

EU-TYPE EXAMINATION CERTIFICATE

Hexing Electrical Co., Ltd.
1418 Moganshan Road, Shangcheng Industrial Zone,
310011 Hangzhou City,
China

EU-Type Examination

Certificate No.

1344-17

Revision 6



Type HXE310
Object Electronic three-phase four-wire energy meter.
Direct connected

The object has been assessed and meets the requirements of

EU Directive 2014/32/EU
Module B

The energy meter(s) meet(s) the essential requirements of Annex V of EU Directive 2014/32/EU, on the harmonization of the laws of Member States relating to the making available on the market of measuring instruments (recast).

This Certification is based on the report(s) listed in the report list in this Certificate.

This Certificate is valid until: February 14, 2035.

This Certificate comprises 9 pages in total.

Issued by KEMA B.V.
Klingelbeekseweg 195,
Arnhem, The Netherlands
Notified Body 2290

Alessandro Bertani
Director,
Services & Smart Technologies

Arnhem, February 14, 2025



REVISION OVERVIEW

The edition with the highest revision number always replaces the earlier issued editions.

Rev. No.	Date of issue	Reason
0 (V1)	July 27, 2017	First issue
1 (V2)	July 27, 2017	Typos corrected
2 (V3)	March 24, 2020	Technical modifications
3 (V4)	March 30, 2020	Typos corrected
4	-	Not issued
5	December 23, 2022	Typos corrected
6	February 14, 2025	Report 103702202-25 R0 added

REPORT LIST

This Certificate is issued based on the following reports.

Report number	Revision	Firmware version
1720-22	R0	V0024
103702202-25	R0	

1 TECHNICAL DATA

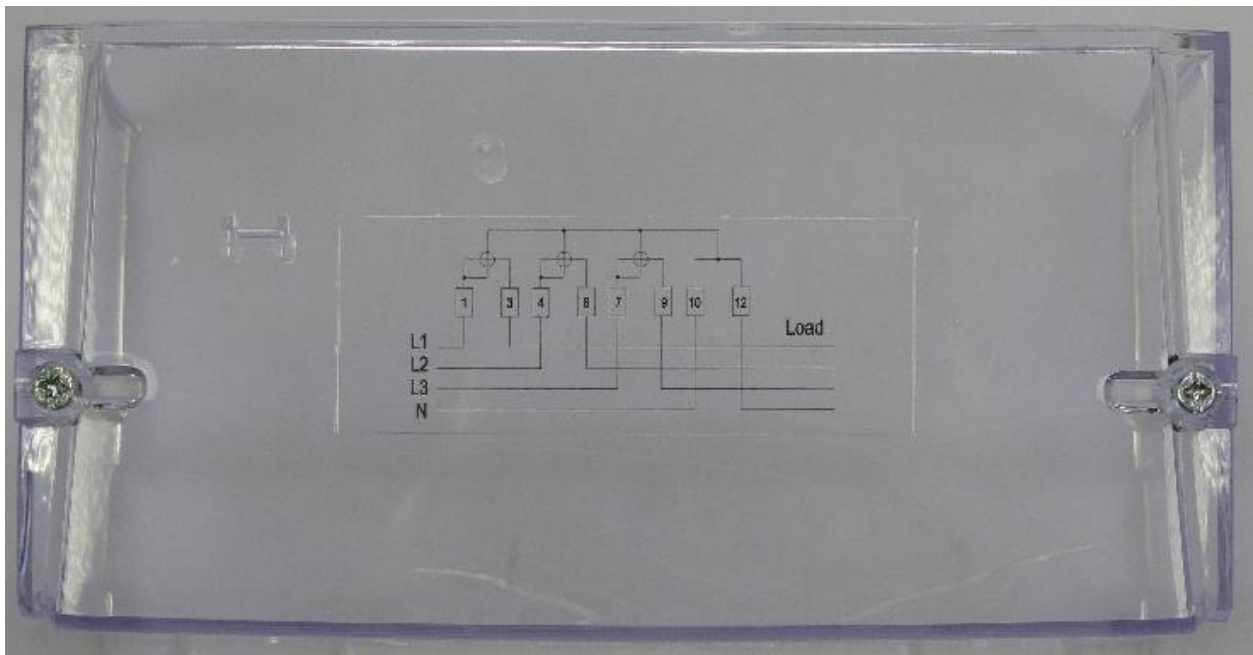
Manufacturer	Hexing Electrical Co., Ltd. 1418 Moganshan Road, Shangcheng Industrial Zone, 310011 Hangzhou City, China
Production location	Hexing Electrical Co., Ltd. 1418 Moganshan Road, Shangcheng Industrial Zone, 310011 Hangzhou City, China
Type	HXE310
Connection	Direct
Type of circuit	3P4W
Accuracy class Wh	1/B
Accuracy class varh	2
Meter constant	500 and 1000 imp/kWh 500 and 1000 imp/kvarh
V range	3x230/400 V
I range I_{min} - I_n (I_{max})	0,25 – 5(80)A and 0,25 – 5(100)A
Frequency	50 Hz
Temperature range	-40 .. 70 °C
Use	Indoor
IP rating	IP54
Protection Class	II
Impulse voltage	6 kV
Internal clock	Crystal controlled
Environmental class	M1, M2, E1 and E2, CISPR32 class B
LR Firmware ID	V0024
LR Firmware CRC	0x5E638CC0
Register	LCD
Registry method(s):	Bi-directional method separate registers: received- and delivered energy of the whole connection is added in separate registers

2 PHOTOGRAPHS AND SEALING





3 EXAMPLES OF NAME PLATES



4 CALCULATION OF THE COMPOSITE ERROR / MPE

During the type approval test the intrinsic errors for temperature, voltage and frequency variation are determined per load point. The composite error is determined with the following formula:

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

Where

$\varepsilon^2(I, \cos\varphi)$ = Intrinsic error of the meter at a certain load

$\delta^2(T, I, \cos\varphi)$ = Additional error due to the variation of the temperature at the same load

$\delta^2(U, I, \cos\varphi)$ = Additional error due to the variation of the voltage at the same load

$\delta^2(f, I, \cos\varphi)$ = Additional error due to the variation of the frequency at the same load

Results are in the table below:

I in % of I _{ref}	cos φ	Phase	Composite error %							
			-40 °C	-25 °C	-10 °C	5 °C	30 °C	40 °C	55 °C	70 °C
5	1	RST	0,25%	0,19%	0,14%	0,13%	0,13%	0,13%	0,13%	0,13%
10	1	RST	0,20%	0,14%	0,10%	0,08%	0,07%	0,07%	0,08%	0,07%
10	0,5 ind.	RST	0,22%	0,17%	0,16%	0,13%	0,13%	0,14%	0,14%	0,14%
10	0,8 cap.	RST	0,23%	0,17%	0,11%	0,10%	0,09%	0,09%	0,09%	0,09%
10	1	R	0,24%	0,17%	0,12%	0,10%	0,08%	0,09%	0,09%	0,09%
10	0,5 ind.	R	0,29%	0,21%	0,16%	0,15%	0,14%	0,15%	0,16%	0,16%
10	1	S	0,19%	0,13%	0,10%	0,08%	0,07%	0,07%	0,07%	0,07%
10	0,5 ind.	S	0,20%	0,17%	0,14%	0,13%	0,12%	0,13%	0,13%	0,12%
10	1	T	0,19%	0,13%	0,10%	0,08%	0,08%	0,08%	0,08%	0,08%
10	0,5 ind.	T	0,19%	0,17%	0,18%	0,16%	0,15%	0,15%	0,16%	0,16%
I _{max}	1	RST	0,22%	0,26%	0,24%	0,23%	0,22%	0,23%	0,23%	0,32%
I _{max}	0,5 ind.	RST	0,30%	0,21%	0,20%	0,20%	0,19%	0,20%	0,20%	0,46%
I _{max}	0,8 cap.	RST	0,53%	0,54%	0,53%	0,53%	0,52%	0,53%	0,52%	0,60%
I _{max}	1	R	0,15%	0,20%	0,17%	0,16%	0,15%	0,15%	0,16%	0,29%
I _{max}	0,5 ind.	R	0,35%	0,32%	0,30%	0,29%	0,29%	0,29%	0,30%	0,54%
I _{max}	1	S	0,24%	0,27%	0,25%	0,25%	0,24%	0,25%	0,25%	0,32%
I _{max}	0,5 ind.	S	0,58%	0,53%	0,53%	0,52%	0,52%	0,52%	0,52%	0,66%
I _{max}	1	T	0,38%	0,39%	0,38%	0,38%	0,38%	0,38%	0,38%	0,45%
I _{max}	0,5 ind.	T	0,41%	0,32%	0,31%	0,31%	0,31%	0,31%	0,31%	0,49%

5 OPTIONS AND VARIANTS

Overview of variants with details

Type designation	Details of the meter
HXE310	<ul style="list-style-type: none">• Communication options:<ul style="list-style-type: none">optical portRS485GPRS/4GPLC• Pulse output (2x)• R1 port

END OF DOCUMENT

The laboratories of KEMA Labs are:

- CESI S.p.A., Milan, Italy, accredited by ACCREDIA in accordance with ISO/IEC 17025:2017 under no. 0030L.
- FGH Engineering & Test GmbH, Mannheim, Germany, accredited by DAkkS in accordance with DIN EN ISO/IEC 17025:2018 under no. D-PL-12110-01-00.
- IPH Institut "Prüffeld für elektrische Hochleistungstechnik" GmbH, Berlin, Germany accredited by DAkkS in accordance with DIN EN ISO/IEC 17025:2018 under nos. D-PL-12107-01-00 and D-K-12107-01-00.
- KEMA B.V., Arnhem, The Netherlands, accredited by RvA in accordance with EN ISO/IEC 17025:2017 under nos. L020, L218 and K006 and with EN ISO/IEC 17065:2012 under no. C685.
- KEMA Labs, Zkušebnictví, a.s., Prague, the Czech Republic, testing laboratory no. 1035 accredited by CAI in accordance with ČSN EN ISO/IEC 17025:2018.
- KEMA-Powertest, LLC, Chalfont, United States, accredited by A2LA in accordance with ISO/IEC 17025:2017 under no. 0553.01.

Tests are carried out under the scope of accreditation, unless otherwise indicated in the chapter 'Tests carried out'.