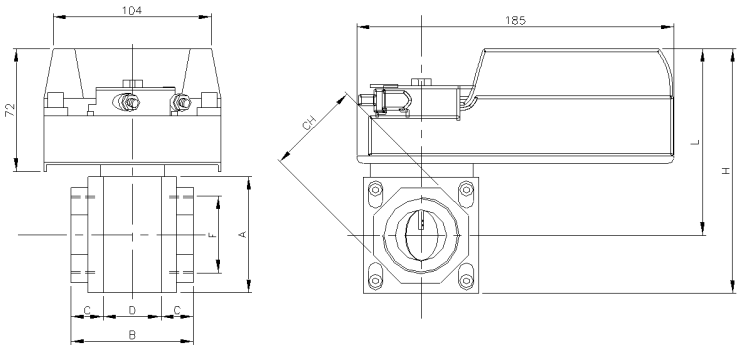
Auxiliary microswitches

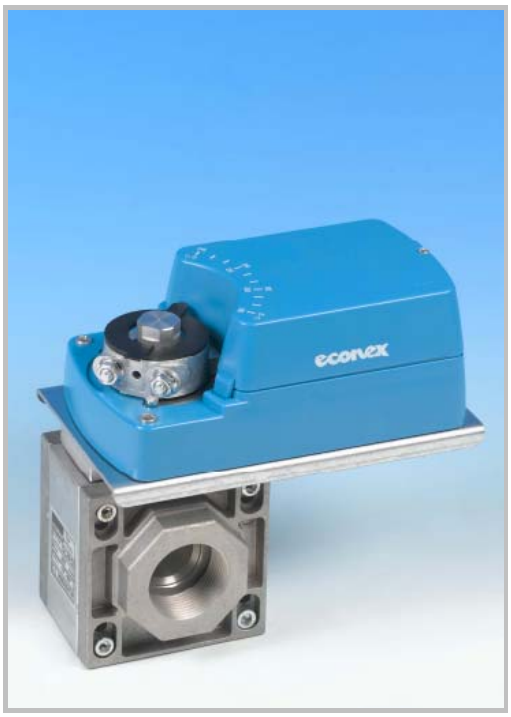


3 (1.5) A, 230Vac
Actuator at 0° position

COUPLING

BSV THREADED BUTTERFLY VALVE DN 20 ÷ DN 50

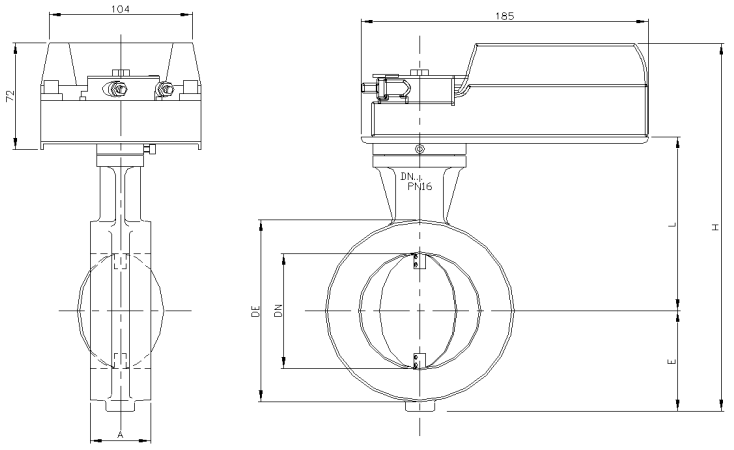




DN	F	CH	A	B	C	D	H	L
20	3/4"	42	60	86	22	42	150	120
25	1"	42	60	86	22	42	150	120
32	1¼"	60	90	95	25	45	170	125
40	1½"	60	90	95	25	45	170	125
50	2"	74	90	95	25	45	170	125

For further technical information and flow diagrams please refer to “BSV” brochure.

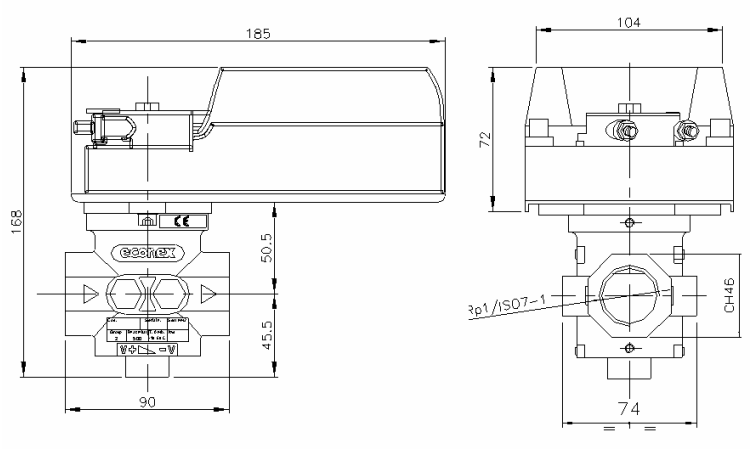
BFV FLANGED BUTTERFLY VALVE - WAFER TYPE DN 25 ÷ DN 150



DN	25	32	40	50	65	80	100	125	150
DE	71	82	92	107	126	141	162	192	217
A	40	40	40	43	46	46	52	56	56
E	36	41	46	54	73	77	89	106	118
L	82	85	90	100	108	128	138	150	162
H	189	198	208	227	253	277	299	328	352

For further technical information and flow diagrams please refer to “BFV” brochure.

MPV MODULATING PLUG VALVE [MODULATING PLUG VALVE]



For further technical information and flow diagrams please refer to “MPV” brochure.

MODELS CODING

BSV = Threaded butterfly valve
BFV = Flanged butterfly valve
S1 = Modulating plug valve

Diameter & Orifice		BSV Rp	BFV DN	S1 mm²
12	=	/	/	119
19	=	/	/	187
20	=	¾	/	/
25	=	1	25	282
32	=	1 ¼	32	/
40	=	1 ½	40	/
50	=	2	50	/
65	=	/	65	/
80	=	/	80	/
100	=	/	100	/
125	=	/	125	/
150	=	/	150	/

AG8 = AG8 Electric/electronic rotary gear motor

Supply voltage
A = 24 Vac / 50-60Hz
C = 230 Vac-Vdc / 50-60Hz

Rotation times for 90° at 50 Hz
2 = 30 s

Feedback potentiometer
0 = not foreseen
13① = 1 kohm
①only for electric AG8 at 230Vac

Auxiliary microswitches
0 = not foreseen
2② = 2 pieces
② only for AG8 at 24Vac/Vdc

Accessories
S = Local control station AUTO/MAN and Open/Stop/Closed
E2 = Control Signal 4 ÷ 20 mA or 0 ÷ 10 Vdc

BSV **25** **AG8** **C** **2** **13** **0** - **S**

All the reported data are subject to be changed without notice.

Form 121003

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