

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 Landis + Gyr A.E.
78th km National Road Athens-Corinth
GR-201 00, Corinth
Greece

Measuring instrument A static **Active Electrical Energy Meter**
Type : E450 G3 IDIS (ZCXi1x0xQ S4)
Reference voltage : 230 V
Reference current : 5 A or 10 A
Destined for the measurement of : electrical energy, in a
- single-phase two-wire network
Accuracy class : B or A
Environment classes : M2 / E2
Temperature range : -40 °C / +70 °C

Further properties are described in the annexes:
- Description T11169 revision 0;
- Documentation folder T11169-1.

Valid until 1 September 2027

Issuing Authority **NMI Certin B.V., Notified Body number 0122**
1 September 2017



C. Oosterman
Head Certification Board

NMI Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands
T +31 78 6332332
certin@nmi.nl
www.nmi.nl

This document is issued under the provision
that no liability is accepted and that the
manufacturer shall indemnify third-party
liability.

The designation of NMI Certin B.V. as Notified
Body can be verified at
[http://ec.europa.eu/growth/tools-
databases/nando/](http://ec.europa.eu/growth/tools-databases/nando/)

Reproduction of the complete
document only is permitted.

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 - Shunt	11169/0-08	
Main board - P000279930 rev F or - P000279930 rev G	11169/0-11 and 11169/0-12 11169/0-13 and 11169/0-14	All parts of the printed circuit boards are essential, except the components which are related to parts as described in paragraph 1.4 or 1.6.

1.2 Essential characteristics

- 1.2.1 See EU-type examination certificate T11169 revision 0 and the characteristics mentioned below.
- 1.2.2 Approved meter types : ZCXi1*0*QU*L*D*.* S4
An explanation of all type designations is presented in document no. 11169/0-02
- 1.2.3 Frequency : 50 Hz
- 1.2.4 Meter constant : 1000 imp./kWh
- 1.2.5 Number of registers : 4 total energy registers and 32 rated energy registers
- 1.2.6 Error messages : Errors are indicated by a blinking alarm symbol on the display.
The error code is display with OBIS code F.F. An overview of all error codes is presented in document no. 11169/0-07.
- 1.2.7 Export energy : the meter is capable of measuring energy in 2 directions.

1.2.8 Software specification (refer to WELMEC 7.2):

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

Identification number (checksum)	Software version	Remarks
0x1372885A 0x22E2F53D 0x7662CE30 0xA02567EC 0x9FE7B2A9 0x94c46bf0 0xA756C35C	V91.00.xx.xx or V91.02.xx.xx or V91.03.xx.xx or V91.04.xx.xx or V91.05.xx.xx or V91.06.xx.xx or V91.10.xx.xx	<p>The software is of fix/flex design. Changes can be made to the flex parts as required. Only changes to the fix part change the metrology of the meter.</p> <p>The checksum is displayed in the MID display list of the meter in the form "A756c35c" (Origin: OBIS 1-0:0.2.8.255, attribute id 2) and optionally also the combined software version number is shown in the form "U911010". (Origin: OBIS 0-0:0.2.0.255, attribute id 2).</p> <p>On the interface side, the combined software version is shown in the form "V911010"(Origin: OBIS 0-0:0.2.0.255, attribute id 2).</p> <p>For the software versions up to and including V91.06.xx.xx, the OBIS code for the checksum is displayed in the form "0.2.8" and for SW version it is displayed in the form "0.2.0".</p> <p>From software version V91.10.xx.xx onwards, the OBIS code for the checksum is displayed in the form "0:0.2.8" and for the SW version it is displayed in the form "0:0.2.0".</p>

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. 11169/0-03.
- 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. The cables are connected with the terminal block via 2 screws. The terminal block can be equipped with an optional CII customer information Interface. See documents no. 11169/0-04.

1.4.2 Housing

The meter has got a dustproof housing, which has sufficient tensile strength. The cover is made of synthetic material. Examples of the housing are presented in documents no. 11169/0-01 and 11169/0-05.

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. 11169/0-06. For test purposes an indication with a least significant element of at least 0,01 kWh, can be arranged via the service menu. See document no. 11169/0-06 paragraph 5.2.3.4.

1.4.5 Tariff control

When the meter is provided with more than one register, a tariff control is available by means of communication or internal calendar.

1.4.6 Optical communication

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

1.4.7 Communication (optionally)

When the meter is provided with PLC, wired M-Bus or wireless M-Bus communication, the EMC-requirements are fulfilled as described in Annex V (MI-003) of Directive 2014/32/EU. Via the communication no legally relevant data can be altered.

Description	Document	Remarks
M-Bus board - 8957 rev C	11169/0-15 and 11169/0-16	
Wireless M-Bus board - 8962 rev A or - P000299840	11169/0-17 and 11169/0-18 11169/0-19 and 11169/0-20	

1.4.8 Supply Control Switch (SCS) (optionally)

Optionally the meter can be equipped with a 1-pole or 2-pole Supply Control Switch (SCS). See documentation no. 11169/0-09 and 11169/0-10.



Description

Number **T11169** revision 0
Project number 1901401
Page 4 of 4

1.5 Conditional characteristics

- 1.5.1 Maximum current: smaller than or equal to 80 A, and at least 5 times higher than the reference current.
- 1.5.2 Minimum current: 0,25 A

1.6 Non-essential parts

- 1.6.1 Output relay
- 1.6.2 CII Customer Information Interface

2 Seals

The housing is made of a base and a cover and is sealed with a sealing pin under the terminal cover. An example of the sealing is presented in document no. 11169/0-05.

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 EU-type examination certificate.
Based on the WELMEC 11.1, section 2.5.6, the sum of the square values is presented.

Influence factors for temperature, frequency and voltage

During the type approval examination the influence factors for temperature, frequency and voltage are determined per load point. The values depicted in the table below present the root sum square values per load point, determined via the following formula:

$$\delta e(T, U, f) = \sqrt{\delta e^2(T, I, \cos \varphi) + \delta e^2(U, I, \cos \varphi) + \delta e^2(f, I, \cos \varphi)}$$

with:

- $\delta e(T, I, \cos \varphi)$ = the additional percentage error due to the variation of the temperature at a certain load;
- $\delta e(U, I, \cos \varphi)$ = the additional percentage error due to the variation of the voltage at the same load;
- $\delta e(f, I, \cos \varphi)$ = the additional percentage error due to the variation of the frequency at the same load.

Current	Power factor	-40°C [%]	-25°C [%]	-10°C [%]	+5°C [%]	+23°C [%]	+40°C [%]	+55°C [%]	+70°C [%]
I _{min}	1	1,1	0,9	0,6	0,4	0,2	0,3	0,6	0,8
	0,5 ind. 0,8 cap.	1,0 1,0	0,8 0,8	0,6 0,6	0,3 0,3	0,1 0,0	0,3 0,3	0,6 0,6	0,8 0,9
10 I _{tr}	1	1,0	0,8	0,6	0,3	0,0	0,3	0,6	0,9
	0,5 ind.	1,0	0,8	0,6	0,3	0,0	0,3	0,6	0,9
	0,8 cap.	1,0	0,8	0,6	0,3	0,0	0,3	0,6	0,9
I _{max}	1	1,0	0,7	0,6	0,3	0,2	0,3	0,6	0,9
	0,5 ind.	0,9	0,7	0,5	0,3	0,1	0,3	0,5	0,8
	0,8 cap.	0,9	0,7	0,5	0,3	0,1	0,3	0,6	0,8