



EU-TYPE EXAMINATION CERTIFICATE

Number: TCM 141/17 - 5443

Addition 2

This addition replaces all previous versions of this certificate in full wording.

Page 1 from 10 pages

- In accordance:** with Directive 2014/32/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments (implemented in Czech Republic by Government Order No. 120/2016 Coll.).
- Manufacturer:** FlowMont, s.r.o.
Ohradní 1087/63
140 00 Praha 4
Czech Republic
- For:** Dispenser for liquids other than water
type: V3HXX.Y, V3HXX.MYY
Accuracy class: 0.5
mechanical environment class: M1
electromagnetic environment class: E1
ambient temperature range: -25 °C...+55 °C
- Valid until:** 1 March 2027
- Document No:** 0511-CS-A007-17
- Description:** Essential characteristics, approved conditions and special conditions, if any, are described in this certificate.
- Date of issue:** 3 December 2021

Certificate approved by:




RNDr. Pavel Klenovský

1 Measuring device description

The V3HXX.Y and V3HXX.MYY dispensers are designed for measuring the volume of liquids other than water specified in this approval, as a legal measuring device in the sense of the Directive of the European Parliament and of the Council no. 2014/32/EU of measuring instruments, as amended.

The measuring system are used to fill separate containers and systems intended for this purpose, located in motor vehicles or other equipment.

The V3HXX.Y and V3HXX.MYY measuring systems consist of:

- measuring transducer
- electronic calculating and indicating device.
- filter
- solenoid valve
- non-return valve
- hose (hose and hose reel) with dispensing nozzle
- storage tank, may be part of the dispenser.

The parts of the measuring system are housed in a metal frame.

The system is intended to be used with an external submersible pump placed at the bottom of a storage tank. Design of the installation has to ensure that there is no risk of air intake or gas release. It must be ensured by a level detection system, which automatically measures the minimum level of liquid in the storage tank or, where appropriate, by other effective means.

Correction of the measurement accuracy can be done by a correction factor of the measuring transducer or in the electronic calculator. Both ways are protected by a mechanical sealing.

Type designation of the measuring system.

V3HXX.Y and V3HXX.MYY

XX = 01 – one transducer, one indicating device

XX = 02 – two transducer, two indicating device

XX = 12 - one transducer, two indicating device

XX = 21 - two transducer, one indicating device

Y = W – windscreen washer fluid (water&soap or water&soapðanol mixture)

Y = A – AdBlue - urea used for selective catalytic reduction

Y = C – mixture from antifreeze fluid and water for car or engine cooling radiator

M = multiproduct dispenser model combines two different liquids

1.1 Measuring transducer

M4000 electromagnetic flow sensor with electronic transducer of the type M DN8-10 PFA, M1000fc or M1000R.

Manufacturer	Badger Meter
Measuring sensor type	M4000
Nominal diameter	DN8
Transducer type	M DN8-10 PFA, M1000fc or M1000R
Accuracy class	0.5
Minimum flow rate	2 L/min
Maximum flow rate	8 L/min
Minimum measured quantity	2 L
Liquid temperature range	(-10 to 50) °C



Manufacturer	Badger Meter
Measuring sensor type	M4000
Nominal diameter	DN25
Transducer type	M DN8-10 PFA, M1000fc or M1000R
Accuracy class	0.5
Minimum flow rate	6 L/min
Maximum flow rate	30 L/min
Minimum measured quantity	5 L
Liquid temperature range	(-10 to 50) °C

Dosimag (picture No. 5) electromagnetic flowmeter was assessed separately in evaluation certificate No 511-02064-02 issued from Federal Institute of Metrology METAS. The device consists of a transmitter and a sensor. The device is a compact version, transmitter and sensor form a mechanical unit.

Manufacturer	Enderss+Hauser
Measuring sensor type	Dosimag DN15K
Nominal diameter	DN12
Environmental class	M2, E2, H3
Accuracy class	0,5
Minimum flow rate	2 L/min
Maximum flow rate	40 L/min
Minimum measured quantity	2 L
Liquid temperature range	-10 °C 55 °C
Software versions	According to the Evaluation certificate No. No 511-02064-02
W&M checksum (CRC)	

1.2 Calculator

Manufacturer	Beta control
Pattern designation	ADP1/L
Accuracy class	0.5
Ambient temperature range	(-25 to +70) °C
Environmental classes	M2, E2, H3
Power supply	220 VAC ±10%, 50-60 Hz
Price and volume display	6 digits
Unit price display	4 digits
Compatible pulser	two-channel
Maximum connected pulsers	1
Software versions	30.62
W&M checksum (CRC)	630A
Approval certificate	ZR 141/10-0072

Manufacturer	Beta control
Pattern designation	ADPMPD _x /T, ADPMPD _x /T-PWM
Accuracy class	0.5
Ambient temperature range	(-40 to +70) °C
Environmental classes	M2, E2, H3
Power supply	220 VAC ±10%, 50-60 Hz
Price and volume display	6 digits
Unit price display	4 digits
Compatible pulser	two-channel
Maximum connected pulsers	10
Software versions	10.62
W&M checksum (CRC)	FA02
Approval certificate	ZR 141/10-0072

The calculator can be operating by communication line or KL-SERINF remote controller. Electronic calibration is realized by automatic procedure "Electronic calibration of the meters and ATC" (manual chapter 2.2.7). Access to electronic calibration is secured by DIP switch No. 2 (location OFF). Access to ATC function setting is secured by DIP switch No. 3 (location OFF). DIP switches are protected by sealing cover.

The version of software is indicated on the display after the calculator is turned on, provided that parameter P11 is adjusted to value more than 0.

Manufacturer	Unidataz
Pattern designation	CDC
Accuracy class	0.5
Ambient temperature range	(-40 to +55) °C
Environmental classes	M1, E1, H3
Power supply	220 VAC ±10%, 50-60 Hz
Price and volume display	6 digits
Unit price display	4 digits
Compatible pulser	two-channel
Maximum connected pulsers	2
Software versions	According to the Evaluation certificate No. ZR 141/10 - 0073
W&M checksum (CRC)	
Approval certificate	ZR 141/10-0073

1.2 Hose

Polyurethane hose in hose reels ECODORA STAINLESS STEEL AISI 304 series 250

2 Basic technical and metrological data

Accuracy class	0.5		
Measuring sensor	DN 8	DN12	DN 25
Max. flow rate Q_{\max} [L/min]	8	40	30
Min. flow rate Q_{\min} [L/min]	2	2	6
Min. measured quantity MMQ [L]	2	2	5
Liquids to be measured	AdBlue (AUS 32 - 32.5 % aqueous urea solution), Water and soap, water and ethanol and soap mixtures mixture from antifreeze fluid and water		
Liquid density	800 kg/m ³ to 1200 kg/m ³		
Liquid conductivity	≥ 500 μS/cm		
Liquid temperature range [°C]	-10 to 50		
Ambient temperature range [°C]	-25 to +55		
Maximum pressure [MPa]	1.0		
Environmental classes	M1, E1, H3		
Measurement unit	Volume [L]		
Type of display:	electronic		
Scale interval of the indication [L]	0,01		
Approved software versions	See the chapter 1.2		

3 Test

Technical tests and conformity assessment of the V3HXX.Y and V3HXX.MYY dispenser have been performed in conformity with International recommendation OIML R 117-1 Edition 2007 *Dynamic measuring systems for liquids other than water*, and according to International recommendation OIML R 117-2 Edition 2014 *Metrological controls and performance tests*.

Examination results are to be found in the Test report No.:

- 6015-PT-P026-09
- 6015-PT-P0002-15
- 6015-PT-P0002-17
- 6015-PT-P0057-17
- 6015-PT-P0057-17"
- 6015-PT-P0040-21

issued by Czech metrology institute (Notified Body No. 1383).

4 The measuring device data

At least following data are to be stated on the measuring transducer and electronic calculator:

- Manufacturer's name, mark or trademark
- Type designation
- Serial number

Following data are to be stated on a name plate of the dispenser:

- The "CE" marking and supplementary metrology marking
- Number of EU-type examination certificate
- Manufacturer's name, mark or trademark and post address
- Type designation
- Serial number and year of manufacture
- Accuracy class 0.5
- Minimum measured quantity



- Maximum flowrate (Q_{\max})
- Minimum flowrate (Q_{\min})
- Maximum pressure (p_{\max})
- Liquids to be measured
- Liquid temperature range
- Ambient temperature range
- Mechanical class
- Electromagnetic class

The name plate must be inseparably fixed to the construction on clearly visible place in normal condition of use.

Following data are to be stated on face of each indicating device:

- Unit of national currency (e.g. €) is indicated next to price display,
- Unit of volume (ℓ or L or word Litre) is indicated next to volume display,
- Unit price per litre (e.g. €/L or €/Litre) is indicated next to unit price display,
- Information regarding the minimum measured quantity (MMQ),

5 Conditions for approval and sealing

- Before putting into use it has to be verified that the dispenser is in conformity with requirements of this certificate.
Accuracy test within the verification has to be performed using liquid which the measuring system is intended in the type approval for, or with fluids having the same characteristics as those to be measured.
Accuracy test shall be performed within given flow rate range, pressure range of the measuring system and in normal conditions of operation.
All measured errors have to be in range of tolerance +/- 0.5%.
- DIP switches No. 2 and 3 have to be set to position OFF
- Each measuring system has to be sealed after the tests and conformity assessment with a positive result according to following description and pictures No. 1, 2, 3, 4, 5 and 7.

Seals:

On the measuring transducer:

- Cover of the transducer (electronics) according to picture No. 1 and 2
- Type plate on the transducer
- The cable converter on the DoublePulse output on Dosimag, has to be secured with an unlocking protector which has to be sealed mechanical, picture No. 7

On the ADP/1 and ADPMPD_x/T, ADPMPD_x/T-PWM electronic calculator:

- Not dissembling of calculator, totalizing device and DIP switches cover according to picture No. 3 or 4
- Type plate of the calculator

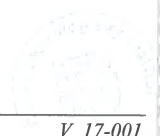
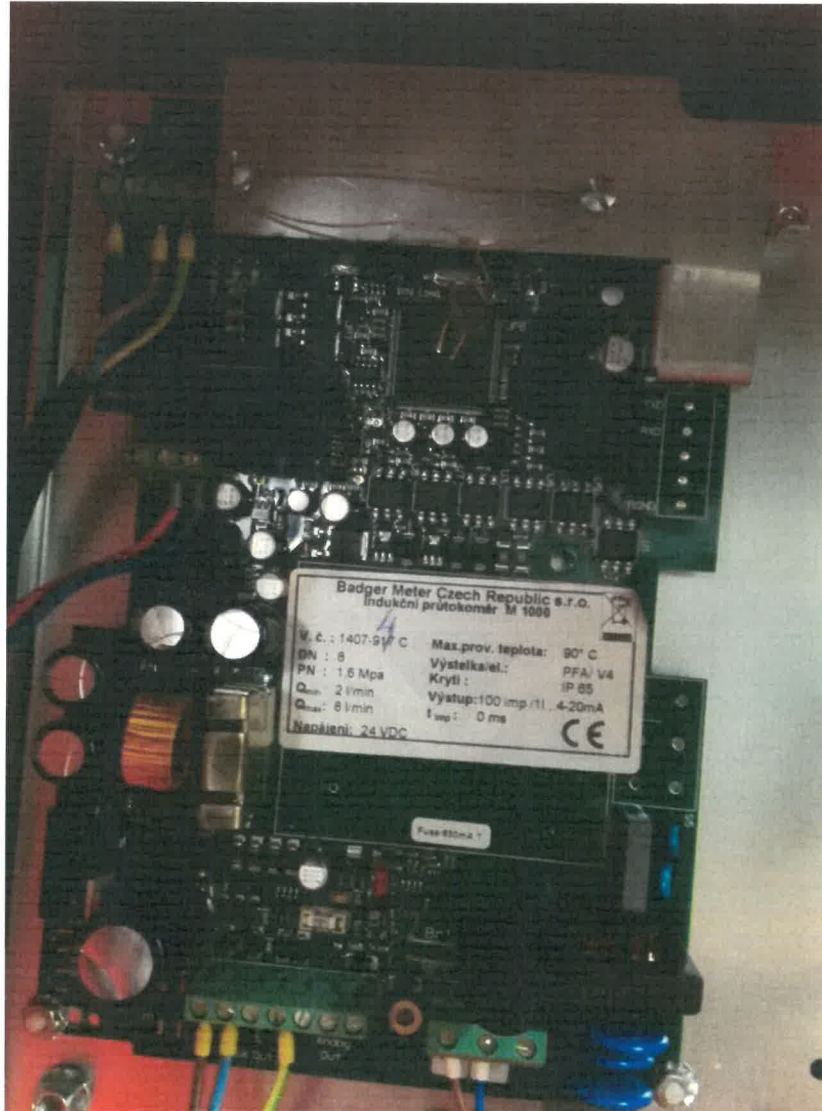
On the CDC electronic calculator picture No. 5:

- Connection of the S3 switch cover with CPU unit
- Connection of the CPU unit to calculator console
- Connection of the electromechanical totalizer to the frame
- Type plate of the calculator

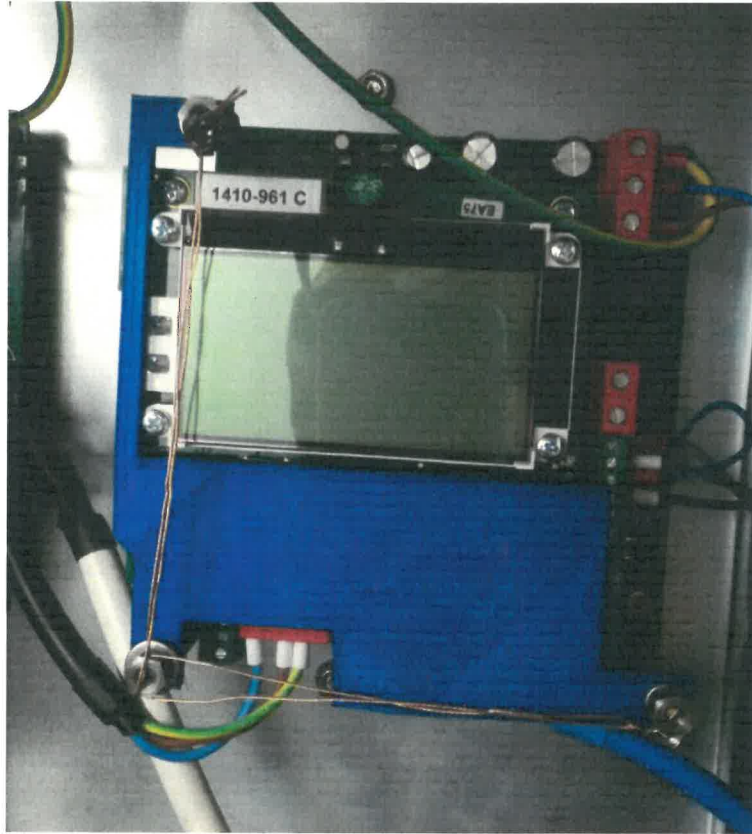
On the dispenser:

- Name plate of the dispenser against removal

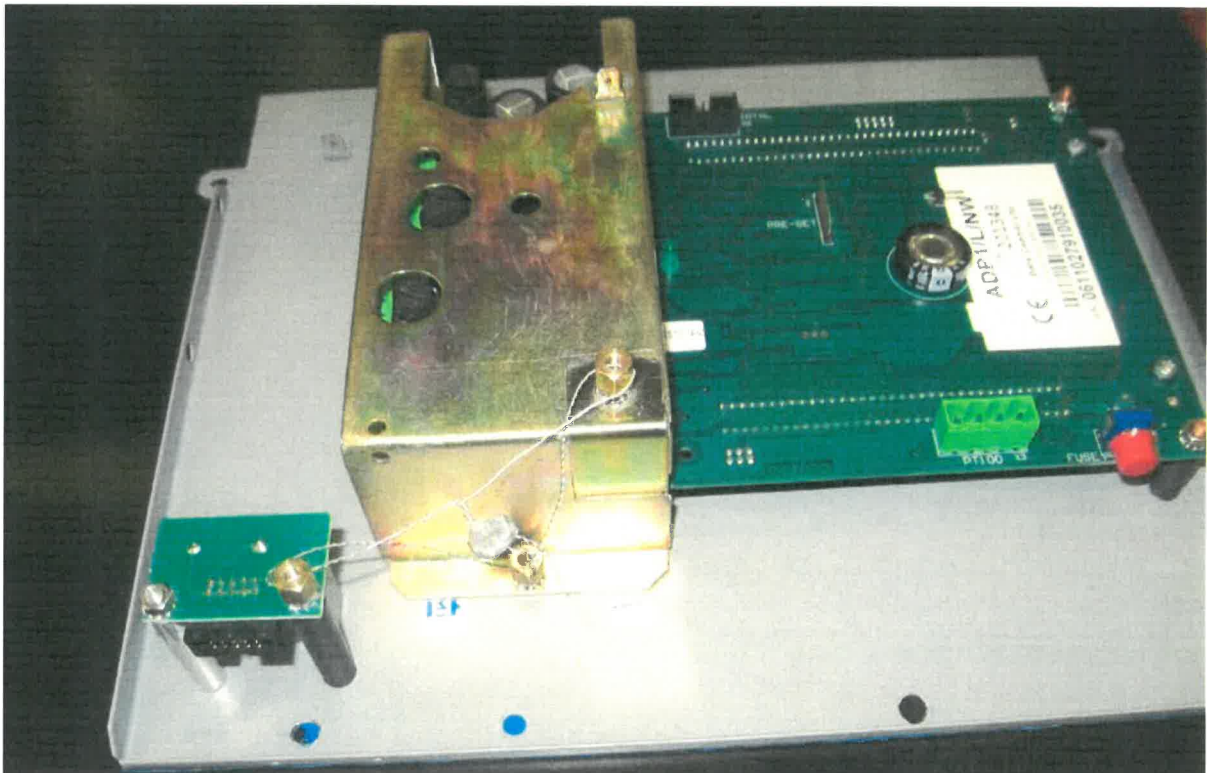
Picture No. 1: The sealing of M1000fc measurement transducer



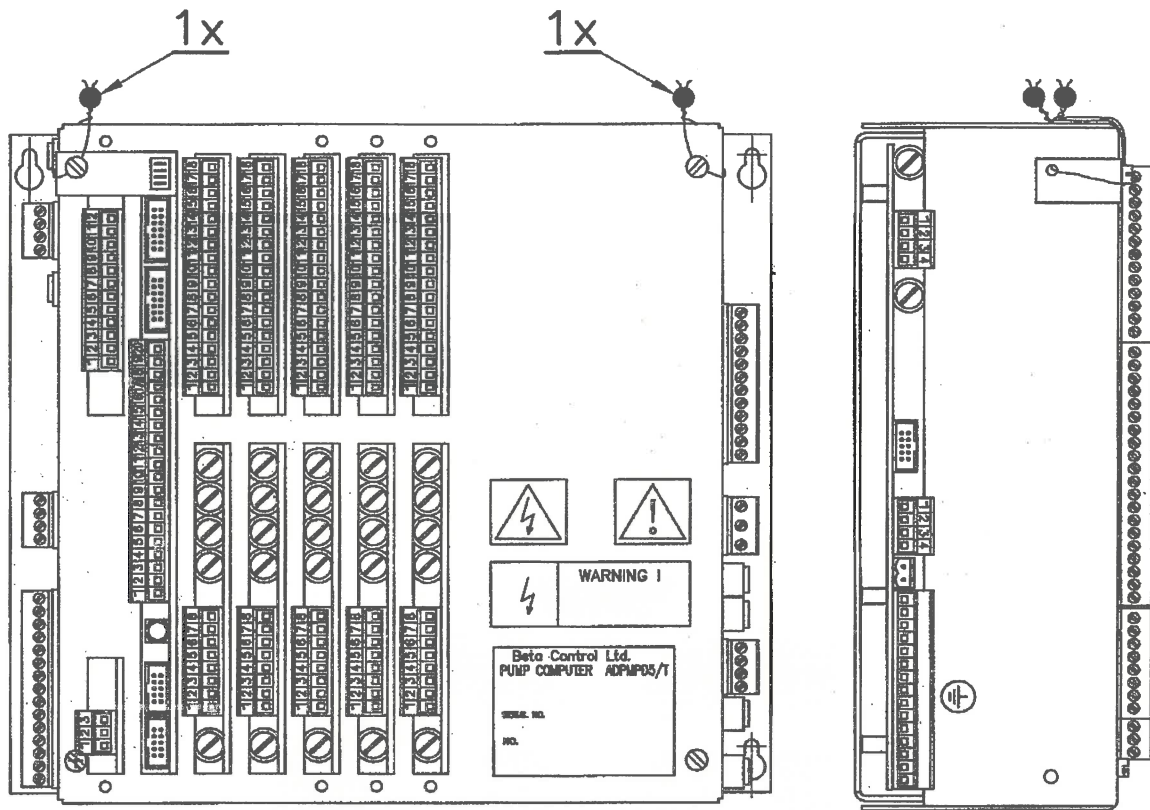
Picture No. 2: The sealing of M1000R measurement transducer



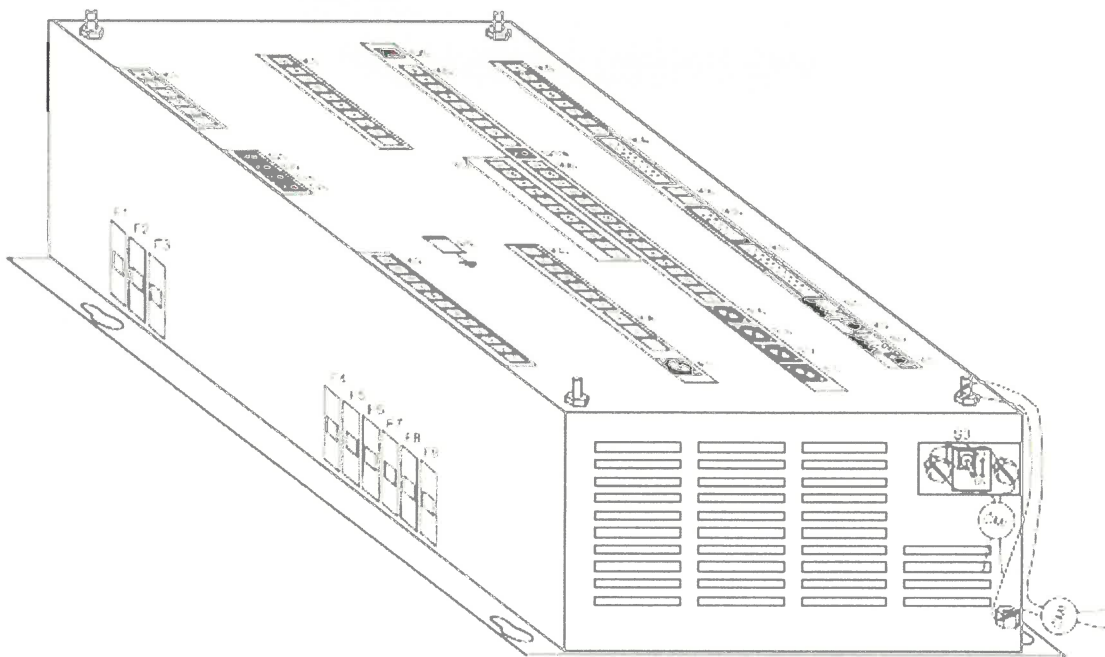
Picture No. 3: The sealing of ADP1/L calculator



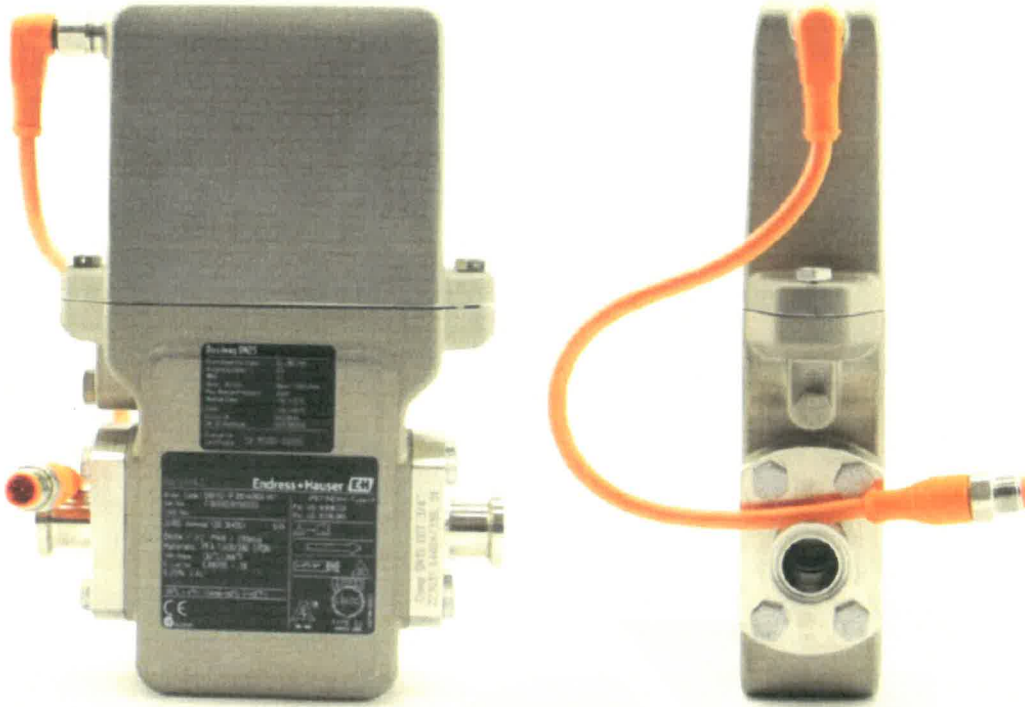
Picture No. 4: The sealing of ADPMPD_x/T, ADPMPD_x/T-PWM calculator



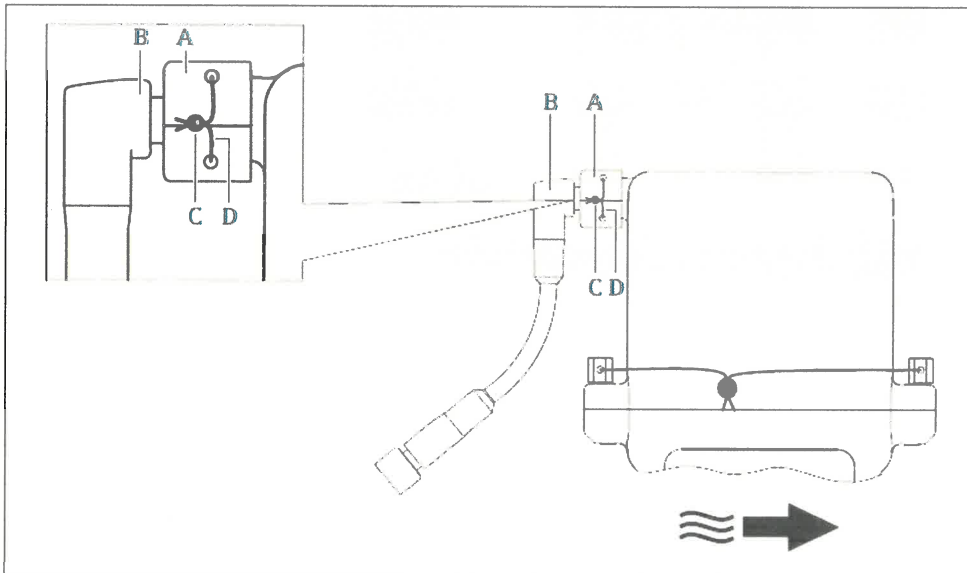
Picture No. 5: The sealing of the CDC calculator



Picture No. 6: Dosimag electromagnetic flowmeter



Picture No. 7: Sealing the double-pulse output



5 Double-pulse output seal

- A Safety clip
- B Cable converter (hardware write protection for custody transfer mode)
- C Seal
- D Safety cable

1. Place safety clip around the cable converter.
2. Pull the safety cable through the safety clip.
3. Guide the safety cable through the seal.
4. Press the seal shut.