

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM19US0028X
3. **Equipment:** OM Series Pulse Meters
(Type Reference and Name) Flowmeter
4. **Name of Listing Company:** Great Plains Industries Inc
5. **Address of Listing Company:** 5252 E 36th St N
Wichita KS 67220-3205,
USA
6. The examination and test results are recorded in confidential report number:

PR449819 dated 22nd March 2019
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3810:2018, ANSI/ UL 61010: 2015, ANSI/ISA 60079-0:2013, ANSI/UL 60079-1:2015
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:**

Flameproof for Class I, Zone 1, AEx db IIB T4 Gb hazardous (classified) locations, with an ambient temperature rating of -40°C to +120°C.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

22 March 2019

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



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11. The marking of the equipment shall include:

Class I, Zone 1, AEx db IIB T4 Gb Ta = -40°C to +120°C

12. **Description of Equipment:**

General - The OM Series Pulse Meter is a precise positive displacement flowmeter incorporating a pair of oval geared motors. The meters are capable of measuring the flow of a broad range of clean liquids. The Stainless Steel flowmeters are suited to most liquid products and chemicals; including many water based liquids, acids, bases and salt solutions. The Aluminum flowmeters are suitable for fuels, oils & most non-aggressive lubricating liquids. The Oval Gear flowmeters are available as blind meters with a pulse signal output capable of interfacing to most monitoring and control instrumentation, or the meter can be fitted with instruments such as totalizers, rate totalizers or batch controllers. These instruments also have monitoring and control output options including 4-20mA, scaled pulse, flow-rate alarms and batch control logic (preset metering).

Construction - The OM Series Pulse Meters are available in Stainless Steel or Aluminum enclosure construction and has 2 separate chambers. The maximum free internal volume is 150 cubic cm. The lower chamber is non-flameproof and is attached to a suitable non-certified manifold. The upper chamber contains a printed circuit board and connection terminals. The flameproof cover form a cylindrical joint with the body. Cable entry is by means of a threaded entry with either Metric M20 or ½" NPT for fitting of a suitable certified cable entry device. The flameproof enclosure houses the electronics and is completely sealed from the process fluid.

Ratings - The OM Series Pulse Meters operate at 28 Vdc, 100 mA max current. The OM Series Pulse Meters are rated for use in an ambient temperature range of -40°C to +120°C.

OMabcd2fgFP, Pulse Meter

a = Size: 004 (1/8"), 006 (1/4"), 008 (3/8"), 015 (1/2"), 025 (1"), 040 (1.5"), 050 (2"), 080 (3"), 100 (4").

b = Body Material: A (aluminum), E (extended flow aluminum, 3" and 4" sizes only), S (stainless steel).

c = Rotor Material/ Bearing Type: 00 (PPS), 10 (Keishi Cut PPS), 41 (Aluminum / Carbon Steel), 51 (Stainless Steel/ Carbon Ceramic), 61 (Keishi Cut Aluminum / Carbon Steel), 71 (Keishi Cut Stainless Steel, Carbon Ceramic)

d = O-ring Material: 1 (Viton), 2 (EPDM), 3 (Teflon encapsulated Viton), 4 (Nitrile)

2 = Temperature Limits: 2 (-40C to +120C)

f = Process Connections: 0 (No Fittings), 1 (BSPP), 2 (NPT), 3 (Tri-clamp), 4 (ANSI-150 Flange), 5 (ANSI-300 Flange), 6 (PN16 DIN Flanged)

g = Electrical Entry: 1 (M20 x 1.5mm), 2 (1/2" NPT)

13. **Specific Conditions of Use:**

1. The flamepaths of the equipment are not intended to be repaired. Contact manufacturer for flamepath joint specifications required for repair.

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

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

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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
22 nd March 2019	Original Issue.

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