EU-TYPE EXAMINATION CERTIFICATE

BUYI Technology Co., Limited,
BUILD.#19, The Belt and Road Industrial Park,
Bei Gou Street, Xin Yi City, China

EU-Type Examination Certificate No.
109433005-26
Revision 0

Type BY100

Object Electronic single-phase two-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: July 22, 2036.

This Certificate comprises 8 pages in total.

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

Marten Dekker
Operations Director Netherlands

Arnhem, July 22, 2026

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REVISION OVERVIEW

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

Rev. No.	Date of issue	Reason
0	July 22, 2026	First issue

REPORT LIST

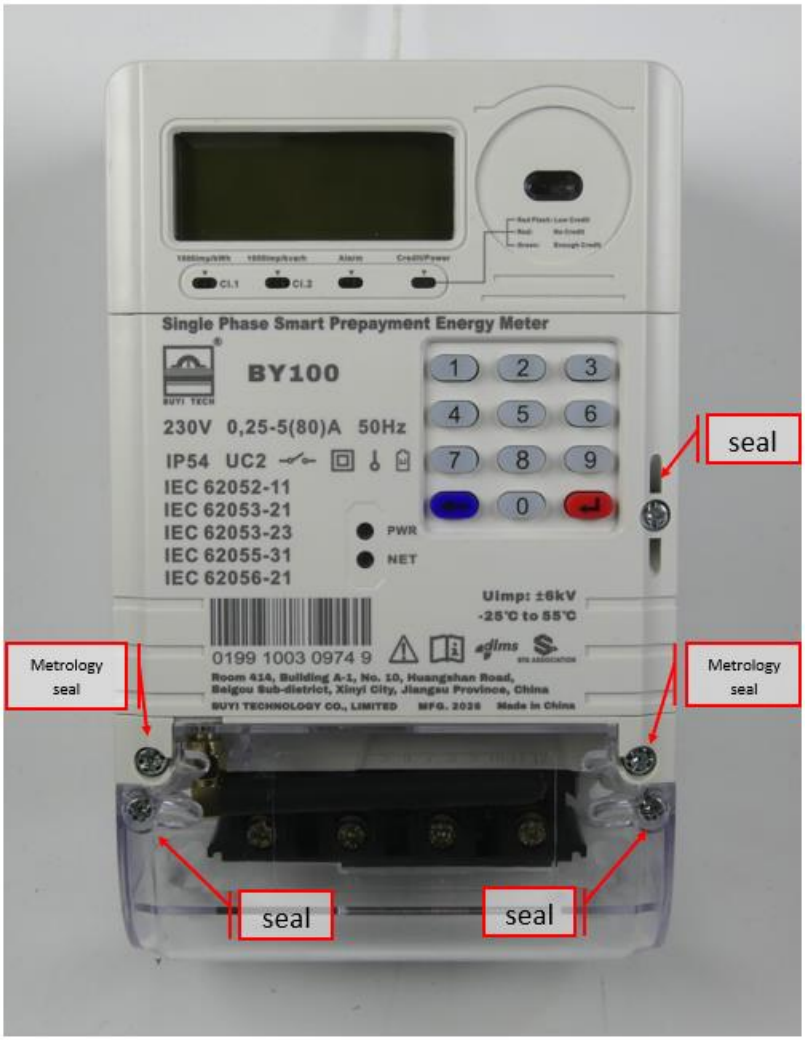
This Certificate is issued based on the following reports.

Report number	Revision	Firmware version
109433001-26	0	0101
109433002-26	0	0101
109433003-26	0	0101

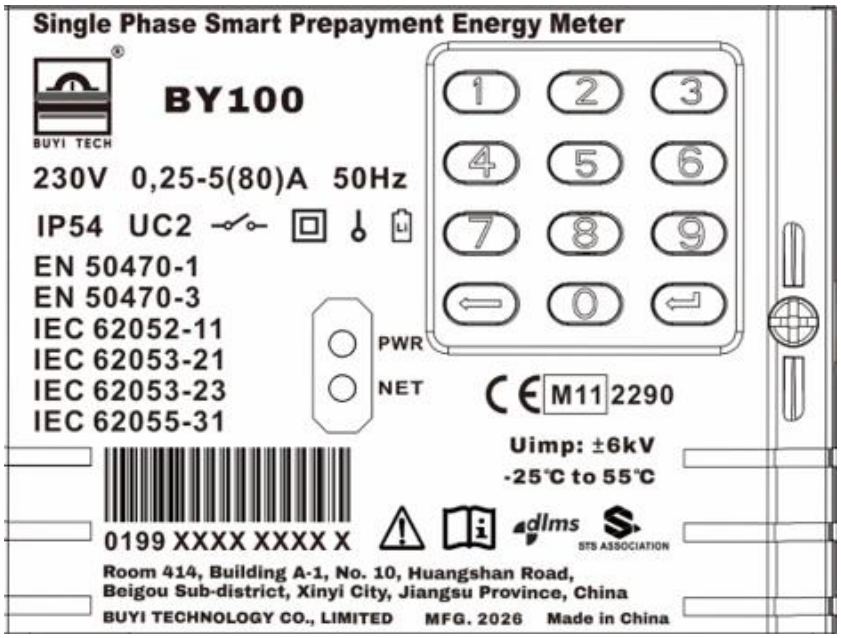
1 TECHNICAL DATA

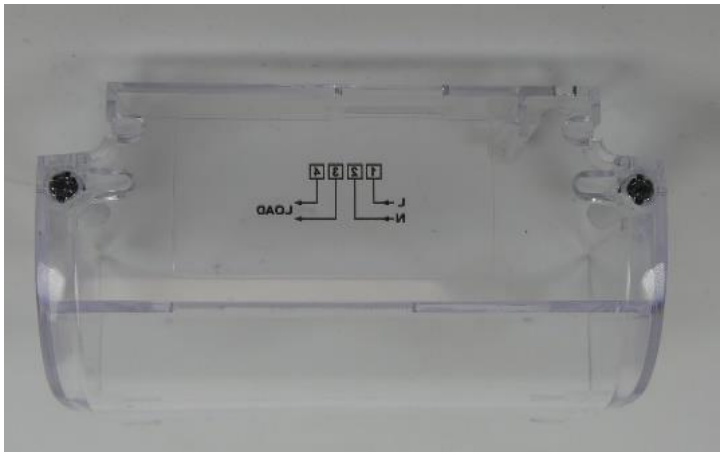
Manufacturer	BUYI Technology Co., Limited, BUILD.#19, The Belt and Road Industrial Park, Bei Gou Street, Xin Yi City, China
Production location	BUYI Technology Co., Limited, BUILD.#19, The Belt and Road Industrial Park, Bei Gou Street, Xin Yi City, China
Type	BY100
Model	-
Connection	Direct
Type of circuit	1P2W
Accuracy class Wh	1/B
Accuracy class varh	2
Meter constant	1000 imp/kWh 1000 imp/kvarh
V range	230 V
I range I_{min}-I_n(I_{max})	0,25-5(80)A
Frequency	50 Hz
Temperature range	-25 .. 55°C
Use	Outdoor, category 2
IP rating	IP54
Protection Class	II
Impulse voltage	6 kV
Internal clock	Crystal controlled
Environmental class	M1, M2, E1 and E2, CISPR32 class B
Utilisation category	UC2
Token interface	Keypad interface
Payment type:	kWh
LR Firmware ID	0101
LR Firmware CRC	0904E51F
Register	LCD
Registry method(s):	bi-directional method with separate registers: received- and delivered energy 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:

		Composite error					
Current	**cosϕ**	**-25°C**	**-10°C**	**5°C**	**30°C**	**40°C**	**55°C**
Imin	1	0,15%	0,10%	0,08%	0,07%	0,08%	0,10%
Itr	1	0,13%	0,08%	0,05%	0,05%	0,07%	0,10%
Itr	0,5i	0,10%	0,09%	0,06%	0,05%	0,06%	0,09%
Itr	0,8c	0,14%	0,10%	0,07%	0,06%	0,07%	0,10%
In	1	0,13%	0,08%	0,06%	0,05%	0,07%	0,08%
In	0,5i	0,11%	0,07%	0,06%	0,05%	0,06%	0,07%
In	0,8c	0,14%	0,09%	0,06%	0,05%	0,06%	0,08%
Imax	1	0,06%	0,04%	0,04%	0,03%	0,03%	0,03%
Imax	0,5i	0,17%	0,13%	0,10%	0,09%	0,09%	0,11%
Imax	0,8c	0,17%	0,12%	0,09%	0,06%	0,07%	0,08%

5 SOPTIONS AND VARIANTS

Overview of variants with details

Type designation	Details of the meter
BY100	• Communication options: optical port WiFi 4G • Supply control switch • Pre-payment functionality. • Neutral Measurement

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. 00026 Testing.
- 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'.