

TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

- Type Examination Certificate Number:** ITS15ATEX48339X **Issue 02**
- Product:** Setpoint – Machinery Protection System, Model VC-8000
- Manufacturer:** BK Vibro America Inc.
- Address:** 2243 Park Place
Suite A
Minden, NV 89423
USA
- 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, 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 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012 + A11:2013 and EN 60079-15:2010 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 Type Examination Certificate relates only to the design of the specified product and not to specific items subsequently manufactured.
- 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

Certification Officer: _____

Todd L. Relyea
3.2019/03930580

Todd L. Relyea

Date:

23 May 2019

SCHEDULE:

TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX48339X – Issue 02

11. 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 monitoring 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 an 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).

12. Report Number

Intertek Report: 103930580DAL-002 Dated: 14-May-2019.

13. Conditions of Certification

(a). Special Conditions of Use

- 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.
- Maximum ambient temperature where the unit is installed shall not exceed 65°C.
- Transient protection shall be provided on the supply to limit transients to max: 50.4 Vpk (140% of the peak voltage).

SCHEDULE:

TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX48339X – Issue 02

- USB connectors are not for use in hazardous area and will be internal to installation in an ATEX certified IP54 enclosure.
- System chassis ground must follow section 3.4.1 of the Hazardous Area Installation Manual; Document: S1160865; Rev: 002.
- Module hot-swapping is not allowed in hazardous locations.
- 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 IEC 60079-15:2010 clauses 6.5.1 and 23.1

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) affected by this variation have been identified and assessed in Intertek Report: 103930580DAL-002 Dated: 14-May-2019.

15. 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

SCHEDULE:

TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX48339X – Issue 02

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
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	002	8-May-2019

16. Details of Certificate changes Issue 2

- Update of drawing S1219238-AGENCY from Rev.1 to Rev.2 to modify mSATA DRIVE component information and requirements.