ELEPHANT

Manufacturer of shut-off and control valves

TECHNICAL DATA SHEET

Pneumatic valve ELEPHANT 4V320-8/10 AC220V

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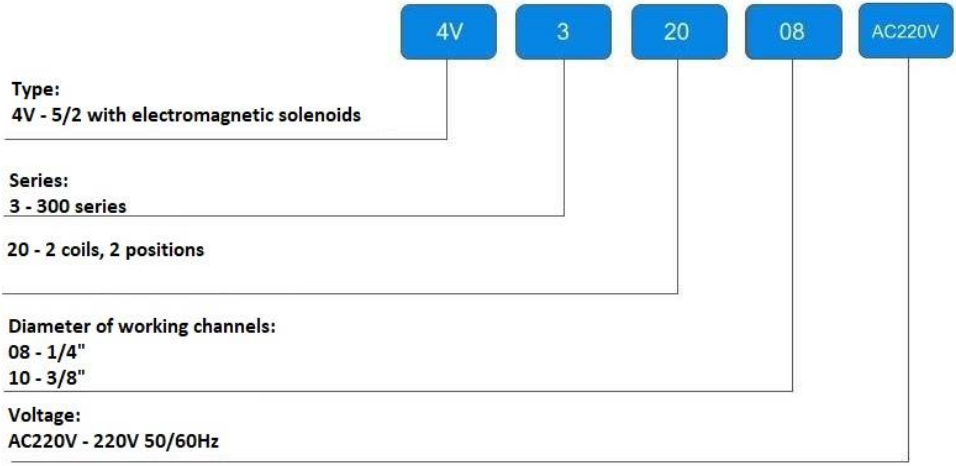
Carrer d'Aragó,264,3-1,08007 Barcelona, Spain

1. GENERAL PRODUCT INFORMATION

1.1. Product name: Pneumatic valve ELEPHANT 4V320-8/10 AC220V with double-sided (electromagnetic control).
1.2. Purpose. Pneumatic distributor is used to change the direction, start, stop the compressed air flow in the pneumatic system depending on the external control action.
1.3 Principle of operation. The control is realized by switching the connection scheme of internal channels of the distributor with inlet and outlet connection openings. External pneumatic lines are understood as air lines and channels for air passage (including holes for connection with atmosphere), connected in certain combinations at different positions of the distributor. The main design elements of a spool pneumatic distributor are a housing in which channels are made and a spool mounted in the housing. The spool has journals that allow connecting selected channels with each other. Moving in the body, the spool changes the connection scheme of the pneumatic distributor channels. Spool valves are better suited for controlling large volumes of energy. The advantage of an electric pneumatic valve is the combination of remote process control, automation, high speed and reliability. In addition, they are much easier to incorporate into a DCS. In most cases, the device can be moved outside the explosion and fire hazardous area where pneumatic actuators are most often used. When moving the core under the influence of control signals that change the magnetic field strength created by the solenoid, the internal channels of the distributor are switched, by means of which the inlet and outlet openings are connected.

1.4. Deciphering of the designation:



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2. BASIC TECHNICAL DATA AND CHARACTERISTICS

Table 1

Type of pneumatic valve	slide valve
Housing material	aluminum alloy and technopolymer
Control	two-way electromagnetic
Operating scheme	5/2
Effective cross-sectional area, mm2	Model 4V320-8 - 25 (Cv = 1.4)
Threads of working ports	Model 4V320-8 - G 1/4”
Exhaust port threads	Model 4V320-8 - G 1/4”
Working pressure, bar	1,5 ÷ 8
Maximum pressure, bar	12
Working medium	purified air
Supply voltage, V	220
Total power, V-A	4,5
Permissible variations of supply voltage	±10%
Degree of protection/insulation class	IP65/F
Температура эксплуатации, °C	-5 to +50
Maximum switching frequency	5 cycles per second
Minimum switching time, s	0,05
Flow capacity, l/min	model 4V320-8 - 1,350
Average life, cycles	20 000 000
Weight, kg	1,200

3. OVERALL AND CONNECTION DIMENSIONS

4V320-8

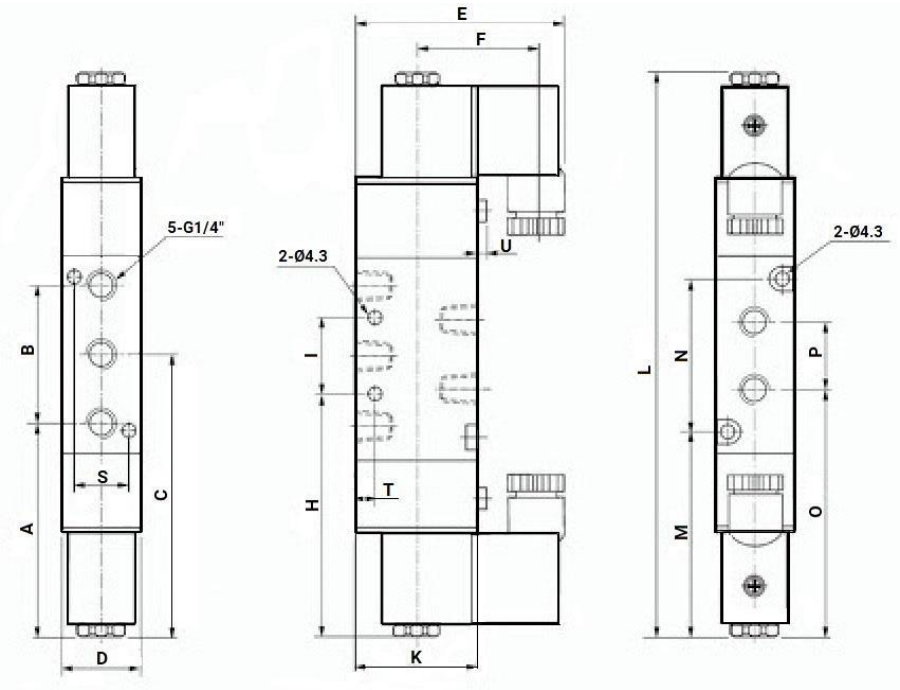

Table 2.1.

A	B	C	D	E	F	H	I	K
mm								
71,9	45	94,4	27	69	40	82,4	24	40

Table 2.2.

L	M	N	O	P	S	T	U
mm							
188,8	69,4	50	83,4	22	20	6,5	2,4

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4V320-10

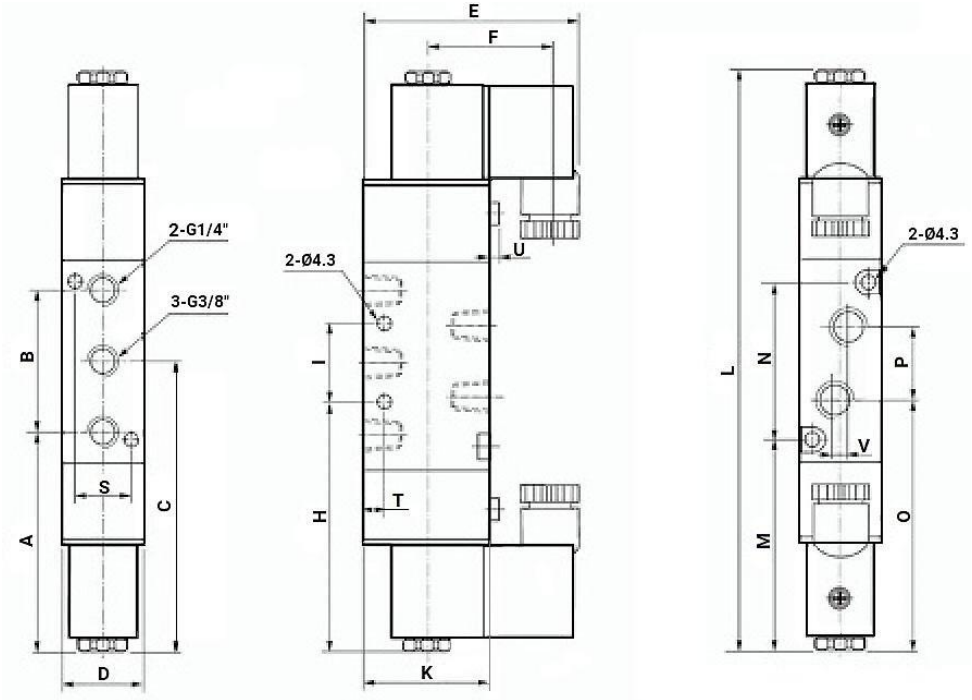


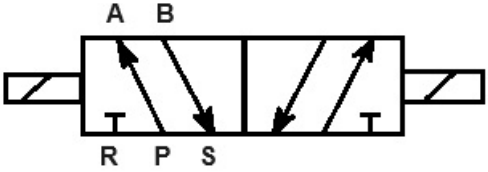
Table 3.1.

A	B	C	D	E	F	H	I	K
mm								
71,9	45	94,4	27	69	40	82,4	24	40

Table 3.2.

L	M	N	O	P	S	T	U	V
mm								
188,8	69,4	50	82,4	24	20	6,5	2,4	4

4. JOB DESCRIPTION



4.1. The pneumatic directional control valve is switched by electric control signals.
4.1 When the signal is applied to the first control input, air is supplied through the supply port P to the working port A, while the working port B is connected to the exhaust port S. When the input signal disappears, the spool remains in the same position.
4.2 When the signal is applied to the second control input, the power supply port P is switched to the working port B, and the working port A is connected to the exhaust port R. When the input signal disappears, the spool remains in the same position.
4.3 It turns out that in the absence of a signal the spool of the pneumatic valve can be either in the left or right position, therefore it is called bistable.

5. INSTALLATION INSTRUCTIONS

5.1. Safety precautions during installation and operation of pneumatic valves must be observed in accordance with the procedure established at the enterprise.
5.2. Personnel who have studied the design of pneumatic valves, safety rules and requirements of this passport are allowed to install, operate and maintain pneumatic valves.
5.3 Before mounting the pneumatic valve it is necessary to inspect the surface and threaded part of the product for absence of burrs, sinks and burrs, as well as other surface defects.
5.4 Connection of the pneumatic valve with the pneumatic actuator is performed by means of pneumatic hoses.

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6. OPERATING INSTRUCTIONS

6.1. When operating the pneumatic valve at low temperatures, it is recommended to install a dehumidifier to prevent freezing of condensation, moisture, etc.
6.2 The pneumatic valve should not be used in places where vibration and/or shock loads are possible.
6.3 In cases when the pneumatic valve is placed on the control panel or it is switched on for a long time, make sure that the ambient air temperature does not exceed the range specified in the technical data of the product.
6.4 In order to regulate the actuator travel speed, throttling is used at the distributor output. Please note that too intensive throttling at the outlet leads to longer travel time of the actuator.

7. TRANSPORTATION AND STORAGE CONDITIONS

7.1. Storage of pneumatic valves should be carried out in accordance with the procedure established at the enterprise.
7.2. Transportation of pneumatic valves is carried out in accordance with the procedure established at the enterprise.

8. UTILIZATION

8.1 The product is disposed of in accordance with the procedure established at the enterprise (remelting, burial, resale).

9. WARRANTY OBLIGATIONS

9.1. Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.
9.2. The warranty applies to equipment installed and used in accordance with the installation instructions and product specifications described in this data sheet.
9.3. The manufacturer guarantees compliance of the product with safety requirements, provided that the consumer complies with the rules of transport, storage, installation and operation.
9.4. The warranty covers all defects caused by the fault of the manufacturer.
9.5. The warranty does not apply:

- parts and materials of the product subject to wear and tear;
- for cases of damage caused by:
    - modifications to the original design of the product;
    - violation of general installation recommendations;
    - faults caused by improper maintenance and storage; improper operation and use of the equipment.

10. WARRANTY TERMS

10.1. Claims to the quality of the goods may be made during the warranty period.
10.2. Defective products are repaired or exchanged for new ones free of charge during the warranty period. ELEPHANT decides whether to replace or repair the product. The replaced product or its parts resulting from the repair shall become the property of 'ELEPHANT'.
10.3. Costs related to dismantling, installation and transport of the defective product during the warranty period shall not be reimbursed to the Buyer.
10.4. If the claim is unfounded, the Buyer shall pay the costs of diagnostics and expertise of the product.
10.5. Products are accepted for warranty repair (as well as for return) fully assembled.

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WARRANTY CARD №____

№	Product Name	Packs

Name and address of the trading organisation

_____

Date of sale _____ Seller's signature _____

Stamp or seal of the trading organisation Acceptance stamp

I agree with the terms and conditions of the warranty:
Buyer _____ (signature)

Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.

For warranty repairs, complaints and product quality claims, please contact ELEPHANT at: Carrer d'Aragó,264,3-1,08007 Barcelona, Spain E-mail address: sales@valveelephant.com.

When making a complaint about the quality of goods, the buyer shall present the following documents:

1. A free-form application, which shall specify:
   - name of the organisation or full name of the buyer, actual address, contact telephone numbers;
   - name and address of the organisation that carried out the installation;
   - basic parameters of the system in which the product was used;
   - a brief description of the defect.
2. Document confirming the purchase of the product (delivery note, receipt)..
3. Act of hydraulic test of the system in which the product was installed.
4. This completed warranty card.

A note on the return or exchange of goods _____

Date: «___»_____202__г. Caption _____