



Manufacturer of shut-off and control valves

TECHNICAL DATA SHEET

**Limit switch unit
ELEPHANT APL-510N EX
explosion-proof**



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1. GENERAL PRODUCT INFORMATION

1.1. Product Name. ELEPHANT APL-510N EX explosion-proof limit switch unit.

1.2. Purpose. The limit switch unit is an electrical device designed for opening and closing of the working circuit and for visualisation of the positions of the shut-off body of pipeline valves. In a sealed box, as a rule, there are two mechanical switches designed for voltage up to 250 V, which monitor the position of the actuator stem and signalise extreme positions. They are mounted on top of the actuator surface. In the upper part of the limit switch unit there is a two-coloured visual indicator hemisphere. If the connected pipe fitting is closed, only the red part of the hemisphere labelled CLOSED is visible; if it is open, only the yellow part labelled OPEN is visible. This visual indicator is clearly visible from a distance, which simplifies the inspection of the equipment, and the colour difference between the open and closed position reduces the probability of misinterpretation of information. Thanks to the use of BCV it becomes possible to transmit information on the position of pipeline valves (open/closed) to automated control systems, which increases the reliability of the system as a whole and simplifies diagnostics in case of fault detection.

1.3. Product Features:

- Robust and compact die-cast aluminium housing with polyester powder coating.
- Visual position indicator with bolt fixing.
- Quick-Set spring-loaded spline cam. Easy adjustment without tools. No need for readjustment.
- Double cable glands.
- Non-drop cover bolts to prevent loss when removing the cover.





2. BASIC TECHNICAL DATA AND CHARACTERISTICS

Table 1

Parameter	Value
Housing	Weatherproof IP67 / NEMA 4, 4X, 7, 9 Explosion-proof E EX d IIC T6
Compatible Devices	- Quarter-turn pneumatic actuators - Any actuators with 90° shaft rotation
Full Rotation Angle	90°
Cable Entries	2 x NPT 3/4"
Electrical Connection	Screw terminal clamps, 8 points (0.08 – 2.5 mm ²)
Cable Entry Thread	2 x NPT 3/4"
Visual Indicator Type	Two-color hemisphere: OPEN (Yellow), CLOSED (Red)
Switches/Sensors	Two mechanical switches Two proximity sensors
Rated Voltage, V	250
Rated Current, A	16
Allowable Ambient Temperature, °C	-20 to +66
Average Service Life, cycles	10,000,000



3. OVERALL AND CONNECTION DIMENSIONS

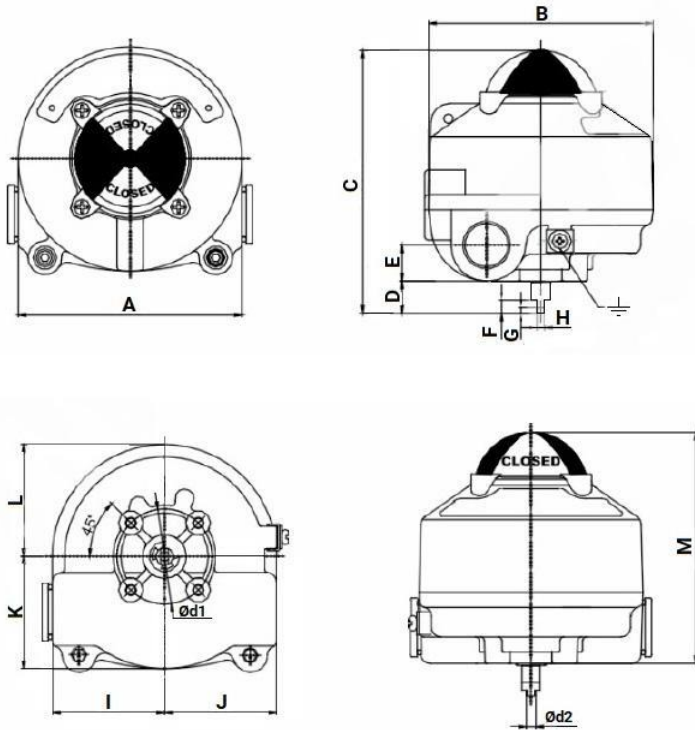
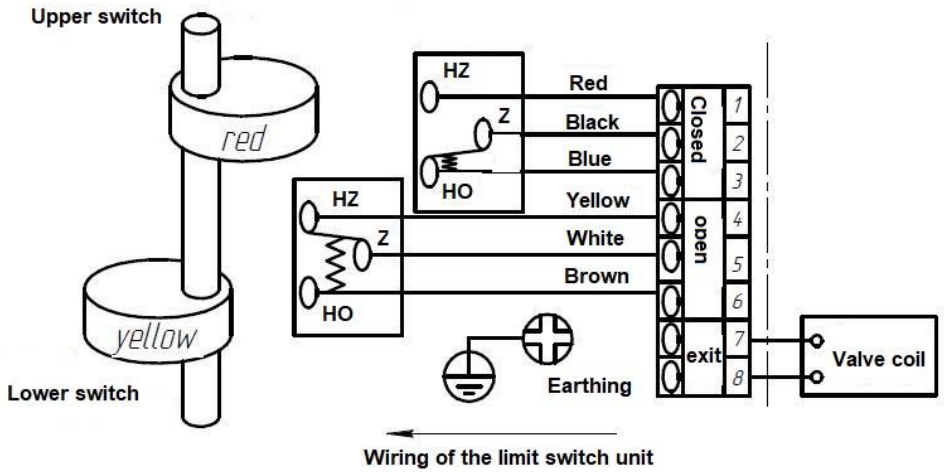


Table 2

A	B	C	D	E	F	G	H	I	J	K	L	M	Ød1	Ød2
mm														
118	118	138,4	17	19	7	3	4	59	59	59	59	121,4	50	5



4. WIRING DIAGRAM



5. INSTALLATION AND OPERATING INSTRUCTIONS

5.1. The installation, connection and maintenance of the limit switch unit (hereinafter referred to as the Limit Switch Unit) must be carried out by qualified personnel in compliance with the requirements of this manual and other rules/standards/regulations accepted by the company.

5.2. Before connecting and maintaining the, make sure that there is no voltage on the connecting wires.

5.3. The wires of the external electrical circuit are connected using screw terminals. Soldering, welding and other connection methods are not allowed.

5.4. Installation procedure:

5.4.1. Install and secure the bracket.

5.4.2. Remove the visual indicator from the pneumatic actuator.

5.4.3. Set the shaft to the position corresponding to the pneumatic actuator shaft position and make sure that the directions of rotation of the shafts are the same.

5.4.4. Turn the shaft by hand by 90° in the direction of rotation of the actuator shaft and check that the rotation is not impeded and that the limit switches operate correctly. Return the OBE shaft to its original position.

5.4.5. Install on the pneumatic actuator and secure the bracket.

5.4.5. Secure with bolts.

5.5. Maintenance should be carried out with the power supply switched off and no voltage and current in its output circuits. During maintenance, it is necessary to prevent the actuator, on which the actuator is mounted, from tripping.

5.6. Frequency of maintenance is established by the responsible persons of the enterprise depending on the operating conditions, however, it is recommended to carry out maintenance at least once a month.



6. TRANSPORT AND STORAGE

6.1. Storage should be carried out in packed form in closed rooms at temperatures from minus 25 °C to plus 50 °C and relative air humidity not more than 80% (without condensation).

6.2. Transportation in the manufacturer's packaging is allowed by any type of transport with protection from dust, rain and snow. During transportation storage conditions should be observed.

7. UTILISATION

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



8. WARRANTY OBLIGATIONS

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

8.2. The warranty applies to equipment installed and used in accordance with the installation instructions and product specifications described in this data sheet.

8.3. The manufacturer guarantees the conformity of the product to the safety requirements, provided that the consumer complies with the rules of transport, storage, installation and operation.

8.4. The warranty covers all defects caused by the fault of the manufacturer

8.5. 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 warehousing;
 - Improper use and application of the equipment.

9. WARRANTY TERMS

9.1. Claims to the quality of the goods may be made during the warranty period.

9.2. 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'

9.3. Costs related to dismantling, installation and transport of the defective product during the warranty period shall not be reimbursed to the Buyer.

9.4. If the claim is unfounded, the Buyer shall pay the costs of diagnostics and expertise of the product.

9.5. Products are accepted for warranty repair (as well as for return) fully assembled.



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;
 - Short description of the defect.
2. Document confirming the purchase of the product (delivery note, receipt).
3. Certificate of work performed for the installation of the product.
4. This completed warranty card.

A note on the return or exchange of goods _____

Date: « ___ » _____ 202__ r. Caption _____

