

CERTIFICATE OF CONFORMITY



- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
- Certificate No:** FM16US0256
- Equipment:** GPro 500
(Type Reference and Name) Gas Sensor
- Name of Listing Company:** Mettler-Toledo GmbH
- Address of Listing Company:** Im Hackacker 15 (Industrie Nord)
CH-8902 Urdorf
Switzerland
- The examination and test results are recorded in confidential report number:

3044884 dated 9th January 2013
- FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3615:2018, FM Class 3810:2005,
ANSI/NEMA 250:1991, ANSI/IEC 60529:2004
- 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.
- 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.
- Equipment Ratings:

Explosionproof for Class I, Division 1, Groups A, B, C and D; Dust-ignitionproof for Class II, Division 1, Groups E, F and G; Class III, Division 1 hazardous (classified) locations, indoors and outdoors (Type 4X, IP65) with an ambient temperature rating of -20°C to +55°C.

Certificate issued by:



J.E. Marquedant
VP, Manager - Electrical Systems

6 May 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

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SCHEDULE



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11. The marking of the equipment shall include:

Class I Division 1, Groups A, B, C, D; T6 Ta = -20°C to +55°C; Type 4X, IP65

Class II, Division 1, Groups E, F, G, Class III, Division 1; T6 Ta = -20°C to +55°C; Type 4X, IP65

12. **Description of Equipment:**

General - The GPro 500 Gas Sensor is an optical instrument designed for continuous in-situ gas monitoring in stack, pipes, and similar applications. The sensor is based on tunable diode laser absorption spectroscopy (TDLAS) technology. The GPro 500 Gas Sensor utilizes a single side installation without the need for alignment to measure the average gas concentration along the line of sight path in the probe. The measuring principle used is infrared single line absorption spectroscopy, which is based on the fact that each gas has distinct absorption lines at specific wavelengths. The GPro 500 consists of 3 separate units, the TDL head (which is explosionproof rated and the subject of this certificate), and the insertion probe which has no electrical connections, a junction box and the user interface M400 (which are not explosionproof rated). The flange mounted insertion probes are available in 3 lengths.

Construction - The GPro 500 housing is a coated aluminum enclosure with a bolt on cover and is available with (1) ½ inch NPT conduit opening.

Ratings - The GPro 500 TDL head contains the laser module with a temperature stabilized diode laser, collimating optics, the main electronics and data storage. The unit is rated for a maximum of 24 VDC, 5 Watts. The laser source has a maximum radiation strength of 0.24mW/mm².

GPro 500USabcdefghij_/_km . Gas Sensor.

FM16US0256

XP/ I/ 1/ ABCD/ T6 Ta= -20°C to +55°C;

DIP/ II, III/ 1/ EFG/ T6 Ta= -20°C to +55°C;

Type 4X, IP65

a = Gases: A0, A1, A2, C0, H0, H1, C2, C1, CC, CM, S0, S1, L0, L1, M0, M1, N0, N1, or NH

b = Process Interface: P, T, F, R, B, U, W, V, E, H, S, A, C or K

c = Process Optics: B, C, Q, R, S, or T

d = Process Sealing: K, G, E, Q, V, S, I, F, M, R or P

e = Wetted Materials: S0, S1, C0, B0, T0, T1, C2, C4, A5, P0, P1, P2, S2, Z0, A0, S3, S4, M0 or A8

f = Optical path probes and extractive cell: 20, 40, 80, 01, 02, 03, 04, 05, 06, 10, or XX

g = Process Connection: PD, PA, LD, LA, GD, GA, MD, MA, ND, NA, W1, W2, W3, W4, W5, W6, S1, S2, S3, S4, S5, S6, J1, J2, J3, J4, J5, J6, J7, J8, J9, EM, or EI

h = Wall Thickness: 1, 2, 3, 4, 5, 6, 7, 8, 9 or X

i = Filter: A, B, C, D, E, F, or X

j = Add-On Module: H, 2, 3, or X

k = Cable : A, B, C, D or X

m = Communication Interface: X or A

13. **Specific Conditions of Use:**

None

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SCHEDULE

US Certificate Of Conformity No: FM16US0256

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
9 th January 2013	Original Issue.
19 th August 2016	<u>Supplement 4:</u> Report Reference: RR206189, dated 19 th August 2016. Description of the Change: revised model code, label drawing and manual.
6 th April 2018	<u>Supplement 5:</u> Report Reference: RR212919, dated 6 th April 2018. Description of the Change: revised model code, add labels, and updated FM 3600 and 3615 standards to 2018 edition due to non-technical changes..
9 th September 2019	<u>Supplement 6:</u> Report Reference: RR219979, dated 9 th September 2019. Description of the Change: documentation and model code updates.
6 th May 2021	<u>Supplement 7:</u> Report Reference: RR227806, dated 6 th May 2021. Description of the Change: documentation and model code updates for minor construction and electronics changes, minor editorial clarifications of equipment reference and listing company address.

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