

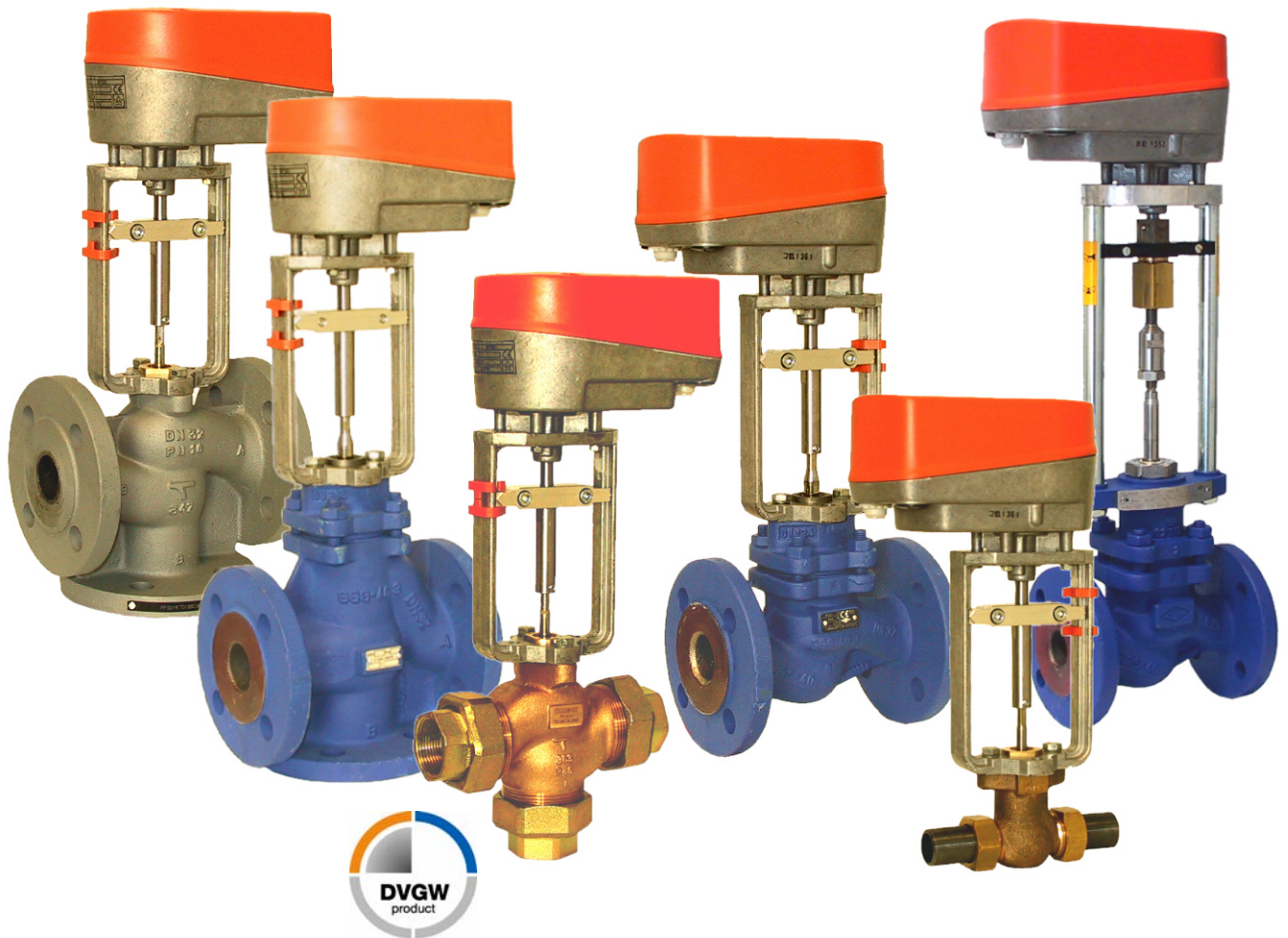
Device description

MF1000Y/MF1000YS/MF1000YZ emergency actuator
with RFH district heating valve or two-way/three-way valve RK/RB/RF/RGD/RGDE/RWG

Emergency actuators

MF1000Y/MF1000YS/MF1000YZ

for AC 24 V with DC 0 to 10 V constant
control with two-way and three-way
valves



Subject to change

Issue date: June 11, 2007

Kieback&Peter GmbH & Co. KG

Tempelhofer Weg 50
D-12347 Berlin/Germany
Telephone: +49 30 60095-0, Fax: +49 30 60095-164
www.kieback-peter.de, info@kieback-peter.de

kieback&peter

Contents

Information about the device description Page 3

Safety instructions Page 3

Qualified technicians Page 3

MF1000Y/MF1000YS/MF1000YZ – Emergency actuator

Application, types, technical data Page 4

Dimensions Page 5

Installation Page 6

PN6 **RK15..50/RK65K(-BF)MF1000YZ – Two-way/three-way valve with emergency actuator**


Application, types, technical data Page 7

Dimensions Page 8

PN16 **RB15..50(-BK)MF1000YZ – Two-way/three-way valve with emergency actuator**

Application, types, technical data Page 9

Dimensions Page 10

 **PN16** **RB15..50T(-BK)MF1000YZ – Two-way/three-way valve with emergency actuator (Drinking and service water version)**


Application, types, technical data Page 11

Dimensions Page 12

PN16 **RF15..50/RF65K(-BF)MF1000YZ – Two-way/three-way valve with emergency actuator**


Application, types, technical data Page 13

Dimensions Page 14

 **PN25** **RFH15..25MF1000Y – Direct heating valve with emergency actuator**


Application, types, technical data Page 15

Dimensions Page 16

 **PN25** **RGD15..40MF1000Y – Two-way valve with emergency actuator**


Application, types, technical data Page 17

Dimensions Page 18

 **PN25** **RGDE25..50MF1000YS – Pressure-relieved two-way valve with emergency actuator**

Application, types, technical data Page 19

Dimensions Page 20

 **PN25** **RWG15..40MF1000YZ – Three-way valve with emergency actuator**

Application, types, technical data Page 21

Dimensions Page 22

Installation

Installation of the valve Page 23

Installation of the emergency actuator Page 24

Commissioning Page 26

Setting notes Page 28

Valve cross-sections with flow directions Page 28

Device description

MF1000Y/MF1000YS/MF1000YZ emergency actuator
with RFH district heating valve or two-way/three-way valve RK/RB/RF/RGD/RGDE/RWG

Information about the device description

The description contains information about installation, commissioning, and use of emergency actuators MF1000Y, MF1000YS, and MF1000YZ with valve series RK15..50/RK65K(-BF), RB15..50(BK), RF15..50/RF65K(-BF), RFH15..25, RGD15..40, RGDE25..50, and RWG15..40.

If you have questions that are not covered by the device description, contact the supplier or manufacturer for further information.

The specified regulations/guidelines for mounting and installation are valid for the Federal Republic of Germany. If the actuators are used in other countries, local regulations are to be complied with at the personal responsibility of the system installer or operator.

Operating personnel are to be instructed according to the description of the technical data sheet.

Safety instructions

The valid work protection, accident prevention and VDE regulations are to be observed when installing and using actuators.

Only qualified technicians may perform the installation of or commissioning work on the actuator or valve.

See section "Qualified technicians".

All persons using the actuators must have read and understood the descriptions on the technical data sheet.

Before removing the actuator cover, the actuator is to be safely disconnected from the mains.

When work is being carried out on the valves, the pipeline is to be depressurized and blocked before beginning work.

Work may only be started when the medium has cooled down to the point that burning/scalding cannot occur.

Meanings of symbols in the technical data sheet:



Danger

Warning of dangerous electric voltage



Danger

Warning of general hazard



Caution

General warning, note must be observed



Note

Additional note to be observed

Danger Means that non-observance could lead to life-threatening danger, serious bodily injury or major material damage.

Caution Means that non-observance could risk injury or material damage.

Note Means that the information requires special attention.

Qualified technicians

Qualified technicians in the context of the technical data sheet are persons who are familiar with the described devices and have the necessary qualifications for their job.

This includes, for example:

- Authorization to connect the units in accordance with VDE regulations and the local energy supply company regulations, as well as authorization for switching on, off and enabling devices under observance of in-house regulations
- Knowledge of accident prevention regulations
- Knowledge of the use of devices within the system
- etc.

MF1000Y/MF1000YS/MF1000YZ emergency actuator

Application

The MF1000Y, MF1000YS, and MF1000YZ emergency actuators, with a thrust of 1000 N, provide for fine stroke adjustment of the two-way valves RB15..50-BK, RF15..50-BF, RF65K-BF, RK15..50-BF, RK65K-BF, RFH15..25, RGD15..40, and RGDE25..50 as well as three-way valves RB15..50, RF15..50, RF65K, RK15..50, RK65K, and RWG15..40.

The emergency actuators are controlled with a control signal Y DC 0 to 10 V. The emergency actuators have an emergency function, which uses spring force to automatically open or close valves when the power supply is interrupted.

Types

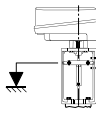
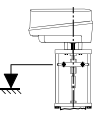
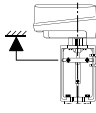
- MF1000Y AC 24 V emergency actuator with DC 0 to 10 V continuous control
Standard version for district heating valve RFH.. and two-way valve RGD..
Emergency function: RFH/RGD closed without power 
- MF1000YS AC 24 V emergency actuator with DC 0 to 10 V continuous control
Standard version for two-way valve with pressure-relieved cone RGDE..
Emergency function: closed without power 
- MF1000YZ AC 24 V emergency actuator with DC 0 to 10 V continuous control
Standard version for two-way and three-way valves RB../RF../RK.. and for three-way valve RWG..
Emergency function: Valve gates A → AB closed without power 



Fig. MF1000Y/MF1000YZ

Technical data

- Mark of conformity DIN mark of conformity, registration number 1F15601 only when unit is delivered with district heating valves RFH15..25, two-way valves RGD15..40, RGDE25..50, and three-way valves RWG15..40
- Mains power supply AC 24V ± 20%, 50/60 Hz; 7.5 VA
- Control Continuous with control signal Y DC 0 to 10 V, 0.1 mA, Working range DC 0.5 to 10 V, invertible actuating direction
- Actuating stroke 20 mm maximum actuating stroke, Adjustment to the actuating stroke of the valves through adaptation
- Positioning time 150 s for 100% valve stroke (adjustable positioning time default set at 70 s)
- Emergency positioning time Approx. 1.7 s/mm actuating stroke
- Thrust ≥ 1000 N
- Stroke indication Self-adjusting position marks on the actuator console
- Position indicator Bridge within the position marks and position feedback: DC 0.5 to 10 V, 0.5 mA for 0 to 100% actuating stroke, invertible
- Manual adjustment Only for commissioning when the unit is disconnected from the power supply with the hexagon key under the cover.
- Ambient temp. 0 to 50°C
- Degree of protection IP54
- Maintenance Maintenance-free
- Weight MF1000Y, MF1000YZ: 2.1 kg, MF1000YS: 2.7 kg

Note
The emergency actuator does not have a DIN mark of conformity if it was not delivered with the district heating valve RFH, two-way valve RGD/RGDE, or three-way valve RWG.

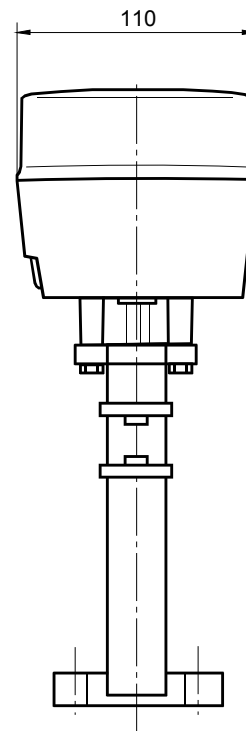
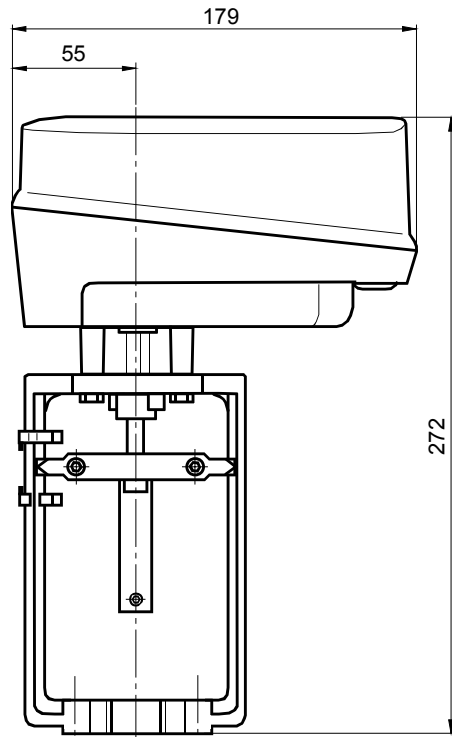
Device description

MF1000Y/MF1000YS/MF1000YZ emergency actuator
with RFH district heating valve or two-way/three-way valve RK/RB/RF/RGD/RGDE/RWG

MF1000Y/MF1000YS/MF1000YZ emergency actuator

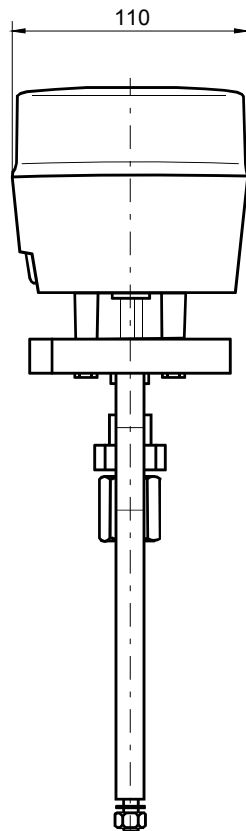
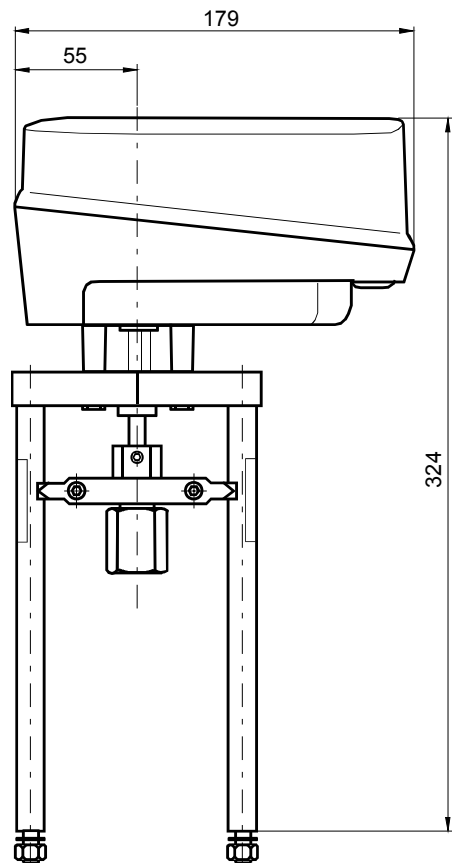
Dimensions

MF1000Y/MF1000YZ



Approx. 200 mm
free space needed
for removing cover

MF1000YS



Approx. 200 mm
free space needed
for removing cover

MF1000Y/MF1000YS/MF1000YZ emergency actuator

Installation



Electrical installation and unit connection may only be carried out by qualified technicians.
The switch cabinet can be connected only when the voltage is disconnected from the switch cabinet.

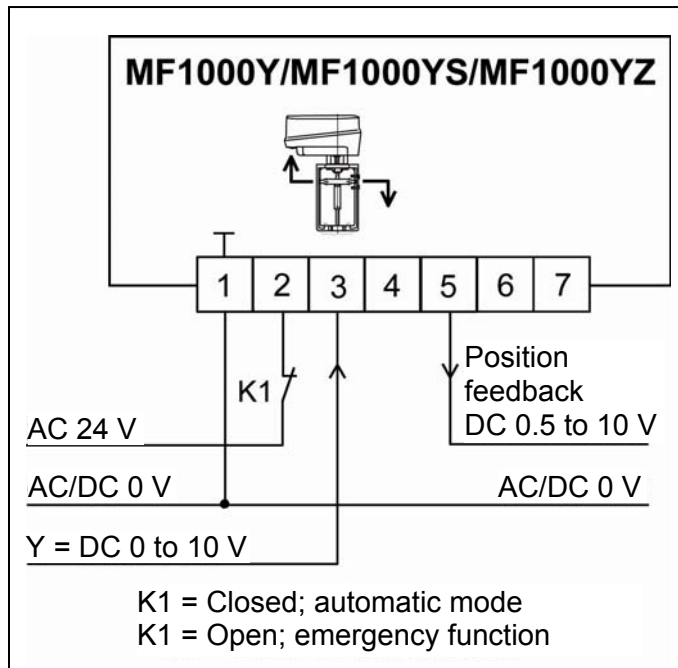


Caution The emergency function of the MF1000Y/MF1000YS/MF1000YZ actuator automatically closes the valve using high spring force when the power supply is interrupted.

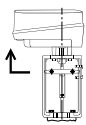
Be sure to comply with local wiring regulations for electric installation.

The device is connected according to the legally binding wiring diagram.

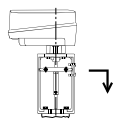
Connection



Actuating directions



District heating valve RFH.. and
Two-way valves RGD/RGDE.: open
Two-way valves
RK..-BF, RB..-BK, RF..-BF: close
Three-way valves
RK/RB/RF/RWG...: Gate A: closes
Gate B: opens



District heating valve RFH.. and
Two-way valve RGD/RGDE.: close
Two-way valves
RK..-BF, RB..-BK, RF..-BF: open
Three-way valves
RK/RB/RF/RWG...: Gate A: opens
Gate B: closes

Actuating direction and position feedback are invertible during commissioning.
See double switch S3 in the functional components section.