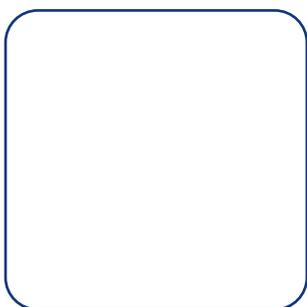


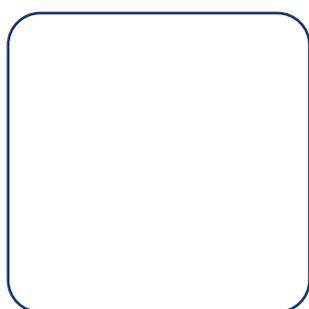


Actuators
for Frese
OPTIMA
Compact



Frese OPTIMA Compact MO-Series actuators

Training, Commissioning
& Trouble shooting



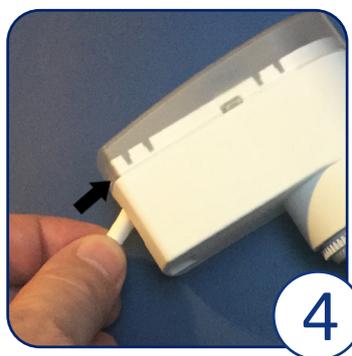
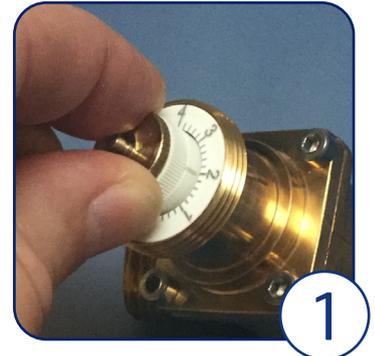
Overview Frese Motoric actuators M0-Series

Size Range	Actuator for OPTIMA Compact valves DN10 to DN32
Actuator type	Modulating 4-20mA, 0-10V or 2-10V, 24V motoric actuators

Actuator mounting on the valve

1. Pre-set the valve to the design flow. (See fig. 1)
2. Mount the adapter ring, delivered with the actuator, on the valve. (See fig. 2)
3. Click on the actuator to the adapter ring. Check that the actuator is sitting straight and cannot be pulled of. (See fig. 3)
4. Connect the cable to the actuator (See fig. 4) Please press the cable firmly into the actuator. Connect the wires in the controller terminal according to the instruction manuals.
5. Switch on the power.

Please Note: Do never turn on the power before the actuator is mounted onto the valve.
6. Let the actuator run the initialisation procedure and calibration.
7. In the display the initialisation is shown by "In" (See fig. 5)
8. The calibration process will take 10-20 minutes.
9. The actuator is now ready to operate.



Overview Frese Motoric actuators MO-Series

Size Range	Actuator for OPTIMA Compact valves DN10 to DN32
Actuator type	Modulating 4-20mA, 0-10V or 2-10V, 24V motoric actuators

Actuator operation and display information

1. When the control signal is changed, the actuator will move to a new position. In the display an arrow is indicating the direction of the actuator stem movement. (See fig. 1)
2. The opening position of the stem is shown in the display as an percentage. (See fig. 2)
3. The input signal is also shown in the display. (See fig. 3)

Please Note: For actuators with mA input signal, the input signal is converted into voltage, by using the input impedance of 500 Ohm.

Example: This means that a 4 mA signal is shown as 2V and a 20 mA signal is shown as 10 V.



Overview Frese Motoric actuators MO-Series

Size Range	Actuator for OPTIMA Compact valves DN10 to DN32
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Trouble shooting on site

Problem: The actuator is not closing and opening according to control signal (2-10V & 0-10V version)

1. Check that the cable is firmly mounted in the actuator, and the wires in the connection terminal are mounted correctly.
2. Disconnect the power and connect the power again. The actuator will run the calibration procedure again.
(Please refer to: Page 2, Paragraph 5 - 9)
3. Use a multimeter to check input signal and power supply. (See fig. 1)
4. Check the input signal (Blue and Red wire) with a multimeter on the terminal where the actuator wire is connected. Verify that the measured signal is according the signal from the BMS

Please Note: For actuators with mA input signal, the input signal is checked by connecting the multimeter in serial between the red wire and the connection terminal.

5. Alternatively use the display to check the input signal.

Please Note: For actuators with mA input signal, the input signal is converted into voltage, by using the input impedance of 500 Ohm.

Example: This means that a 4 mA input signal is shown as 2V and a 20 mA signal is shown as 10 V.

6. Check the power supply (Black & Blue wire) with a multimeter. Is the power supply within 24V +/- 15%. Even for AC it is important that the black wire is connected to AC-neutral.



Manual operation:

6. If the actuator stem is extended too far, and prevents from connecting the valve and actuator, or you want to operate the valve manually, retract or extend the stem by the manual setting of the stem at the top of the actuator. (See fig. 2)
7. After manual operation the actuator must be recalibrate by switching the power off and back on again. The actuator will run the calibration procedure again.

(Please refer to: Page 2, Paragraph 5 - 9)





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