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/CE and Low Voltage Directive 2006/95/CE.

TECHNICAL FEATURES

Nominal maintaining torque	8÷32 Nm
Running time	8÷240 seconds
Rotation angle	Standard 90°
Rotation limit	5° ...85° in 5° steps
Life time	60.000 rotations
Noise level	45 dB (A)
Ambient temperature	-20÷ +50 °C / IEC 721-3-3
Enclosure	IP54 acc. to IEC 529
Cable gland	M16 x 1,5
Supply voltage	230V ac or 24V ac and dc
Frequency	50 - 60 Hz
Power consumption	2,5 W running
Nominal load	3.6 VA / 0.5 A @ 2 ms or 6.0 VA / 3.6 A @ 2 ms
Control signal	ON / OFF, floating or 0÷10V dc / Ri 250 KΩ or (0) 4÷20 mA / Ri 388 Ω
Aux. switches rating	3 (1.5) A, 230V ac

FEATURES

- ON/OFF and floating control or proportional
- 1000 ohm potentiometer [only on electric version]
- 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)

STANDARD MODELS

	Electric motor AG8C2130-S	Electric motor AG8A2002-SE2**	Electric motor AG8C2002-SE7
Supply voltage	230V ac 50-60 Hz	24V ac 50-60 Hz or dc	230V ac 50-60 Hz
Rotation time / torque	30 s / 8 Nm	30 s / 8 Nm	30 s / 8 Nm
Potentiometer	1000 ohm	not applicable	not applicable
Control signal	ON/OFF or floating	(0) 4÷20 mA or 0÷10V dc	(0) 4÷20 mA or 0÷10V dc
Feedback signal	not applicable	0÷10V dc	0÷10V dc
Weight	1,20 Kg	1,10 Kg	1,20 Kg
Rating of auxiliary switches	not applicable	3 (1.5) A, 230V ac	3 (1.5) A, 230V ac
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

** Available also with starting point and working range functions.

OTHER MODELS

Tourque in Nm	Rotation time	Auxiliary switches	Inpunt signal	Supply voltage
8	8 s	0 or 2	2/3 points	24V ac and dc / 230V ac
8	8 s	0 or 2	mA or V	24V ac and dc / 230V ac
8	30 s	0 or 2	2/3 points	24V ac and dc / 230V ac
8	30 s	0 or 2	mA or V	24V ac and dc / 230V ac
16	16 s	0 or 2	2/3 points	24V ac and dc / 230V ac
16	16 s	0 or 2	mA or V	24V ac and dc / 230V ac
16	90 s	0 or 2	2/3 points	24V ac and dc / 230V ac
16	90 s	0 or 2	mA or V	24V ac and dc / 230V ac
24	140 s	0 or 2	2/3 points	24V ac and dc / 230V ac
24	140 s	0 or 2	mA or V	24V ac and dc / 230V ac
32	240 s	0 or 2	2/3 points	24V ac and dc / 230V ac
32	240 s	0 or 2	mA or V	24V ac and dc

MODELS

AG = Dumper actuator

Torque
8 = 8 Nm
16 = 16 Nm
24 = 24 Nm
32 = 32 Nm

Supply voltage
A = 24V ac and dc
C = 230V ac 50-60 Hz

Rotation speed
0 = 8s
1 = 16 s
2 = 30 s
3 = 40 - 70 s
4 = 70 - 150 s
5 = 160 - 240 s

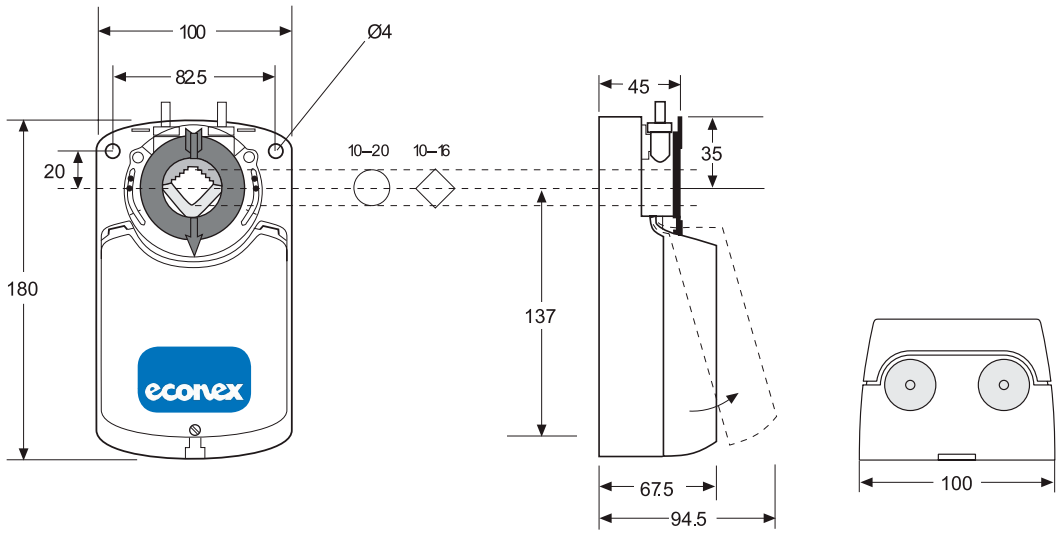
Feedback poti
00 = No poti
13 = 1 kohm (only for electric version)

Auxiliary switches
0 = Without aux switches
2 = With n° 2 aux switches

Control signal
S = Manual shaft release
SE2 = Input 0÷10V dc or 4÷20 mA, output 0÷10V dc
SE7 = Input 4÷20 mA, output 0÷10V dc

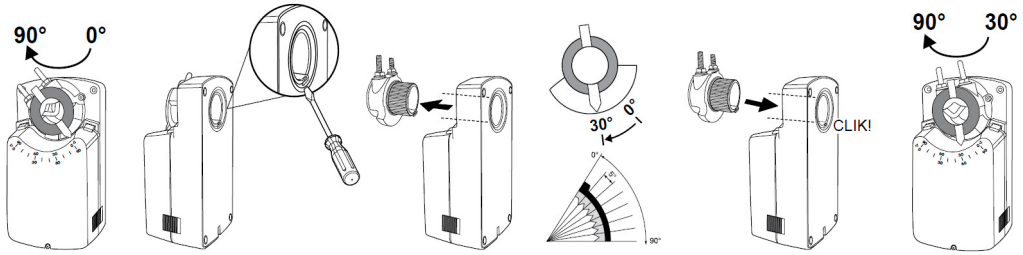
AG	16	A	2	00	2	SE2

DIMENSIONS



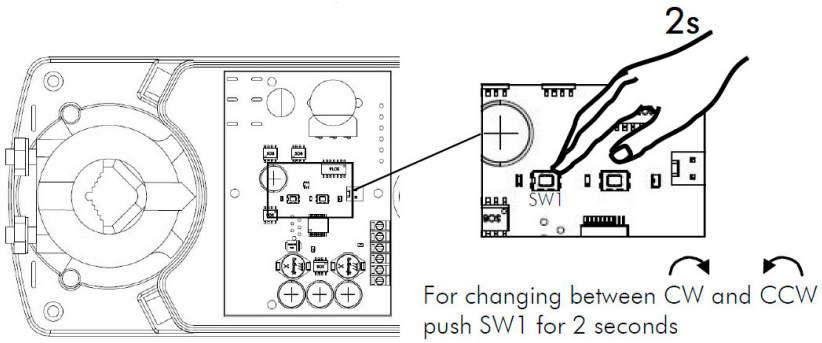
Limitation of rotation angle

The limitation of rotation angle can be set in 5° steps by moving the adapter.
Adapter removed by pressing the adapter clip on the bottom of the actuator simply.



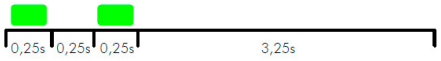
ROTATION ADJUSTMENT & WIRING DIAGRAM

ELECTRIC MOTOR AG8C2130-S



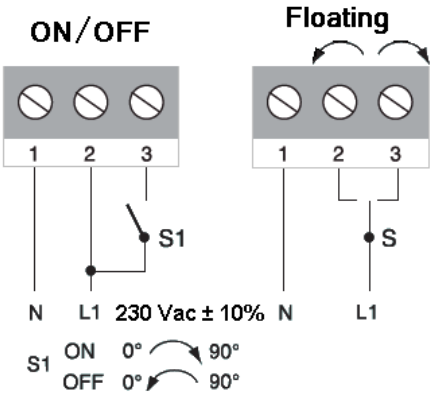
Green LED flashing:

- for CW position—two pulses (like "C-W")

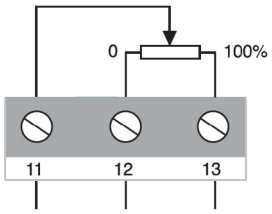


- for CCW position—three pulses (like "C-C-W")

Wiring diagram

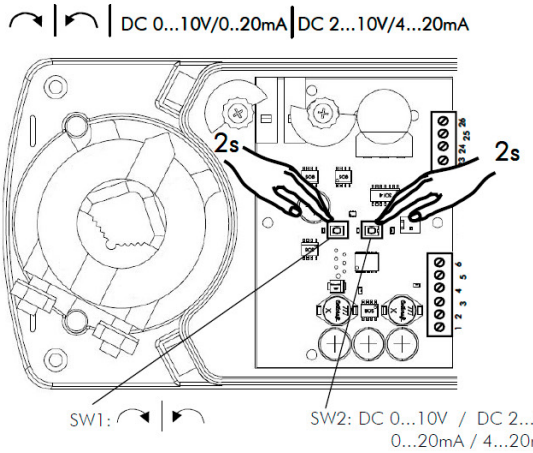


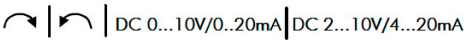
Potentiometer



P1= 1K Ω / 0,5W /± 10%

ELECTRONIC MOTOR AG8A2002-SE2 / AG8C2002-SE2





SW1

For changing between CW and CCW push SW1 for at least 2 seconds.

SW2

For changing between DC 0...10V/0...20mA and DC 2..10V/4...20mA
Input signal push SW2 at least 2 seconds.

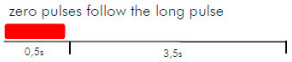
Green LED flashing:

- for CW position—two pulses (like "C-W")

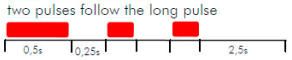
- for CCW position—three pulses (like "C-C-W")

Red LED flashing:

- for 0-10V / 0-20 mA
zero pulses follow the long pulse



- for 2-10V / 4-20 mA
two pulses follow the long pulse



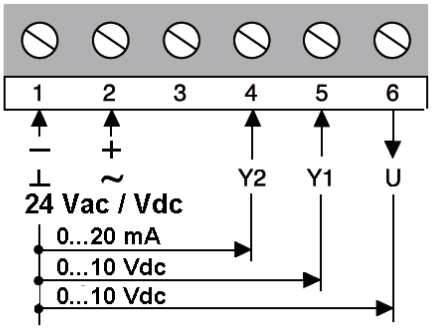
Control signal Y1	0 (2) …10V dc / Ri 250 kΩ
Control signal Y2	0 (4) …20 mA / Ri 388 Ω
Position signal U	0 (2)…10V dc / Ri> 50 kΩ

Auxiliary microswitches

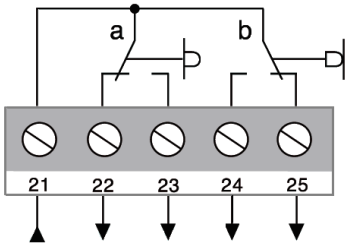
Auxiliary switches are factory set at 10° [a] and at 80° [b]. To change the switching position manually, turn the ratchet to required position.

Wiring diagram

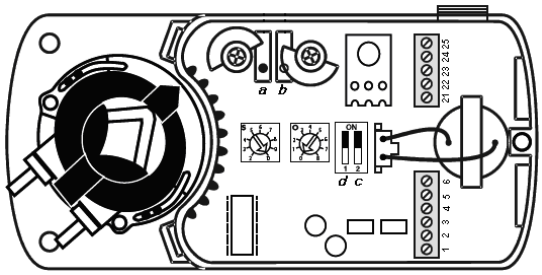
Main terminal board



Auxiliary microswitches



ELECTRONIC MOTOR AG8A2002-SE2 WITH STARTING POINT AND WORKING RANGE FUNCTIONS

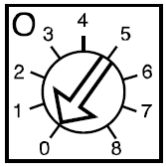


Wiring diagram

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

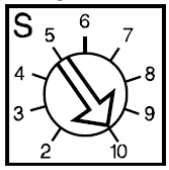
Example	Control signal	Working voltage	Setting	
			Starting point	Working range
Example 1	Y1	2÷10V dc	0 = 2	S = 8
Examble 2	Y2	6÷18 mA	0 = 3	S = 6

Starting point



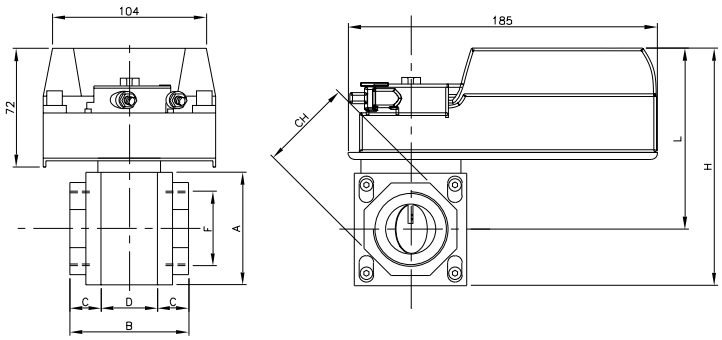
Scale 0	0	1	2	3	4	5	6	7	8
For Y1 (Vdc)	0	1	2	3	4	5	6	7	8
For Y2 (mA)	0	2	4	6	8	10	12	14	16

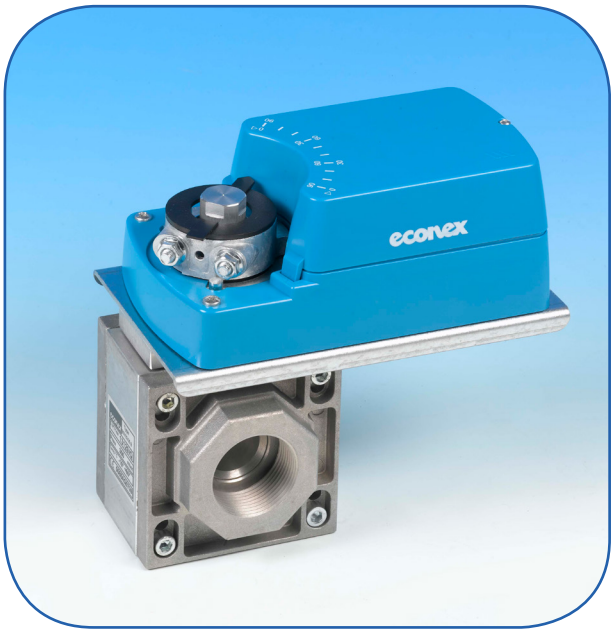
Working range



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

BSV THREADED BUTTERFLY Rp 3/4 ÷ Rp 2

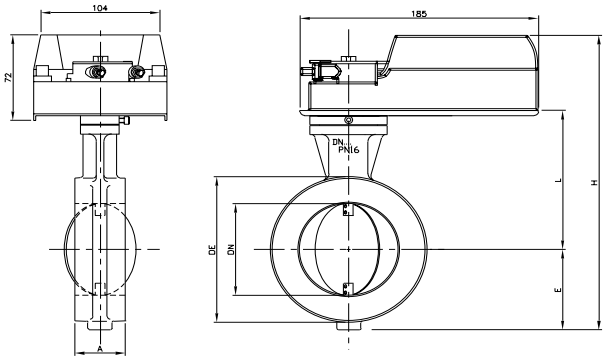




DN	F	CH	A	H	B	L	C	D
20	3/4	42	60	150	86	120	22	42
25	1	42	60	150	86	120	22	42
32	1.1/4	60	90	170	95	125	25	45
40	1.1/2	60	90	170	95	125	25	45
50	2	74	90	170	95	125	25	45

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

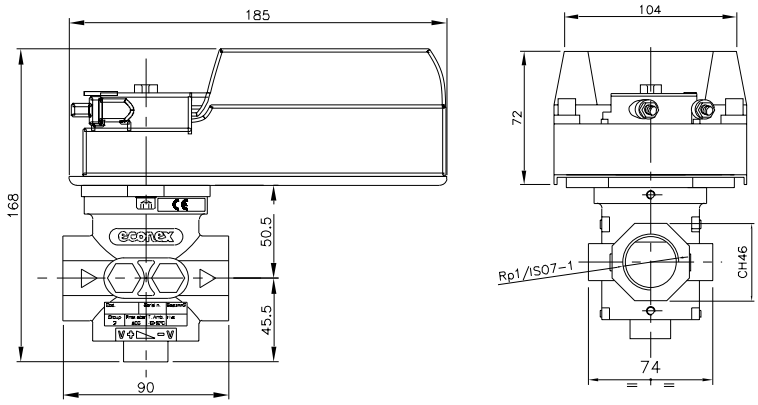
BFV FLANGED BUTTERFLY VALVE - DN 25 ÷ DN 150



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

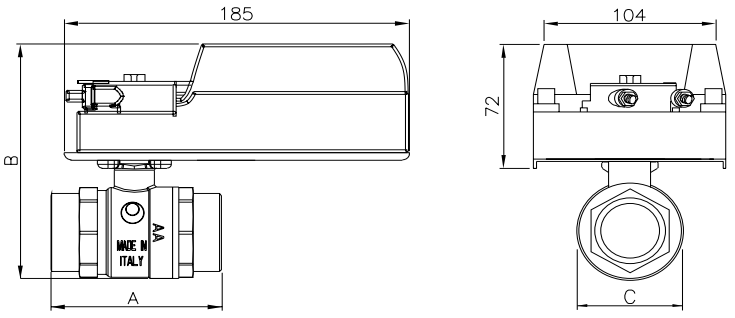
For further technical information and flow diagrams please refer to "BFV" brochure.

MPV MODULATING PLUG VALVE



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

SF MOTORIZED BALL VALVE



DN	15	20	25	32	40	50
A	62	68	82	91	102	122
B	113	120	122	139	141	165
C	18	23	29	38	46	60

For further technical information and flow diagrams please refer to "SF" brochure.

MOTORIZED VALVE MODELS

BSV = Threaded butterfly valve
BFV = Flanged butterfly valve
S1 = Modulating control valve
SF = Ball valve

Diameter & Orifice	BSV Rp	BFV DN	S1 mm²	SF Rp
12 =	/	/	119	1/2
19 =	/	/	187	/
20 =	3/4	/	/	3/4
25 =	1	25	282	1
32 =	1. 1/4	32	/	1. 1/4
40 =	1. 1/2	40	/	1. 1/2
50 =	2	50	/	2
65 =	/	65	/	/
80 =	/	80	/	/
100 =	/	100	/	/
125 =	/	125	/	/
150 =	/	150	/	/

BSV **80** Continue the code with below letters

AG8 = Rotary gear motor

Supply voltage
A = 24V ac / dc 50 - 60 Hz
C = 230V ac 50-60 Hz

Rotation time
2 = 30 s

Feedback potentiometer
00 = No foreseen
13 = 1 kohm (only for electric AG8 at 230V ac)

Auxiliary switches
0 = Not foreseen (only for electric AG8 at 230V ac / V dc)
2 = With n° 2 aux switches

Accessories
S = Manual shaft release
E2 = Control signal 0÷10V dc or 4÷20 mA, output 0÷10V dc
E7 = Control signal 4÷20 mA, output 0÷10V dc

AG8 **A** **2** **00** **2** **SE2**

All the reported data are subject to be changed without notice. **from 140906**

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