

TECHNICAL DATA SHEET

Electric drive 3/4-turn ELEPHANT E34-N-xEM-O1-220VAC-U1



1. GENERAL PRODUCT INFORMATION

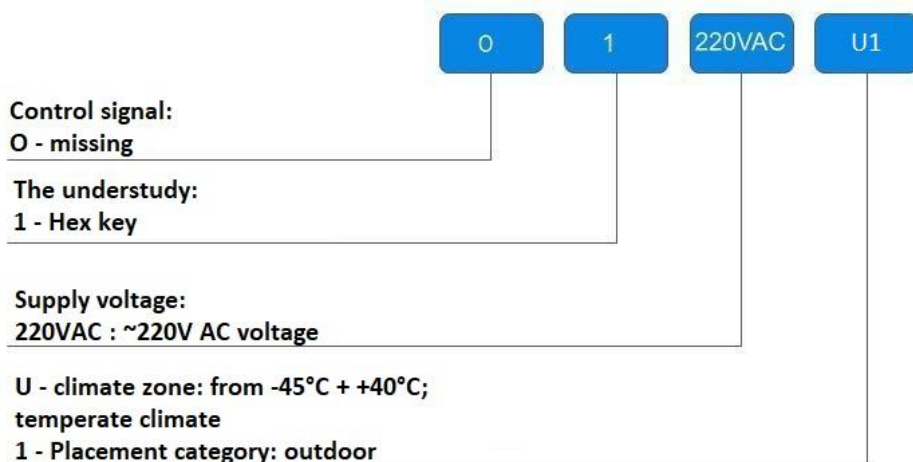
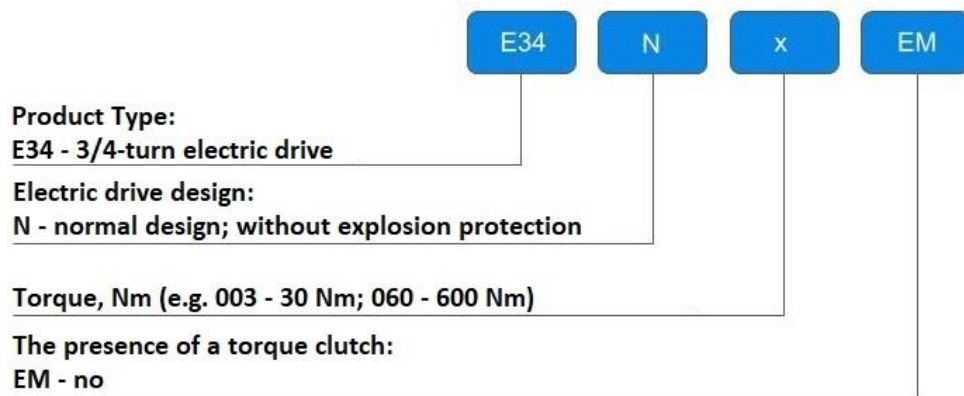
1.1 Product name: 3/4 turn actuator ELEPHANT series E34-N-xEM-O1-220VAC-U1.

1.2 Purpose: 3/4 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. They are widely used in various branches of national economy: in gas, oil, metallurgical, food industry, housing and communal services, etc.

1.3 Operating principle: electric actuators are mounted 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.



1.4 Deciphering of the designation:

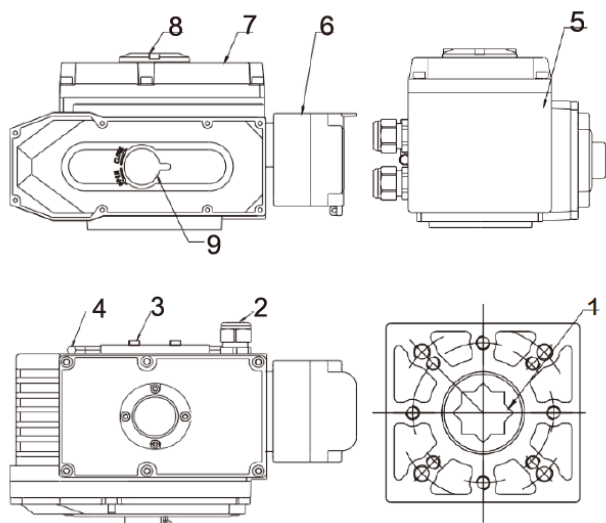


BASIC PARAMETERS

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	0°-270° ±10°
Overheat protection/ Motor operating temperature	Integrated thermal protection, opening at 120°C ± 5°C / closing at 97°C ± 5°C
Operating temperature range, ° C	-20 ...+40
Ambient temperature, ° C	-20 ...+70
Manual override	Hexagon (included)
Self-locking device	Self-locking worm and worm gear transmission
Mechanical limiter	2 external adjustable stops
Cable glands	2 pcs, M18



DRIVE DESIGN



- | | |
|---|--------------------|
| 1 | Output shaft |
| 2 | Cable lock |
| 3 | Mechanical limiter |
| 4 | Manual Wrench |
| 5 | Body |
| 6 | Modular box |
| 7 | Cap |
| 8 | Viewing window |
| 9 | Dust protection |

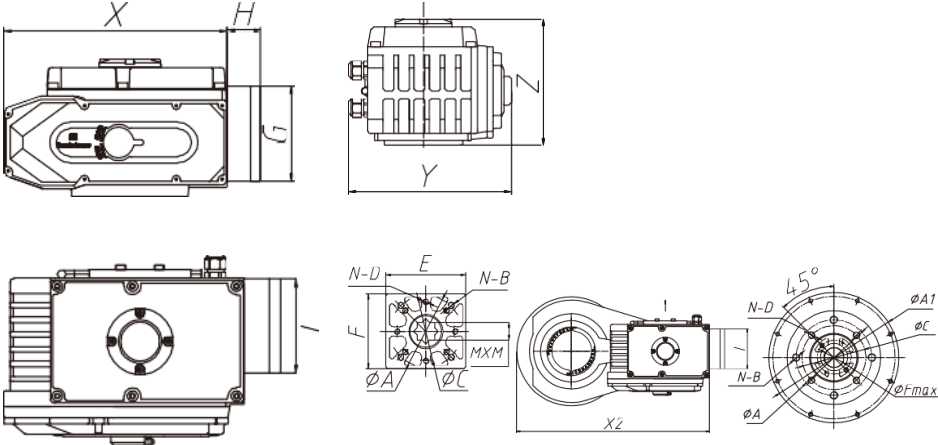


BASIC TECHNICAL DATA AND CHARACTERISTICS

	ST-003	ST-005	ST-008	ST-010	ST-015	ST-020	ST-030	ST-040	ST-060	ST-080	ST-100
Power supply voltage	220V										
Motor power, W	8	10	10	15	15	45	45	60	90	180	180
Motor current, A	0,15	0,25	0,25	0,35	0,33	0,3	0,31	0,33	0,33	0,47	0,47
Torque, Nm	30	50	80	100	150	200	300	400	600	800	1000
Cycle time, sec. (90° rotation)	20	30	30	30	30	30	30	30	30	40	40
Maximum valve stem diameter, mm	11x11	14x14	14x14	17x17	17x17	22x22	22x22	22x22	27x27	27x27	27x27
Degree of enclosure protection	IP67 (IP68 on request)										
Material	steel, aluminum alloy, aluminum bronze, polycarbonate										
Height of connecting projection, mm	74	89	89	107	104	152	152	152	152	152	152
ISO flange type	F04/ F05	F05/ F07	F05/ F07	F05/ F07	F05/ F07	F10/ F12	F10/ F12	F10/ F12	F10/ F12	F10/ F12	F10/ F12
Weight, kg	2,1	3,6	3,6	4,6	4,6	13	13,4	13,8	14	14,3	14,5



OVERALL DIMENSIONS OF THE ACTUATOR



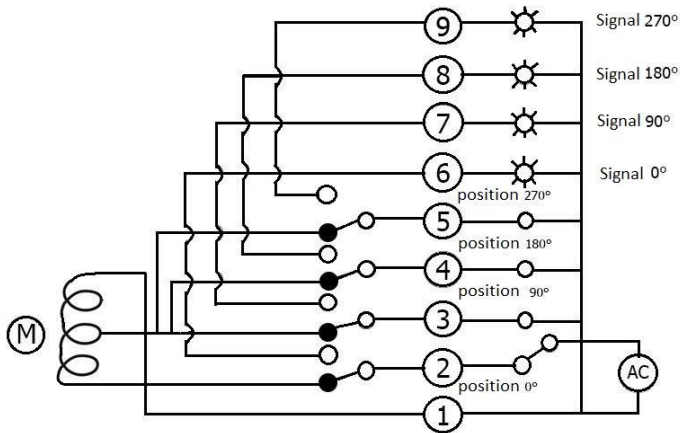
	ST-003	ST-005	ST-008	ST-010	ST-015	ST-020	ST-030	ST-040	ST-060	ST-080	ST-100
X	123	160	160	189	189	268	268	268	268	268	268
Y	123	146	146	163	163	212	212	212	212	212	212
Z	113	121	121	129	129	164	164	164	164	164	164
ØA	Ø50	Ø70	Ø70	Ø70	Ø70	Ø125	Ø125	Ø125	Ø125	Ø125	Ø125
N-B	4-M6	4-M8	4-M8	4-M8	4-M8	4-M12	4-M12	4-M12	4-M12	4-M12	4-M12
ØC	Ø42	Ø50	Ø50	Ø50	Ø50	Ø102	Ø102	Ø102	Ø102	Ø102	Ø102
N-D	8-M5	4-M6	4-M6	4-M6	4-M6	8-M10	8-M10	8-M10	8-M10	8-M10	8-M10
E	50	66	66	100	100	140	140	140	140	140	140
F	50	66	66	90	90	130	130	130	130	130	130
G	-	114	114	114	114	114	114	114	114	114	114
H	-	40	40	40	40	40	40	40	40	40	40
I	-	100	100	100	100	100	100	100	100	100	100
M x M	11 x 11	14 x 14	14 x 14	17 x 17	17 x 17	22 x 22	22 x 22	22 x 22	27 x 27	27 x 27	27 x 27

* единица измерения:

мм



WIRING DIAGRAM



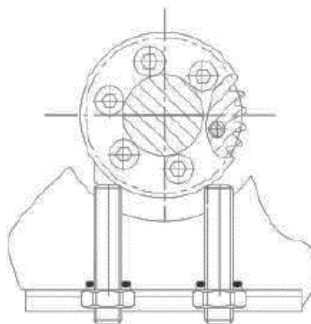
INSTALLATION AND OPERATION

1. This actuator is not equipped with torque switches, therefore, when using the actuator as an actuating control element on valves conveying polluted and/or abrasive media with solid particles, in order to avoid actuator and/or valve failure, it is necessary to eliminate the possibility of jamming of the valve shut-off body due to the ingress of solid particles/body between the shut-off body and the valve body and/or seal, or to provide for electrical protection and disconnection by current consumption of the electric actuator..
2. Provide space for cable repair, hand work.
3. Check or adjust limit switches before connecting the actuator to avoid damage to the valve.
4. When installing the actuator on the gate valve in any position other than vertical, the actuator must have its own supports.
5. Before starting the actuator, perform several cycles of test opening-closing of the gate valve using the actuator's handwheel. If the valve opens-closes normally when opened by the manual override, connect it to the power and control networks and perform several test opening-closing cycles with the actuator.



Adjusting the mechanical switch:

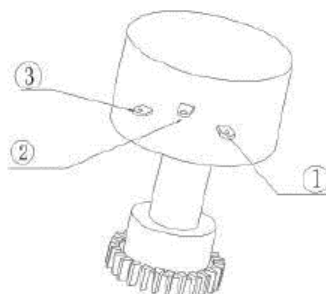
Loosen the lock nut and manually move the actuator to the fully closed position, turn the mechanical stop nuts until they touch the fan gear, then turn two turns and tighten the lock nut. This sets the position of the mechanical stops to the fully closed position of the actuator. This also sets the position for the fully open position.



Adjusting the potentiometer:

Connect the potentiometer as feedback output with 3 terminals: to the moving arm of the potentiometer (2); to the terminal whose resistance decreases between the moving arms when the actuator moves towards the open position (1); to the terminal whose resistance decreases between the moving arms when the actuator moves towards the closed position (3).

Turn the valve manually to the full open position until the limit switch moves, measuring the resistance with a multimeter, stop the resistance between (2) and (1) $35\Omega \sim 60\Omega$. If the value is incorrect, adjust it by turning the drive gear of the potentiometer.



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.

