



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx LCIE 21.0015X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2021-07-26)

Status: **Current** Issue No: 1

Date of Issue: 2022-01-24

Applicant: **VALPES**
89, rue des Etangs
ZI Centr'Alpes
38430 Moirans
France

Equipment: **Electric actuator - Type: VRX*.70*.*.*, VSX*.90*.*.* and DVX*.90*.*.***

Optional accessory:

Type of Protection: **Ex db and Ex tb**

Marking: Ex db IIB T6...T5 Gb
Ex tb IIIC T80°C...T95°C Db
IECEx LCIE 21.0015X
(Refer to attachment for full marking).

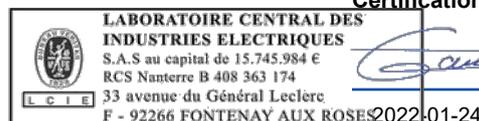
Approved for issue on behalf of the IECEx
Certification Body:

Julien GAUTHIER

Position:

Certification Officer

Signature:
(for printed version)



Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France





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Date of issue: 2022-01-24

Issue No: 1

Manufacturer: **VALPES**
89, rue des Etangs
ZI Centr'Alpes
38430 Moirans
France

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[FR/LCIE/ExTR21.0033/00](#)

[FR/LCIE/ExTR22.0012/00](#)

Quality Assessment Report:

[FR/LCIE/QAR15.0010/06](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The electrical actuator VRX*.70*.**.**, VSX*.90*.**.**, or DVX*.90*.**.**, type is an equipment which permits to open or to close a valve. This device is composed of a gear reducer (gear train) driven by a DC motor controlled by an electronic card or by a 400 V asynchronous motor.

The electric actuator has a limit switch system to stop the device in the closed and open valve positions (0° to 90° or 180° - 270° optional).

A backup control is also present: in the event of a power failure, the user can manually operate the valve-actuator assembly.

In addition, the electrical actuator with the DC motor controlled by an electronic card is available in different models with versions and options listed in the range details below.

The BBPR models are available in several versions. They integrate a battery pack (EBS.24) controlled by an electronic card. The GPS version corresponds to the BBPR model with the addition of an analog function (control and copy) 4 - 20 mA or 0 - 10 V.

Note: The types VRX*.70*.**.**, VSX*.90*.**.**, and DVX*.90*.**.**, differ in particular by the type of mounting base and the characteristics of the manual control. The DVX*.90*.**.**, is identical to the VSX*.90*.**.**, but it has more maximum torques.

The designation of the electric actuator type refers directly to the maximum torque provided by the equipment. For example, the VRX25 type electric actuator provides a maximum torque of 25 Nm.

The entire range of electric actuators includes the following types: VRX25, VRX45, VRX75, VSX100, VSX150, VSX300, DVX25, DVX45, DVX75, DVX100, DVX150 and DVX300.

(Refer to attachment for more details)

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment shall be equipped with suitably certified cable glands and blanking elements with a compatible type of protection for the intended use.
- All special fasteners used for the assembly of the parts of the flameproof enclosure shall have at least a property class A2-70 (stainless steel).
- Every information concerning the flameproof joints of the products are available on request. Please contact the manufacturer.
- The equipment shall be installed and used according to the instruction manual provided by the manufacturer. Removing of stop screws is strictly forbidden.
- Before any intervention on the actuator or around the actuator, to avoid any electrostatic discharge, the apparatus shall be cleaned with a damp cloth.
- The apparatus shall only be installed in areas of low mechanical impact risk.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Replacement of the option 1 (marine surface coating).

Adding of the new type designation DVX

Update of the range details

Annex:

[IECEX LCIE 21.0015X - Issue 01 - Annex 01 - Valpes.pdf](#)



Annex 01 to Certificate IECEX LCIE 21.0015X issue 01



MARKING

For standard models of electrical actuators

VALPES

Address: ...

Type: VRX*.70*.G*.** or VSX*.90*.G*.** or DVX*.90*.G*.** (1)

Serial number: ...

Year of construction: ...

Ex db IIB T6 Gb

Ex tb IIIC T80°C Db

IECEX LCIE 21.0015X

$-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +70^{\circ}\text{C}$

WARNINGS –

DO NOT OPEN WHEN ENERGIZED.

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.

POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

SELECTION OF CABLES AND CABLE GLANDS – SEE INSTRUCTIONS.

$U = \dots \text{ V}; P = \dots \text{ W}; f = \dots \text{ Hz}$ (2)

(1): completed with type designation.

(2): completed by electrical parameters.

For BBPR models of electrical actuators

VALPES

Address: ...

Type: VRX*.70*.G*.** or VSX*.90*.G*.** or DVX*.90*.G*.** (1)

Serial number: ...

Year of construction: ...

Ex db IIB T6 Gb

Ex tb IIIC T80°C Db

IECEX LCIE 21.0015X

$-10^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$

WARNINGS –

DO NOT OPEN WHEN ENERGIZED.

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.

POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

SELECTION OF CABLES AND CABLE GLANDS – SEE INSTRUCTIONS.

$U = \dots \text{ V}; P = \dots \text{ W}; f = \dots \text{ Hz}$ (2)

(1): completed with type designation.

(2): completed by electrical parameters.

For 400V model of electrical actuators

VALPES

Address: ...

Type: VRX*.709.R*.** or VSX*.909.R*.** or DVX*.909.R*.** (1)

Serial number: ...

Year of construction: ...

Ex db IIB T5 Gb

Ex tb IIIC T95°C Db

IECEX LCIE 21.0015X

$-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +54^{\circ}\text{C}$

WARNINGS –

DO NOT OPEN WHEN ENERGIZED.
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

SELECTION OF CABLES AND CABLE GLANDS – SEE INSTRUCTIONS.

$U = \dots \text{ V}; P = \dots \text{ W}; f = \dots \text{ Hz}^{(2)}$

(1): completed with type designation.

(2): completed by electrical parameters.

RANGE DETAILS

The range detail for the VRX*.70*.**.*** type is defined as follow:

VRX * . 7 0 * . * * * . * * *	
<p>Maximal torque (N.m) 25 45 75</p>	<p>Option 2 O = BBPR –normally open</p>
<p>Mounting 7 = Female star 17 mm ; Flange connection F05/F07 (as per ISO 5211)</p>	<p>Option 1 A = EPR.01.B B = EPR.1.B C = EPR.5.B D = EPR.10.B E = EPT.C F = EFC.2 J = 0-10V set point signal & 0-10V feedback L = Applications with vibrations M = Marine coating R = 4 mA or 0 V set point signal for open position and 20 mA or 10 V for closed T = Counter clockwise closing direction U = 180° rotation for POSI, BBPR or GPS W = 270° rotation for POSI, BBPR or GPS Y = 0-10V set point signal & 4-20mA feedback Z = 4-20mA set point signal & 0-10V feedback 167 = 12-48 V board for 2 wire-control 182 = 4-wire control - pulse control 187 = Coated electronic board 347 = Modbus-RTU for GS6, GP8,GFS,GPS versions 365 = 0-90-180° for GPS version 366 = 0-90-270° for GPS version</p>
<p>Operating time 0 = Standard</p>	
<p>Voltage supply (motor) 9 = 400 V three-phase A = 100 V to 240 V 50/60 Hz 100 V to 350 V DC B = 15 V to 30 V 50/60 Hz 12 V to 48 V DC 24 V to 30 V 50/60 Hz (S6, PS,FS) 24 V to 48 V DC (S6, PS,FS)</p>	
<p>Duty rating G = 50% (all models except 400 V) R = 50% (400 V models)</p>	
<p>Version 00 = 3-modulating point + ON-OFF P5 = Positioning P8 = Positioning (Bluetooth® and compatible with Modbus-RTU®) F0 = 90° setup without mechanical stops F1 = 180° setup F2 = 270° setup F3 = 3 position setup (0°-90°-180°) F4 = 3 position setup (0°-90°-270°) F6 = Specific customer setup (angular movement > 60° or specific actuator) F7 = Specific customer setup for 2 position actuator S2 = BBPR, normally closed S3 = BBPR and 3-position setup (0-90°-270°) S6 = BBPR PS = Positioning and BBPR FS = BBPR and 3-position setup (0-90°-180°) MB = Modbus-RTU version</p>	

The range detail for the VSX*.90*.*.* type is defined as follow:

VSX * . 9 0 * . * * . * *	
<p>Maximal torque (N.m) 100 150 300</p> <p>Mounting 9 = Female star 22 mm ; Flange connection F07/F10 (as per ISO 5211)</p> <p>Operating time 0 = Standard</p> <p>Voltage supply (motor) 9 = 400 V three-phase A = 100 V to 240 V 50/60 Hz 100 V to 350 V DC B = 15 V to 30 V 50/60 Hz 12 V to 48 V DC 24 V to 30 V 50/60 Hz (S6, PS,FS) 24 V to 48 V DC (S6, PS,FS)</p> <p>Duty rating G = 50% (all models except 400 V) R = 50% (400 V models)</p> <p>Version 00 = 3-modulating point + ON-OFF P5 = Positioning P8 = Positioning (Bluetooth® and compatible with Modbus-RTU®) F0 = 90° setup without mechanical stops F1 = 180° setup F2 = 270° setup F3 = 3 position setup (0°-90°-180°) F4 = 3 position setup (0°-90°-270°) F6 = Specific customer setup (angular movement > 60° or specific actuator) F7 = Specific customer setup for 2 position actuator S2 = BBPR, normally closed S3 = BBPR and 3-position setup (0-90°-270°) S6 = BBPR PS = Positioning and BBPR FS = BBPR and 3-position setup (0-90°-180°) MB = Modbus-RTU version</p>	<p>Option 2 O = BBPR –normally open</p> <p>Option 1 A = EPR.01.B B = EPR.1.B C = EPR.5.B D = EPR.10.B E = EPT.C F = EFC.2 J = 0-10V set point signal & 0-10V feedback L = Applications with vibrations M = Marine coating R = 4 mA or 0 V set point signal for open position and 20 mA or 10 V for closed position and counter clockwise closing direction T = Counter clockwise closing direction U = 180° rotation for POSI, BBPR or GPS W = 270° rotation for POSI, BBPR or GPS Y = 0-10V set point signal & 4-20mA feedback Z = 4-20mA set point signal & 0-10V feedback 167 = 12-48 V board for 2 wire-control 182 = 4-wire control - pulse control 187 = Coated electronic board 324 = MONT.H/B (upside down mounting) 336 = IP10 347 = Modbus-RTU for GS6, GP8,GFS,GPS versions 365 = 0-90-180° for GPS version 366 = 0-90-270° for GPS version</p>

The range detail for the DVX*.90*.**.** type is defined as follow:

<div style="text-align: right; margin-bottom: 0;">DVX * . 9 0 * . * * . * *</div>	
<p>Maximal torque (N.m)</p> <p>25 45 75 100 150 300</p> <p>Mounting</p> <p>9 = Star 22 F07/F10 + KIT KCC.F05/F07 Star 17 (for DVX 25-75 N.m) Star 22 F07/F10 (for DVX 100-300 N.m)</p> <p>Operating time</p> <p>0 = Standard</p> <p>Voltage supply (motor)</p> <p>9 = 400 V three-phase A = 100 V to 240 V 50/60 Hz 100 V to 350 V DC B = 15 V to 30 V 50/60 Hz 12 V to 48 V DC 24 V to 30 V 50/60 Hz (S6, PS,FS) 24 V to 48 V DC (S6, PS,FS)</p> <p>Duty rating</p> <p>G = 50% (all models except 400 V) R = 50% (400 V models)</p> <p>Version</p> <p>00 = 3-modulating point + ON-OFF P5 = Positioning P8 = Positioning (Bluetooth® and compatible with Modbus-RTU®) F0 = 90° setup without mechanical stops F1 = 180° setup F2 = 270° setup F3 = 3 position setup (0°-90°-180°) F4 = 3 position setup (0°-90°-270°) F6 = Specific customer setup (angular movement > 60° or specific actuator) F7 = Specific customer setup for 2 position actuator S3 = BBPR and 3-position setup (0-90°-270°) S6 = BBPR PS = Positioning and BBPR FS = BBPR and 3-position setup (0-90°-180°) MB = Modbus-RTU version</p>	<p>Option 2</p> <p>O = BBPR –normally open</p> <p>Option 1</p> <p>A = EPR.01.B B = EPR.1.B C = EPR.5.B D = EPR.10.B E = EPT.C F = EFC.2 J = 0-10V set point signal & 0-10V feedback M = Marine coating R = 4 mA or 0 V set point signal for open position and 20 mA or 10 V for closed T = Counter clockwise closing direction U = 180° rotation for POSI, BBPR or GPS W = 270° rotation for POSI, BBPR or GPS Y = 0-10V set point signal & 4-20mA feedback Z = 4-20mA set point signal & 0-10V feedback 167 = 12-48 V board for 2 wire-control 182 = 4-wire control - pulse control 187 = Coated electronic board 347 = Modbus-RTU for GS6, GP8,GFS,GPS versions 365 = 0-90-180° for GPS version 366 = 0-90-270° for GPS version</p>

RATINGS

Voltage supply and frequency	15 V to 30 V 50/60Hz or 100 V to 240 V 50/60Hz 12 V to 48 VDC (BBPR models : 24 V to 48 VDC) or 100 V to 350 VDC 400 V three-phase 50/60Hz
Power consumption	For the type VRX*.70*.**.** and the DVX*.90*.**.** (for 25, 45 and 75 N.m) : 45W (400V : 52W) For the type VSX*.90*.**.** and the DVX*.90*.**.** (for 100, 150 and 300 N.m) : 45W (400V : 135W)
Operating time (rotation of 90°)	For the type VRX25.70*.**.** and the DVX*.90*.**.** (for 25, 45 and 75 N.m) : 7s (400V : 10s) For the type VRX45.70*.**.** and the DVX*.90*.**.** (for 25, 45 and 75 N.m) : 15s (400V : 10s) For the type VRX75.70*.**.** and the DVX*.90*.**.** (for 25, 45 and 75 N.m) : 20s (400V : 15s) For the type VSX100.90*.**.** and the DVX*.90*.**.** (for 100, 150 and 300 N.m) : 15s (400V : 10s) For the type VSX150.90*.**.** and the DVX*.90*.**.** (for 100, 150 and 300 N.m) : 30s (400V : 20s) For the type VSX300.90*.**.** and the DVX*.90*.**.** (for 100, 150 and 300 N.m) : 60s (400V : 35s)
Manual override	For the type VRX*.70*.**.** : Axe sortant / Outgoing axis For the type VSX*.90*.**.** and the DVX*.90*.**.** : Volant / Wheel
Duty cycle	50 %
Additional information for the options A to H (associated to the « option 1 » included in the range details of actuators)	Option feedback signal with potentiometer integrated inside the housing to report valve position on a scale of 100, 1000, 5000 or 10000 Ohms for 90°: EPR.01.B (100 Ω), EPR.1.B (1 kΩ), EPR.5.B (5 kΩ) or EPR.10.B (10 kΩ). Option feedback with 5 kΩ potentiometer + transmitter 4-20 mA, 0-20 mA, 0-10V (Integrated transmitter inside the housing to report valve position with a signal from 4 to 20mA, 0 to 20mA or 0 to 10V for 90°): EPT.C. 2 auxiliary limit switches (one for opening and one for closing), free of potential, for position feedback : EFC.2. Anti-condensation resistance 230 VAC - 10 W (Designation : H).
Installation	Vertical or horizontal. The installation of the actuator with the cover facing down is not allowed.
Connection to the valve	For the type VRX*.70*.**.** and the DVX*.90*.**.** (for 25, 45 and 75 N.m) : Flange connection for the attachment of quarter-turn actuator to valve: F05 / F07 (according to ISO 5211); 17 mm square drive output (Female star). For the type VSX*.90*.**.** and the DVX*.90*.**.** (for 100, 150 and 300 N.m) : Flange connection for the attachment of quarter-turn actuator to valve: F07 / F10 (according to ISO 5211); 22 mm square drive output (Female star).
Threaded entries into the enclosure	2 x ISO M20x1.5 – 6H, intended for the mounting of certified cable glands or blanking elements.

ROUTINE TESTS

None.