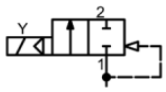
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# 2/2-Way solenoid valve - combined-operated Series 21HF






normally closed

| | |
|---|---|
| Design type | 2/2-way solenoid valve with diaphragm seal-off, combined-operated, normally closed |
| Connection | G11/4"...G11/2" according to ISO228/1 |
| Materials | Body Brass, Internal parts brass and stainless steel similar to 1.4104, Seals FKM, EPDM or NBR |
| Mounting type | Installation in rigid piping system |
| Mounting position | preferably with upright electrical part |
| Application range | gaseous and liquid media that do not attack the materials used |
| Viscosity | max. 12mm $^2$ /s (cst) |
| Switching time | depending on operating pressure, medium and nominal diameter |
| Medium temperature | depending on the sealing material and Solenoid coil |
| Ambient temperature | see table "Solenoid coils" |

## Electrical data:

| | |
|---|---|
| Coil type | Type BDA, Connector width 32mm (Standard coil)<br>Type BDV, Connector width 32mm (Coil for humid environment)<br>Type GDH/GDV, Connector width 32mm (DC coil, Coil for humid environment) |
| Electrical connection | connector according to EN175301-803 Form A (see separate data sheet) |
| Voltage type | AC and DC voltage |
| Standard voltage | 230V/50-60Hz, 24V/50-60Hz, 24VDC |
| Special voltages | on request |
| Permissible voltage fluctuation | AC +10%/-15%  DC +10%/-5% |
| Power consumption | see table "Power consumption of the solenoid coils" |
| Duty cycle | 100% duty cycle (continuous operation) |
| Degree of protection | IP65 according to EN 60529 with correctly mounted device connector (protection against dust ingress and water jets) |
| Application note | When ordering, please specify voltage and type of current. We always recommend installing a strainer upstream to prevent malfunctions in the event of contamination of the medium. These valves can also be used for rough vacuum applications. |



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## Type code

| | 21HF | 7 | K0 | B | 350 | - | BDA | - | 230V/50-60Hz |
|---|---|---|---|---|---|---|---|---|---|
| | G11/4" | 7 | | | | | | | |
| **Connection** | G11/2" | 8 | | | | | | | |
| | | | | | | | | | |
| | NBR | | | B | | | | | |
| | EPDM | | | E | | | | | |
| **Seal** | FKM | | | V | | | | | |
| | 35mm | | | | 350 | | | | |
| **Nominal size** | 40mm | | | | 400 | | | | |
| | | | | | | | | | |
| | BDA Standard coil - Approval CE | | | | | | BDA | | |
| | BDV Coil for humid environment - Approval CE-CSA-UL-VDE | | | | | | BDV | | |
| | GDV Coil for higher pressures - Coil for humid environment - Approval CE-CSA-UL-VDE | | | | | | GDV | | |
| **Coil** | GDH Coil for higher pressures - Coil for humid environment - Approval CE | | | | | | GDH | | |
| | | | | | | | | | |
| | 230V/50-60Hz | | | | | | | | 230V/50-60Hz |
| | 24V/50-60Hz | | | | | | | | 24V/50-60Hz |
| **Voltage** | 24VDC | | | | | | | | 24VDC |

## Possible applications of the individual sealing materials

| Material | Medium temperature | Application examples |
|---|---|---|
| NBR | -10...+90°C | Air, Water, neutral gases and liquids |
| EPDM | -10...+140°C | Hot water, Steam, Oxygen |
| FKM | -10...+140°C | Oils, Gasoline, Diesel |

## Solenoid coil

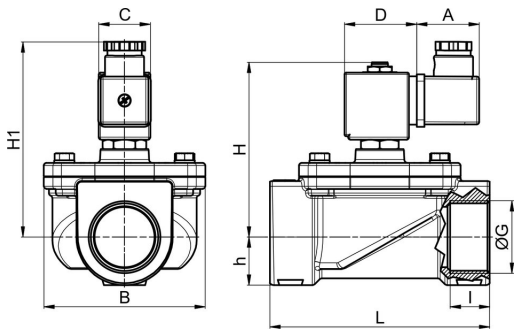
| Type | Degree of protection | Insert | Ambient temperature | Approvals |
|---|---|---|---|---|
| BDA | IP65 | Medium temperature up to max. 120°C | -10...+40°C | CE |
| BDV | IP65 | Medium temperature up to max. 160°C, high humidity | -20...+60°C | CE-CSA-UL-VDE |
| GDH | IP65 | Medium temperature up to max. 180°C, high humidity | -20...+40°C | CE |
| GDV | IP65 | Medium temperature up to max. 180°C, high humidity | -20...+60°C | CE-CSA-UL-VDE |


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## Power consumption of the solenoid coils

| Voltage | Tightening torque (Alternating current) VA | Holding force (Alternating current) VA | Holding force (Direct current) operating temperature W | Type |
|---|---|---|---|---|
| 12VDC | - | - | 8 | BDA08012CS |
| 24V/50-60Hz | 25 | 14,5 | - | BDA08024DS |
| 24VDC | - | - | 8 | BDA08024CS |
| 42V/50Hz | 25 | 14,5 | - | BDA08042AS |
| 48V/50Hz | 25 | 14,5 | - | BDA08048AS |
| 110VDC | - | - | 8 | BDA08110CS |
| 110V/50-60Hz | 25 | 14,5 | - | BDA08110DS |
| 115V/60Hz | 25 | 14,5 | - | BDA08115BS |
| 220-230V/50-60Hz | 25 | 14,5 | - | BDA08223DS |
| 380V/50-60Hz | 25 | 14,5 | - | BDA08380DS |
| 24VDC | - | - | 11 | BDV08024CY |
| 24V/50-60Hz | 25 | 17 | - | BDV08024DY |
| 110V/50Hz 120V/60Hz | 25 | 15 | - | BDV080110AY |
| 230V/50Hz 240V/60Hz | 25 | 16 | - | BDV08230AY |
| 12VDC | - | - | 14 | GDH14012CS |
| 48VDC | - | - | 14 | GDH14048CS |
| 220VDC | - | - | 14 | GDH14220CS |
| 24VDC | - | - | 14 | GDV14024CY |
| 24V/50-60Hz | 43 | 26 | - | GDV14024DY |
| 230V/50Hz 240V/60Hz | 43 | 27 | - | GDV14230AY |
| 110V/50Hz 120V/60Hz | 43 | 23 | - | GDV14110AY |

## Dimensions




| Connection G | Nominal size DN[mm] | Pressure range [bar] | | A | B | C | D | H | H1 | h | I | L | Kv value [m³/h Water] | Coil | Weight [approx. kg] | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AC | DC | | | | | | | | | | | | | |
| G11/4" | 35 | 0 - 16 | - | 36 | 94 | 30 | 42 | 130 | 142 | 27 | 21 | 128 | 16,2 | BD. | 2,45 | 21HF7K0B350 |
| G11/4" | 35 | 0 - 16 | 6 | 36 | 94 | 52 | 55 | 130 | 142 | 27 | 21 | 128 | 16,2 | GD. | 2,75 | 21HF7K0B350 |
| G11/2" | 40 | 0 - 16 | - | 36 | 94 | 30 | 42 | 130 | 142 | 27 | 21 | 128 | 16,8 | BD. | 2,25 | 21HF8K0V400 |
| G11/2" | 40 | 0 - 16 | 6 | 36 | 94 | 52 | 55 | 130 | 142 | 27 | 21 | 128 | 16,8 | GD. | 2,55 | 21HF8K0V400 |

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