



EC Type Examination Certificate Number: **0120/ SGS0246**

Els Polska Sp z.o.o.

U1 Andersa 6D 58-200
Dzierzoniow
Poland

Instrument Identification:
SDM120 Series

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

Instrument Traceable Number
0120/ SGS0246

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 17 February 2024
Issue 1

Certification is based on report number(s)


Certification is based on report number(s) SHES130800321401 dated 18th February 2014
EMA185897/1
EMA225728/1

Authorised Signature

Jan Saunders


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

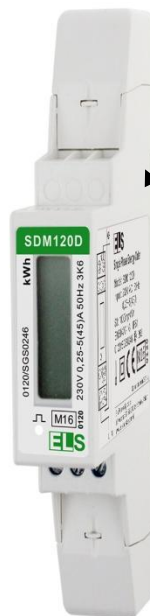
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	Issue Number: 1	Dated: 30 th June 2016

1. Technical Data

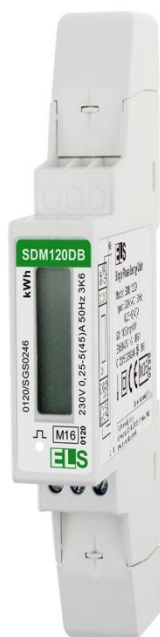
Manufacturer	Els Polska Sp z.o.o.
Meter Types	SDM120A, SDM120D, SDM120DB, SDM120-Modbus
Voltage Rating (U_n)	230V
Current Rating ($I_{min} - I_{ref} (I_{max})$)	0.25-5(45)A
Frequency (F_n)	50Hz
Active Accuracy Class (kWh)	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No's	SDM120A, SDM120D, SDM120DB: V1.2 SDM120-Modbus: V2.3
Identification Location	Nameplate
Bill Of Materials Number's	SDM120-Measure: V2.1 SDM120-Power: V2.1 SDM120-Pulse: V2.0 SDM120Modbus: V151119
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, SDM120C, SDM120-Modbus Mechanical (SDM120A)

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2. Photograph of Meter and Sealing Plan



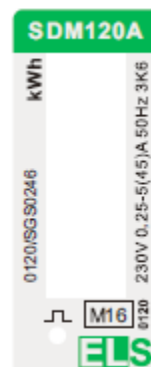
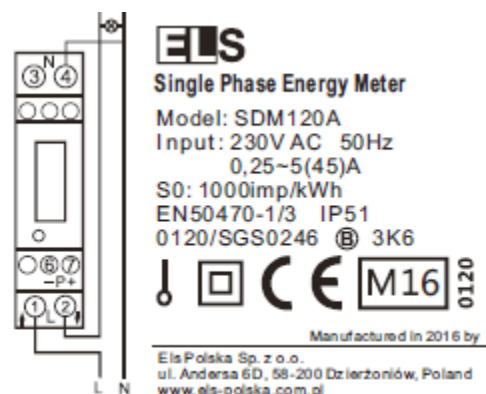
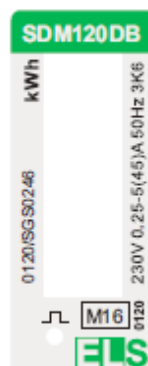
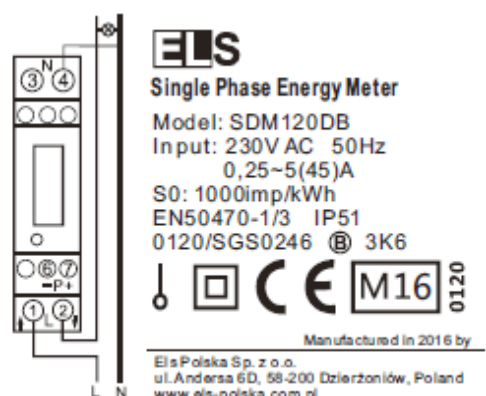
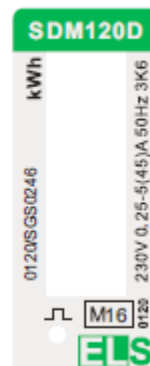
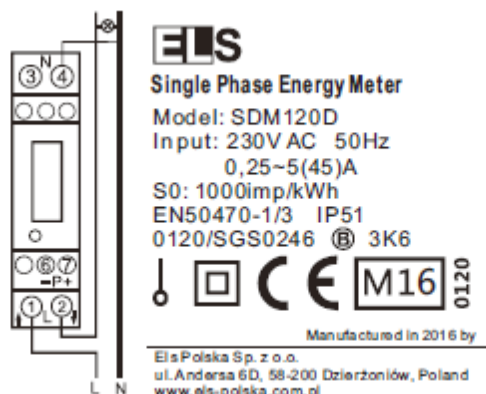
Meter seals
Welded




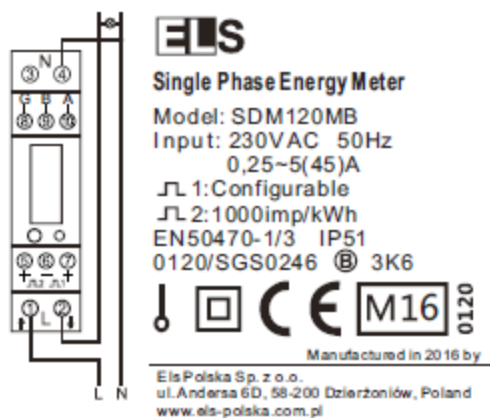
Utility Seals


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3. Meter Labelling



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4. Influence factors for temperature, frequency and voltage

		Influence Factors for temperature, frequency and voltage					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
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:-

$$\square e(T, U, f) = I (\square e^2(T, I, \cos \phi) + \square e^2(U, I, \cos \phi) + \square e^2(f, I, \cos \phi)) \text{ where}$$

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

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5. Annex of Variants

Product Variant Identification Details:

Type Designation

SDM120D

SDM120DB

SDM120A

SDM120- Modbus

Meter Description

Single Phase 230V, 0.25-5(45)A LCD register

Single Phase 230V, 0.25-5(45)A LCD register with backlight


Single Phase 230V, 0.25-5(45)A Mechanical register

Single Phase 230V, 0.25-5(45)A, LCD register,

2 Pulse Outputs, RS485 Communication Port,

Modbus

Modifications to the meter(s) described according to approval No.**0120/ SGS0246** 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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Document Revision History

Issue	Date	Comments
1	30/06/2016	Initial Issue