EU-type examination certificate

Number **T10821** revision 2
Project number 1900956

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	ASSYTECH S.r.l. Via Val d'Aosta 169 23018 Talamona (SO) Italy
Measuring instrument	A **measuring system** for AdBlue

Type	:	AT…/U
Manufacturer's mark or name	:	ASSYTECH
Destined for the measurement of	:	AdBlue (Aeqeous liquid)
Accuracy class	:	0,5
Environment classes	:	M1 / E1
Temperature range liquid	:	-10 °C / +55 °C
Temperature range ambient	:	-25 °C / +55 °C
Q_{min} - Q_{max}	:	2 - 40 L/min

Further properties are described in the annexes:
- Description T10821 revision 2;
- Documentation folder T10821-2.

Valid until: 31 October 2026

Remarks
- The measuring system may be combined with one or more LPG- and/or gasoline oil dispensers and/or measuring systems for AdBlue, which make use of the same or separate calculating/indicating device(s);
- The measuring system may be combined with the self-service devices as mentioned in § 1.1 of the description;
- This revision replaces the previous versions, with exception of its documentation folder.

Issuing Authority: **NMi Certin B.V., Notified Body number 0122**
11 April 2017

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INSPECTION RvA I 122

Description

1 General information about the measuring system

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

1.1 Essential parts

Producer	Type	Evaluation Certificate	Remarks
Measurement transducer			
Petrotec	PTF AdBlue	TC7289	-
Endress + Hauser Flowtec AG	Dosimag	511-02064	
Electronic calculating/indicating device (including pulser(s))			
Coptron Soc. Coop.	CPTH02	TC7308	-

The measuring system may be connected to a Self Service Device which is described in:
- any Parts Certificate issued by a Notified Body that acts under module B of the MID for MI-005;

and under the condition that the applied communication protocol is stated in the Parts Certificates of both the applied electronic calculating/indicating device and self-service device.

1.2 Essential characteristics

In addition to the characteristics as is stated on page 1 of this EU-type examination certificate the following characteristics apply to the measuring system:

- $Q_{min} - Q_{max}$
  Within the flow ranges of the essential parts, specified in the table of paragraph 1.1, a minimum and maximum flow rate can be chosen provided their ratio is at least 1:5;

- Minimum Measured Quantity (MMQ): 2 L.

- Maximum pressure: 5 bar(g).

- Ambient temperature range:
  The ambient temperature range is -25 °C / +55 °C, under the condition that measures are taken to prevent freezing of AdBlue at temperatures below -10 °C (see paragraph 1.4). If those measures are not taken, a minimum ambient temperature of -10 °C or +5 °C can be stated on the nameplate.

- The total price indication together with the unit price indication is optional.

1.3 Essential shapes

1.3.1 Configuration

- As long as no conflict with the concerning Evaluation Certificates, the essential parts mentioned in paragraph 1.1 can be applied in any desired combination;
- The measuring system may be combined with one or more LPG- and/or gasoline oil dispensers and/or measuring installations for AdBlue, which make use of the same or separate calculating/indicating device(s). If the same calculator/indicating device is used, depending on the calculator/indicating device, the delivery is possible separately or simultaneously;
- The measuring system is provided with a separate or a common supply system for several dispensers.
- When using the Electronic volume calculating and converting device, one device could be used for two hoses with the same product.
- A Self Service Device can be integrated in the same frame (housing) of the dispenser or connected from a remote place.

A schematic drawing of the measuring system is given in documentation no. 10821/1-01 and 10821/0-02.

1.3.2 Inscriptions

- The following information is clearly visible on the nameplate:
  - 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 number;
  - Manufacturer's name, registered trade name or registered trade mark;
  - Manufacturer's postal address;
  - Type designation;
  - Year of manufacture and serial number;
  - Accuracy class;
  - Minimum and maximum flow rate;
  - Maximum pressure;
  - Name(s) or nature(s) of the product(s) to be measured;
  - Mechanical and electromagnetic environment class;
  - Ambient temperature range;
  - Liquid temperature range;
  - Serial numbers of all essential parts stated in Paragraph 1.2.

Remarks:
The nameplate must be clearly visible without removing the covers.

- Further inscriptions:
  - The inscription “minimum measured quantity ... L” on the indicator face of the calculating/indicating device (on both sides if applicable);
  - The inscriptions on the measurement transducer as mentioned in the appertaining Evaluation Certificate;
  - The inscriptions on the electronic calculating/indicating device as mentioned in the appertaining Evaluation Certificate;
  - The inscriptions on the self-service device as mentioned in the appertaining Evaluation Certificate.

- Data sheet (optional)
  A data sheet can be available with markings belonging to individual components (e.g. the measurement transducer) in case this information is not stated on the component itself. When the data sheet contains mandatory information that is not present on the name plate, it shall be fixed in a permanent manner to the frame of the housing.
  Also a drawing identifying each nozzle with its associated hydraulics can be printed on the data sheet.

An example of the nameplate is given in documentation no. 10821/0-03.

1.4 Conditional parts

- Pumping unit
  The measuring system is operated with a submerged pump, without using a gas separator. One remote pump system can be connected to several meters delivering the same product. See schematic drawing of the pump system given in documentation no. 10821/0-02.

- Filter
  A filter is fitted upstream of each measurement transducer.

- Mechanical volume totalizer (optional)
  The mechanical volume totalizer(s), driven by the measurement transducer, can be present.

- Electro-mechanical volume totalizer (optional)
  The electro-mechanical volume totalizer(s), as a part of the calculating/indicating device, can be present.

- Check valve
  An additional check valve (of various manufacturers) is fitted upstream of the measurement transducer to prevent the reverse flow of the liquid into the storage tank.

- Cut off valve
  A valve (of various manufacturers) fitted up- or downstream of the measurement transducer used to stop/block the flow of the liquid and can also have the function as preset valve. This valve is optional if the cut-off in is secured another way.

- Pre-set valve (optional)
  A valve (of various manufacturers) fitted up- or downstream of the measurement transducer used for stopping the flow on the entered quantity (volume or price). The function of the cut off valve and preset valve can be combined in one valve.

- Control valve (optional)
  A valve (of various manufacturers) fitted up- or downstream of the measurement transducer used for changing the flow e.g. from the minimum flow rate to the maximum flow rate.

- Manual operated valves (optional)
  Manual operated valves fitted up- or downstream of each measurement transducer in case of two measurement transducers in parallel, if there is no possibility to calibrate each measurement transducer separately.

- Several delivery points of the same measurement transducer
  Each delivery point has its own hose, nozzle and cut-off valve, the cut-off valve can be fitted in the housing of the dispenser or in a so-called “satellite”.

- Non-return valve
  The non-return valve is fitted upstream of the measurement transducer.

- Solenoid valve (optional)
  The solenoid valve is fitted downstream of the measurement transducer. A hose may be fitted with a solenoid valve.

- Heating element (optional)
  The AdBlue installation is equipped with a heating element which prevents the temperature in the housing of dropping below the freezing point.

1.5 Non essential parts

- The housing of the measuring system;
- Hoses;
- Nozzles.

2 Seals

The following items of the measuring system are sealed:
- the nameplate* with the frame of the measuring system;
- the data sheet (if available);
- the measurement transducer as mentioned in the applicable Evaluation Certificate;
- the mechanical connections between the meter sensor and the pulser (if applicable);
- the connection between the pulser and the calculating / indicating device against manipulation (if applicable);
- the electronic calculating/indicating device as mentioned in the applicable Evaluation Certificate;
- the self-service device as mentioned in the applicable Evaluation or Parts Certificate.

*) Removal without destroying the nameplate shall not be possible, otherwise the nameplate shall be sealed to the frame.

In case the identification of the components is not stated on the Name plate or Data sheet:
- the gas separator against removal;
- the measurement transducer against removal;
- the electronic calculating / indicating device against removal.

An example of those sealings, who are not mentioned in the applicable Evaluation Certificates of the measurement transducer or calculating / indicating device, is mentioned in the documentation folder.

3 Conditions for Conformity Assessment

The initial verification of the measuring system shall include at least the following four steps:

1. Essential parts covered by an Evaluation Certificate or Part Certificate shall be constructed and set-up according the applicable Evaluation/Part Certificate.
2. Verification of the correct parameter settings of the essential parts.
3. The zero-offset (at zero flow) of the meter is checked (if applicable).
4. The measurement accuracy of the measuring system is verified.
   This can be done:
   - Directly on site of installation by comparing the measurement result with a calibrated master (e.g. master meter; weighing bridge).
     or
   - In a test lab on a liquid with similar properties (density and viscosity) as the liquid to be measured.
     The result of this investigation is a calibration report, which states the results and the correct settings of all parameters, which are directly involved in the measurement (as a result of this investigation, they may have to be changed in respect of the original factory settings).
     or
   - See ‘Conditions for Conformity Assessment’ of the applicable measurement sensor.