

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** **FM18US0162X**
3. **Equipment:** **1616 Wireless UT Node**
(Type Reference and Name)
4. **Name of Listing Company:** **MISTRAS Group Inc.**
5. **Address of Listing Company:** **195 Clarksville Road**
Princeton Junction, NJ 08550- USA
6. The examination and test results are recorded in confidential report number:

3051800 dated 29th February 2016
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2011, FM Class 3610:2015, FM Class 3810:2018,
ANSI/ISA 60079-0:2013, ANSI/ISA 60079-11:2014, ANSI/IEC 60529:2004
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
10. **Equipment Ratings:**

Intrinsically Safe for Class I, Division 1, Groups A, B, C and D; AEx ia for Class I, Zone 0, Group IIC, hazardous (classified) locations, indoors and outdoors, with an ambient temperature rating of T4 for $-55^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$, IP66.
11. The marking of the equipment shall include:

Certificate issued by:


J.E. Marquedant

VP, Manager - Electrical Systems

23 August 2021

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE



US Certificate Of Conformity No: FM18US0162X

IS//1/ABCD/T4 for $-55^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$; Control Drawing #1616-6000;
I/O/AEx ia/IIC/ T4 for $-55^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$; Control Drawing #1616-6000;
IP66.

12. Description of Equipment:

General - The 1616 UT Node is a pulser/receiver used for making material thickness measurements. It is used in conjunction with any combination of up to four single-crystal or dual-crystal transducers. The 1616 UT Node is powered from a 7.2V (nominal) battery, and sends out triggering pulses to the transducers, typically twice per day. Each transducer senses the thickness of the medium it is connected to, and converts it into an electrical signal which is sent back to the 1616.

Construction - The 1616's enclosure material is aluminum, while the transducer enclosures are made of stainless steel.

1616-5015. Wireless UT Thickness Node.

ISSUT5M-XX-YY-5015, with XX = S or TC, YY= 3 or 5. Transducer.

ISDUTXXM-5015, with XX = 2 or 5. Transducer

HSM-X-YYZ, with X = T or N, and Y = T, N, H or C, and ZZ = delay line length (≥ 10). Transducer.

13. Specific Conditions of Use:

1. Do not remove cover, replace batteries, fuse or plug-in module unless the area is known to be free of ignitable gas vapors. Only battery type MISTRAS E950-0036 shall be used.
2. To avoid electrostatic discharge, cleaning must only be performed with a damp cloth.
3. The enclosure contains aluminum and is considered a potential risk of ignition by impact or friction. Care must be taken during installation to prevent impact or friction.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
29 th February 2016	Original Issue.
2 nd July 2018	<u>Supplement 1</u> Report Reference: PR450202 dated 2 nd July 2018. Description of the Change: Addition of transducer model HSM-X-YYZ. The original certificate #3051800coc is reissued in the new format.
23 rd August 2021	<u>Supplement 2:</u> Report Reference: Revision Report RR228931 dated 23 rd August 2021.

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	Description of the Change: The fuse rating is reduced from 125 mA to 100 mA. The maximum ambient temperature is increased from +55°C to +70°C. Other minor design and drawing changes not affecting compliance.
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