

Type Examination Certificate



1. **TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**
3. **Type Examination Certificate Number: ITS15ATEX48339X Issue 1**
4. **Product:** Setpoint – Machinery Protection System, model VC-8000
5. **Manufacturer:** BK Vibro America Inc.
6. **Address:** 2243 Park Place, Suite A Minden, NV, 89423, USA
7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8. Intertek Testing and Certification Limited, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of the products intended for use in potentially explosive atmospheres given in Annex II to the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential Intertek Report 103103177DAL-002, dated-5th Jan 2018
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013, EN 60079-15:2010 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
11. This Type Examination Certificate relates only to the design of the specified product and not to specific items subsequently manufactured.
12. The marking of the product shall include the following:-



II 3 G Ex nA nC IIC 160°C (T3) Gc

-20°C ≤ Ta ≤ 65°C

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

Kevin J. Wolf
Certification Officer
11 JAN 2018



SCHEDULE

TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX48339X Issue 1

13. Description of Equipment or Protective System

The Setpoint – Machinery Protection System consists of a 4-slot, 8-slot, or 16-slot backplane, a rack connect module (RCM), one or two system access modules (SAM), and a combination of universal monitory modules (UMM), temperature monitoring modules (TMM) and power connection modules (PCM).

RCM and SAM are required in all configurations; however, UMM and TMM are optional. A combination of UMM and TMM can be from one of each module or up to 14 combined for 16-slot model. RCM consists of: primary power input, secondary power input, discrete contact control inputs, rack fault relay, reset button, LED indicators, buffered transducer outputs. PCM is a modified RCM containing only the power circuits.

SAM provides access for: configuring all modules, connection to the control network, local display connection, system event and alarm lists, and connection to condition monitoring host computer.

UMM is a 4-channel machine monitoring modules that supports various sensors including but not limited to proximity, velocity, acceleration, seismic, pressure, LVDT or process variable. All channels are independent and may be configured to use any of the sensors.

TMM is a 6-channel machine monitoring module that supports thermocouple and RTD inputs or external process variable.

Remote display contains of a LCD display, display board and a door of the enclosure. Setpoint Modules can be removed while the system is powered (hot swap) only in non-hazardous environment.

Input Parameters: $V_{min} = 18V$, $V_{max} = 36V$, $P_{max} = 160W$

Relay Contact Parameters: $V_{max} = 30VDC$, $I_{max} = 5A$

14. Report Number

Intertek Report 103103177DAL-002, dated-5th Jan 2018

15. Conditions of Certification

(a). Specific Conditions of Safe Use

1. To be installed inside an ATEX certified IP54 enclosure that has a suitable service temperature range. Mounting of the equipment within a suitable enclosure will cause the internal ambient enclosure temperature to be higher than the maximum external enclosure ambient temperature. The equipment shall not form part of the external enclosure (panel mounted, for example). All cable entries in to the enclosure shall be fitted with ATEX certified cable glands that have a minimum ingress protection of IP54. The cable glands shall have an operating temperature range equal to or greater than the ambient operating temperature.
2. Maximum ambient temperature where the unit is installed shall not exceed 65°C.
3. Transient protection shall be provided on the supply to limit transients to max: 50.4 Vpk (140% of the peak voltage).
4. USB connectors are not for use in hazardous area and will be internal to installation in an ATEX certified IP54 enclosure.
5. System chassis ground must follow section 3.4.1 of the Hazardous Area Installation

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Manual; Document: S1160865; Rev: 002.

- 6. Module hot-swapping is not allowed in hazardous locations.
- 7. Any Ethernet connectors used shall be checked to ensure that the mechanical retaining clip is undamaged and provides a mechanically secured and retained connection.

(b). Conditions of Manufacture - Routine Tests

Dielectric strength test between all circuit connections and chassis: 500 Vrms for 60s or 600 Vrms for 100ms as per the requirements of EN 60079-15:2010 clauses 6.5.1 and 23.1



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16. Essential Health and Safety Requirements (EHSRs)




Compliance with the Essential Health and Safety Requirements (EHSRs) is not affected by this variation.

17. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
* Hazardous Area Installation Manual	Document S1160865.002	002	2-Nov-2017
*Marking Label-VC-8000	S100426-AGENCY	002	2-Nov-2017
*Schematic Temperature Monitor	S100446-AGENCY	001	13-Sep-2017
*Display Card	S100449-AGENCY	001	13-Sep-2017
*Backplane 16 slot	S100452-AGENCY	001	13-Sep-2017
*Backplane 8 slot	S100455-AGENCY	001	13-Sep-2017
*Backplane 4 slot	S100521-AGENCY	001	13-Sep-2017
*Schematic Vibration Monitor	S100551-AGENCY	001	13-Sep-2017
*Connector Card	S100555-AGENCY	001	13-Sep-2017
*System Monitor	S100560-AGENCY	001	13-Sep-2017
*Label, VC-8000, Warning, Explosive atmosphere	S100567-AGENCY	001	13-Sep-2017
*Specifications VC-8000, UMM PCB	S100569-AGENCY	001	13-Sep-2017
*Specifications VC-8000, TMM Board	S100570-AGENCY	001	13-Sep-2017
*Specifications VC-8000, SAM Board, Agency	S100571-AGENCY	001	13-Sep-2017
*Specifications VC-8000, RCM PCB, Agency	S100572-AGENCY	001	13-Sep-2017
*Specifications Backplane, 8 slot	S100573-AGENCY	001	13-Sep-2017
*Specifications Backplane, 16 slot	S100574-AGENCY	001	13-Sep-2017
*Specifications VC-8000, Display/BNC Board	S100575-AGENCY	001	13-Sep-2017
*Drill DWG, SP-2020 Backplane, 4-slot	S100581-AGENCY	001	13-Sep-2017



ATEX TEST REPORT COVER

Reference Number	103103177DAL-002
Certificate Number	ITS 15 ATEX 48339X
Compiled by + signature (TL)	Chaitanya Katekar 
Reviewed by + signature (TL/MR) :	Michael Spector 
Date of issue	9 Jan 2018
Testing Laboratory (TL)	Intertek Testing Services NA, Inc.
Address	3933 US Route 11 South; Cortland, NY, 13045; USA
Ex Testing Laboratory (TL)	Intertek Plano
Address	1809 10 th Street; Suite 400; Plano, TX 75074; USA
Notified Body (NB)	Intertek Testing and Certification, Limited.
Address	Intertek House, Cleeve Road; Leatherhead, Surrey, KT22 7SB; UK
Applicant's name	BK Vibro America Inc.
Address	2243 Park Place, Suite A Minden, NV, 89423, USA
Standards associated with this Certification	EN 60079-0:2012+A11:2013 EN 60079-15:2010
Clauses considered	All clauses considered
Test procedure	ATEX
Test Report Form Number	ATEX Cover ExTR
Test item description	Setpoint – Machinery Protection System
Model/type reference	VC-8000
Code (eg : CE  _ _ Ex _ II _ T _)	Ex nA nC IIC 160°C (T3) Gc
Rating	Input voltage: 18 - 36 VDC, 160 Watts max Relay circuits: Vmax: 30 VDC, Imax: 5A
All testing fully performed by TL staff at TL address above	Yes

Instructions for Intended Use of ExTR Cover:

An ATEXTR Cover is the sole top-level document to associate together all other parts of an ATEX Test Report (ATEXTR) package. An ATEXTR package is comprised of an ATEXTR Cover and one or more associated ATEXTR documents (which may include Test Reports and Addendums). All ATEXTR package documents are compiled and reviewed by the TL.

Manufacturer's name : BK Vibro America Inc.
 Address : 2243 Park Place, Suite A Minden, NV, 89423
 Trademark..... : 

Particulars: Test item vs. Test requirements

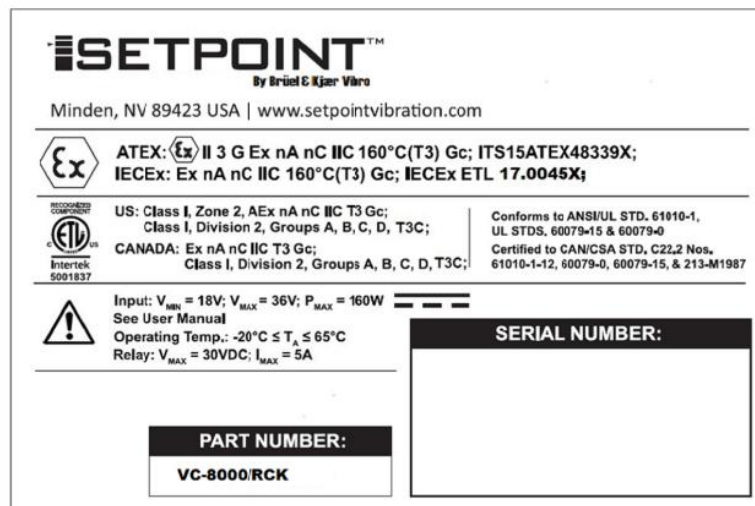
Classification of installation and use : Stationary
 Ingress protection : X condition: to be installed inside an IEC certified IP54 enclosure
 Rated ambient temperature range (°C) : $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq 65^{\circ}\text{C}$

General remarks:

The test results presented in this TR package relate only to the item or product tested.

- "(see Attachment #)" refers to additional information appended to the TR package.
- "(see appended table)" refers to a table appended to the TR package.
- Throughout this TR package, a point is used as the decimal separator.
- *Where the term "N/A" appears in any part of an TR package, it indicates that the associated issue was considered "Not applicable" to the involved evaluation.*

The technical content of this TR package shall not be reproduced except in full without the written approval of the Issuing NB and TL.

Copy of Marking Plate:**General product information:**

The Setpoint – Machinery Protection System consists of a 4-slot, 8-slot, or 16-slot backplane, a rack connect module (RCM), one or two system access modules (SAM), and a combination of universal monitory modules (UMM), temperature monitoring modules (TMM) and power connection modules (PCM).

RCM and SAM are required in all configurations; however, UMM and TMM are optional. A combination of UMM and TMM can be from one of each module or up to 14 combined for 16-slot model.

RCM consists of: primary power input, secondary power input, discrete contact control inputs, rack fault relay, reset button, LED indicators, buffered transducer outputs. PCM is a modified RCM containing only the power circuits.

SAM provides access for: configuring all modules, connection to the control network, local display connection, system event and alarm lists, and connection to condition monitoring host computer.

UMM is a 4-channel machine monitoring modules that supports various sensors including but not limited to proximity, velocity, acceleration, seismic, pressure, LVDT or process variable. All channels are independent and may be configured to use any of the sensors.

TMM is a 6-channel machine monitoring module that supports thermocouple and RTD inputs or external process variable.

Remote display contains of a LCD display, display board and just a door of the enclosure .

Setpoint Modules can be removed while the system is powered (hot swap) only in non-hazardous environment.

Product is nC due to presence of sealed relays; all other components evaluated are non-arcing (nA).

Details of change (applicable only when revising an existing TR package):

Intertek had Previously issued ATEX test report and certificate to Set Point Vibration company. Setpoint Vibration company (formerly owned by Metrix Instrument Company) is purchased by BK Vibro America Inc.

This ExTR addendum is created to issue new issue of ATEX cert to BK Vibro America Inc. Control drawings are revised to add "BK Vibro America Inc" reference in title block. Product name is changed from MX2020 to VC-8000. No technical changes are made to product.

In accordance with, testing not fully performed by TL staff at the above TL address: N/A

IECEX reports and certificate used as part of this evaluation, if any:

IECEX report 103103177DAL-001
IECEX crt: IECEX ETL 17.0045X

"Specific Conditions of Use" for Ex Equipment or "Schedule of Limitations" for Ex Components, if any:

1. To be installed inside an ATEX certified IP54 enclosure that has a suitable service temperature range. Mounting of the equipment within a suitable enclosure will cause the internal ambient enclosure temperature to be higher than the maximum external enclosure ambient temperature. The equipment shall not form part of the external enclosure (panel mounted, for example). All cable entries in to the enclosure shall be fitted with ATEX certified cable glands that have a minimum ingress protection of IP54. The cable glands shall have an operating temperature range equal to or greater than the ambient operating temperature.
2. Maximum ambient temperature where the unit is installed shall not exceed 65°C.
3. Transient protection shall be provided on the supply to limit transients to max: 50.4 Vpk (140% of the peak voltage).
4. USB connectors are not for use in hazardous area and will be internal to installation in an ATEX certified IP54 enclosure.
5. System chassis ground must follow section 3.4.1 of the Hazardous Area Installation Manual; Document: S1160865; Rev: 002.
6. Module hot-swapping is not allowed in hazardous locations.
7. Any Ethernet connectors used shall be checked to ensure that the mechanical retaining clip is undamaged and provides a mechanically secured and retained connection.

Routine tests, if any:

Dielectric strength test between all circuit connections and chassis: 500 Vrms for 60s or 600 Vrms for 100ms as per the requirements of EN 60079-15:2010 clauses 6.5.1 and 23.1

Manufacturer's Documents			
Title:	Drawing No.:	Rev. Level:	Date:
* Hazardous Area Installation Manual	Document S1160865.002	002	2-Nov-2017
*Marking Label-VC-8000	S100426-AGENCY	002	2-Nov-2017
*Schematic Temperature Monitor	S100446-AGENCY	001	13-Sep-2017
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*Backplane 8 slot	S100455-AGENCY	001	13-Sep-2017
*Backplane 4 slot	S100521-AGENCY	001	13-Sep-2017
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*Specifications Backplane, 16 slot	S100574-AGENCY	001	13-Sep-2017
*Specifications VC-8000, Display/BNC Board	S100575-AGENCY	001	13-Sep-2017
*Drill DWG, SP-2020 Backplane, 4-slot	S100581-AGENCY	001	13-Sep-2017
*Power Connection Module	S100850-AGENCY	001	13-Sep-2017
*VC-8000-RCK, Outline and Dimension	S1089867-AGENCY	001	13-Sep-2017
*MPS, BOM, AGENCY CONTROLLED COMPONENTS (14 Pages)	S1219238-AGENCY	001	13-Sep-2017

*Note: An * is included before the title of documents that are new or revised.*



ATEX TEST REPORT ADDENDUM

Reference Number..... : 103103177DAL-002

Compiled by + signature (ExTL) : Chaitanya Katekar

Reviewed by + signature (ExTL) ... : Michael Spector

Date of issue : 9 Jan 2018

Testing Laboratory (TL) : Intertek Testing Services NA, Inc.

Address..... : 3933 US Route 11 South; Cortland, NY, 13045; USA

Ex Testing Laboratory (TL) : Intertek Plano

Address..... : 1809 10th Street; Suite 400; Plano, TX 75074; USA

Applicant's name..... : BK Vibro America Inc.

Address..... : 2243 Park Place, Suite A Minden, NV, 89423, USA

Standards..... : EN 60079-0:2012+A11:2013
EN 60079-15:2010

Test procedure..... : ATEX

Test Report Form Number..... : ExTR Addendum_2 (released 2010-08)

Instructions for Intended Use of ExTR Addendum:

An ExTR Addendum is to supplement a previously issued ExTR package. Only those clauses applicable to the supplemental issue being addressed are to be tabulated and remarked upon as part of this document. An ExTR of National Differences may also supplement this document. An ExTR Addendum is to be compiled and reviewed by the ExTL. The Issuing ExCB indicates final approval of the ExTR Addendum as part of the overall ExTR package on the associated ExTR Cover.

Possible test case verdicts:

- test case does not apply to the test item :N / A

- test item does meet the requirement :Pass

General remarks:

The test results presented in this ExTR Addendum relate only to the item or product tested, and are only valid when considered together with the related Ex Test Report that was previously issued, along with any previously issued ExTR Addendums for the same item or product.

Only clauses and manufacturer's documents impacted by this document are detailed.

- "(see Attachment #)" refers to additional information appended to this document.
- "(see appended table)" refers to a table appended to this document.
- Throughout this document, a point is used as the decimal separator.

The technical content of this ExTR Addendum shall not be reproduced except in full without the written approval of the Issuing ExCB and ExTL.

EN 60079-0:2011+A11:2013			
Clause	Requirement – Test	Result – Remark	Verdict
24	Documentation	New label and manual along with other control drawings with new company name are provided. Provided control drawings are compared with existing drawings to verify they are identical.	Pass
28	Manufacturer's responsibility	See below	Pass
28.1	Conformity with the documentation	The manufacturer agrees to carry out the verifications or tests necessary to ensure that the electrical equipment produced complies with the documentation.	Pass
28.2	Certificate	IECEX/ATEX Certificate preparation is complete.	Pass
28.3	Responsibility for marking	By marking, the manufacturer attests to the construction and testing.	Pass
29.4	Ex marking for explosive gas atmospheres	<p>Existing marking is modified to reflect new company name, new address, new model number (VC-8000) and new IECEX Certificate number "IECEX ETL 17.0045X"</p> <p>Following Ex Markings is on the label:</p> <p>CANADA: Class I, Division 2, Groups A - D, T3C, and Ex nA nC IIC 160°C (T3) Gc US: Class I, Division 2, Groups A - D, T3C, and Class I, Zone 2, AEx nA nC IIC 160°C (T3) Gc</p> <p>ATEX: II 3 G Ex nA nC IIC 160°C (T3) Gc</p> <p>IECEX: Ex nA nC IIC 160°C (T3) Gc</p> <p>Tamb: -20°C to 65°</p>	Pass

EN 60079-15:2010			
Clause	Requirement – Test	Result – Remark	Verdict
24	Marking	<p>Existing marking is modified to reflect new company name, new address, new model number (VC-8000)”</p> <p>Following Ex Markings is on the label:</p> <p>CANADA: Class I, Division 2, Groups A - D, T3C, and Ex nA nC IIC 160°C (T3) Gc</p> <p>US: Class I, Division 2, Groups A - D, T3C, and Class I, Zone 2, AEx nA nC IIC 160°C (T3) Gc</p> <p>ATEX: II 3 G Ex nA nC IIC 160°C (T3) Gc</p> <p>IECEX: Ex nA nC IIC 160°C (T3) Gc</p> <p>Tamb: -20°C to 65°</p>	Pass
25	Documentation	New label and manual along with other control drawings with new company name are provided. Provided control drawings are compared with existing drawings to verify they are identical.	Pass
26	Instructions	New instruction manual with new company name, new model name and Ex Markings is provided	Pass

Measurement Section, including Additional Narrative Remarks (as deemed applicable):

Product does not have technical changes. Previous EHSR is not affected.