

UK-TYPE EXAMINATION CERTIFICATE

Product or Protective Systems Intended for Use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

- UK-Type Examination Certificate Number:** ITS21UKEX0157X **Issue 0**
- Product:** VRX*.70*.**.**. and VSX*.90*.**.**.
- Manufacturer:** VALPES
- Address:** ZI Centr'Alp, 89 Rue des Etangs, 38430 Moirans / France
- This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- Intertek Testing and Certification Limited, Approved Body number 0359, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential report 104672920CHE-001 dated 16 August 2021 and 160655-734807-02 dated 05 August 2020.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018, EN 60079-1:2014 and EN 60079-31:2014 except in respect of those requirements referred to within item 14 of the Schedule.
- If the sign "X" is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.
- This UK-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- The marking of the product shall include the following:

II 2 G D Ex db IIB T6/T5 Gb

Ex tb IIIC T80°C/T95°C Db



-20/10°C ≤ Ta ≤ +40/+54/70°C*

* see Schedule for details

Certification Officer: _____ **Date:** 16 September 2021
M Newman

SCHEDULE:

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11. Description of Product or Protective System

The electrical actuator VRX*.70*.**.**. or VSX*.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*.**.**. and VSX*.90*.**.**. differ in particular by the type of mounting base and the characteristics of the manual control.

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 and VSX300.

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

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VRX * . 7 0 * . * * *	
Couple maximum / Maximal torque (N.m) 25 45 75	Option 2 O = BBPR – normalement ouvert / normally open
Liaison avec la vanne (sortie) / Connection to the valve (output drive) 7 = Etoile femelle de 17 mm ; Bride de raccordement F05/F07 (ISO 5211) Female star 17 mm ; Flange connection F05/F07 (as per ISO 5211)	Option 1 A = EPR.01.B B = EPR.1.B C = EPR.5.B D = EPR.10.B E = EPT.C F = EFC.2 H = Résistance anti condensation Anti-condensation resistance J = Consigne 0-10V & recopie 0-10V (P5) 0-10V set point & 0-10V copy (P5) L = Applications avec vibrations / Vibration applications M = Revêtement marine / Marine surface coating R = Signal 4mA ou 0V NO et 20mA ou 10V NF Signal 4mA or 0V NO and 20mA or 10V NC T = Fermeture sens antihoraire / Counter clockwise closing U = Angle 180° pour P5 ou BBPR NF 180° angle for P5 or BBPR NF W = Angle 270° pour P5 ou BBPR N.F 270° angle for P5 or BBPR N.C Y = Consigne 0-10V & recopie 4-20mA (P5) 0-10V set point & 4-20mA copy (P5) Z = Consigne 4-20mA & recopie 0-10V (P5) 4-20mA set point & 0-10V copy (P5) 167 = Pilotage carte 12V – 48V en 2 fils Control of board 12V - 48V in 2 wires 182 = Pilotage 4 fils – impulsionsnel / 4-wires control - impulse 187 = Carte électronique vernie / Varnished electronic board 326 = Carte contact avec switch FDC inversés Contact board with inverted FDC switch
Temps de manœuvre / Operating time 0 = Standard	
Alimentation (moteur) / Voltage supply (motor) 9 = 400 V triphasé / three-phase 50 Hz A = 100 V à / to 240 V 50/60 Hz 100 V à / to 350 V DC (VR, VS) B = 15 V à / to 30 V 50/60 Hz (VR, VS) 12 V à / to 48 V DC (VR, VS) 24 V à / to 48 V DC (BBPR)	
Facteur de marche / Duty cycle G = 50% (230 V) R = 50% (400 V)	
Version 00 = Mode 3 points modulants + mode ON-OFF 3-points modulating mode + ON-OFF mode P5 = Positionnement / Positioning F0 = Réglage 90° sans butée / Setting 90° without stop F1 = Réglage / Setting 180° F2 = Réglage / Setting 270° F3 = 3 positions (0°-90°-180°) F4 = 3 positions (0°-90°-270°) F6 = Réglage spécifique client pour gamme 3 positions (écart angulaire > 60° sinon actionneur spécial) Customer specific setting for 3-position range (angular deviation > 60° otherwise special actuator) F7 = Réglage spécifique client pour gamme 2 positions Customer specific setting for 2-position range S2 = BBPR, NF / BBPR, NC S6 = BBPR (SNBA140000) PS = Positionnement et BBPR (SNBA150000) BBPR and positioning (SNBA150000) FS = BBPR et réglage 3 positions (0°-90°-180°) BBPR and 3-position adjustment (0°-90°-180°) MB = Version protocole Modbus-RTU Modbus-RTU protocol version	

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

VSX * . 9 0 * . * * *	
Couple maximum / Maximal torque (N.m) 100 150 300	Option 2 O = BBPR – normalement ouvert / normally open
Liaison avec la vanne (sortie) / Connection to the valve (output drive) 9 = Etoile femelle de 22 mm ; Bride de raccordement F07/F10 (ISO 5211) Female star 22 mm ; Flange connection F07/F10 (as per ISO 5211)	Option 1 A = EPR.01.B B = EPR.1.B C = EPR.5.B D = EPR.10.B E = EPT.C F = EFC.2 H = Résistance anti condensation Anti-condensation resistance J = Consigne 0-10V & recopie 0-10V (P5) 0-10V set point & 0-10V copy (P5) L = Applications avec vibrations / Vibration applications M = Revêtement marine / Marine surface coating R = Signal 4mA ou 0V NO et 20mA ou 10V NF Signal 4mA or 0V NO and 20mA or 10V NC T = Fermeture sens antihoraire / Counter clockwise closing U = Angle 180° pour P5 ou BBPR NF 180° angle for P5 or BBPR NF W = Angle 270° pour P5 ou BBPR N.F 270° angle for P5 or BBPR N.C Y = Consigne 0-10V & recopie 4-20mA (P5) 0-10V set point & 4-20mA copy (P5) Z = Consigne 4-20mA & recopie 0-10V (P5) 4-20mA set point & 0-10V copy (P5) 167 = Pilotage carte 12V – 48V en 2 fils Control of board 12V - 48V in 2 wires 182 = Pilotage 4 fils – impulsionsnel / 4-wires control - impulse 187 = Carte électronique vernie / Varnished electronic board 326 = Carte contact avec switch FDC inversés Contact board with inverted FDC switch 336 = IP10 : 10m 72h 337 = IP10 avec enveloppe marine IP10 with marine enclosure
Temps de manœuvre / Operating time 0 = Standard	
Alimentation (moteur) / Voltage supply (motor) 9 = 400 V triphasé / three-phase 50 Hz A = 100 V à / to 240 V 50/60 Hz 100 V à / to 350 V DC (VR, VS) B = 15 V à / to 30 V 50/60 Hz (VR, VS) 12 V à / to 48 V DC (VR, VS) 24 V à / to 48 V DC (BBPR)	
Facteur de marche / Duty cycle G = 50% (230 V) R = 50% (400 V)	
Version 00 = Mode 3 points modulants + mode ON-OFF 3-points modulating mode + ON-OFF mode P5 = Positionnement / Positioning F0 = Réglage 90° sans butée / Setting 90° without stop F1 = Réglage / Setting 180° F2 = Réglage / Setting 270° F3 = 3 positions (0°-90°-180°) F4 = 3 positions (0°-90°-270°) F6 = Réglage spécifique client pour gamme 3 positions (écart angulaire > 60° sinon actionneur spécial) Customer specific setting for 3-position range (angular deviation > 60° otherwise special actuator) F7 = Réglage spécifique client pour gamme 2 positions Customer specific setting for 2-position range S2 = BBPR, NF / BBPR, NC S6 = BBPR (SNBA140000) PS = Positionnement et BBPR (SNBA150000) BBPR and positioning (SNBA150000) FS = BBPR et réglage 3 positions (0°-90°-180°) BBPR and 3-position adjustment (0°-90°-180°) MB = Version protocole Modbus-RTU Modbus-RTU protocol version	

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Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

SCHEDULE:

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Ratings

Pour les modèles standards d'actionneurs

VALPES
Adresse : ...
Type : VRX*.70*.G*.** ou VSX*.90*.G*.** (1)
N° de fabrication : ...
Année de fabrication : ...

⊕ II 2 G D

Ex db IIB T6 Gb
Ex tb IIIC T80°C Db
LCIE 06 ATEX 6006 X

-20°C ≤ T_{amb} ≤ +70°C

For standard models of electrical actuators

VALPES
Address: ...
Type: VRX*.70*.G*.** or VSX*.90*.G*.** (1)
Serial number: ...
Year of construction: ...

⊕ II 2 G D

Ex db IIB T6 Gb
Ex tb IIIC T80°C Db
LCIE 06 ATEX 6006 X

-20°C ≤ T_{amb} ≤ +70°C

Pour les modèles BBPR d'actionneurs

VALPES
Adresse : ...
Type : VRX*.70*.G*.** ou VSX*.90*.G*.** (1)
N° de fabrication : ...
Année de fabrication : ...

⊕ II 2 G D

Ex db IIB T6 Gb
Ex tb IIIC T80°C Db
LCIE 06 ATEX 6006 X

-10°C ≤ T_{amb} ≤ +40°C

For BBPR models of electrical actuators

VALPES
Address: ...
Type: VRX*.70*.G*.** or VSX*.90*.G*.** (1)
Serial number: ...
Year of construction: ...

⊕ II 2 G D

Ex db IIB T6 Gb
Ex tb IIIC T80°C Db
LCIE 06 ATEX 6006 X

-10°C ≤ T_{amb} ≤ +40°C

Pour le modèle 400V d'actionneurs

VALPES
Adresse : ...
Type : VRX*.709.R*.** or VSX*.909.R*.** (1)
N° de fabrication : ...
Année de fabrication : ...

⊕ II 2 G D

Ex db IIB T5 Gb
Ex tb IIIC T95°C Db
LCIE 06 ATEX 6006 X

-20°C ≤ T_{amb} ≤ +54°C

For 400V model of electrical actuators

VALPES
Address: ...
Type: VRX*.709.R*.** or VSX*.909.R*.** (1)
Serial number: ...
Year of construction: ...

⊕ II 2 G D

Ex db IIB T5 Gb
Ex tb IIIC T95°C Db
LCIE 06 ATEX 6006 X

-20°C ≤ T_{amb} ≤ +54°C

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Alimentation et fréquence Voltage supply and frequency	15 V à / to 30 V 50/60Hz ou / or 100 V à / to 240 V 50/60Hz 12 V à / to 48 VDC (BBPR modèles / models : 24 V à / to 48 VDC) ou / or 100 V à / to 350 VDC 400 V triphasé / three-phase 50/60Hz
Puissance absorbée Power consumption	Pour le type / For the type VRX*.70*.**.**: 45W (400V : 52W) Pour le type / For the type VSX*.90*.**.**: 45W (400V : 135W)
Temps de manœuvre (rotation de 90°) Operating time (rotation of 90°)	Pour le type / For the type VRX25.70*.**.**: 7s (400V : 10s) Pour le type / For the type VRX45.70*.**.**: 15s (400V : 10s) Pour le type / For the type VRX75.70*.**.**: 20s (400V : 15s) Pour le type / For the type VSX100.90*.**.**: 15s (400V : 10s) Pour le type / For the type VSX150.90*.**.**: 30s (400V : 20s) Pour le type / For the type VSX300.90*.**.**: 60s (400V : 35s)
Commande manuelle Manual override	Pour le type / For the type VRX*.70*.**.**: Axe sortant / Outgoing axis Pour le type / For the type VSX*.90*.**.**: Volant / Wheel
Facteur de marche Duty cycle	50 %
Informations supplémentaires pour les options A à H (associée à l'option 1) incluse dans le détail de la gamme des actionneurs) Additional information for the options A to H (associated to the « option 1 » included in the range details of actuators)	Potentiomètre de recopie intégré dans l'actionneur donnant la position de la vanne sur une plage de 100, 1000, 5000, 1000 Ohms pour 90° : 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). Potentiomètre de recopie 5 kΩ + convertisseur 4-20 mA, 0-20 mA, 0-10 V (Transmetteur intégré dans l'actionneur donnant la position de la vanne avec un signal de 4 à 20 mA, 0 à 20 mA ou 0 à 10 V à 90°): 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 contacts de fin de course additionnels (un pour l'ouverture et l'autre pour la fermeture) sans potentiel, pour la recopie : 2 auxiliary limit switches (one for opening and one for closing), free of potential, for position feedback : EFC.2. Résistance anti-condensation / Anti-condensation resistance 230 VAC - 10 W (Designation : H).
Installation	Verticale ou horizontale / Vertical or horizontal. Le montage de l'actionneur avec le couvercle tête en bas n'est pas autorisé. The installation of the actuator with the cover facing down is not allowed.
Liaison avec la vanne Connection to the valve	Pour le type / For the type VRX*.70*.**.**: Bride de raccordement pour la fixation de l'actionneur quart de tour sur la vanne F05/F07 (selon ISO 5211); commande de sortie carrée 17 mm (femelle étoile) Flange connection for the attachment of quarter-turn actuator to valve: F05 / F07 (according to ISO 5211); 17 mm square drive output (Female star). Pour le type / For the type VSX*.90*.**.**: Bride de raccordement pour la fixation de l'actionneur quart de tour sur la vanne F07/F10 (selon ISO 5211); commande de sortie carrée 22 mm (femelle étoile) Flange connection for the attachment of quarter-turn actuator to valve: F07 / F10 (according to ISO 5211); 22 mm square drive output (Female star).
Entrées filetées dans l'enveloppe Threaded entries into the enclosure	2 x ISO M20x1.5 – 6H, prévues pour le montage d'entrées de câbles ou de dispositifs d'obturation certifiés. intended for the mounting of certified cable glands or blanking elements.

12. Report Number

Intertek Report: 104672920CHE-001 dated 16 August 2021.

13. Special Conditions of Certification

(a). Special Conditions of Use

- 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).
- For information concerning the flameproof seals 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.
- Potential electrostatic charging hazard. See instructions.
- The equipment shall be submitted to low mechanical impact only.

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Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

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- (b). Conditions of Manufacture
- None.

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 104672920CHE-001 dated 16 August 2021.

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
ÉTIQUETTE 60X40 MARQUAGE Ex VRX / VSX T5 / T95 °C -20 °C à +54 °C (400V TRIPHASÉ)	SWAE470000	L	26/07/2021
ÉTIQUETTE 60X40 MARQUAGE Ex VRX / VSX BBPR T6 / T80 °C et -10 °C à +40 °C	SWAE940000	B	26/07/2021
ÉTIQUETTE 60X40 MARQUAGE Ex VRX / VSX std T6 / T 80° et -20 °C à +70 °C	SWAE650000	H	26/07/2021
Dossier technique / Technical file (47 pages)	DEAG0600	M	2020/07/29
Actionneur électrique VRX antidéflagra (enveloppe ATEX) - 2 pages	DEAG0701	G	2020/07/16
Actionneur électrique VSX antidéflagra (enveloppe ATEX) - 2 pages	DEAG0801	H	2020/07/10
Manuel d'installation et d'utilisation / Installation and operation manual	DSBA3401	-	-