



EC Type Examination Certificate Number: **0120/SGS0162**

Europa Component & Equipment plc

Europa House,
Airport Way,
Luton,
Bedfordshire,
LU2 9NH

Instrument Identification:
SDM120*

Instrument Traceable Number
0120/SGS0162

Single Phase, Active Import (kWh) Indoor, Electricity Meter

has been assessed and certified as meeting the requirements of

EC Directive 2004/22/EC

Measuring Instruments Annex 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 MI-003 of EC Directive 2004/22/EC

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


This certificate is valid from 1st June 2014 to 17th February 2024
Issue 1

Certification is based on report number(s) SHES130800321401 dated 18th February 2014

Authorised Signature


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1. Technical Data


Manufacturer	Europa Component & Equipment plc
Meter Type	SDM120A, SDM120D, SDM120DB
Voltage Rating (U_n)	230V
Current Rating (I_{min} – I_{ref} (I_{max}))	0.25-5(45)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-25°C to +55°C
Software Version No.	SWV1.2
Identification Location	Name Plate
Bill Of Materials No.'s	SDM120-Measure-V2.1 SDM120-Power-V2.1 SDM120-Pulse-V2.0
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	1000imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	4 x Wire & Crimp
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD (SDM120D & SDM120DB), Mechanical (SDM120A)

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2. Photographs of Meters

SDM120D




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Photographs of Meters (cont)

SDM120DB




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Photographs of Meters (cont)

SDM120A



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3. Influence factors for temperature, frequency and voltage


		Influence Factors for temperature, frequency and voltage					
Current	PF Cos	-25	-10	5	30	40	55
I _{min}	1.0	0.12	0.12	0.12	0.13	0.12	0.12
I _{tr}	1.0	0.16	0.16	0.16	0.16	0.16	0.16
10I _{tr}	1.0	0.17	0.16	0.16	0.16	0.16	0.16
I _{max}	1.0	0.13	0.13	0.13	0.13	0.13	0.13
I _{tr}	0.5ind	0.29	0.29	0.29	0.29	0.29	0.29
10I _{tr}	0.5ind	0.40	0.40	0.40	0.40	0.40	0.40
I _{max}	0.5ind	0.16	0.16	0.16	0.16	0.16	0.16
I _{tr}	0.8cap	0.24	0.24	0.24	0.24	0.24	0.24
10I _{tr}	0.8cap	0.31	0.31	0.31	0.31	0.31	0.31
I _{max}	0.8cap	0.09	0.09	0.09	0.09	0.09	0.09

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

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4. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SDM120D	Single Phase 230V, 0.25-5(45)A LCD register
SDM120DB	Single Phase 230V, 0.25-5(45)A LCD register with backlight
SDM120A	Single Phase 230V, 0.25-5(45)A Mechanical register

Modifications to the meter(s) described according to approval No.**0120/SGS0162** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

5. Document Revision History

Issue	Date	Comments
1	01/06/2014	Initial Issue