SEC-DS-GERMAN-ESG2-V2.00-2012.07.17

Electronic position encoder ESG2

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 Figure 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 (siehe Figure 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.

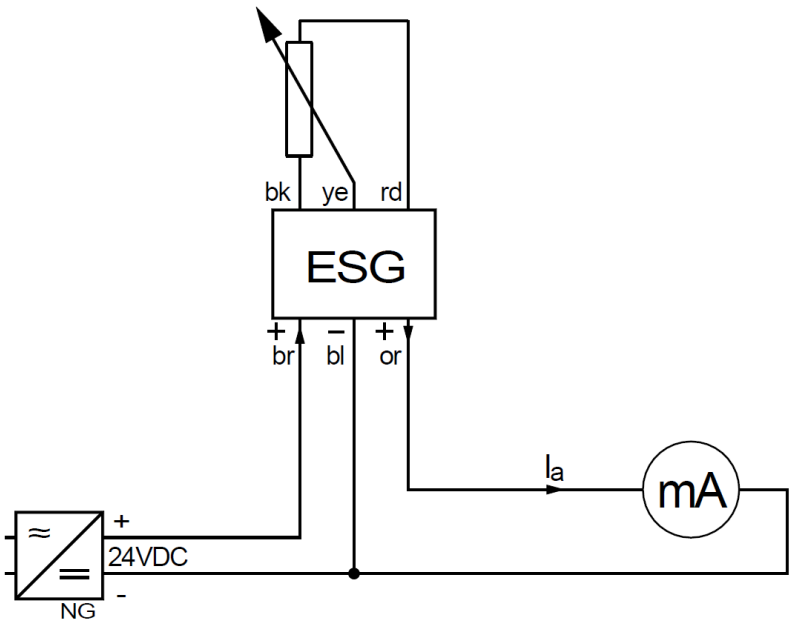

Figure 1: *Wiring of the ESG2*

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

3 Dimensions

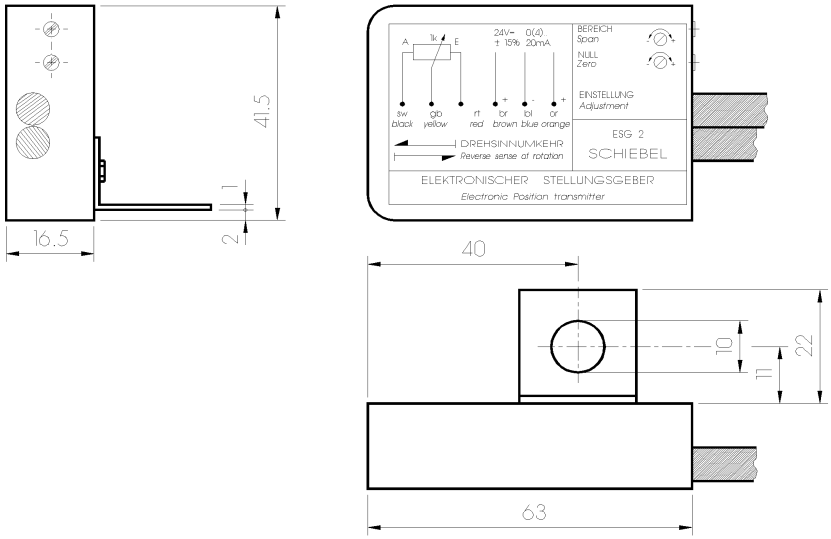

Figure 2: *Dimensions*

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 Ia of the ESG2 achieves a clearly positive value (>0.1mA), then slowly turn in a counter-clockwise direction until the output current) Ia just falls to 0 mA.
Final value: Move actuator into "OPEN position". Set the output current Ia 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 Ia to 4mA at the ESG2 using the trimming potentiometer zero.
Final value: Move actuator into "OPEN position". Set the output current Ia 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	1000Ω
Current output	0...20mA bzw. 4...20mA
Current limitation	max. 25mA
Zero point shift	max. ±35%
Final point shift	max. von 35% auf 100%
Ambient temperature	-20℃...+60℃
Influence of supply voltage	max. 0,2%
Dependence on temperature	0,2%/10K
Linearity	0,05%