

Issued by NMI Certin B.V.,
designated and notified by the Netherlands to perform tasks with respect to conformity modules mentioned in article 17 of Directive 2014/32/EU, after having established that the Measuring instrument meets the applicable requirements of Directive 2014/32/EU, to:

Manufacturer Zenner Gas S.r.l.
Via Aterno, 122
66020 San Giovanni Teatino (CH)
Italy

Measuring instrument **A Diaphragm Gas Meter**

Type	: BK04ZENNER01
Manufacturer's mark or name	: ZENNER
Destined for the measurement of	: Gas volume
Accuracy class	: Class 1,5
Environment classes	: M1 / E2
Temperature range	: - 25 °C / +55 °C
Location	: Closed

Further properties are described in the annexes:

- Description T11199 revision 5;
- Documentation folder T11199-3.

Valid until 7 August 2028

Remark This revision replaces the previous versions, except for its documentation folder.

Issuing Authority **NMI Certin B.V., Notified Body number 0122**
9 March 2020

Certification Board

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1 General information about the gas meter

All properties of the gas meter, whether mentioned or not, shall not be in conflict with the legislation.

The meter is executed as follows:

- A gas meter with an electronic register, indicating the volume at base conditions only, conform paragraph 2.2 of ANNEX IV (MI-002).

1.1 Essential parts

Mechanical:

Producer	Type	Certificate number	Remarks
Zenner Metering Technology (Shanghai) Ltd.	Atmos G1.6S Atmos G2.5S Atmos G4S Atmos WG2.5S Atmos HP G1.6A Atmos HP G2.5A Atmos HP G4A Atmos HP WG2.5A	TC10945	A diaphragm gas meter module, including the diaphragm, valve and valve seat.

Electronical:

Description	Documentation	Remarks
Construction	11199/0-02	
Display/CPU board - AC 0106031154616 REV. 3	11199/0-07, 11199/0-08 or 11199/0-07, 11199/2-01	
Temperature board - PCT2075	11199/0-09, 11199/0-10	With integrated temperature sensor

1.2 Essential characteristics

1.2.1 See EU-type examination certificate no. T11199 revision 5 and the characteristics mentioned below:

measuring volume		: 1,2 dm ³
maximum p _{max}	Steel housing	: 0,5 bar
	Aluminium housing	: 1,5 bar

Maximum Q _{max} [m ³ /h]	Minimum Q _{min} [m ³ /h]	Minimum Q _t [m ³ /h]
6	0,016	0,2

Notes:

If higher values are chosen for Q_{min} and/or lower values for Q_{max}, it has to be taken into account that Q_{max} / Q_{min} ≥ 150. For Q_t it has to be taken into account that the minimum value is not lower than the minimum value as indicated in the table above and that Q_t ≤ 0,1 Q_{max}.

- 1.2.1 Indicated converted volume
 The volume is converted through the following formula;

$$V_b = V_a * \frac{T_b}{T}$$

With T_b and T in Kelvin.

- 1.2.2 Software specification (refer to WELMEC 7.2):

- Software type P;
- Risk Class C;
- Extensions L, T and D, while extensions S is not applicable.

Software version	Identification number (checksum)	Modem	Remarks
500001 500002	7BF2 C421	GPRS	Via the user interface it is possible to display the firmware version number and the CRC value by pressing the buttons as follow: <ul style="list-style-type: none"> • 1 time right button (long pressure) to activate the display; • 32 time left button go to "VERSIONE" field to watch the firmware version number; • 1 time left button go to "IDSW" field to watch the CRC value.
510001 510002 510003	B72C DE08 2F85	NB-IoT	

1.3 Essential shapes

- 1.3.1 The nameplate is bearing at least, good legible, the following information:
- CE marking including the supplementary metrological marking (M + last 2 digits of the year in which the instrument has been put into use);
 - Notified Body identification number, following the supplementary metrological marking;
 - EU-type examination certificate no. T11199;
 - Evaluation Certificate no. TC10945;
 - manufacturer's name, registered trade name or registered trade mark;
 - manufacturer's postal address;
 - serial number of the meter and year of manufacture;
 - mechanical environment class;
 - electromagnetic environment class;
 - Q_{max} , Q_t and Q_{min} ;
 - cyclic volume;
 - maximum working pressure p_{max} ;
 - ambient temperature range;
 - accuracy class;
 - base temperature (t_b);
 - specific centre temperature (t_{sp});
 - resistance to high temperatures, marked with a 'T' (optional).

In case of a gas meter with an electronic register the data may also be presented on the register. Examples of the markings are shown in document no. 11199/1-01.

- 1.3.2 Sealing: see chapter 2.

1.4 Conditional parts

1.4.1 Construction

In addition to the essential parts as mentioned at 1.1, the meter contains at least the following conditional parts:

- housing;
- transmission;
- LCD;
- Battery;
- Wireless communication;
- Optical communication.

See document no. 11199/0-01 for an example of the construction.

1.4.2 Housing

The gas meter has a housing, which has sufficient tensile strength. See Evaluation Certificate T10945 for further details.

The register is connected to the upper case by screws. See document no. 11199/0-02.

1.4.3 Transmission

The transmission between the measuring part and the register is executed via a fixed mechanical coupling. The pulse transmission is checked using a two-pulse system.

1.4.4 LCD

The LCD is used for the presentation of legal data and (accountable) alarms. See further the documentation no. 11199/0-02, 11199/0-03 and 11199/0-04.

The indication takes place in m³, by at least 5 digits before the comma and 4 digits behind the comma.

The register is equipped with a display test, which is shown when the display is activated.

1.4.5 Battery

The meter is powered by a lithium battery (3,6 V dc, 9 Ah, C-size). The battery lifetime is at least 15 years. When 10% or less of the lifetime is remaining a low battery alarm will be indicated.

For communication a separate lithium battery (3,6 V dc, 14 Ah, D-size) is used. This battery can be changed in the field without breaking a metrological seal.

1.4.6 Wireless communication

The meter is provided with communication possibilities via GPRS. Via communication no legally relevant data can be altered.

1.4.7 Optical communication

The meter is provided with optical communication. Via the communication no legally relevant data can be altered.

1.5 Conditional shapes

See Evaluation Certificate TC10945.

1.6 Non-essential parts

See Evaluation Certificate TC10945.

2 Seals

The following items of the meter are sealed:

- The nameplate of the meter;
- The entrance to the register is sealed with one or more seals.

See drawing no. 11199/0-06 for an example of the sealing.

The contents of the audit trail will be displayed after pressing the key sequence:

- 1 time right button (long pressure) to activate the display;
- 36 time left button go to "REGISTRO EVENTI" field;
- 1 time right button go to a sub menu where is possible to drive through the events fields by pressing the left button to scroll each entry.