



EU Type Examination Certificate Number: **0120/ SGS0262**

Wasion Group Limited

468 West Tongzipo Road
High-New-Tech Industrial Development Zone ChangSha
Hunan
China

Instrument Identification:
aMeter350

Polyphase, Active Import/Export (kWh), Multi-rate, Smart Electricity Meter

Instrument Traceable Number
0120/ SGS0262

has been assessed and certified as meeting the requirements of

EU Directive 2014/32/EU on Measuring Instruments Annex II, Module B

It is certified that the manufacturer's technical design and specimen for the above instrument has been examined and, based on the evidence submitted, it is considered that the instrument conforms to the requirements of Annex V of EU Directive 2014/32/EU

This certificate must be used in conjunction with a certificate covering the product verification as required in Annex II, Module D or Annex II, Module F

**This certificate is valid until 20th October 2026
Issue 9**

Certification is based on report number(s) SHES160900772601 dated 20th October 2016,
SHE160900772601/iss2 dated 23rd January 2017, SHES160900772601/iss3 dated 11th October 2017
SHES171101064301 dated 16th November 2017, SHES171201259001 dated 18th January 2018, EMA230741/1
SHES180500482501 dated 20th September 2018

Authorised Signature

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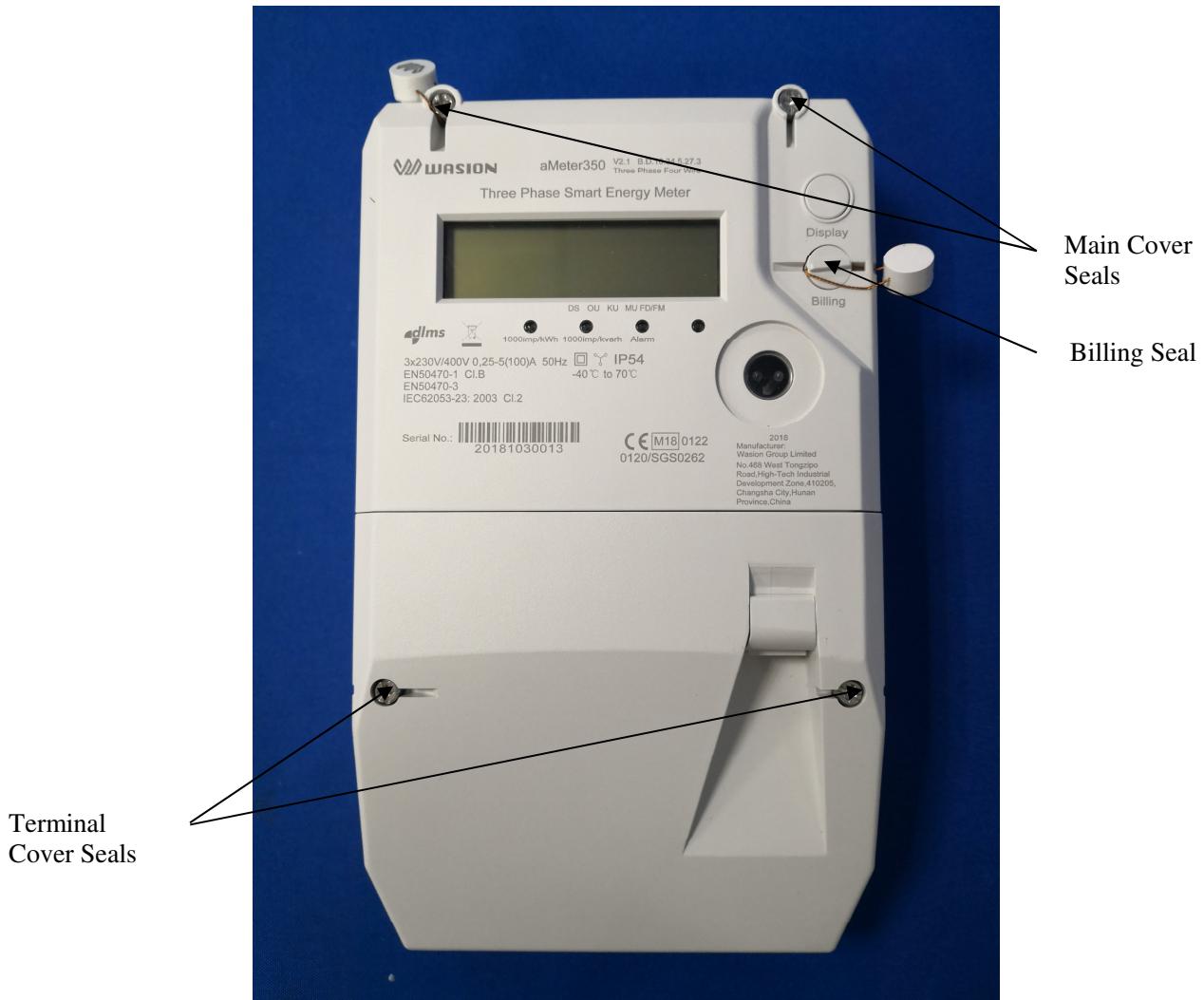
1. Technical Data

Manufacturer	Wasion Group Limited
Meter Type	aMeter350
Voltage Rating (Un)	3x110/190-240/415 V
Current Rating (Imin – Iref (Imax))	0.25-5(60) A 0.25-5(100) A
Frequency (Fn)	50 Hz
Active Accuracy Class (kWh)	A & B (kWh)
Type of circuit	3P4W Network, 1P2W Network (Line 1)
Temperature Range	-40° C to +70° C
Software/ Firmware Version No's	BA000001, WSE350EL04010002, WSE350EL04020001
Checksum No's	FDFDFDFD, 48594022D4DB5ACC13BA14C67ABE61C0DB47EDAAF1794857C66CCB6 8AB 7E3AD4953D6300B409376515417C774F89FF2A12C1E4D3FE068E7C054 1A55BE2F5B430, 212CA260B825BB8BEEB02E360D7E274467284F151982D1707FAEE98FE 8C6F1D4F1762375157A0671F1F8A6B87AE0C81329E953420D533BE673C 681ADD90EE67F
Identification Location	LCD and Communication Interface
Bill Of Materials No's	aMeter350V1.0, aMeter350V1.1, aMeter350V1.3, aMeter350V1.3.1, aMeter350V2.1
IP Rating	IP54
Insulation Protective Class	Class II
LED Pulse Constant	1000 imp/ kWh
Impulse Voltage Rating	6 kV
AC Voltage Rating	4 kV
Main Cover Sealing Type	Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	BS/ DIN
Location of manufacture address	Nameplate

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- The structure of the software of the meter is divided into two parts according to Welmec 7.2 software separation
- The meter provides the possibility to update firmware (legally and non legally relevant parts) according to Welmec 7.2
- The meter provides following energy registers and tariff registers includes:

Active energy ($|+A| + |-A|$) total and 4 tariff register, Active energy import (+A) total and 4 tariff register,
 Active energy export (-A) total and 4 tariff register, Reactive energy import (+R) total and 4 tariff register, Reactive energy export (-R) total and 4 tariff register,
 Reactive energy QI (+R_i) register, Reactive energy QII (+R_c) register, Reactive energy QIII (-R_i) register, Reactive energy QIV (-R_c) register
- The meter provides a three phase bi-stable break which can be optional.
- The meter provides Pulse outputs (A+, A-, R+, R- 15min) which can be optional.
- The meter provides two relay outputs which can be optional
- The meter provides one signal input which can be optional.
- The meter provides following Communication interfaces: G3 PLC interface, consumer interface, optical service interface, MBUS interface.
- The meter provides two push buttons.

2. Photograph of Meter and Sealing Plan

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3. Calculation of the composite error/ MPE

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

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

where

- | | |
|------------------------------|---|
| $\delta e(T, I, \cos\phi) =$ | Additional error due to variation of the temperature at the same load |
| $\delta e(U, I, \cos\phi) =$ | Additional error due to variation of the voltage at the same load |
| $\delta e(f, I, \cos\phi) =$ | Additional error due to variation of the frequency at the same load |

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3P4W Configuration 0.25-5(60) A

		Influence Factors for temperature, frequency and voltage							
Current	PF Cos	-40 °C	-25 °C	-10 °C	5 °C	30 °C	40 °C	55 °C	70 °C
Imin	1.0	0.04	0.04	0.04	0.04	0.15	0.09	0.05	0.02
Itr	1.0	0.04	0.04	0.03	0.04	0.09	0.05	0.04	0.02
10ltr	1.0	0.04	0.04	0.04	0.03	0.04	0.03	0.03	0.02
Imax	1.0	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Itr	0.5ind	0.07	0.07	0.06	0.06	0.18	0.03	0.02	0.07
10ltr	0.5ind	0.05	0.05	0.05	0.05	0.05	0.02	0.03	0.05
Imax	0.5ind	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Itr	0.8cap	0.02	0.02	0.02	0.03	0.12	0.04	0.04	0.05
10ltr	0.8cap	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.06
Imax	0.8cap	0.05	0.04	0.05	0.05	0.05	0.04	0.05	0.05
					0.00	0.00	0.00	0.00	0.00
L1									
Itr	1.0	0.04	0.05	0.04	0.04	0.10	0.03	0.02	0.02
10ltr	1.0	0.04	0.04	0.04	0.03	0.04	0.02	0.02	0.02
Imax	1.0	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01
Itr	0.5ind	0.09	0.08	0.06	0.05	0.15	0.02	0.04	0.08
10ltr	0.5ind	0.07	0.06	0.05	0.03	0.02	0.01	0.03	0.06
Imax	0.5ind	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.03
L2									
Itr	1.0	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02
10ltr	1.0	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02
Imax	1.0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Itr	0.5ind	0.06	0.06	0.05	0.04	0.06	0.03	0.03	0.06
10ltr	0.5ind	0.07	0.07	0.07	0.06	0.06	0.06	0.05	0.06
Imax	0.5ind	0.38	0.37	0.37	0.37	0.39	0.37	0.37	0.37
L3									
Itr	1.0	0.05	0.04	0.04	0.04	0.12	0.04	0.05	0.02
10ltr	1.0	0.05	0.04	0.04	0.03	0.04	0.03	0.04	0.02
Imax	1.0	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.02
Itr	0.5ind	0.08	0.07	0.06	0.04	0.08	0.03	0.02	0.05
10ltr	0.5ind	0.06	0.06	0.05	0.03	0.02	0.02	0.01	0.04
Imax	0.5ind	0.13	0.12	0.13	0.12	0.07	0.12	0.12	0.10

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3P4W Configuration 0.25-5(100) A

		Influence Factors for temperature, frequency and voltage							
Current	PF Cos	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Imin	1.0	0.11	0.05	0.04	0.02	0.03	0.03	0.04	0.06
Itr	1.0	0.10	0.07	0.06	0.03	0.03	0.03	0.07	0.06
10ltr	1.0	0.13	0.09	0.06	0.05	0.04	0.04	0.05	0.07
Imax	1.0	0.06	0.06	0.05	0.05	0.06	0.05	0.09	0.11
Itr	0.5ind	0.06	0.02	0.01	0.00	0.00	0.00	0.00	0.01
10ltr	0.5ind	0.08	0.04	0.04	0.03	0.02	0.02	0.02	0.02
Imax	0.5ind	0.03	0.07	0.08	0.06	0.10	0.12	0.12	0.10
Itr	0.8cap	0.14	0.08	0.07	0.05	0.05	0.04	0.06	0.08
10ltr	0.8cap	0.14	0.10	0.08	0.06	0.06	0.06	0.07	0.09
Imax	0.8cap	0.12	0.03	0.04	0.04	0.08	0.09	0.10	0.10
L1						0.00	0.00	0.00	0.00
Itr	1.0	0.13	0.07	0.06	0.05	0.04	0.04	0.04	0.04
10ltr	1.0	0.11	0.06	0.05	0.03	0.02	0.02	0.04	0.04
Imax	1.0	0.07	0.02	0.02	0.03	0.05	0.05	0.07	0.07
Itr	0.5ind	0.12	0.06	0.08	0.07	0.06	0.06	0.07	0.08
10ltr	0.5ind	0.10	0.04	0.05	0.05	0.03	0.03	0.03	0.03
Imax	0.5ind	0.14	0.14	0.13	0.13	0.15	0.16	0.16	0.15
L2									
Itr	1.0	0.10	0.04	0.03	0.01	0.04	0.04	0.07	0.08
10ltr	1.0	0.13	0.07	0.07	0.05	0.05	0.05	0.07	0.07
Imax	1.0	0.11	0.06	0.06	0.06	0.08	0.08	0.08	0.11
Itr	0.5ind	0.06	0.06	0.06	0.07	0.08	0.08	0.09	0.07
10ltr	0.5ind	0.07	0.03	0.03	0.02	0.03	0.03	0.03	0.02
Imax	0.5ind	0.02	0.09	0.10	0.11	0.10	0.11	0.10	0.09
L3									
Itr	1.0	0.13	0.08	0.06	0.06	0.05	0.05	0.05	0.06
10ltr	1.0	0.14	0.08	0.07	0.06	0.06	0.06	0.06	0.06
Imax	1.0	0.11	0.09	0.08	0.08	0.08	0.08	0.10	0.10
Itr	0.5ind	0.06	0.03	0.02	0.02	0.02	0.02	0.03	0.04
10ltr	0.5ind	0.07	0.03	0.02	0.02	0.02	0.02	0.02	0.02
Imax	0.5ind	0.09	0.09	0.09	0.09	0.06	0.10	0.10	0.09

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1P2W Configuration 0.25-5(60) A (Line 1)

		Influence Factors for temperature, frequency and voltage							
Current	PF Cos	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Imin	1.0	0.29	0.22	0.15	0.08	0.03	0.04	0.08	0.10
Itr	1.0	0.29	0.22	0.14	0.07	0.02	0.04	0.11	0.10
10Itr	1.0	0.29	0.22	0.14	0.07	0.02	0.05	0.17	0.11
Imax	1.0	0.31	0.25	0.14	0.02	0.02	0.04	0.21	0.09
Itr	0.5ind	0.27	0.21	0.14	0.07	0.02	0.02	0.05	0.03
10Itr	0.5ind	0.27	0.21	0.13	0.06	0.02	0.03	0.19	0.05
Imax	0.5ind	0.27	0.21	0.14	0.09	0.06	0.05	0.07	0.07
Itr	0.8cap	0.30	0.23	0.15	0.08	0.02	0.05	0.10	0.14
10Itr	0.8cap	0.30	0.23	0.14	0.07	0.03	0.05	0.15	0.13
Imax	0.8cap	0.31	0.25	0.15	0.02	0.02	0.05	0.28	0.10

1P2W Configuration 0.25-5(100) A (Line 1)

		Influence Factors for temperature, frequency and voltage							
Current	PF Cos	-40°C	-25°C	-10°C	5°C	30°C	40°C	55°C	70°C
Imin	1.0	0.10	0.06	0.04	0.03	0.03	0.03	0.03	0.03
Itr	1.0	0.09	0.06	0.04	0.02	0.03	0.02	0.03	0.04
10Itr	1.0	0.09	0.05	0.04	0.02	0.02	0.03	0.03	0.05
Imax	1.0	0.07	0.03	0.02	0.04	0.06	0.05	0.07	0.10
Itr	0.5ind	0.06	0.02	0.06	0.02	0.03	0.02	0.02	0.04
10Itr	0.5ind	0.07	0.03	0.03	0.03	0.02	0.02	0.02	0.03
Imax	0.5ind	0.07	0.09	0.10	0.06	0.16	0.15	0.16	0.16
Itr	0.8cap	0.11	0.07	0.06	0.04	0.04	0.05	0.05	0.07
10Itr	0.8cap	0.11	0.06	0.04	0.03	0.02	0.03	0.04	0.06
Imax	0.8cap	0.07	0.06	0.08	0.10	0.09	0.10	0.11	0.14

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4. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
aMeter350	3x110/190-240/415V, 0.25-5(60)A, 50Hz. Round terminals (BOM: aMeter350V1.3), hole diameter 8.5 ±1.0mm Square terminals (BOM: aMeter350V1.3.1), hole diameter 8.5 ±1.0mm
	3x110/190-240/415V, 0.25-5(100)A, 50Hz. Round terminals (BOM: aMeter350V2.1), hole diameter 9.5 ±1.0mm

Modifications to the meter(s) described according to approval No.**0120/ SGS0262** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

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5. Document Revision History

Issue	Date	Comments
1	21/10/2016	Initial Issue
2	23/01/2017	0.25-5(100)A model added to meter range. New BOM number
3	08/06/2017	Additional information added
4	11/10/2017	CPU change, minor PLC circuit change, minor MBUS circuit change. New software and BOM revision
5	16/11/2017	Terminal block and meter cover modified to meet customer requirements. Version aMeter350 v1.1 replaced with aMeter350 v1.2.
6	18/01/2018	BOM number aMeter350V1.2 changed to aMeter350V1.3. New software version Minor non-metrology component change. Meter class A & B.
7	19/04/2018	Influence factors for 1P2W configuration added.
8	18/05/2018	New variant with square terminals (BOM: aMeter350V1.3.1) added to approval
9	20/09/2018	Influence factors for 1P2W 5(100A) & 3P4W 5(100)A added. BOM aMeter350V2.0 replaced with aMeter350V2.1

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