

## Frese OPTIMA Compact Actuator SI-series DN40-DN200

### EN Mounting instruction

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#### Intro:

This document describes installation of Frese OPTIMA Compact Actuators SI-series in connection with Frese OPTIMA Compact DN40-DN200.

#### Warning:

Hot media hazard. Before installing or removing actuator from valve or opening the valve, ensure that the valve control medium is isolated and relieve the pressure. Work should only be carried out by a competent engineer.

#### Mounting on valve

FIG 1

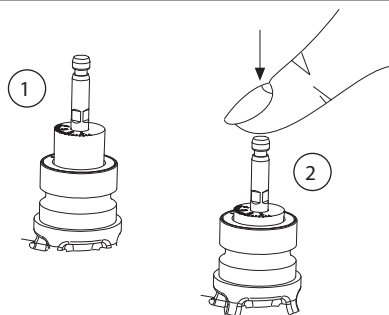
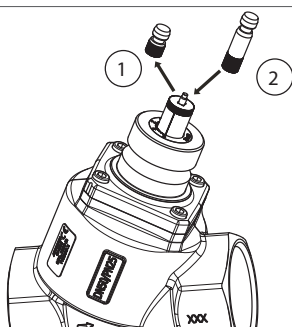


FIG 1: Spindle position

1. The spindle will be in the upper position when water is filled into the system
2. Press down the valve spindle before mounting the actuator on the valve

FIG 2



Frese OPTIMA Compact DN40-50

FIG 2: Before mounting the actuator on Frese OPTIMA Compact DN40-DN50 threaded versions

1. Remove the short spindle mounted on the valve
2. Mount the long spindle delivered with the actuator (Actuators type 58-8901 & 58-8908)

FIG 3

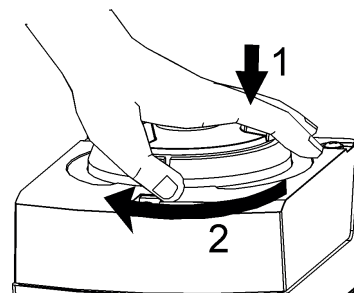


FIG 3: The actuator can be manual adjusted by the handwheel

1. Push up the handwheel for manual operation.
2. Turn the handwheel.

FIG 4

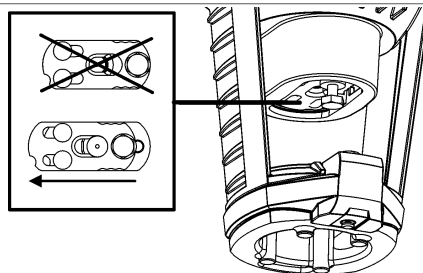


FIG 4: Release the bolt for the spindle connection and push it to free the hole for the spindle

FIG 5

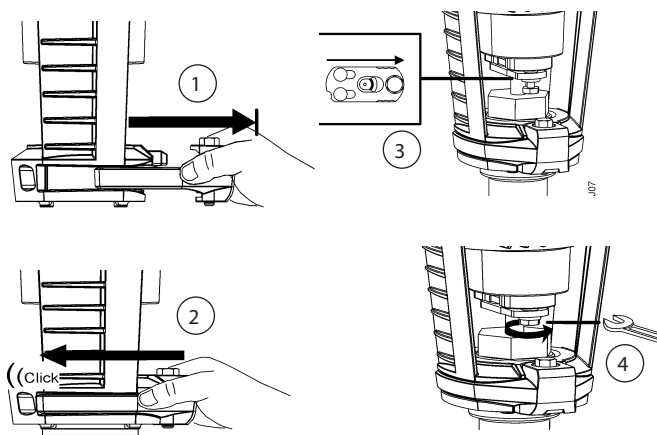


FIG 5: Valve neck and spindle connection

1. Release the bolt on the U-bracket and pull it out
2. Place actuator on the valve neck and push the U-bracket in again. Tighten the bolt
3. Push the spindle locking back when the spindle is placed in the hole
4. Tighten the bolt

## Electrical wiring

FIG 6

58-8908  
53-1290  
53-1293

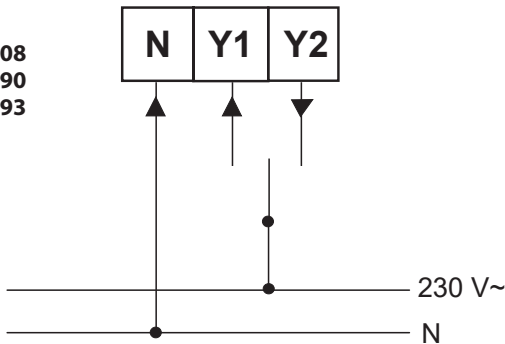


FIG 6: Electrical wiring: 3-position control 230V AC

Terminal	Function
N	System neutral (SN)
Y1	Positioning signal (actuator's stem retracts)
Y2	Positioning signal (actuator's stem extends)

FIG 7

53-1291  
53-1294

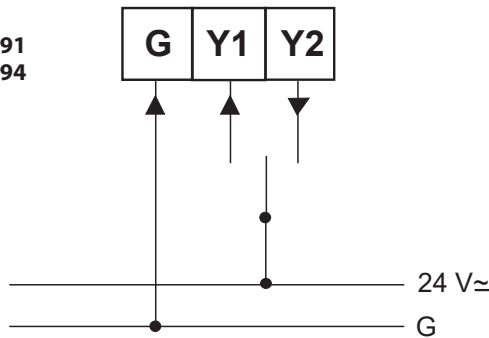


FIG 7: Electrical wiring: 3-position control 24V AC/DC

Terminal	Function
G	System potential (SP)
Y1	Positioning signal (actuator's stem retracts)
Y2	Positioning signal (actuator's stem extends)

FIG 8

58-8901  
58-8902  
58-8903

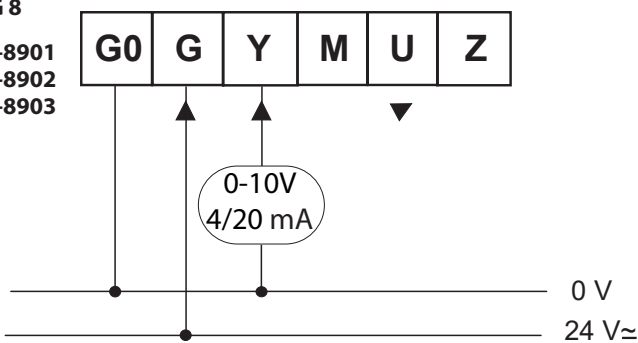


FIG 8: Electrical wiring: 0-10V/4-20mA control 24V AC/DC

Terminal	Function
G0	System neutral (SN)
G	System potential (SP)
Y	Positioning signal for DC 0...10 V / 4...20 mA
M	Measuring neutral
U	Position feedback DC 0...10 V
Z	Positioning signal forced control

## Calibration

FIG 9

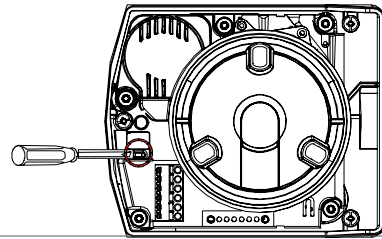


FIG 9: Actuators with 0-10V/4-20mA control  
The actuator must be manually calibrated by using a screw drive to make bridge contact

## Installation

FIG 10

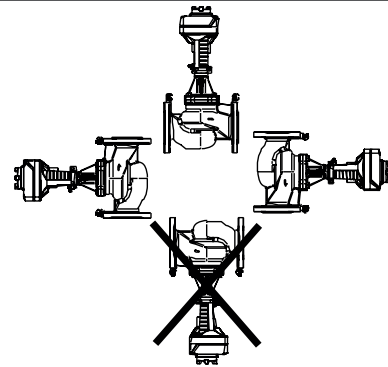


FIG 10: Actuator mounting positions

FIG 11

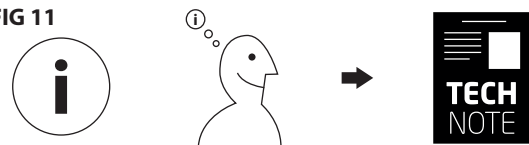


FIG 11: For setting of dip-switches, please refer to the actuator SI-series Technote