

1 EC-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially
Explosive Atmospheres - Directive 94/9/EC

3 EC-Type Examination Certificate No: FM13ATEX0016X

4 Equipment or protective system: Electronic Digital Meters
(Type Reference and Name)

5 Name of Applicant: Great Plains Industries, Inc

6 Address of Applicant: 5252 East 36th Street North,
Wichita, KS 67220
United States of America

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Ltd, notified body number 1725 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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

3045394 dated 14th June 2013

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN60079-0:2012, EN60079-11:2012, and EN 60529+A1:2000

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:



II 1 G Ex ia IIC T6 Ta = -40°C to 60°C; IP65

Mick Gower
Certification Manager, FM Approvals Ltd.

Issue date: 4th July 2013

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

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to EC-Type Examination Certificate No. FM13ATEX0016X

13 Description of Equipment or Protective System:

The Electronic Digital Meters are battery powered turbine flow meters. The meters contain a turbine assembly, microprocessor and LCD readout and are designed for measuring batch or cumulative quantities of liquids including fuels. Each turbine assembly is contained in a housing made of brass, aluminium, stainless steel, nylon or PVDF plastic. The plastic versions are carbon-filled and electrically conductive. Process pressure rating varies depending on the enclosure material and construction. The display cover assembly is clear plastic and all of the electronics except for the batteries and the LCD display are completely encapsulated. A remote kit option is also available that permits the electronics assembly to be mounted up to 100 feet (30 meters) from the turbine assembly.

Model abcdefg. Electronic Digital Meter.

II 1 G Ex ia IIC T6 Ta = -40°C to 60°C; IP65

a = Product Identifier A1 or A2.

b = Computer Assembly 01, 02, 03, 04, 05, 06, 07, 08, 09 or XX.

c = Factory Calibration G, L, Q, Z, P, B, U, M, F, I, J, O or X.

d = Time Base M, S, H, D or X.

e = Turbine Housing A025, A050, A075, A100, A150, A200, B050, B075, B100, B150, B200, N025, N100, P050, P100, S025, S050, S075, S100, S150, S200, V025, V100, X025, X050, X075, X100, X150, X200, Z050, Z100, XXXX or 0000.

f = Fitting N, I, B, T, F, X or O.

g = Packaging A1, A2, B1, B2, B3, C1, C2, C3, C4, D1, D2, J1, J2, K1, K2, K3, K4, K5, L1, L2, L3, L4, L5, XX or 00.

GPI Remote Kit Assembly 113275-1 per installation drawing 920507-01

Model abcdefgh. Electronic Digital Meter.

II 1 G Ex ia IIC T6 Ta = -40°C to 60°C; IP65

a = Product Identifier: G2 or N2.

b = Turbine Body Material: A, B, P, S, X or Z.

c = Turbine Size: 05, 07, 10, 15, or 20.

d = Fitting Type: N, I, X, T or F.

e = Computer Assembly: 03, 04, 05, 06, 07, 08, 09, 19 or XX.

f = Factory Calibration: G, L, Q, Z, P, B, U, M, F, I, J, O or X.

g = Time Base M, S, H, D or X.

h = Packaging kit: A, B, D or E

GPI Remote Kit Assembly 113275-1 per installation drawing 920507-01

Model abcd. Electronic Digital Meter.

II 1 G Ex ia IIC T6 Ta = -40°C to 60°C; IP65

a = Computer Assembly 03, 04, 05, 06, 07, 08 or 09.

b = Housing/Turbine Assembly A, N or S.

c = Flow Range 11, 12, 13, 30, 31, or 32.

d = Factory Cal. Units GM, LM or GMME

GPI Remote Kit Assembly 113275-1 per installation drawing 920507-01

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14 **Special Conditions for Safe Use:**

1. The Electronic Digital Meters shall only be used with GPI battery 902004-02.
2. The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.
3. Part of the enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned only with a damp cloth.

15 **Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 **Test and Assessment Procedure and Conditions:**

This EC-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's ATEX Certification Scheme.

17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
4 th July 2013	Original Issue.

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Blueprint Report

Great Plains Industries (100002150)

Class No ATEX

Original Project I.D. 3045394

Certificate I.D. FM13ATEX0016X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
113017-4	P	COIL ASSY	3045394	Yes (pdf)
113044	AB	HOUSING TURBINE (2')	3045394	Yes (pdf)
113071	J	PROBE	3045394	Yes (pdf)
113086	F	COIL	3045394	Yes (pdf)
113136	AU	PACKAGING/ASSEMBLY 1-50 GPM	3045394	Yes (pdf)
113137	AP	PACKAGING/ASSEMBLY 30-300 GPM	3045394	Yes (pdf)
113138	U	Assembly Computer (GPI-9)	3045394	Yes (pdf)
113139	H	ASSEMBLY LO-FLO TURBINE	3045394	Yes (pdf)
113140	P	ASSY, TURBINE 1"	3045394	Yes (pdf)
113141-1	N	ASSEMBLY, 2 " TURBINE(ALUM/NPT)	3045394	Yes (pdf)
113141-3	N	ASSEMBLY, 2 " TURBINE(ALUM/ISO)	3045394	Yes (pdf)
113141-5	N	ASSEMBLY, 2 " TURBINE(ALUM/BSPP)	3045394	Yes (pdf)
113142-11	B	Assembly, 03A, 1" Turbine, ENP	3045394	Yes (pdf)
113142	R	ASSEMBLY, 1 " TURBINE	3045394	Yes (pdf)
113145	B	Decal, Battery Warning	3045394	Yes (pdf)
113147	D	HOUSING, TURBINE	3045394	Yes (pdf)
113148-01	A	Decal, ATEX	3045394	Yes (pdf)
113148-02	-	Decal, ATEX (Remote)	3045394	Yes (pdf)
113160-01	A	HOUSING, TURBINE ALUM.A1 2"NPT	3045394	Yes (pdf)
113160-02	A	HOUSING, TURBINE ALUM.A1 2"ISO	3045394	Yes (pdf)
113160-03	A	HOUSING, TURBINE ALUM.A1 2"BSPP	3045394	Yes (pdf)
11318101	C	Assembly Circuit (GPI-9)	3045394	Yes (pdf)
11318201	H	Assembly PCB. (GPI-9)	3045394	Yes (pdf)
11318301	E	Printed Circuit Board (GPI-9)	3045394	Yes (pdf)
11318401	D	GPI-9 Schematic Diagram	3045394	Yes (pdf)
113209	D	RETAINER	3045394	Yes (pdf)
113211	L	HOUSING INNER	3045394	Yes (pdf)
113230	G	HOUSING COMPUTER	3045394	Yes (pdf)
113260	J	DUST COVER	3045394	Yes (pdf)
113264	G	DUST COVER ASSEMBLY	3045394	Yes (pdf)
113273	D	SENSOR MODULE ASSY	3045394	Yes (pdf)
113275	F	ASSEMBLY, REMOTE KIT	3045394	Yes (pdf)
113301	R	Housing Turbine (1" Plastic)	3045394	Yes (pdf)
113310-5	M	DECAL	3045394	Yes (pdf)
113318-1	C	Decal, Caution, EDM Inst.	3045394	Yes (pdf)
113409-10	N	Cover Casting	3045394	Yes (pdf)
113409-11	N	Cover Casting	3045394	Yes (pdf)
113409-12	N	Cover Casting	3045394	Yes (pdf)
113409-13	P	Cover, Casting	3045394	Yes (pdf)
113409-2	N	Cover Machined	3045394	Yes (pdf)
113409-3	P	Cover, Machined	3045394	Yes (pdf)
113409-4	P	Cover, Machined_	3045394	Yes (pdf)
113409-5	P	_Cover, Machined	3045394	Yes (pdf)
113700-01	A	Meter, 03A31GM-Methanol	3045394	Yes (pdf)
113710-01	A	Housing, Turbine, 1" NPT, ENP	3045394	Yes (pdf)
125003	K	ASSEMBLY, TURBINE	3045394	Yes (pdf)
125004	AF	PACKAGING, ASSEMBLY INDUSTRIAL	3045394	Yes (pdf)
125005	L	ASSEMBLY, TURBINE	3045394	Yes (pdf)
125010	N	HOUSING, TURBINE (1/2")	3045394	Yes (pdf)
125020	L	HOUSING TURBINE (3/4")	3045394	Yes (pdf)
125021-8	AE	LABEL, PRINTED	3045394	Yes (pdf)

125030-1	N	Housing, TURBINE (1")	3045394	Yes (pdf)
125030-2	N	Housing Turbine (1")	3045394	Yes (pdf)
125040	P	ASSEMBLY, TURBINE (1 1/2")	3045394	Yes (pdf)
125050	P	ASSEMBLY, TURBINE (2")	3045394	Yes (pdf)
125208-01 thru -26	R	PACKAGING, ASSEMBLY INDUSTRIAL	3045394	Yes (pdf)
125210-1	E	HOUSING, TURBINE (1/2-INCH PIT)	3045394	Yes (pdf)
1252181	C	ASSEMBLY, Turbine (1/2" P.I.T.)	3045394	Yes (pdf)
1252182	C	ASSEMBLY, Turbine (1/2" P.I.T.)	3045394	Yes (pdf)
1252183	C	ASSEMBLY, Turbine (1/2" P.I.T.)	3045394	Yes (pdf)
1252184	C	ASSEMBLY, Turbine (1/2" P.I.T.)	3045394	Yes (pdf)
1252301	E	HOUSING, PIT 1" TURBINE	3045394	Yes (pdf)
1252381	E	ASSEMBLY TURBINE (1" PIT), NPT	3045394	Yes (pdf)
1252382	E	ASSEMBLY TURBINE (1" PIT), ISO	3045394	Yes (pdf)
1252383	E	ASSEMBLY TURBINE (1" PIT), NPT (NO COVERPLATE	3045394	Yes (pdf)
1252384	E	ASSEMBLY TURBINE (1" PIT), ISO (NO COVERPLATE	3045394	Yes (pdf)
125261-01	B	Adapter 90 Deg display	3045394	Yes (pdf)
125410-01	C	Housing, Aluminum 1/2", NPT	3045394	Yes (pdf)
125410-02	C	Housing, Aluminum 1/2", ISO	3045394	Yes (pdf)
125410-11	B	Housing, Aluminum 1/2" (Casting)	3045394	Yes (pdf)
125411-01	C	Housing, Brass 1/2", NPT	3045394	Yes (pdf)
125411-02	C	Housing, Brass 1/2", ISO	3045394	Yes (pdf)
125411-11	B	Housing, Brass 1/2" (Casting)	3045394	Yes (pdf)
125412-01	B	HOUSING_TURBINE (1/2"NPT/ALUM)	3045394	Yes (pdf)
125412-02	B	HOUSING_TURBINE (1/2"ISO/ALUM)	3045394	Yes (pdf)
125413-01	A	Housing, Brass 1/2", From bar stock (NPT)	3045394	Yes (pdf)
125413-02	A	Housing, Brass 1/2", From bar stock (ISO)	3045394	Yes (pdf)
125420-01	C	Housing, Aluminum 3/4", NPT	3045394	Yes (pdf)
125420-02	C	Housing, Aluminum 3/4", ISO	3045394	Yes (pdf)
125420-11	B	Housing, Aluminum 3/4" (Casting)	3045394	Yes (pdf)
125421-01	C	Housing, Brass 3/4", NPT	3045394	Yes (pdf)
125421-02	C	Housing, Brass 3/4", ISO	3045394	Yes (pdf)
125421-11	B	Housing, Brass 3/4" (Casting)	3045394	Yes (pdf)
125422-01	B	HOUSING_TURBINE (3/4"NPT/ALUM)	3045394	Yes (pdf)
125422-02	B	HOUSING_TURBINE (3/4"ISO/ALUM)	3045394	Yes (pdf)
125423-01	A	Housing Turbine (3/4"NPT Brass)	3045394	Yes (pdf)
125423-02	A	Housing Turbine (3/4"ISO Brass)	3045394	Yes (pdf)
125430-01	C	Housing, Aluminum 1", NPT	3045394	Yes (pdf)
125430-02	C	Housing, Aluminum 1", ISO	3045394	Yes (pdf)
125430-11	B	Housing, Aluminum 1" (Casting)	3045394	Yes (pdf)
125431-01	C	Housing, Brass 1", NPT	3045394	Yes (pdf)
125431-02	C	Housing, Brass 1", ISO	3045394	Yes (pdf)
125431-11	B	Housing, Brass 1" (Casting)	3045394	Yes (pdf)
125432-01	B	HOUSING_TURBINE (1"NPT/ALUM)	3045394	Yes (pdf)
125432-02	B	HOUSING_TURBINE (1"ISO/ALUM)	3045394	Yes (pdf)
125433-01	A	Housing, Brass 1", From bar stock (NPT)	3045394	Yes (pdf)
125433-02	A	Housing, Brass 1", From bar stock (ISO)	3045394	Yes (pdf)
125440-01	C	Housing, Aluminum 1 1/2", From bar stock NPT	3045394	Yes (pdf)
125440-02	C	Housing, Aluminum 1 1/2", From bar stock ISO	3045394	Yes (pdf)
125441-01	C	Housing, Brass 1 1/2", From bar stock (NPT)	3045394	Yes (pdf)
125441-02	C	Housing, Brass 1 1/2", From bar stock (ISO)	3045394	Yes (pdf)
125450-01	C	Housing, Aluminum 2", From bar stock NPT	3045394	Yes (pdf)
125450-02	B	Housing, Aluminum 2", From bar stock ISO	3045394	Yes (pdf)
125451-01	B	Housing, Brass 2", From bar stock (NPT)	3045394	Yes (pdf)
125451-02	B	Housing, Brass 2", From bar stock (ISO)	3045394	Yes (pdf)
125460-01 thru -29	K	Packaging/Assembly (Aluminum & Brass)	3045394	Yes (pdf)
125610-01 thru -29	J	PACKAGING/ASSEMBLY (SANITARY)	3045394	Yes (pdf)
125629-01 thru -29	K	PACKAGING/ASSEMBLY (FLANGED)	3045394	Yes (pdf)
9020042	C	Battery	3045394	Yes (pdf)
920507-01	-	ATEX Guide	3045394	Yes (pdf)