OIML Certificate of Conformity

OIML Member State
The Netherlands

Number R137/2012-NL1-15.09 revision 2
Project number 16200582

Issuing authority Person responsible:	NMi Certin B.V. C. Oosterman
Applicant and Manufacturer	Emerson Automation Solutions 11100 Brittmoore Park Drive 77041 Houston, Texas United States of America
Manufacturers mark or name	Daniel Measurement and Control, Inc.
Identification of the certified type	An **ultrasonic Gas Meter** 3414 / 3415 / 3416 / 3417 Senior Sonic
Characteristics	See page 2 and further

This Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML Type Evaluation Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

R 137-1 (2012) "Gas meters"

Accuracy class	0,5

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation identified above. This Certificate does not bestow any form of legal international approval.

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was issued, partial quotation of the Certificate and of the associated OIML Type Evaluation Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority

NMi Certin B.V., OIML Issuing Authority NL1
3 November 2016

C. Oosterman
Head Certification Board

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The notification of NMi Certin B.V. as Issuing Authority can be verified at www.oiml.org

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The conformity was established by the results of tests and examinations provided in the associated report(s):

- No. NMi-15200787-01 dated 25 February 2016 that includes 50 pages;
- No. NMi-16200582-02 dated 3 November 2016 that includes 7 pages.

Characteristics of the measuring instrument
In Table 1 the general characteristics of the measuring instrument are presented.
Table 2 gives an overview of the general characteristics of the family of instruments.
The construction of the measuring instrument is recorded in the Documentation folder no. T10078-5.

Gas meter configuration
Model 3414
The model 3414 is equipped with 4 measuring paths in a horizontal configuration.
Model 3415
The model 3415 contains of a model 3414 path layout and electronics. The model 3415 is additionally equipped with one check path which is connected to a separate set of electronics.
Model 3416
The model 3416 contains of a model 3414 path layout and electronics. The model 3416 is additionally equipped with one check path and one diagnostic path which are connected to a separate set of electronics.
Model 3417
The model 3417 is composed of two model 3414 electronics and transducers built into a model 3417 spool piece. The meter can be used in the following configurations:

1. Two separate gas meters
2. Pay / check configuration

Table 1 General characteristics

Destined for the measurement of	Gas volume
Environmental classes	M2 / E2
Accuracy class	Class 0,5
Maximum pressure	425 bar
Ambient temperature range	-40°C / +55°C
Gas temperature range	-40°C / +55°C
Designed for	Condensing humidity
Orientation	All orientations
Power supply voltage	10,4 – 36 V DC
Software identification	Version number: 1.24 Checksum: 1869761847

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Table 2 General characteristics of the family of instruments

Diameter		V_{min}	V_t	V_{max}
DN [mm]	Typical ranges [mm]	[m/s]	[m/s]	[m/s]
100	80 ~ 108	0,5	1/10 V_{max}	28
150	124 ~ 161			
200	173 ~ 212			
250	216 ~ 265			
300	257 ~ 315			30,5
350	284 ~ 343			
400	325 ~ 394			
450	367 ~ 445			
500	408 ~ 495			
600	491 ~ 597			
750	730 ~ 749			26
900	876 ~ 899			23
1050	1029 ~ 1048			21

Installation conditions:

Inlet piping and flow straightener
The meter is used in one of the following configuration:

- a Vortab straightener followed by 20D piping at the inlet of the meter, see document 10078/0-08;
- 5D piping followed by a Daniel straightener followed by 10D piping at the inlet of the meter, see document 10078/0-09;
- 5D piping followed by a CPA 50E/CPA 55E straightener followed by 10D piping at the inlet of the meter, see document 10078/0-10;
- 20D at the inlet of the meter, without any flow straightener;
- 10D at the inlet of the meter, while no 2 elbows out of plane are mounted in the next 10D.

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Certificate history:
This revision replaces the previous version.

Revision	Date	Description of the modification
Initial	6 November 2015	-
1	4 March 2016	Class 0,5 and Vmin lowered to 0,5m/s
2	3 November 2016	Additional electronic boards and Modules are added.