




## 1. TYPE EXAMINATION CERTIFICATE

### 2. Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3. **Type Examination Certificate Number:** ITS15ATEX48339X
4. **Equipment or Protective System:** Setpoint – Machinery Protection System, model MX2020
5. **Manufacturer:** SETPOINT Vibration, a division of Compressor Controls Corporation
6. **Address:** 2243 Park Place, Suite A  
Minden, NV 89423  
United States of America

7. This equipment or protective system 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 equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive 94/9/EC of 23 March 1994

The examination and test results are recorded in confidential Intertek Report 102173086DAL-002 dated November 11, 2015.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards 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, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12. The marking of the equipment or protective system shall include the following:-



II 3 G Ex nA nC IIC 160°C (T3) Gc

-20°C ≤ Ta ≤ 65°C

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**Michael Spector**  
Certification Officer  
11 November 2015

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## SCHEDULE

### TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX48339X

#### 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 Ref: 102173086DAL-002 dated November 11, 2015

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#### 15. Conditions of Certification

##### (a). Special Conditions for safe 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).
- 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: 1160865; Rev: C.
- 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

- 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 (EHSR's)**

The relevant EHSR's have been identified and assessed in project folder G102173086.

**17. Drawings and Documents**

Title	Drawing No.:	Rev. Level:	Date:
Backplane 4 slot (pages)	100521-AGENCY	A	2/3/2015
Backplane 8 slot	100455-AGENCY	A	8/13/2015
Backplane 16 slot	100452-AGENCY	A	8/27/2015
MX2020-RCK, Outline & Dimension	1089867-AGENCY	E	5/5/2015
Connector Card	100555-AGENCY	B	7/14/2015
System Monitor	100560-AGENCY	B	9/23/2015
Schematic Temperature Monitor	100446-AGENCY	B	9/23/2015
Schematic Vibration Monitor	100551-AGENCY	A	9/23/2015
MX2020, Setpoint Rack, Label	100426-05-AW	J	9/24/2015
Label, MX2020, Warning, Explosive Atmosphere	100567-AGENCY	E	9/24/2015
MANUAL, MX2020 Hazardous Installation	1160865	C	9/24/2015
Specifications MX2020, RCM PCB, Agency	100572-AGENCY	C	9/24/2015
Specifications MX2020, SAM Board, Agency	100571-AGENCY	C	9/24/2015
Specifications MX2020, UMM PCB	100569-AGENCY	C	9/24/2015
Specifications MX2020, TMM Board	100570-AGENCY	C	9/24/2015
Specifications MX2020, Display/BNC Board	100575-AGENCY	C	9/24/2015
Drill DWG, MX2020 Backplane, 4-slot	100581-AGENCY	C	9/24/2015
Specifications Backplane, 8 slot	100573-AGENCY	C	9/24/2015
Specifications Backplane, 16 slot	100574-AGENCY	C	9/24/2015
Power Connection Module	100850-AGENCY	A	9/24/2015
MPS, BOM, AGENCY CONTROLLED COMPONENTS (14 PAGES)	1219238	B	9/24/2015

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