



EU Type Examination Certificate Number: **0120/ SGS0303**

Inepro Metering BV

Pondweg 7
2153PK
Nieuw Vennep
The Netherlands

Instrument Identification:
KDK1-45AM-12

Instrument Traceable Number
0120/ SGS0303

Single phase, Active Import only, Electricity Meter, Mechanical Display

has been assessed and certified as meeting the requirements of

EC 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 EC 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 6th June 2026
Issue 1

Certification is based on report number(s) SHES151200784001 dated 3rd June 2016
EMA224514
EMA228109

Authorised Signature


SGS United Kingdom Limited, Notified Body 0120
Unit 202B Worle Parkway, Weston-super-Mare, BS22 6WA UK
t +44 (0)1934 522917 f +44 (0)1934 522137 www.sgs.com

Contact Address
SGS United Kingdom Ltd, Units 12A & 12B, South Industrial Estate, Bowburn, Durham, DH6 5AD UK
t +44 (0)191 377 2000 f +44 (0)191 377 2020 www.sgs.com

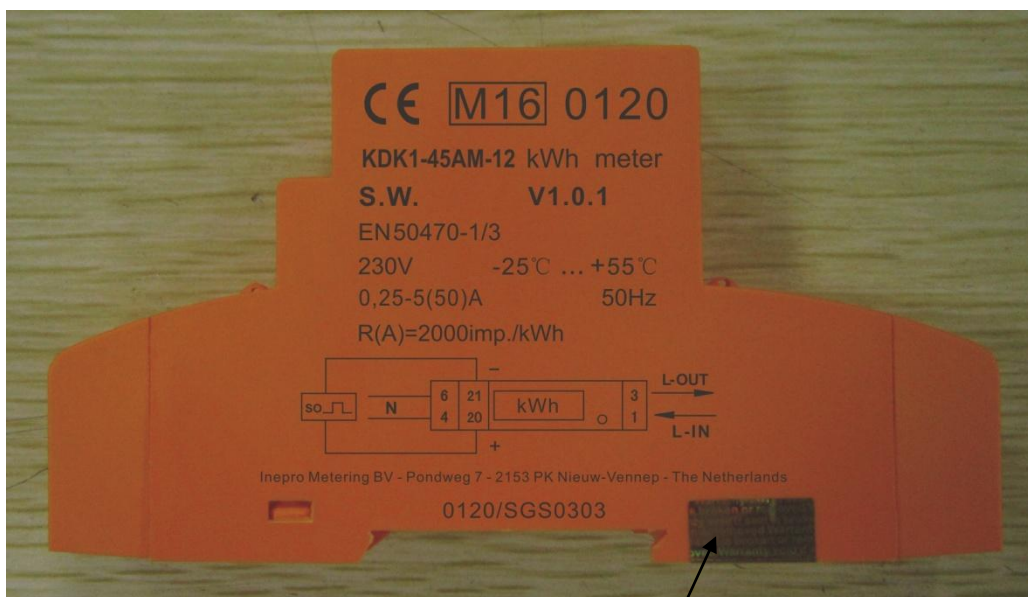
	EC-Type Examination Certificate Number:	
	0120/ SGS0303	
	Issue Number: 1	Dated: 1 st September 2016

1. Technical Data

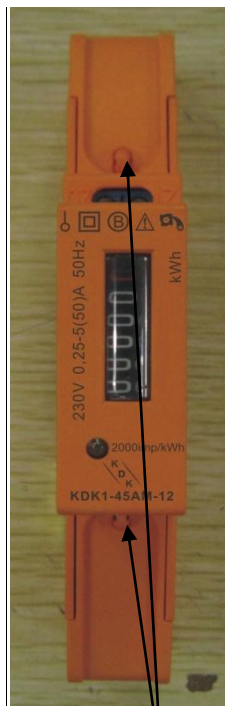
Manufacturer	Inepro Metering BV
Meter Type	KDK1-45AM-12
Voltage Rating (U_n)	230V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	0.25-5(30)A, 0.25-5(32)A, 0.25-5(40)A, 0.25-5(45)A, 0.25-5(50)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	B (kWh)
Type of circuit	1p2w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No's	KDK1-45AM-12F+R Version(2000imp/kWh):V1.0 KDK1-45AM-12F+R Version(1000imp/kWh):V1.1 KDK1-45AM-12F+R Version(100imp/kWh): V1.2 KDK1-45AM-12F Version(2000imp/kWh):V1.0.1
Identification Location	Nameplate
Bill Of Materials Numbers	1000imp/kWh, V1.1: D111042; 100imp/kWh, V1.2: D111042-01; 2000imp/kWh, V1.0, F+R: D111042-02 2000imp/kWh, V1.0.1, F version: D111031
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	2000imp/kWh, 1000imp/kWh, 100imp/kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	Mechanical
Terminal Arrangement(s)	DIN

	EC-Type Examination Certificate Number:	
	0120/ SGS0303	
	Issue Number: 1	Dated: 1 st September 2016

2. Photograph of Meter and Sealing Plan




Main Cover seal

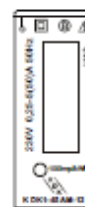
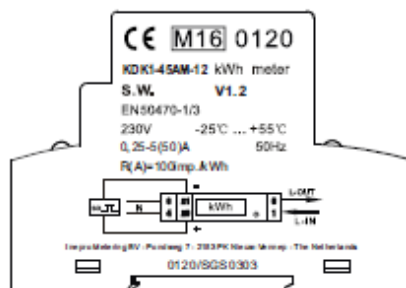
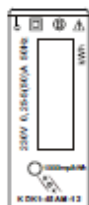
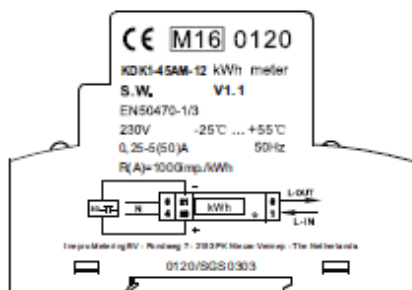


Utility terminal cover seals

All 4 software versions have the same arrangement

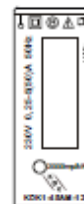
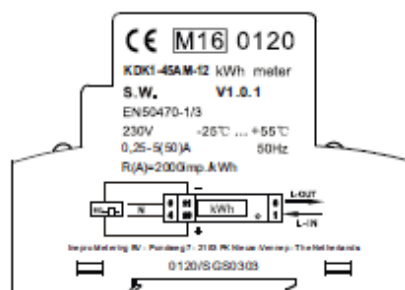
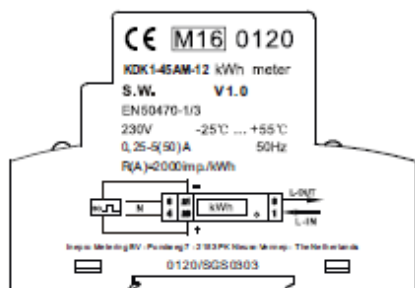
	EC-Type Examination Certificate Number:	
	0120/ SGS0303	
	Issue Number: 1	Dated: 1 st September 2016


3. Nameplates



色号

C: 37 M: 60 Y: 35 K: 80
PANTONE Black 5c



	EC-Type Examination Certificate Number:	
	0120/ SGS0303	
	Issue Number: 1	Dated: 1 st September 2016

4. Calculation of Composite Error/MPE


Current	PF Cos		-25°C	-10°C	5°C	30°C	40°C	55°C	
I _{min}	1.0		0.64	0.57	0.48	0.29	0.34	0.40	
I _{tr}	1.0		0.57	0.39	0.28	0.20	0.25	0.37	
10I _{tr}	1.0		0.49	0.36	0.22	0.14	0.24	0.38	
I _{max}	1.0		0.49	0.40	0.29	0.14	0.18	0.29	
I _{tr}	0.5ind		0.48	0.44	0.43	0.43	0.50	0.57	
10I _{tr}	0.5ind		0.34	0.26	0.21	0.26	0.32	0.45	
I _{max}	0.5ind		0.41	0.34	0.28	0.19	0.19	0.25	
I _{tr}	0.8cap		0.69	0.55	0.39	0.23	0.27	0.38	
10I _{tr}	0.8cap		0.58	0.45	0.27	0.13	0.22	0.38	
I _{max}	0.8cap		0.60	0.50	0.35	0.13	0.15	0.26	

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

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

where

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


	EC-Type Examination Certificate Number:	
	0120/ SGS0303	
	Issue Number: 1	Dated: 1 st September 2016

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
KDK1-45AM-12	<p>The above model has current ranges options of:-</p> <p>0.25-5(30)A, or 0.25-5(32)A, or 0.25-5(40)A, or 0.25-5(45)A, or 0.25-5(50)A</p> <p>The above model has impulse options of:-</p> <p>2000imp/kWh, or 100imp/kWh, or 1000imp/kWh, or 2000imp/kWh.</p> <p>Hardware the same for all currents and impulse constants. The only differences are in software.</p>

Modifications to the meter(s) described according to approval No.**0120/ SGS0303** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

	EC-Type Examination Certificate Number:	
	0120/ SGS0303	
	Issue Number: 1	Dated: 1 st September 2016

6. Document Revision History

Issue	Date	Comments
1	01/09/2016	Initial Issue