

## 90° pneumatic actuators and accessories

### NAMUR solenoid valve for pneumatic actuators

**Model 50811** Monostable

**Model 50813** Bistable



#### Specifications

**Connection:** NAMUR 1/4"

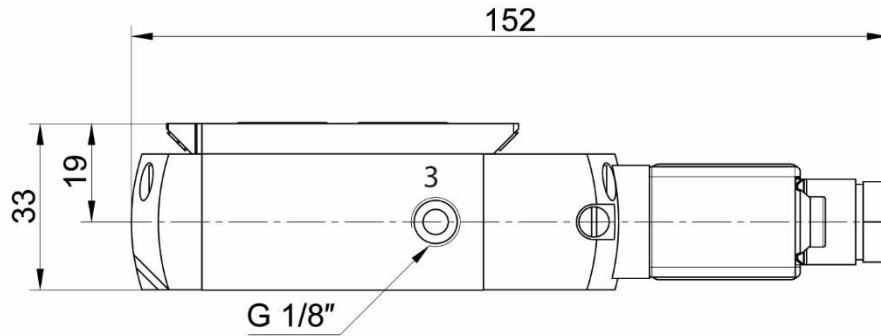
**Usage pressure:** 2 to 10 bar

**Temperature:** -25°C to +60°C

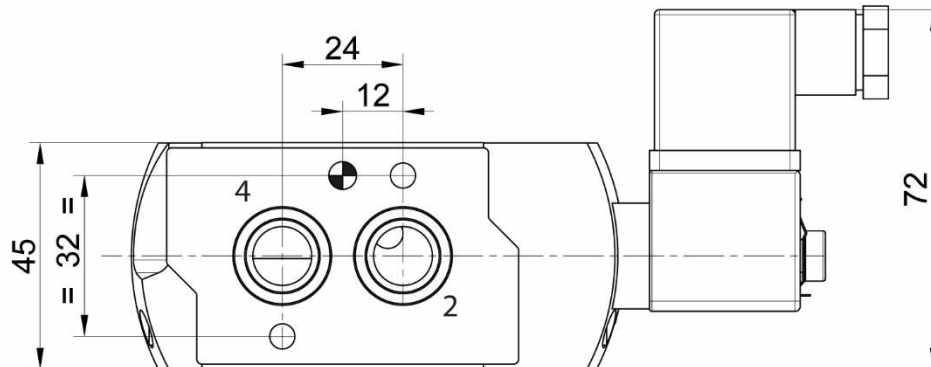


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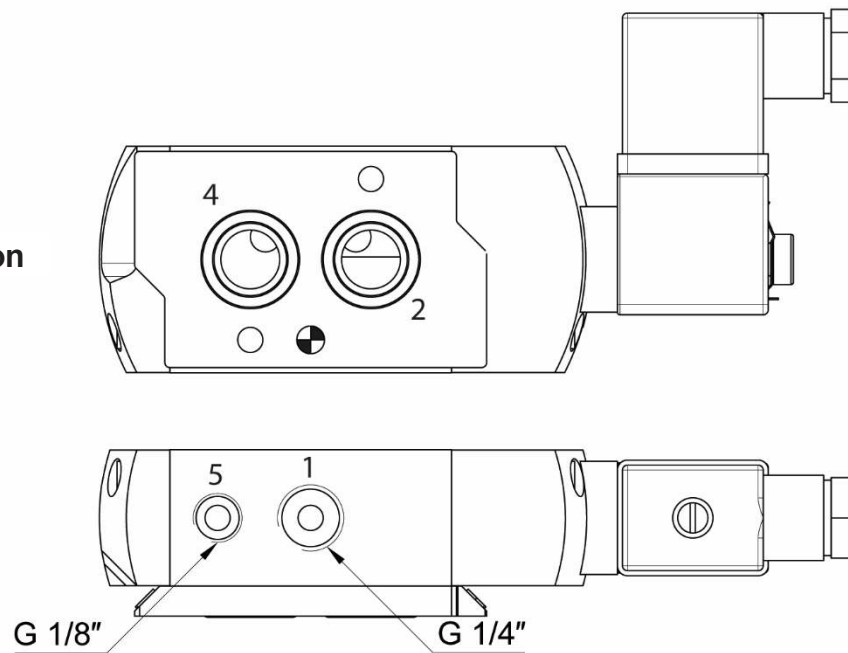
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3/2-way function



5/2-way function

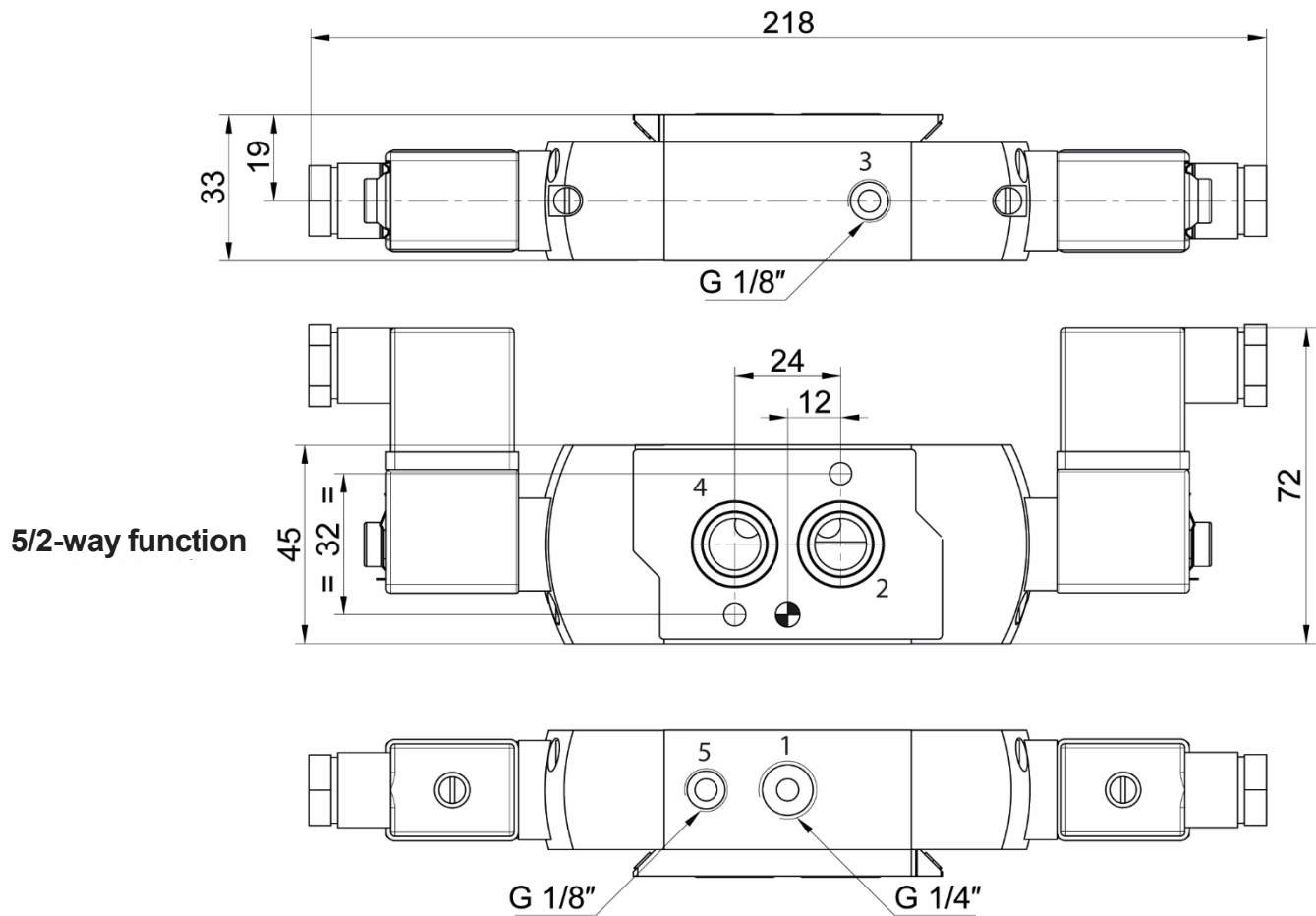


Part Name	Direct current part number	Alternating current part number
IP65 monostable 3/2 and 5/2-way with 24V coil	750811-24CC	750811-24CA
IP65 monostable 3/2 and 5/2-way with 48V coil	750811-48CC	750811-48CA
IP65 monostable 3/2 and 5/2-way with 110V coil	750811-110CC	750811-110CA
IP65 monostable 3/2 and 5/2-way with 220V coil	-	750811-220CA

Connection Ø (inches)	Passage Ø (mm)	Flow coefficient Kv (m3/h)	Allowed differential pressure (bar)	
			Min.	Max.
1/4	6	0.60	2	10

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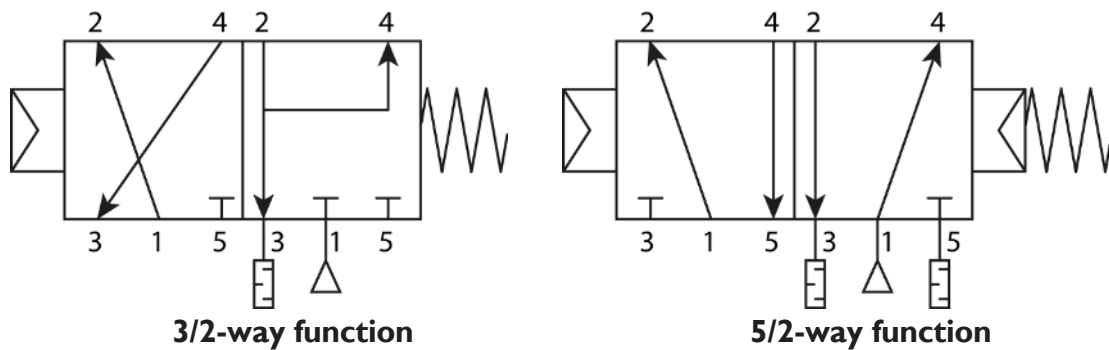
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5/2-way function

Part Name	Direct current part number	Alternating current part number
IP65 bistable 5/2-way with 24V coils	750813-24CC	750813-24CA
IP65 bistable 5/2-way with 48V coils	750813-48CC	750813-48CA
IP65 bistable 5/2-way with 110V coils	750813-110CC	750813-110CA
IP65 bistable 5/2-way with 220V coils	-	750813-220CA

Connection Ø (inches)	Passage Ø (mm)	Flow coefficient Kv (m <sup>3</sup> /h)	Allowed differential pressure (bar)	
			Min.	Max.
1/4	6	0.60	2	10



The solenoid valve can be use with 3/2-way or 5/2-way functions:

- With the position indicator at the top: 3/2-way function
- With the position indicator at the bottom: 5/2-way function

Female threaded port **1**: Air supply input G1/4"

Port **2**: Direct actuator mounting

Female threaded port **3**: Air outlet G1/8"

Port **4**: Direct actuator mounting

Female threaded port **5**: Air outlet G1/8"

## Installation

You can install the solenoid valve in any position.

Check that there is enough space to carry out maintenance operations where you are planning to install the solenoid valve. Check that the installation is clean and free from foreign bodies that could damage the solenoid valve.

Before you assemble the solenoid valve on the actuator, adapt the device to the function you require:

- Take the interface plate that corresponds to the function you need: 3/2-way NC or 5/2-way.
- Check that the form-fitting gasket is present and is correctly put into place
- Assemble the plate under the solenoid valve using the two screws that are supplied.  
Make sure you assemble it the right way round: the function marker must be placed on the same side as the position indicator

### How to install a solenoid valve:

You must not use the solenoid valve's body when you are tightening the assembly (this could damage the solenoid valve). Use a gasket that is suitable for the working conditions to make sure the solenoid valve's threaded connections are sealed correctly.

## Electrical connection

Connect the piping according to the function you require, taking into account the valve's port markings and the information in this documentation.



Warning: Electrical wiring must be carried out by qualified personal according to the applicable standards and regulations.

Warning: Before you work on the solenoid valve, turn off the electric power supply to turn off all its component parts.

Depending on the voltage, the electrical components must be earthed according to local standards and regulations.

Most solenoid valves contain coils that allow continuous duty. You could burn yourself if you touch the magnetic head as it can become very hot in normal operation conditions and continuous duty. If the solenoid valve is easy to access you must install a protective cover around the magnetic head.

### IP65 waterproof version, integrated driver:

Adjust the coil on the tube (that can be rotated through 360°), then the Ø 6-8 mm cable plug-in connector, that can be rotated through 180° (3 pins: 2 + earth).

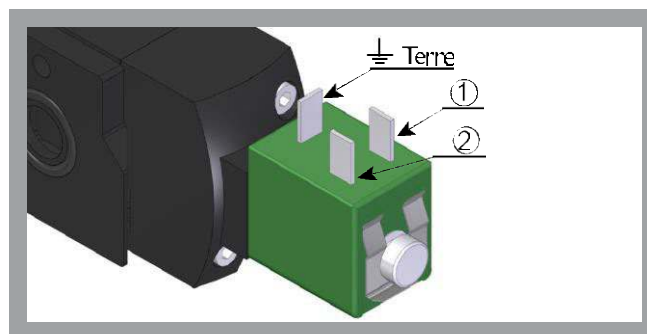
The coil is not polarised.

### Terminal:

 Earth: Connection to earth

① : Phase or neutral

② : Phase or neutral



## Assembly and maintenance instructions

### Pneumatic connection

Connect the piping according to the functions you require, taking into account the instructions in this guide.



Warning: You must not use the valve for leverage when you are tightening it. Do not over tighten the piping connections as this may damage the device.

### Solenoid valve connection:

Connect the piping according to the reference marks shown on its label.

#### **- 3/2-way function NC:**

Pressure inlet through female threaded port **1**. Exhaust out through the port **3**.

Exhaust from the spring return actuator's spring chambers is channelled through the solenoid valve towards the connectible port **3**. You should protect port **5** without blocking it.

#### **- 5/2-way function:**

Pressure inlet through female threaded port **1**. The actuator's exhaust is channelled through the solenoid valve towards the connectible ports **3** and **5**.

### Operating speed adjustment:

#### Connection of exhaust reducers:

Depending on your requirements, solenoid valves can be supplied with or without exhaust breaks with silencers, model **50960** or **50959**. These parts can adapt the actuator's opening/closing speed.

#### **3/2-way function:**

Only the opening speed can be adjusted.

Install the exhaust break with silencer on port **3**. Tighten the adjustment screw until you cannot tighten it any more, then unscrew it until you obtain the speed you need.

#### **5/2-way function:**

##### Opening speed:

Install the exhaust break with silencer on port **5**. Tighten the adjustment screw until you cannot tighten it any more, then unscrew it until you obtain the speed you need.

##### Closing speed:

Install the exhaust break with silencer on port **3**. Tighten the adjustment screw until you cannot tighten it any more, then unscrew it until you obtain the speed you need.

## Maintenance

The maintenance and removal/installation of the solenoid valve must be carried out by personnel who are qualified and trained for this type of intervention.



Warning: Before you carry out any maintenance operations or restart the installation, turn off the solenoid valve's power supply, make sure the installation is not pressurised and purge it to reduce the risk of people being injured or equipment being damaged.

Solenoid valve maintenance depends on the conditions they are used in. Clean the valve periodically if you need to.

### Cleaning:

You must examine all of the solenoid valve's components to check for any excess wear and tear.

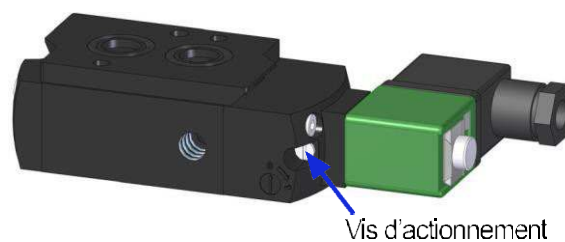
You must clean the solenoid valve if its movements have slowed down, even under the correct driving pressure, or if you hear any strange noises or you find a leak.

### Operating noise:

You can only measure the emitted noise level accurately when you have assembled the component on the installation. The operating noise level will depend on the valve's use, the fluid and the type of equipment.

### Preventative maintenance:

Open and close the solenoid valve at least once a month to check it is opening and closing correctly. You can check the solenoid valve is working correctly by turning the manual operating screw 1/4 turn (90°).



### Trouble-shooting tips:

Incorrect outlet pressure: check the solenoid valve's inlet pressure, this should correspond to the allowed values on its identification label.

Be careful to respect these values: minimum drive pressure 2 bar and maximum drive pressure 10 bar according to the driver type.

Check that the solenoid valve is working correctly before you put it back into operation to reduce the risk of people being injured or equipment being damaged.