

**OIML Member State**  
The Netherlands

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Project number 2224544  
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Issuing authority  
Person responsible: NMI Certin B.V.  
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Applicant and  
Manufacturer HAM Criogénica S.L.  
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Spain

Identification of the  
certified type **A compressed gas (CG) dispenser.**  
Type: SH\*\*\*\*\*

Characteristics See page 2 and further

This OIML Certificate is issued under scheme A

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 139-1 (2018)** "Compressed gaseous fuel measuring systems for vehicles"

Accuracy class 1,5

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.

This certificate and supporting reports comply with the requirements of OIML-CS-PD-07 clause 6.2.

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Issuing Authority **NMI Certin B.V., OIML Issuing Authority NL1**  
4 March 2021

#### Certification Board

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The conformity was established by the results of tests and examinations provided in the associated reports:

- No. NMI-2224544-01 dated 4 March 2021 that includes 28 pages.

Measurement transducer, make Emerson Process Management Flow B.V, type CNG050:

- No. C-BI-02-WV-0428 dated 28 May 2002 that includes 20 pages;
- No. CPC/9200574-2 dated 7 January 2010 that includes 12 pages;
- No. CVN/201269 dated 10 July 2002 that includes 80 pages;
- No. NMI-1900487-01 dated 17 July 2017 that includes 24 pages.

Electronic calculating/indicating device, make CETIL Medicion y Transporte, type EAS2:

- No. NMI-13200749-1 dated 1 May 2014 that includes 77 pages;
- No. NMI-13200749-2 dated 1 January 2014 that includes 15 pages;
- No. NMI-15200617-01 dated 14 April 2016 that includes 85 pages;
- No. NMI-15200617-02 dated 14 April 2015 that includes 20 pages;
- No. NMI-15200617-04 dated 14 April 2016 that includes 34 pages;

### Characteristics of the measuring instrument

In Table 1 the general characteristics of the measuring instrument are presented. The construction of the measuring instrument is recorded in the Documentation folder no. NMI-2224544-01-1.

**Table 1 General characteristics**

Minimum – maximum flow rate	1,3 to 77 kg/min
Minimum measured quantity	1 kg
Maximum storage pressure	200 – 300 bar(g) <sup>[1]</sup>
Maximum operating pressure	200 – 250 bar(g) <sup>[1]</sup>
Environmental classes	M2/ E2
Ambient temperature range	-40 – +55 °C; non-condensing humidity
Product temperature range	-25 – +55 °C
Intended for the measurement of	Compressed Natural Gas
Power supply voltage	230 – 110 V AC; 50/60 Hz.

Each measuring instrument consists at least of:

- One measurement transducer (meter);
- One calculating/indicating device (calculator).

The characteristics of the mentioned parts of the dispenser are presented at table 3 and 4.

<sup>[1]</sup> Depends on the national regulation in the country of use.

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The same housing of the dispenser can comprise of one or more measuring systems. When more than one measuring systems are in one housing, one calculating/indicating device may be a common part of the measuring systems.

**Table 2 Dispenser type name denomination**

SH	*	*	*	*	*	*	*	*
SH	Fluid	Position LNG 1	Position LNG 2	Recovery gas	Position CNG 1	Position CNG 2	Display	Inlets
	<b>L:</b> LNG	<b>E:</b> Left	<b>E:</b> Left	<b>A:</b> with recovery	<b>E:</b> Left	<b>E:</b> Left	<b>1</b>	<b>R:</b> Rear
	<b>G:</b> CNG	<b>D:</b> Right	<b>D:</b> Right	<b>S:</b> without recovery	<b>D:</b> Right	<b>D:</b> Right	<b>2</b>	<b>B:</b> Below
	<b>M:</b> LNG & CNG	<b>0:</b> not applicable	<b>0:</b> not applicable		<b>0:</b> not applicable	<b>0:</b> not applicable		

The CNG dispenser can be used with or without sequential control.

The CNG dispenser can be built as a single stage system or as a multi-stage (2 or 3) system.

- Single stage systems have one supply of gas;
- Multi-stage systems are connected to 2 or 3 gas supplies, which differ in pressure. Depending on the programmed low flow rate conditions, the instrument switches to the next higher pressure stage or ends the delivery.

The CNG is delivered from a high-pressure storage tank or from a high-pressure compressor. The gas is measured by the measurement transducer; the measured quantity from the meter together with the price to pay are displayed and registered by the electronic counter/calculator.

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## Parts of the measuring instrument

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

Part: Measurement transducer  
 Producer: Emerson Process Management Flow B.V  
 Type: CNG050  
 Documentation folder: TC11012-1

**Table 3 General characteristics of the measurement transducer type CNG050**

Flow rate range [kg/min]	1,3 – 77 kg/min
MMQ	1 kg
Maximum pressure	317 or 345 bar(g) (depending on flange type)
Environmental classes	M2 / E2
Ambient temperature range	-40 – +55 °C
Product temperature range	-25 – +55 °C
Intended for the measurement of	Compressed Natural Gas
Power supply voltage	24 V DC $\pm$ 20 % (with MVD Direct Connect I.S) 15 – 26 V DC
Software identification	Version number: 3.52 Checksum: 3C4A

### Installation conditions:

Installation of the meter with the MVD Direct Connect barrier is preferred to protect against EMI.

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Part: Calculating/indicating device  
 Producer: Cetil Dispensing Technology, S.L.  
 Type: EAS2  
 Documentation folder: TC8491-2

**Table 4 General characteristics of the calculating/indicating device type EAS2**

Environmental classes	M3 / E2
Ambient temperature range	-40 °C / +55 °C
Software identification	see table

**Table 5 Software versions of the calculating and indicating type EAS2**

Device	Identification	Checksum
MCON	01-02 11-04-14	F06F405F
	01-04 31-10-14	CA8DD289
	01-05 17-02-15	CC84A0AD
	01-10 26-02-16	0xD8AB9A77
	01-11 15-07-16	667D7E1B
	01-13 23-09-16	702278F2
	01-14 24-11-16	1ADD7BB2
	01-15 18-04-17	5B43F929
	01-16 07-07-17	DB202DD2
	01-17 24-04-18	A99774BF
	01-19 23-11-18	5887E0CB
	01-20 18-03-19	C7573D31
	01-21 01-04-19	FD0C4AE7
	01-22 02-08-19	15615C2F
01-24 10-01-20	8A974FFB	
01-25 30-07-20	7B9DA776	
01-26 28-10-20	BC2C476A	
MMED	01-02 11-04-14	0947E0DE
	01-04 31-10-14	1836FB4F
	01-05 17-02-15	3CE9B953
	01-10 26-02-16	0x7BF0F604
	01-11 15-07-16	37A61307
	01-13 23-09-16	9B79E9AF
	01-14 24-11-16	B9A1C6C5
	01-15 18-04-17	E85F99A0
	01-16 07-07-17	85411193
	01-17 24-04-18	040F4BF9
01-19 23-11-18	3A2801C5	

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Device	Identification	Checksum
	01-20 18-03-19	300976F7
MMED	01-22 02-08-19	613BED73
	01-24 10-01-20	A4FF5598
	01-25 30-07-20	1AAE501D
	01-26 28-10-20	967E90D1
	01-22 02-08-19	613BED73
MVIS	01-02 11-04-14	3F2A5C82
	01-04 31-10-14	DF83CF5B
	01-05 17-02-15	2070CEE3
	01-10 26-02-16	0x9850F12E
	01-11 15-07-16	AB4A41A7
	01-13 23-09-16	999A6FE0
	01-14 24-11-16	B2FDD15C
	01-15 18-04-17	1959E9A8
	01-16 07-07-17	FB8BC300
	01-17 24-04-18	D1D3FF71
	01-19 23-11-18	1CF49503
	01-20 18-03-19	3F2C7517
	01-21 01-04-19	4E97A5C6
	01-22 02-08-19	B253CBC9
	01-24 10-01-20	6BB72102
01-25 30-07-20	44D12CEE	
01-26 28-10-20	784C3480	
MEES	01-10 26-02-16	0xEEB805DE
	01-11 15-07-16	5CF96D68
	01-13 23-09-16	35B5A20C
	01-14 24-11-16	4CBF0297
	01-15 18-04-17	83932367
	01-16 07-07-17	18898D87
	01-17 24-04-18	32743806
	01-19 23-11-18	AE33C392
	01-20 18-03-19	4678B259
	01-21 01-04-19	B9FAD9EE
	01-22 02-08-19	1D72487B
	01-24 10-01-20	E73816E6
	01-25 30-07-20	41518F40
	01-26 28-10-20	FE0C06E3
M420	01-10 00-02-16	0x5FE0FEF9
	01-11 00-07-16	32F11CE4
	01-13 00-09-16	44043F49
	01-14 00-11-16	C32C150E
	01-15 18-04-17	15F7104A
	01-16 07-07-17	9D6365A5

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Device	Identification	Checksum
	01-17 00-04-18	AAA11519
	01-19 00-11-18	B525DA43
M420	01-20 00-03-19	7F0CF98E
	01-21 00-04-19	44C251DA
	01-22 00-08-19	30DFD0FA
	01-24 00-00-80	9DE0A1D9
	01-25 00-07-20	93461053
	01-26 00-10-20	AF6E2936

### Certificate history:

Revision	Date	Description of the modification
Initial	04 March 2021	-