# TYPE APPROVAL CERTIFICATE

## N. ELE302119CS

**This is to certify that the product below is found to be in compliance with the applicable requirements of the RINA type approval system.**

| | |
|---|---|
| *Description* | **Electric Actuator** |
| *Type* | **Series 85 and 86** |
| *Applicant* | **VALBIA S.r.l.**<br>**Via Industriale, 30**<br>**25065 Lumezzane S.S. (BS)**<br>**Italy** |
| *Manufacturer* | **VALBIA S.r.l.**<br>**Via Industriale, 30**<br>**25065 Lumezzane S.S. (BS)**<br>**Italy** |
| *Testing Standards* | **Rules for the classification of Ships. - Part C - Machinery, Systems and Fire protection. - Ch. 3, Sect. 6, Table 1** |

Issued in **Genova** on **November 11, 2019**

This certificate is valid until **November 11, 2024**

**RINA Services S.p.A.**

***Giovanni Carratino***

**Appendix 1: revision (2018)**
**Appendix 2: revision (2019)**

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## N. ELE302119CS

**Rotating Electrical Actuator** modulating and ON-OFF type designed to control ball and butterfly valves:

- **model S85** (Plastic enclosure)
- **model S86** (Die – Cast Aluminum enclosure)

**Main features:**

**TABLE 1**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Models | **S85** | Polyamide PA 66 (*) enclosure | **VB030** | **VB060** | **VB110** | **VB190** | **VB270** | **VB350** |
| | **S86** | Die Cast Aluminum enclosure | **VB030M** | **VB060M** | **VB110M** | **VB190M** | **VB270M6** | **VB350M** |
| **Max working torque Nm** | | | 30 | 60 | 110 | 190 | 270 | 350 |
| **Torque limiter** | | | STD | STD | STD | STD | STD | STD |
| **Nominal voltage** | | L version (50/60 Hz) | 24Vac/dc | 24Vac/dc | 24Vac/dc | 24Vac/dc | 24Vac/dc | 24Vac/dc |
| | | H version (50/60 Hz) | 110-240Vac | 110-240Vac | 110-240Vac | 110-240Vac | 110-240Vac | 110-240Vac |
| **Control signal** | | | 4-20 mA 0-10 Vdc | 4-20 mA 0-10 Vdc | 4-20 mA 0-10 Vdc | 4-20 mA 0-10 Vdc | 4-20 mA 0-10 Vdc | 4-20 mA 0-10 Vdc |
| **Duty rating** | | | 75% | 75% | 75% | 75% | 75% | 75% |
| **IP Protection (polyamide PA 66)** | | | IP67 | IP67 | IP67 | IP67 | IP67 | IP67 |
| **IP Protection (die cast aluminum)** | | | IP68 8 m | IP68 8 m | IP68 8 m | IP68 8 m | IP68 8 m | IP68 8 m |
| **Rotation** | | | 90° STD | 90° STD | 90° STD | 90° STD | 90° STD | 90° STD |
| **End mechanical stop S86** | | | NO | NO | STD | STD | STD | STD |
| **End mechanical stop S85** | | | NO | NO | NO | NO | NO | NO |
| **Manual actuator Control** | | | STD Mechanical. Coupling | STD Mechanical. Coupling | STD Override with hand wheel | STD Override with hand wheel | STD Override with hand wheel | STD Override with hand wheel |
| **Position indicator** | | | STD | STD | STD | STD | STD | STD |
| **Anti-condensation heater** | | | STD | STD | STD | STD | STD | STD |
| **Addit. free contacts limit switch** | | | n. 2 STD | n. 2 STD | n. 2 STD | n. 2 STD | n. 2 STD | n. 2 STD |

(*) Polyamide 66 Flame Class V-0 (UL 94, IEC 60695-11-10)

**Warning :**

**A cumulative free voltage contact is available:**

- Power supply failure
- Microcontroller watch dog
- Torque limiter activation (overload)
- **For ON-OFF version**: time-out
- **For modulating version :** feedback potentiometer failure ; actuator wrong position

**Test reports:**

Functional tests / power supply variations: Valbia / RINA doc. (20/06/2016)
Environmental tests: *INTEK* report n. RP2016-0354-00 rev. 00 (2016/09/30)
Environmental tests (EMC*): INTEK* report n. RP2016-0353-00 rev. 00 (2016/10/18)
IP Protection test IP68: *INTEK* report n. RP 2016-0220-00 (2016/06/30)
IP Protection test 6x, x5, x7: *INTEK* report n. RP 05-0279 rev.0 (2006/01/30)
Salt mist test: *AQM* report n. 2017-2667/PC2 (07/11/2017) supplement n. 2018-0006
(with corrosion protection Resicoat R4-ES epoxy powder coating – Product data sheet Resicoat R4-ES HJF10R)

**Technical descriptions:**

Electric Actuators Series 85; Electric Actuators Series 86
Instruction Sheets: 90004000059 rev. C, 90004000060 rev. B, 90004000063 rev. B, 900040000 rev. B

**Remarks:**

Battery back-up option is not covered by this Type Approval Certificate.
Installation and use to be in accordance with the manufacturer instruction.

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## N. ELE302119CS

**APPENDIX 1 (Revision 2018)**

The equipment described on Table 1 has been subject to a modification related to the Electric Actuator HT Power supply Control Card for implementing an independent 24 VDC/AC 50/60 Hz control with the addition of a free voltage contact in order to discriminate Power Off condition from a failure condition.

The products according to the above added functionality have the following codes :
- **85H0DZxx (*)**
- **86H0DKxx (*)**

(*) new features solely concern ON / OFF Actuators; Therefore do not apply to Actuators including:
- Power Supply 24V AC/DC
- Modulating actuators having analog controls 4-20mA or 1-10V.

Identification Code Standard Version electronic card: mod. V132-02 code 40803000052
Identification Code Special Version electronic card: mod. V135-00 code 40803000054

**Technical description:**

Installation Manual for product 85H0DZxx: 90004000096_RINA_COM24V-ITA-Rev. A (08/06/2018)
Installation Manual for product 86H0DKxx: 90004000097_RINA_COM24V-ITA-Rev. A (12/06/2018)
Description: Special Card V135-00 Rev. 0, (28/06/2018)

**RINA Test Report:**
Functional test for ON /OFF actuators: VB-INT-TEST-076 (15/06/2018)

**Remarks:**
Battery back-up option is not covered by this Type Approval Certificate.
Installation and use to be in accordance with the manufacturer instruction.

**APPENDIX 2 (Revision 2019)**

Interface card n. 40803000069 (Code. PCB V114) is an optional card suitable for installation on all Valbia ON /OFF actuators as an alternative to the card n. 40803 000039 (Code PCB V112). The new interface between control plant and actuator, allows checking of cables interruption.

**Technical description:**

RINA Verification tests for new interface card Type V-114 (21/10/2019)
Installation and maintenance manuals Series 85 / 86 models:
n. 90004000079 rev. G (30/10/19); 90004000060 rev. E; 90004000085 rev. E (30/10/19); 90004000087 rev. B (09/09/19)
n. 900040000110 rev. A (28/10/19); n. 900040000111 rev. A (28/10/19)

Description functionality interface card n. 40803000069 (PCB V114) rev. 0 (05/11/2019)
dwg: V114 Connection Card PCB_DOKU ; V114 card dwg. N. 408003000069-B (28/01/2016)

**Test report:**
RINA Verification tests for new interface card Type V-114 (21/10/2019)

**Remarks:**
Battery back-up option is not covered by this Type Approval Certificate.
Installation and use to be in accordance with the manufacturer instruction.