

# EC type-examination Certificate

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Issued by + + + + NMi Certin B.V.,

designated and notified by the Netherlands to perform tasks with respect to conformity modules mentioned in article 9 of Directive 2004/22/EC, after having established that the Measuring instrument meets the applicable

requirements of Directive 2004/22/EC, to:

Manufacturer ABB AB

Cewe-Control Arnöleden 2

SE-611 31 Nyköping

Sweden

Measuring instrument A static Active Electrical Energy Meter

Type : A41 and A42

Reference voltage + + + + + + : 57,7...288 V

Reference current + + + + + + : A41: 5 A (direct connected)

A42: 1 A (indirect connected)

Destined for the measurement of : electrical energy, in a

- single-phase two-wire network

Accuracy class : A41: A or B

A42: A, B or C

Environment classes : M2 / E2

Temperature range :  $-40 \,^{\circ}\text{C} / +70 \,^{\circ}\text{C}$ 

Further properties are described in the annexes

Description T10358 revision 4Documentation folder T10358-3

Valid until 26 January 2022

Remarks This revision replaces the earlier versions, including its documentation

folder.

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C. Oosterman Head Certification Board

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# Description

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### 1 General information about the instrument

All properties of the static active electrical energy meter, whether mentioned or not, shall not be in conflict with the legislation.

# 1.1 Essential parts

Description	Document	Remarks	
Measuring sensor A41: 80 A A42: 6 A	10358/0-10 or 10358/0-11 or 10258/0-12; 10358/0-13 or 10358/0-14;		
Main PCB A41 - Rev A0031 or - Rev A0041	10358/0-15, 10358/0-16; 10358/1-01, 10358/1-02 or 10358/4-01;	All parts of the printed circuit boards are essential, except the components which are related to parts as	
Main PCB A42 - Rev A0021 or - Rev A0031	10358/0-17, 10358/0-18; 10358/1-03, 10358/1-04 or 10358/4-02;	described in paragraph 1.4 or 1.6.	

### 1.2 Essential characteristics

- 1.2.1 See EC type-examination Certificate T10358 revision 4 and the characteristics mentioned below.
- 1.2.2 Approved meter types: A41...-10. and A42...-10.. An explanation of all type designations is

presented in document no. 10358/0-03.

- 1.2.3 Frequency : 50 or 60 Hz
- 1.2.4 Meter constant : 1.000 imp./kWh (A41) or 5.000 imp./kWh (A42)
- 1.2.5 Number of registers : 4
- 1.2.6 Error messages : errors are indicated by a triangle on the display and error codes in

the system log. An overview of all error codes is presented in

- document no.10358/0-06.
- 1.2.7 Export energy : the meter is capable of measuring energy in 2 directions.
- 1.2.8 Software specification (refer to WELMEC guide 7.2):
  - Software type P;
  - Risk Class C;
  - Extension D and L, while extensions S, T are not applicable.



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Software version	Identification number (checksum)	Remarks
A.1.2.0 or A.1.10.0 or A.1.10.3 or A.1.10.4 or A.1.10.8 or A.1.10.9	93B219A9 CC4D33CE 11EEDCA2 F0D40182 951959B8 E22FE513	The firmware version and checksum are presented on the display.  Path: Main Menu / Status / About

# 1.3 Essential shapes

- 1.3.1 The nameplate is bearing at least, good legible, the information as mentioned in the regulations on energy meters. An example of the markings is shown in document no. 10358/0-04.
- 1.3.2 Sealing: see chapter 2.
- 1.3.3 The registration observation is executed by means of a LED.

# 1.4 Conditional parts

### 1.4.1 Terminal block

The connections for the current cables on the terminal block have a diameter of at least 7 mm (A41) or 5 mm (A42). The cables are connected with the terminal block via 1 screw. See documents no.10358/0-07 (A41) and 10358/0-08 (A42).

# 1.4.2 Housing

The meter has got a dustproof housing, which has sufficient tensile strength. The cover is made of synthetic material. An example of the housing is presented in document no. 10358/0-01 (A41) and 10358/0-02 (A42).

#### 1.4.3 Terminal cover

The terminal cover is made of synthetic material.

#### 1.4.4 Register

The quantity of measured energy is presented by means of a display with at least 6 elements. The way of presentation is described in document no. 10358/0-05.

For test purposes an indication with a least significant element of at least 0,01 kWh, can be arranged via the display.

## 1.4.5 Tariff control

When the meter is provided with more than one register, a tariff control is available by means of tariff inputs, clock or communication, whereby the EMC-requirements are fulfilled as described in Annex MI-003 of Directive 2004/22/EC.

#### 1.4.6 Communication

When the meter is provided with MBUS, RS485, OPTICAL or ZIGBEE communication, EMC



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requirements as described in Annex MI-003 of Directive 2004/22/EC must be fulfilled. Via the communication no legally relevant data can be altered.

# 1.5 Conditional characteristics

1.5.1 Maximum current:

A41 (Direct connected): smaller than or equal to 80 A, and at least 5 times higher than

the reference current.

A42 (Indirect connected): smaller than or equal to 6 A, and at least 1,2 times higher

than the reference current

### Terminal block:

Maximum current	Document no.	Remarks
80 A	10358/0-07	Direct connected version
6 A	10358/0-08	Indirect connected version

1.5.2 Minimum current: A41 (Direct connected): 0,25 A

A42 (Indirect connected): 0,01 A

# 1.6 Non-essential parts

1.6.1 Pulse output

## 2 Seals

Both sides of the meter are sealed by sealing labels. An example of the sealing is presented in document no. 10358/0-09.

# 3 Conditions for conformity assessment according to module D or F

The influence factors for temperature, frequency and voltage, which are necessary to perform the conformity assessment according to module D or F, are presented in Annex 1, belonging to this EC type-examination certificate.

Based on the WELMEC Guide 11.1, section 2.5.6, the sum of the square values is presented.