

TECHNICAL DATA SHEET

Electric quarter-turn actuator
ELEPHANT QT-N-003EM-O1-220VAC-U1 MINI



GENERAL PRODUCT INFORMATION

Product name: Electric quarter-turn actuator ELEPHANT QT-N-003EM-O1-220VAC-U1 MINI.

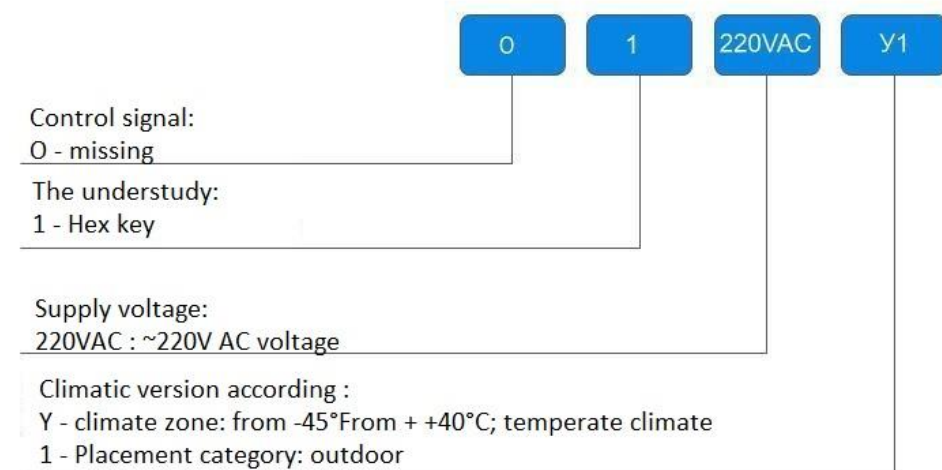
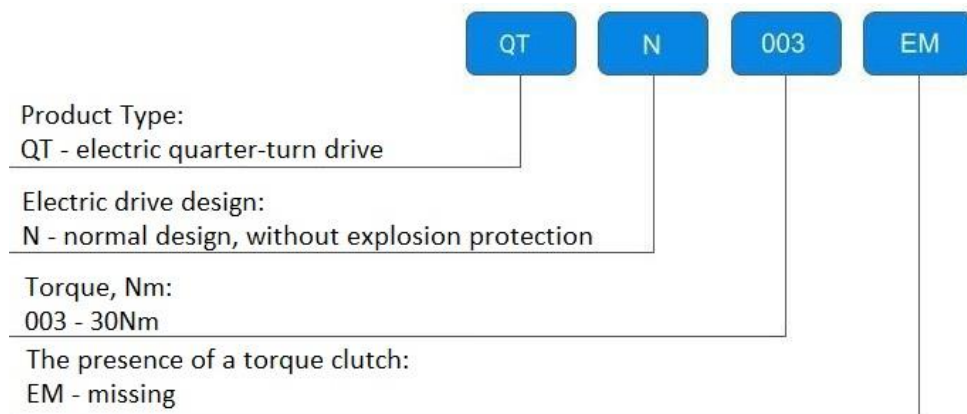
Purpose: Electric quarter-turn actuators are designed for remote and local control of $0^{\circ} \sim 270^{\circ}$ rotation of a shut-off valve of such types as ball valve, etc.

Application: widely used in various branches of national economy: in gas, oil, metallurgical, food industry, housing and communal services, etc.

Operating principle: electric actuators are installed directly on pipeline valves. The mounting dimensions comply with the international standard ISO 05211 / DIN3337. Four microswitches are used to limit the travel of the output shaft to the end positions of the valve actuator. The actuators are designed for operation in nominal short-time mode S2.



Deciphering of the designation:



BASIC TECHNICAL DATA AND CHARACTERISTICS

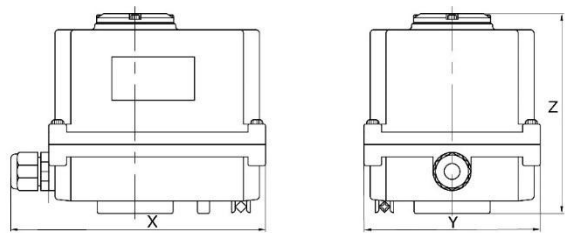
Supply voltage	220V
Motor power, W	20
Motor current, A	0,2
Torque, Nm	30
Cycle time, sec. (90° rotation)	5-15
Maximum valve stem diameter, mm	11x11
Degree of protection of the body	IP67 (IP68 on request)
Actuator body material	polycarbonate
ISO flange type	F03/ F05
Weight, kg	1,4

BASIC PARAMETERS

Power supply	220V, 50Hz, 1 phase
Limit switches	2-Open/Closed 250V 10A
Additional limit switches	2-Open/Closed 250V 10A
Output shaft rotation angle	Standard: 90°, on request 90°-270° $\pm 10^\circ$
Overheat protection/ Motor operating temperature	Built-in thermal protection, opening at $+120 \pm 5^\circ \text{C}$ / closing at $+97 \pm 5^\circ \text{C}$
Operating temperature range, ° C	-20 ...+40
Ambient temperature, ° C	-20 ...+70
Manual doubler	Hexagon (included)
Self-locking device	Self-locking worm and worm gear transmission
Cable glands	1 pc, M18

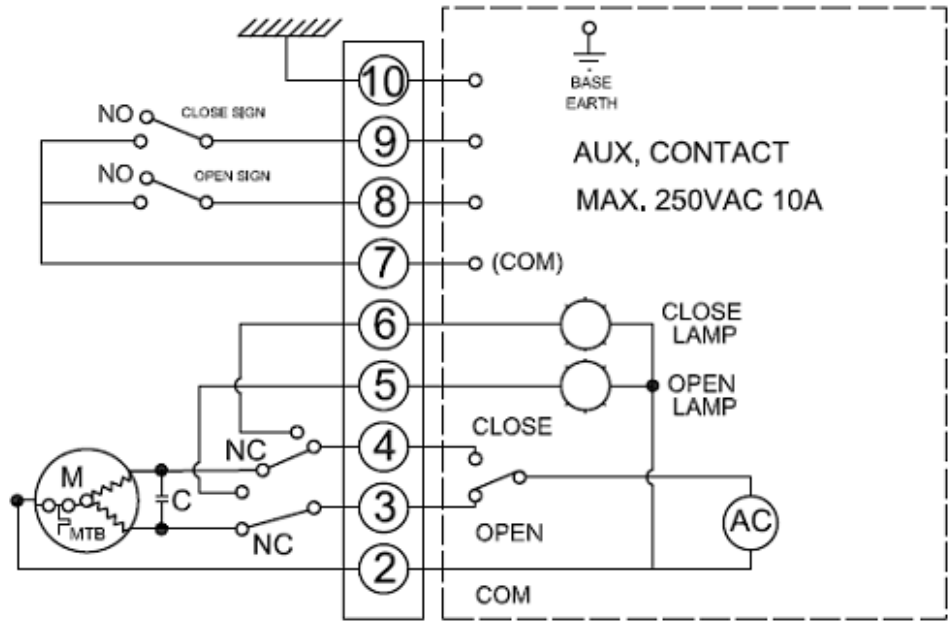


ACTUATOR OVERALL DIMENSIONS



Модель	X	Y	Z
	mm		
QT-003-MINI	157	90	115

WIRING DIAGRAM OF THE ACTUATOR



INSTALLATION AND OPERATION

Место установки:

- o Notes for indoor installation:
 - Do not install non-explosion-proof products in areas where there is a risk of gas explosion.
 - o Notes for outdoor installation:
 - IP68 drive enclosure is designed to protect against precipitation, direct sunlight, etc...;
 - Provide space for cable repair, manual work.
1. This actuator is not equipped with torque switches, therefore, when using the actuator as an actuating control element on valves conveying contaminated and/or abrasive media with solid inclusions, in order to avoid actuator and/or valve failure, it is necessary to exclude the possibility of jamming of the valve shut-off body due to ingress of solid particles/body between the shut-off body and the valve body and/or seal, or to provide electrical protection and disconnection by current consumption of the electric actuator.
 2. Before operating the actuator, make sure that the manual mode is disabled (manual override socket fully depressed).
 3. To prevent damage to the valve, the limit switches must be checked or adjusted before connecting the actuator.
 4. When installing the actuator on a gate valve in any position other than vertical, the actuator must have its own supports.
 5. Before starting the actuator, several cycles of test opening-closing the gate valve with the actuator's handwheel should be performed. If the valve opens-closes normally when opened by the manual override, the valve should be connected to the supply and control networks and several test opening-closing cycles should be performed with the actuator.



HANDWHEEL ADJUSTMENT

1. The manual override socket is in the initial NEUTRAL position. Only in this position is it possible to operate the valve with the actuator. **To avoid damage to the actuator, after any manipulation of the handwheel, it must be ensured that the handwheel socket is set to the original UNLOADED position.**
2. Insert the hexagon of the handwheel clutch.



3. In the pressed position, rotate.



4. **IMPORTANT:** push the handwheel all the way in.



5. Pull out the handwheel hexagon. The handwheel socket should return to its original NEUTRAL position.



6. Check the initial recessed position of the handwheel socket. The socket must not be recessed, if necessary, return it to its original position.



WARRANTY PERIOD

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

The warranty does not apply:

- parts and materials of the product subject to wear and tear
- for cases of damage caused by:
 - violations of the product storage, installation, testing, operation and maintenance specifications;
 - improper transportation and handling operations;
 - the presence of traces of exposure to substances aggressive to the product materials;
 - presence of damage caused by fire, elements, force majeure circumstances;
 - damage caused by incorrect actions of the consumer;
 - traces of tampering with the design of the product.

SALES MARK

No	Product Name	Packs

Date of sale: _____

L.S.

