



EU-TYPE EXAMINATION CERTIFICATE

Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

Certificate Number: **Sira 19ATEX1299X** Issue: **1**

Equipment: **Aviator II Valve Controller**

Applicant: **Flowserve/PMV Automation AB**

Address: **Korta Gatan 9
SE-171 54 Solna
Sweden**

This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018

EN 60079-1:2014 A/C:2018

If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

The marking of the equipment shall include the following:



II 2G

Ex db IIB T3/T4 Gb

Ta = -20°C to +40°C T4

Ta = -20°C to +60°C T3

Project Number 80063514

Signed: J A May

Title: Director of Operations

CSA Group Netherlands B.V.
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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The AVIATOR II series Valve Controller consists of a switch assembly mounted in a flame-proof enclosure which is optionally provided with a solenoid and/or spool valve. The Solenoid and Spool valve options do not form part of this assessment. However, Section 3.1.9.2 and 3.1.9.3 below describes solenoid and spool valve options and suitability as a reference only.

Minimum Ambient Temperature: -20°C

Maximum Ambient Temperature: +40°C (T4) & +60°C (T3)

Aviator II Nomenclature – (Ex d IIB T3/T4)

A N XV U 2 M1 14 0 A 3A1 P R N 1
I – II – III – IV – V – VI – VII – VIII – IX – X – XI – XII – XIII – XIV

Key to Alpha-numeric data

- I **Manufacturer Label**
 - Single Alpha-numeric Character
- II **Shaft Type**
 - Single Alpha-numeric character
- III **Housing**
 - XV – Aluminium Housing with 3/4 NPT Conduit
 - XM – Aluminium Housing with M25 conduit
- IV **Position Indicator**
 - Single Alpha-numeric Character
- V **Quantity of Switch Elements**
 - Single Alpha-numeric Character
- VI **Switch Element Type**
 - M1 - SPDT Mechanical
 - MG – SPDT Mechanical – Gold Plated
 - MB – DPDB Mechanical – Licon
 - P4 – SPST Proximity
 - PE – Sabre SPDT Proximity
 - PP - Phazer SPDT Proximity
 - PL - Phazer SPDT Proximity w/LED
 - PT – BRS SPDT Proximity
 - PX – BRS SPDT Proximity w/LED
 - N8 – P+F NJ2-V3-N
 - NQ – P+F NJ4-12GK-N (Namur)
 - NR – P+F NJ4-12GM40-E1
 - NS - P+F NJ4-12GM40-E2
 - NT - P+F NJ4-12GK40-E2
 - NP – P+F SJ3-5N (Namur)
 - FA – As-I card with (2) P4 Switches

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- VII **Certification Type**
- 14 – General Purpose
 - 19 – Ex d IIB ATEX II 2G T5
 - 23 – Explosion Proof CL I,II Div 1,2 Groups C,D,E,F,G AEx d IIB T5 Ex d IIB T5 ATEX II 2G ;Ex d IIB T5
 - 25 – Ex d IIB IECEX T5
- VIII **Number Of Coils**
- 0 – Integral Single Coil (Internally Mounted)
- IX **Solenoid Coil Voltage**
- 0 – None
 - A – 110Vac/50Hz, 120Vac/60Hz (2 Watt)
 - C - 220Vac/50Hz, 240Vac/60Hz (2 Watt)
 - F – 12Vdc (2 Watt)
 - G - 24Vdc (2 Watt)
 - H –12Vdc Low-Power (0.67 Watt)
 - J – 24Vdc Low-Power (0.67 Watt)
 - K – 24Vdc (Intrinsically Safe)
 - P – 24Vdc Ultra Low Power (Piezo 0.006 Watt)
- X **Spool Valve**
- Single Alpha-Numeric Character
- XI **Paint Options**
- Single Alpha-Numeric Character
- XII **Spool Valve Exhaust Mufflers**
- Single Alpha-Numeric Character
- XIII **Override Options**
- Single Alpha-Numeric Character
- XIV **Other**
- Single Alpha-Numeric Character not affecting Explosion Proof design concepts.

Marked electrical ratings are determined by the provided switch and the optional solenoid coil as follows:

Switch

Suffix M1 = rated 250Vdc, 0.025A - 125Vdc, 0.05A; 125Vac, 15A – 250Vac, 15A

Suffix MG = rated 24Vdc, 10A – 125Vdc, 0.1A; 125Vac, 10A – 250Vac, 10A.

Suffix P4 = rated 24Vdc, 1A – 200Vdc, 25A; 120Vac, 0.4A – 250Vac, 0.1A.

Suffix PE = rated 24Vdc, 0.001A – 150Vdc, 1A; 120Vac, 0.001A – 250Vac, 0.001A.

Suffix PP, PL = rated 24Vdc, 0.05A – 500Vdc, 3A; 120Vac, 0.05A – 250Vac, 0.4A.

Suffix PT, PX = rated 24Vdc, 0.001A – 115Vdc, 3A; 120Vac, 0.001A – 240Vac, 0.5A

Suffix N8, NQ, NP = rated 5-25Vdc Load Current<1mA (w/target >3mA(w/o target)

Suffix NR, NS, NT = rated 200mA max. Current 10-60Vdc

Suffix FA = (select 24Vdc coil) 24Vdc, 1A – 200Vdc, 0.25A; 120Vac, 0.4A – 250Vac, 0.1A

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Pilot Solenoid Coil/Valve (optional)

Suffix A = 110Vac, 50Hz – 120Vac, 60Hz 150psig

Suffix C = 220Vac, 50Hz – 240Vac, 60Hz 150psig

Suffix F = 12Vdc, 2Watts, 150psig

Suffix G = 24Vdc, 2Watts, 150psig

Suffix H = 12Vdc, 105psig

Suffix J = 24Vdc, 0.67Watts, 105psig

Suffix K = 24Vdc, (15.5Vdc, 0.67Watts), 105psig

Suffix P = 24Vdc, 0.006Watts, 150psig

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	22 April 2020	R80018343A	The release of the prime certificate.
1	18 November 2020	R80063514A	Transfer of certificate Sira 19ATEX1299X from Sira Certification Service to CSA Group Netherlands B.V.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 The following flame-proof gaps are less than those allowed by Table 2 of EN 60079-1:2014;

- Flat Joint between cover and base
- Cylindrical joint between shaft and cover
- Cylindrical joint between shaft and base.

For maximum gaps refer to User Instructions, FCD ACENIOM0100-02.

15.2 Flameproof joints are not to be repaired or altered in any way after approval.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

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Certificate Annexe



Certificate Number: Sira 19ATEX1299X
Equipment: Aviator II Valve Controller
Applicant: Flowserve/PMV Automation AB

Issue 0

Drawing	Sheets	Rev.	Date	Title
X01337	1 of 1	E	26 Mar 20	Nameplate, Switch, Aviator II, ATEX rating, Blank Model, Mylar SOLNA Manufacture.
XM0372	1 of 1	B	26 Mar 20	Base Switch, Aviator II. Cover thread, M8X1.25p, Conduit, 3/4"NPT
X01218	1 to 2	B	26 Mar 20	Casting, Base, Switch, Aviator II
L02819	1 of 1	1	26 Mar 20	Layout, Switch, Aviator II, Flame-path Certification
X01294	1 of 1	1	26 Mar 20	Flame Arrester, 0.32dia, 0.25L, Sintered Bronze, GKN P/N BZ-060929-1
X01142	1 of 1	3	26 Mar 20	Casting, Cover, Switch, XCL, Ultradome
X01265	1 of 1	0	27 Mar 20	Bolt, Socket Head, Captured M8 x 1.25 1.00L
XM0401	1 to 2	3	26 Mar 20	Cover, Switch XCL Ultradome M8X1.25p Threads

Issue 1. No new drawings were introduced

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