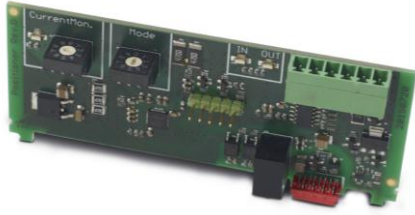


Instruction Manual

Electric actuators type EA25-250: Positioner



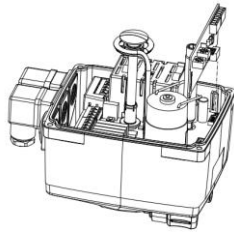
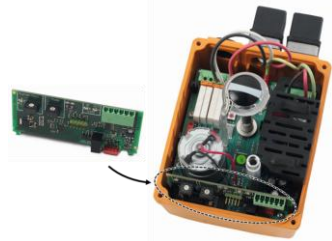
The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Our General Conditions of Sale apply. Using the positioner, the instruction manual of the electric actuator type EA25-250 must be observed.

Intended use

Accessory board Positioner

The positioner can be used with the electric actuators type EA25, EA45, EA120 and EA250, both with the 24V AC/DC as well as the 100-230V AC version. The board is to be plugged into the housing of the actuator in the provided slots.

Description	Technical data	Code
Positioner	Inputs with galvanic isolation	199 190 603



1 Function

The positioner controls a user-defined valve position proportional to a given setpoint value. This can be 0 – 10 V or 4 – 20 mA. Feedback on the valve position (actual value) is done via the integrated 4 – 20 mA position detection. All signals can be inverted in any desired combination.

NOTE

The inputs are galvanically isolated, so the power supply does not have to be galvanically separated.

The monitoring card module „Motor current monitoring“ is located on the positioner (left BCD switch). See chapter 6 „Settings motor current monitoring“ for further settings.

2 Assembly of the positioner board

CAUTION

Disconnect the actuator from the supply voltage.

1. Remove housing cover of the electric actuator (loosen the 4 screws, open cover).
2. Take the positioner board out of the packaging and check for damages.

CAUTION

Do not touch the board itself. Electrostatic discharge can damage the components.

Georg Fischer Piping Systems Ltd CH-8201 Schaffhausen
 Phone +41 (0)52 631 30 26 / info.ps@georgfischer.com / www.gfps.com
 700 278 095
 GFDO_6429_4 (01.16)
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3. Insert the board vertical on the backside of the main board onto the red plug.

CAUTION

Ensure that the board sits in the lateral guides and snaps.

4. Stick scheme label into the housing cover.
5. Set signal configuration and if necessary, motor current monitoring (see chapter 4 „Signal configuration“ and 6 „Settings motor current monitoring“).

3 Connecting the positioner and test functioning

Connect set point 4 – 20 mA (or 0 – 10 V) to terminals of the positioner, see 5 „Terminal assignment“. Move actuator in positions OPEN and CLOSE, adjust positions if necessary: set 4 mA (0 V) for CLOSE and 20 mA (10 V) for OPEN.

6. Put the cover back in place and fasten it with the 4 screws.

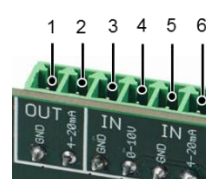
4 Signal configuration

The signal configuration is performed via the right BCD-switch „Mode“, depending on switch position, the following signal configuration can be achieved:

BCD	Input	Output
0 (factory setting)	4-20 mA	4-20 mA
1	0-10 V	4-20 mA
2	4-20 mA (inverted)	4-20 mA
3	0-10 V (inverted)	4-20 mA
4	4-20 mA	4-20 mA (inverted)
5	0-10 V	4-20 mA (inverted)
6	-	-
7 (only as feedback)	-	4-20 mA
8 (only as feedback)	-	4-20 mA (inverted)
9	-	-

5 Terminal assignment

The cables are applied as follows via a plug (according to signal configuration):



1	2	3	4	5	6
Ground	4-20 mA	Ground	0-10 V	Ground	4-20 mA
OUT			IN		

6 Settings motor current monitoring

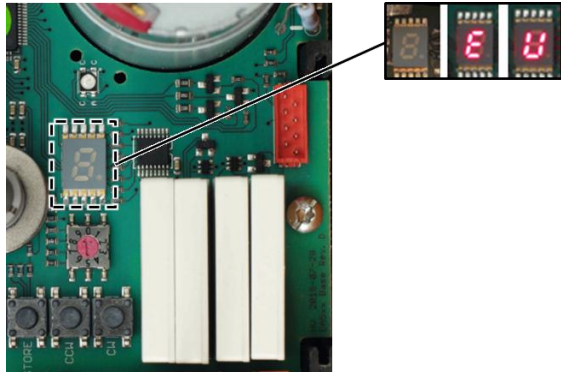
The current monitoring function monitors the motor current. If the motor current is higher than the preset value, an error is reported and the actuator will remain in place.

Motor Current Monitoring	BCD	EA25	EA45	EA120	EA250
	0	25	25	50	50
	1	100	300	300	400
	2	150	350	400	500
	3	200	400	500	600
	4	250	450	600	700
	5	300	500	700	800
	6	400	600	800	1000
	7	500	700	900	1200
	8	600	900	1000	1500
9 (factory setting)	700	1100	1200	1800	

7 Error message

An error message triggers the following signals:

- The 7-segment display on the main board illuminates; see illustration below. If the positioner PCB is installed, the respective LED lights up red on the BCD switch, if its set value is exceeded.
- The ready-to-operate signal will be off (terminals 5,6 NO contact)
- LED flashes yellow (except in case of power outage)



Assignment of error codes for error messages

If the positioner PCB is installed, the following error codes can be displayed:

Error code	Description	Signal „Ready-to-operate“	EA response
2	Setpoint error		None
3	Actual value error		None
4	Setpoint reversed polarity		None
6	Actual value reversed polarity		None
7	Setpoint short circuit		None
8	Actual value short circuit		None
!	Actuator has run into engine current limit	No	Stops

For further error codes of the main board, see instruction manual of the electric actuator type EA 25-250.

Acknowledge error message

Check the cause of fault, if necessary, carry out relevant maintenance.

NOTE

The message can be eliminated while the supply voltage is still connected or the actuator is briefly disconnected from the mains voltage (does not work with cycle monitoring).

Error can be acknowledged via the „SET“ button on the main board.