

SCHIEBEL	data sheet	Pages: 1 Date: 30.05.2001 File: esg2e1.doc
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Electronic position encoder ESG2 - Operating instructions

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Note:



Notes contain important information.

Warning:



Warnings indicate special methods or handling procedures which, if not followed properly, may result in serious injury.

Electronic position encoder ESG2 - Operating instructions

1 General

The ESG2 electronic position encoder converts the resistance value of the potentiometer (F1000) into a proportional current signal 0(4)..20mA..

The ESG2 is cast in a plastic case (see fig. 2).

2 Connection

The ESG2 electronic position encoder is operated in a three-wire circuit. The slider of the potentiometer is connected with the yellow lead of the ESG2. The two terminal connections of the potentiometer are connected to the red and black lead of the ESG2 (see fig. 1). If the output signal I_a of the ESG2 changes to the wrong direction upon actuation of the actuator the two terminal connections of the potentiometer have to be interchanged.

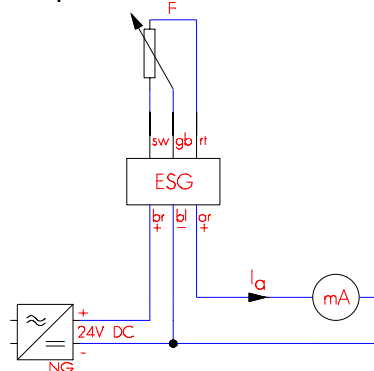


Fig. 1: Connections

The ESG2 is supplied via the brown lead (+) and the blue lead (-). The output current I_a is emitted via the orange lead against mass (blue lead).

3 Dimensions

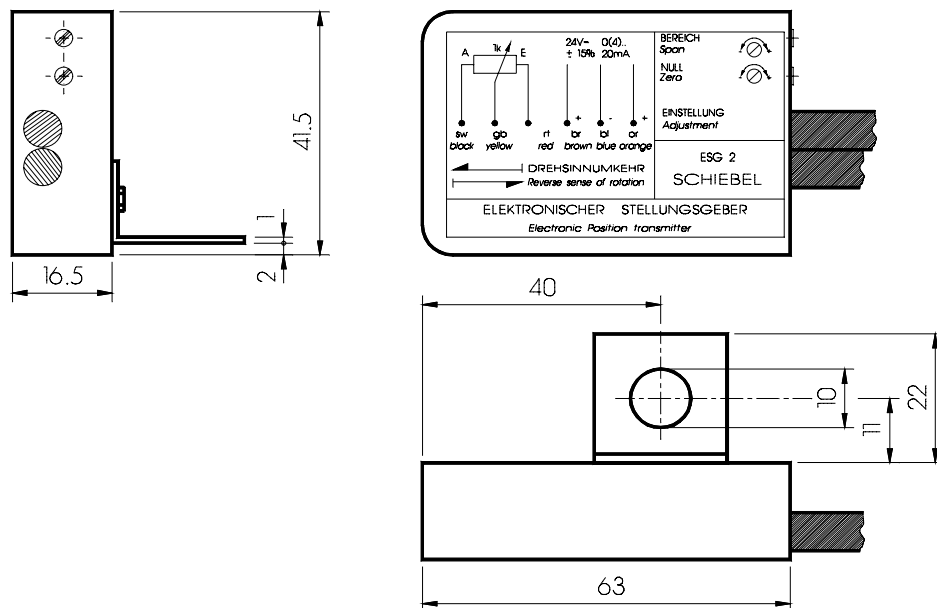


Fig. 2: Dimensions

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4 Setting

Prior to setting the ESG2, the final position switches of the actuator (according to the operating instructions of the actuator) and the potentiometer have to be set. Furthermore, the "CLOSE position" corresponds to the output current 0 and/or 4mA, the "OPEN position" to the output current 20mA. Connect the ESG2 according to the chapter "Connection".

Output current 0...20mA:

Initial value: Move actuator into "CLOSE position". Turn the trimming potentiometer zero at the ESG2 in a clockwise direction until the output current I_a of the ESG2 achieves a clearly positive value ($>0.1\text{mA}$), then slowly turn in a counter-clockwise direction until the output current I_a just falls to 0 mA.

Final value: Move actuator into "OPEN position". Set the output current I_a to 20mA at the ESG2 using the trimming potentiometer range.

Control: After setting, check both final positions and, if necessary, reset according to the initial value and final value points.

Output current 4...20mA:

Initial value: Move actuator into "CLOSE position". Set the output current I_a to 4mA at the ESG2 using the trimming potentiometer zero.

Final value: Move actuator into "OPEN position". Set the output current I_a to 20mA at the ESG2 using the trimming potentiometer range.

Control: After setting, check both final positions and, if necessary, reset according to the points initial value and final value.

5 Technical data

Supply voltage	24V DC ± 15 , smoothed
Current consumption	max. 35mA
Potentiometer value	1000 Ω
Current output	0...20mA or 4...20mA
Current limitation	max. 25mA
Zero point shift	max. $\pm 35\%$
Final point shift	max. from 35% to 100%
Ambient temperature	-20°C...+60°C
Influence of supply voltage	max. 0.2%
Dependence on temperature	0.2%/10K
Linearity	0.05%