

# CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM22US0035

3. **Equipment:** FHX40 Display  
(Type Reference and Name)

4. **Name of Listing Company:** Endress+Hauser SE+Co KG

5. **Address of Listing Company:** Hauptstrasse 1  
Maulburg D79689  
Germany

6. The examination and test results are recorded in confidential report number:

3015480 dated 21<sup>st</sup> March 2003

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

FM Class 3600:2022, FM Class 3610:2021, FM Class 3611:2021, FM Class 3810:2021,  
ANSI/UL 60079-0:2020, ANSI/UL 60079-11:2018, ANSI/UL 121201:2019, ANSI/ISA 61010-1:2012,  
NEMA 250:2003, 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.

**Certificate issued by:**

  
J.E. Marquedant

2 June 2022

Date

VP, Manager - Electrical Systems

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://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



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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 apparatus for use in Class I, Division 1, Groups A, B, C and D; Class I, Zone 0, Group IIC in accordance with Installation Drawing 960006493; Nonincendive for use in Class I, Division 2, Groups A, B, C and D; for use in outdoor locations (Type 4X, IP66) with an ambient temperature rating of -40°C to +75°C.

11. The marking of the equipment shall include:

IS Class I, Division 1, Groups A, B, C, D – 960006493

IS Class I, Zone 0, AEx ia IIC T5 Ga – 960006493

Class I, Division 2, Groups A, B, C, D – 960006493

T5, Ta = -40°C to +75°C; Type 4X, IP66

12. **Description of Equipment:**

**General** - The FHX40 Display can be connected to level, pressure and flow instruments with an intrinsically safe display output signal. For functional reasons the cable length is limited to 40 m. Keypads are located on the display module for configuration and control purposes.

**Construction** – The FHX40 Display enclosure body is constructed of a polyester-coated aluminium with a glass window. The enclosure is not subject to electrostatic charges on these surfaces

**Ratings** - The FHX40 Display is rated for use in an ambient temperature range of -40°C to +75°C and has the following electrical properties:

Supply and input circuit (Connector, Pins 1 ... 4):

in type of protection intrinsic safety Ex ia IIC or when utilizing NIFW, the following parameters are used  
 $U_i = 5.6 \text{ V}$ ;  $I_i = 47 \text{ mA}$ ;  $P_i = 66 \text{ mW}$ ;  $C_i = 11 \text{ }\mu\text{F}$ ;  $L_i = 30 \text{ }\mu\text{H}$ .

The values for the capacitance  $C_i$  and the inductance  $L_i$  include the cable capacitance and inductance.

13. **Specific Conditions of Use:**

None

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

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

15. **Schedule Drawings**

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# **SCHEDULE**



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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
21 <sup>st</sup> March 2003	Original Issue.
2 <sup>nd</sup> June 2022	<p><u>Supplement 2:</u> Report Reference: – PR462853 dated 2<sup>nd</sup> June 2022. Description of the Change:</p> <ol style="list-style-type: none"><li>1) FM3600 updated to latest edition (2022)</li><li>2) FM3610, FM3611 and FM3810 updated to latest edition (2021)</li><li>3) ANSI/ISA 60079-0:2009 updated to ANSI/UL 60079-0:2020</li><li>4) ANSI/ISA 60079-11:2009 updated to ANSI/UL 60079-11:2014</li><li>5) ANSI/UL 121201:2019 added to standards list</li><li>6) ANSI/ISA 61010-1:2012 added to standards list</li><li>7) NEMA 250:2003 added to standards list</li><li>8) ANSI/IEC 60529:2004 added to standards list</li><li>9) Certificate updated to latest format</li></ol>

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