

## 84660/84670/84680/84690 3/2-way valves

- Port size: DN 1,6 and 3
- Compact design
- Complete with connector and gasket
- Solenoid interchangeable without tools (Click-on®)
- Noiseless exhaust
- Low power consumption
- International approvals

Click-on®



### Technical features

**Medium:**  
Filtered, lubricated  
resp. non-lubricated air or  
neutral liquid fluids

**Switching function:**  
Normally closed

**Operation:**  
Indirectly solenoid actuated

**Mounting:**  
Optional, preferably solenoid  
vertical on top

**Flow direction:**  
Determined

**Port size:**  
DN 1,6, DN 3

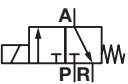
**Operating pressure:**  
1 ... 10 bar (14,5 ... 145 psi)

**Fluid temperature:**  
–10 ... +60°C (+14 ... +140°F)

**Ambient temperature:**  
–10 ... +60°C (+14 ... +140°F)

**Material:**  
Body: Aluminium  
Seat seal: TPU  
Internal parts: Stainless steel, PPS

### Technical data – standard models

| Symbol                                                                              | Orifice | Port size  |            |         | Flow *2) | Operating pressure | Switching time *3) |      | Weight | Model              | Model              |
|-------------------------------------------------------------------------------------|---------|------------|------------|---------|----------|--------------------|--------------------|------|--------|--------------------|--------------------|
|                                                                                     | (mm)    | Internal P | External R | A       |          |                    | On                 | Off  |        | Solenoid in V d.c. | Solenoid in V a.c. |
|  | 1,6     | G1/4       | *1)        | G1/4    | 1,2      | 1 ... 10           | 8,5                | 30,4 | 0,47   | 8466000.9101.xxxxx | 8466000.9101.xxxxx |
|                                                                                     | 1,6     | 1/4 NPT    | *1)        | 1/4 NPT | 1,2      | 1 ... 10           | 8,5                | 30,4 | 0,47   | 8467000.9101.xxxxx | 8467000.9101.xxxxx |
|                                                                                     | 3       | G1/4       | *1)        | G1/4    | 3,3      | 1 ... 10           | 15                 | 81,9 | 0,45   | 8468000.9151.xxxxx | 8468000.9151.xxxxx |
|                                                                                     | 3       | 1/4 NPT    | *1)        | 1/4 NPT | 3,2      | 1 ... 10           | 15                 | 81,9 | 0,45   | 8469000.9151.xxxxx | 8469000.9151.xxxxx |

xxxxx Please insert voltage and frequency codes

\*1) Noiseless exhaust

\*2) Cv-value (US) ≈ kv-value x 1,2

\*3) At 6 bar acc. to DIN VDI 3290 with solenoid in d.c

### Option selector

| Thread form/Port size              | Substitute |
|------------------------------------|------------|
| ISO G (DN 1,6)                     | 6          |
| NPT (DN 1,6)                       | 7          |
| ISO G (DN 3)                       | 8          |
| NPT (DN 3)                         | 9          |
| Valve options                      | Substitute |
| Manual override                    | 02         |
| Connection P female thread<br>G1/8 | 53         |
| Connection A male thread<br>G1/8   |            |

846★0★★★.★★★.★★★

|                           |                   |
|---------------------------|-------------------|
| <b>Frequency</b>          | <b>Substitute</b> |
| See table frequency codes | xx                |
| <b>Voltage</b>            | <b>Substitute</b> |
| See table voltage codes   | xxx               |
| <b>Solenoid options</b>   | <b>Substitute</b> |
| DN 16                     | 9101 *5)          |
| DN 3                      | 9151              |

## Standard solenoid systems

| Voltage and Frequency Solenoid 9101 *5) |           |            |           |                   |         |
|-----------------------------------------|-----------|------------|-----------|-------------------|---------|
| Code                                    | Code      | Voltage    | Frequency | Power consumption |         |
| Voltage                                 | Frequency |            |           | Inrush            | Holding |
| 024                                     | 00        | 24 V d.c.  | -         | 8 W               | 8 W     |
| 024                                     | 50        | 24 V a.c.  | 50 Hz     | 15 VA             | 12 VA   |
| 110                                     | 50        | 110 V a.c. | 50 Hz     | 15 VA             | 12 VA   |
| 120                                     | 60        | 120 V a.c. | 60 Hz     | 15 VA             | 12 VA   |
| 230                                     | 50        | 230 V a.c. | 50 Hz     | 15 VA             | 12 VA   |
| Voltage and Frequency Solenoid 9151 *4) |           |            |           |                   |         |
| 024                                     | 00        | 24 V d.c.  | -         | 18 W              | 18 W    |
| 024                                     | 50        | 24 V a.c.  | 50 Hz     | 45 VA             | 35 VA   |
| 110                                     | 50        | 110 V a.c. | 50 Hz     | 45 VA             | 35 VA   |
| 120                                     | 60        | 120 V a.c. | 60 Hz     | 45 VA             | 35 VA   |
| 230                                     | 50        | 230 V a.c. | 50 Hz     | 45 VA             | 35 VA   |



\*4) C<sup>®</sup> US only

\*5) The solenoid 9101 has no longer CSA-approval. The UL approval is in preparation. If you have any questions, please contact directly the sales department +49 (0) 5731/791-0.

**Further versions on request!**

## Electrical details for all solenoid systems

|                  |                                             |
|------------------|---------------------------------------------|
| Design           | DIN VDE 0580                                |
| Voltage range    | ±10%                                        |
| Duty cycle       | 100% ED                                     |
| Protection class | EN 60529 IP65                               |
| Socket           | Form A acc. to DIN EN 175301-803 (included) |

According to DIN VDE 0580 at a solenoid temperature of +20°C.  
At operating state temperature the input power of a coil decreases by  
up to ca. 30% due to physical reasons.

### Additional solenoid systems for hazardous areas

| ATEX category  | ATEX protection class                         | IP protection class | Solenoid | Standard voltages                   |
|----------------|-----------------------------------------------|---------------------|----------|-------------------------------------|
| II 2G<br>II 2D | Ex eb mb IIC T4 Gb<br>Ex mb tb IIIB T125°C Db | IP66                | 6106     | 24 V d.c., 110 V a.c.<br>230 V a.c. |
| II 2G<br>II 2D | Ex eb mb IIC T3 Gb<br>Ex mb tb IIIB T140°C Db | IP66                | 6120     | 24 V d.c., 110 V a.c.<br>230 V a.c. |
| II 3G<br>II 3D | Ex ec IIC T4 Gc<br>Ex tc IIIC T130°C Dc       | IP65                | 9116     | 24 V d.c., 110 V a.c.<br>230 V a.c. |
| II 3G<br>II 3D | Ex ec IIC T4 Gc<br>Ex tc IIIC T130°C Dc       | IP65                | 9176     | 24 V d.c., 110 V a.c.<br>230 V a.c. |

### Attention!

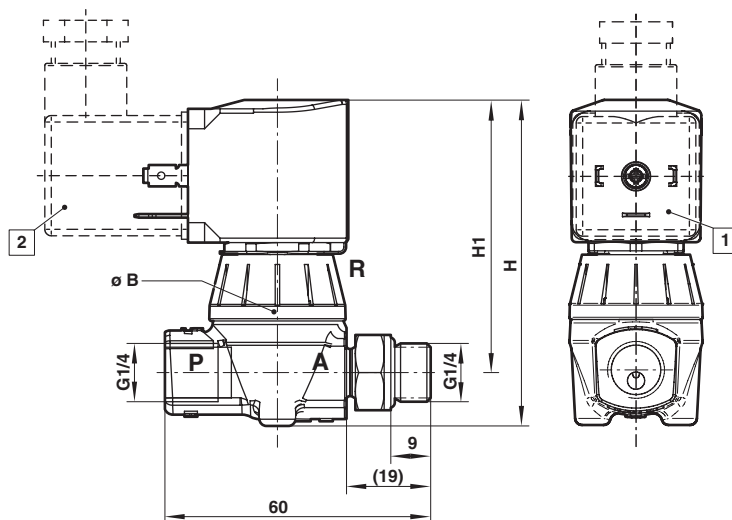
The conditions imposed on the Ex approvals lead to reduction of the permissible standard temperature ranges in the cases of explosion protected solenoids.

## Dimensions

DN 1,6 ... 3

Dimensions in mm

Projection/first angle



- 1 Solenoid rotatable 360°
- 2 Socket turnable 4 x 90°  
(Socket included)

| Orifice (mm) | ø B | H    | H1   | Model              |
|--------------|-----|------|------|--------------------|
| 1,6          | 31  | 73,6 | 61,5 | 8466000.9101.xxxxx |
| 1,6          | 31  | 73,6 | 61,5 | 8467000.9101.xxxxx |
| 3            | 31  | 91   | 79   | 8468000.9151.xxxxx |
| 3            | 31  | 91   | 79   | 8469000.9151.xxxxx |

### Note to Pressure Equipment Directive (PED):

The valves of this series are according to Art. 4 § 3 of the Pressure Equipment Directive (PED) 2014/68/EU. This means interpretation and production are in accordance to engineers practice wellknown in the member countries. The CE-sign at the valve does not refer to the PED. Thus the declaration of conformity is not longer applicable for this directive.

### Note to Electromagnetic Compatibility Guideline (EEC):

The valves shall be provided with an electrical circuit which ensures the limits of the harmonised standards EN 61000-6-3 and EN 61000-6-1 are observed, and hence the requirements of the Electromagnetic Compatibility Guideline (2014/30/EU) satisfied.