CERTIFICATE OF CONFORMITY

1. **HAZARDOUS LOCATION COMPONENT PER CANADIAN REQUIREMENTS**
2. **Certificate No:** **FM20CA0051U**
3. **Component: (Type Reference and Name)** **X-Series Junction Box and JB5000 Junction Box**
4. **Name of Listing Company:** **MSA – The Safety Company**
5. **Address of Listing Company:** **1000 Cranberry Woods Dr. Cranberry Township, PA 16066, USA**
6. The examination and test results are recorded in confidential report number:

   3027766 dated 25th April 2007

7. FM Approvals LLC, certifies that the component described has been found to comply with the following Approval standards and other documents:

   CSA-C22.2 No. 0.4:R2013, CSA-C22.2 No. 0.5:R2016, CSA-C22.2 No. 25:R2009, CSA-C22.2 No. 30:R2012, CSA-C22.2 No. 94:R2011, CSA-C22.2 No. 142:R2004, CSA-C22.2 No. 60529:R2010, CAN/CSA-C22.2 No. 60079-0:2019, CAN/CSA-C22.2 No. 60079-1:2016.

8. The sign 'U' placed after the certificate number indicates that this certificate must not be mistaken for a certificate for equipment or a protective system. This certificate may only be used as the basis for the certification of equipment or a protective system. This certificate is issued to the manufacturer also intended to be the holder of the equipment certificate which includes this component.
9. This certificate relates to the design, examination and testing of the component 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 component as examined, tested and Approved.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

1 April 2022
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

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SCHEDULE

Canadian Certificate Of Conformity No: FM20CA0051U

10. Component Ratings:

    Explosionproof for Class I, Division 1, Groups A, B, C and D; flameproof for Ex db IIC Gb; suitable for Class II, Division 1, Groups E, F and G; and suitable for Class III, Division 1 hazardous locations, indoor and outdoor (Type 4X / IP66).

11. The marking of the component shall include:

    Class I Division 1, Groups A, B, C, D

    Class II, Division 1, Groups E, F, G, Class III, Division 1

    Ex db IIC Gb

    Type 4X, IP66

12. **Description of Equipment:**

    General – The X Series Junction Box and JB5000 Junction Box is a stainless steel single compartment assembly consisting of a base and a threaded blank cover. An o-ring seal is provided between the cover and the base to prevent the ingress of dust and water. The enclosure measures approximately 3¼ inches in diameter by 2¾ inches in height. The cover to base thread is 3¼-12 UN-2A/2B with a minimum thread engagement of 8 threads.The base has options for three threaded entries. The entries can be either ¾ inch-14 NPT or M25x1.5 –6H threads.

    X Series Junction Box
    JB5000 Junction Box
    XP / I / 1 / ABCD
    Ex db / IIC Gb
    DIP / II,III / 1 / EFG
    Type 4X, IP66

13. **Schedule of Limitations:**

    1. Where necessary for safety, the contents of the enclosure shall comply with the appropriate requirements of relevant standards for electrical apparatus.
    2. Rotating machines, or other devices which create turbulence, shall not be incorporated.
    3. Primary and secondary cells and batteries shall only be used in accordance with Annex E of IEC 60079-1.
    4. Enclosures which can be opened more quickly than the time necessary for the discharge of incorporated capacitors or the cooling of hot components shall be labeled in accordance with the requirements of IEC 60079-0.
    5. Oil-filled circuit-breakers and contactors shall not be used.
    6. All entry or closure devices when fitted shall satisfy the requirements of Clause 5 of EN60079-1, or be specifically evaluated with the apparatus and be suitable for the conditions of use. Threads interrupted by the set screw shall not be counted in satisfying the requirements of Clause 5 of EN 60079-1. A thread of engagement of 5 threads is required and depth of engagement 8mm is required.
    7. For all gas groups the content of the enclosure apparatus may be placed in any arrangement, provided that an area of at least 20 %of each cross-sectional area remains free to permit an unimpeded gas flow and, therefore, unrestricted development of an explosion.

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8. Contact the manufacturer for flamepath details. The joints are non-repairable.
9. The EX Port Line Bushing assembly is rated for Service Temperature of -50°C ≤ +105°C

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

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
25th April, 2007	Original Issue.
19th October 2020	Supplement 2: Report Reference: – PR456046 dated 19th October 2020. Description of the Change: Review of Canadian standards and update to latest editions. Exam and review of CAN/CSA-C22.2 No. 60079-0 and CAN/CSA-C22.2 No. 60079-1 as compared to IEC Standards and address of National Differences. Revised Certificate to new certificate format and addition of JB5000 Junction Box.
1st April 2022	Supplement 3: Report Reference: – RR231825 dated 1st April 2022. Description of the Change: Label drawing revisions, removed UKCA logo, T-Code references, and T ambient ranges as these are not applicable for Ex Components. Add Schedule of Limitations note 9.

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