

Butterfly Valves

| CODE | DN | Kvs [m ³ /h] |
|--------|-----|-------------------------|
| VFA25 | 25 | 26 |
| VFA32 | 32 | 26,5 |
| VFA40 | 40 | 49,6 |
| VFA50 | 50 | 116 |
| VFA65 | 65 | 259 |
| VFA80 | 80 | 377 |
| VFA100 | 100 | 763 |
| VFA125 | 125 | 1030 |
| VFA150 | 150 | 1790 |
| VFA200 | 200 | 3460 |



APPLICATION AND USE

VFA series butterfly motorized valves are used in heating, refrigerating, hydraulic plants for fluids belonging to group 2 according to the article 13 of 2014/68/UE directive (PED), therefore, they cannot be used as safety valves.

Group 2 regards water, overheated water, steam. For different fluids belonging to group 2, please contact our Sales Support.

In particular, when actuated by MDA2./5., they can be employed in boiler sequence programming systems.

VFA valves can also be actuated by MDL actuators with AF24 linkage for MDL.4 (20 Nm) for valve up to DN100 or AF25 for MDL.6 (30 Nm) for valves DN125÷200. Please refer to MDL data sheet for further information about these actuators.

VALVE MANUFACTURING CHARACTERISTICS

They consist of valve body, linkage kit for MDA2./5. actuator assembly, Manual knob with position indicator. If the valve has to be mounted on other manufacturer actuators, it is advisable to realise a specific linkage.

VALVE TECHNICAL CHARACTERISTICS

| CHARACTERISTIC | DESCRIPTION |
|-----------------------|---|
| Construction | PN16 (it is also possible to connect to VFA valves with PN6 and PN10 flanges) |
| Valve body | Nodular iron (EN-JS1030) |
| Disk | 1.4581 (DN25-80), EN-JS1030 (DN100-200) |
| Butterfly shaft | O-Ring |
| Seat | EPDM |
| Fluid | Water or water-glycol (50% max) |
| Max fluid temperature | -10°C to 100°C |
| Sealing leakage test | DIN EN 12266-1 Leakage rate A (Tight close-off) DIN 3230 T3 Leakage rate 1 |
| Connections | Flanges |

Valves are supplied already fitted with coupling elements for MDA2./4./5. actuators.

ATTENTION: If the valves are assembled with MVB+spacer (MVBHT) the max. operating temperature is 140 °C, while without spacer is 120 °C.

The performances stated in this sheet can be modified without any prior notice.

MDA2./4./5. ACTUATORS TECHNICAL CHARACTERISTICS

| Model | Torque [Nm] | Angular stroke | Timing [s] | Power supply | VALVE |
|-------|-------------|----------------|------------|-------------------|---------------|
| MDA22 | 20 | 90° | 90 | 230 V 50/60 Hz | VFA DN25÷100 |
| MDA24 | 40 | | 150 | | VFA DN125÷200 |
| MDA42 | 20 | | 24 Vac/dc | 90 | VFA DN25÷100 |
| MDA44 | 40 | | | 150 | VFA DN125÷200 |
| MDA52 | 20 | | | 90 | VFA DN25÷100 |
| MDA54 | 40 | | | 150 | VFA DN125÷200 |

| CHARACTERISTIC | MDA22 | MDA24 | MDA42 | MDA44 | MDA52 | MDA54 |
|------------------|---|-------|-------|--------------|-------|-------|
| Protection | DIN 40050 IP54 | | | | | |
| Control signal | Floating | | | Proportional | | |
| Timing [s] | 90 | 150 | 90 | 150 | 90 | 150 |
| Shaft | D 4 with 11 key (DN25÷100), 17 key (DN125÷200) | | | | | |
| Carter | Die-cast aluminium | | | | | |
| Case | Anti-shock plastic material | | | | | |
| Room temperature | Operating -30°C to 50°C, Storage -40°C to 80°C | | | | | |
| Terminal boards | Screw-type for 1,5 to 2,5 mm ² sectionwires | | | | | |
| Compliance | EMC 89/336 directive according to EN 50081-1 for emission and EN 50082-1 for immunity | | | | | |
| | LVD | | | - | | |

INSTALLATION

VFA butterfly valves can be installed in any position, ensuring that the actuator is oriented so as to avoid direct exposure of the hot air current coming from pipes. The valve body must be locked between the flanges of the piping by bolts or ties. Leave a 30 cm room in order to allow the disassembling of the actuator from the valve for maintenance operations. Avoid the valve installation in plants which are considered aggressive and/or corrosive for valve materials. Please contact our Sales Support in order to determine which potentially aggressive or polluting substances can be used. We disclaim all responsibility in case of valve failure due to external fortuitous events (fire, earthquakes etc.).

ACCESSORIES

AF24 Linkage kit for MDLx4 (20 Nm) only for DN25÷100

AF25 Linkage kit for MDLx6 (30 Nm) only for DN125÷200

The valve with MDL actuator assembled has the following code: actuator part number (ex. MDL24 + AF24) + MDLAV.

MDAV1 MDA-VFA assembling

MDAV2 MDA-Micro DMDA assembling

The valve with actuator assembled has the following code: actuator part number (ex. MDA22) + MDAV1.

AUXILIARY CIRCUIT

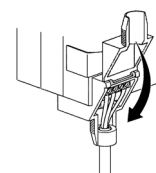
DMDA 2 SPST microswitches (S2A): 1 NO (closes with valve completely open) and 1 NC (opens with valve completely closed) 5(1)A - 24 V~

This circuit is mounted in our factory only, therefore, it cannot be supplied as a spare part.

The products with DMDA micro assembled have the following codes: actuator part number (ex. MDA22) + DMDA + MDAV2.

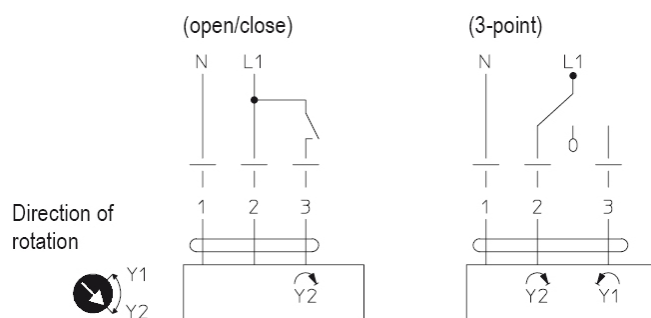
ELECTRIC CONNECTIONS

Unscrew the fixing nut of the conduit and raise the upper part; route the cables into the gasket supplied and make the connections with the terminal boards (see illustration).

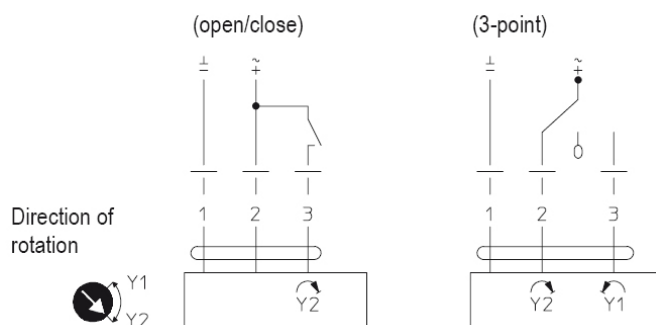


WIRING DIAGRAM

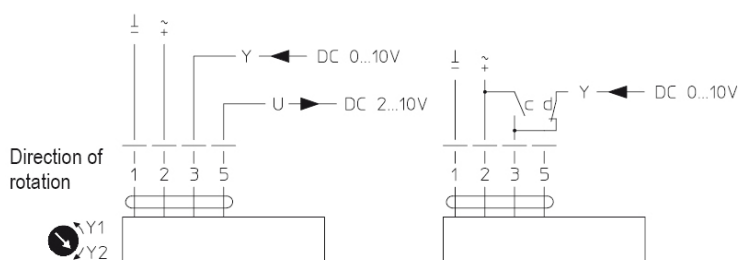
MDA22/24 - 230V - 50/60Hz



MDA42/44 - 24Vac/dc



MDA52/54 - 24Vac/dc (proportional)



CONSUMPTION VALUES

| DESCRIPTION | MDA22 | MDA24 | MDA42 | MDA44 | MDA52 | MDA54 |
|--------------------------------|-------|-------|-------|-------|-------|-------|
| Operating (nominal torque) [W] | 2,5 | 4 | 2 | 4,5 | 4 | 4,5 |
| Holding [W] | 0,4 | 2 | 0,2 | 2 | 1,25 | 1,5 |
| Transformer Dimensioning [VA] | 6 | 7 | 4 | 7 | 6 | 7 |

MAX. DIFFERENTIAL PRESSURE [kPa]

| VALVE | ACTUATOR | Δp |
|------------------|----------------------|------------|
| VFA DN 25 ÷ 100 | MDA22/42/52 MDL.4 | 600 |
| VFA DN125 | MDA24/44/54 MDL.6 | 600 |
| VFA DN 150 ÷ 200 | | 300 |

DIMENSIONS [mm]

| DN | H1 | P1 | P2 | P3 | E | L | Weight VFA (Kg) |
|-----|-----|-----|-----|-----|-----|----|-----------------|
| 25 | 212 | 70* | 142 | 95 | 58 | 33 | 1,4 |
| 32 | 212 | | | | 58 | 33 | 1,4 |
| 40 | 218 | | | | 66 | 33 | 1,6 |
| 50 | 224 | | | | 69 | 43 | 2 |
| 65 | 234 | | | | 81 | 46 | 2,6 |
| 80 | 242 | | | | 100 | 46 | 3,2 |
| 100 | 263 | | | | 109 | 52 | 4 |
| 125 | 293 | 69 | 166 | 134 | 124 | 56 | 4,6 |
| 150 | 309 | | | | 140 | 56 | 8,6 |
| 200 | 343 | | | | 167 | 60 | 12,6 |

