

ELECTRIC ROTARY GEAR MOTOR Series SBF (AB1...)

The SBF electric rotary gear motors have been specially designed to be installed on industrial and residential combustion systems. They are particularly suitable for the control and regulation of modulating valves, butterfly valves, dampers and other fluid regulation systems requiring an angular positioning within 90° or 180°. The electric motor is unipolar and bidirectional with high static and maintaining torque for 3-position operation.



TECHNICAL FEATURES

Body and cover	: die-cast aluminium	Supply voltage	: 230Vac/ 50 - 60Hz
Nominal torque	: 3 ÷ 5 Nm	On request	: 110 Vac / 50 - 60 Hz
Maintaining torque	: 2,5 ÷ 3 Nm		24 Vac / 50 - 60 Hz
Rotation time	: 7,5÷120 sec. for 90° at 50 Hz	Nominal load	: 4 - 7 VA
Rotation angle	: standard 90°	Duty cycle	: continuous 100% ED
On request	: 20° ÷ 180°	Rating of end and	: 0,5 A / 48 V D.C. and Vac
Output shaft	: Ø 10 mm	auxiliary switches	
Installation	: in any position	Enclosure	: IP54 acc. to IEC 529
Fastening bore	: ISO 5211 [F05], F07	Cable gland	: 2 x Pg 13,5
Ambient temperature	: -10 ÷ +60 °C	Weight	: ~1,7 kg

FEATURES

- Interchangeability with the most available gear motors.
- Sturdy, compact construction, suitable for industrial applications.
- Installation in any position.
- Adjustable rotation angle.
- Cams easily adjustable through friction.
- Relay for phase cut
- n. 2 End switches + n.2 adjustable auxiliary microswitches with free electric contacts
- Manual/automatic operation and service switch "open/stop/closed"
- Wide range of accessories on request:
 - 1 or 2 potentiometer - range: 150 ohm to 2.5 kohm
 - mechanical position indicator
 - 180° or clockwise rotation
 - IP65 enclosure

SBF

= Electric rotary gear motor

Supply voltage

- A** 24Vac ± 10% / 50-60Hz
B 115Vac ± 10% / 50-60Hz
C 230Vac ± 10% / 50-60Hz

		Rotation time at 50Hz [s]	Rated torque	Maintenance torque
0	=	7,5 for 90°	3 Nm	2,5 Nm
1	=	15 for 90°	3 Nm	2,5 Nm
2	=	30 for 90°	3 Nm	2,5 Nm
3	=	60 for 90°	5 Nm	3 Nm
4	=	120 for 90°	5 Nm	3 Nm

Potentiometer

- 00** = none
11 = 1 Poti. 150 ohm
13 = 1 Poti. 1 kohm
15 = 1 Poti. 2,5 kohm (Bourns)
16 = 1 Poti. 5 kohm (Spectrol)
18 = 1 Poti. 1 kohm (Spectrol)
21 = 2 Poti. 150 ohm
23 = 2 Poti. 1 kohm
25 = 2 Poti. 2,5 kohm

Auxiliary microswitches

- 0** = none
2 = 2 pc.

Accessories (-- = none)

- S** = Control Station AUTO/MAN and Open/Stop/Close [standard]
-O = Position indicator on the top cover
-Z = Enclosure IP65
18 = 180° rotation
DX = Clockwise rotation
R1 = Relay control [ON/OFF]

SBF

C

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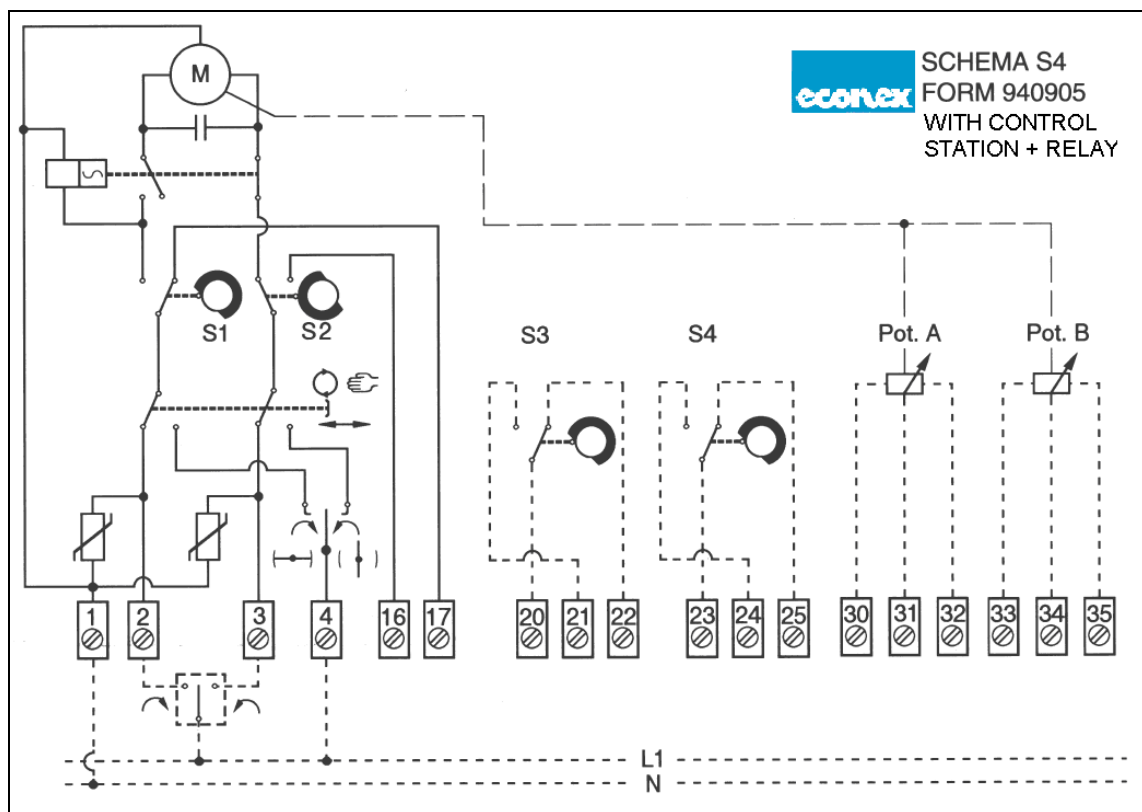
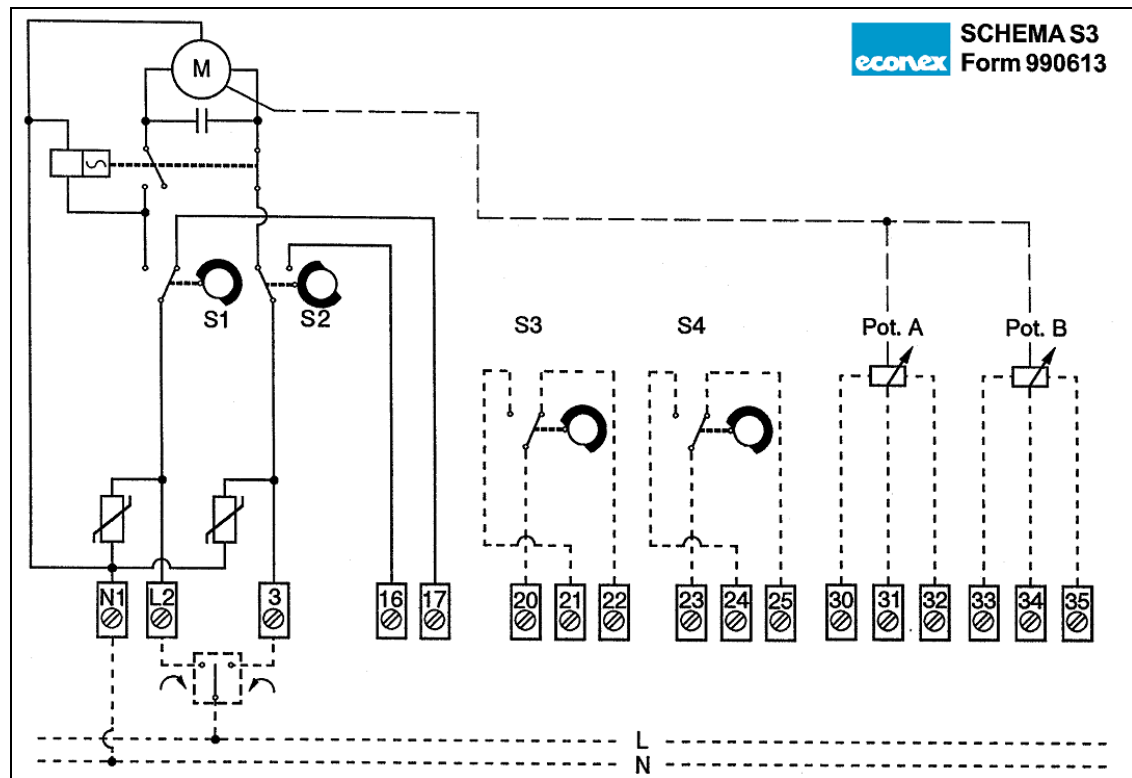
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-S

NOTE Max. torque on auxiliary shaft is 3 Nm less than rated torque.

WIRING DIAGRAM

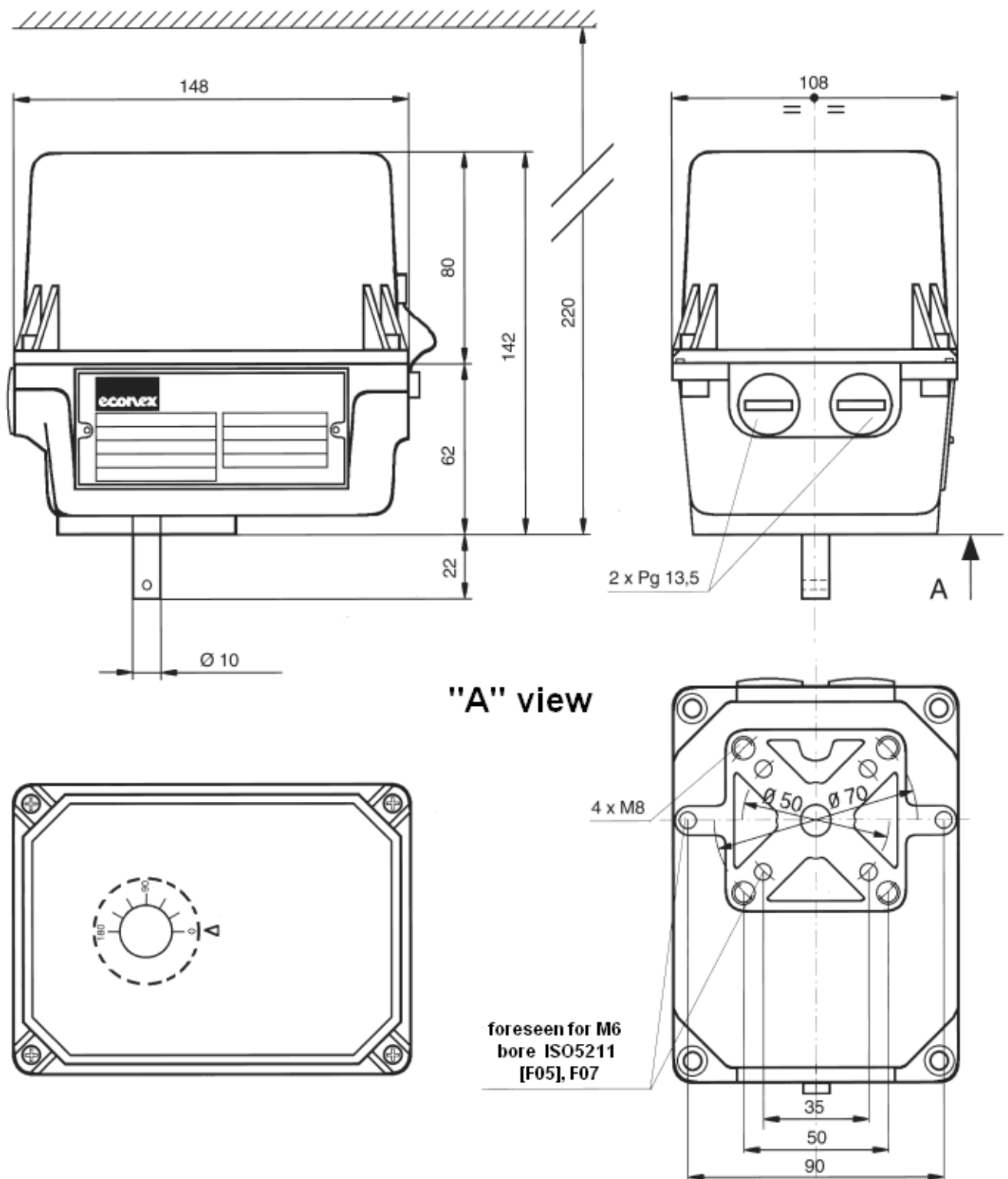


CAM ADJUSTMENT



For cam adjustment, the proper lever supplied with the gear motor equipment is to be used. Use the lever from the right side, introducing the pin into one of the bores on the sides of the blue cam and lever it to the desired position. If the blue cam is in a behind position, use the lever on its curved side to move the blue cam to a more suitable position to perform adjustment. Adjustment is possible in both directions along the whole rotation angle of the cam shaft. Remove the lever before servicing.

Note If a potentiometer is installed it is necessary to reset its friction gear to 0 setting.



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