EU Type Examination Certificate Number: **0120/SGS0286**

SmartProcess & Control Ltd.

Unit 11 Totman Close
Brook Road
Rayleigh
SS6 7UZ
United Kingdom

Instrument Identification:
SmartPanel X835-MID

Polyphase, Active Import/Export (kWh), Indoor, Transformer Operated, Multi-function, Electricity Meter

Instrument Traceable Number
0120/SGS0286

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 23rd April 2027
Issue 1

Certification is based on report number(s) EMA234440/2 dated 24th April 2017
EMA240491/1

Authorised Signature

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SGSPAPER
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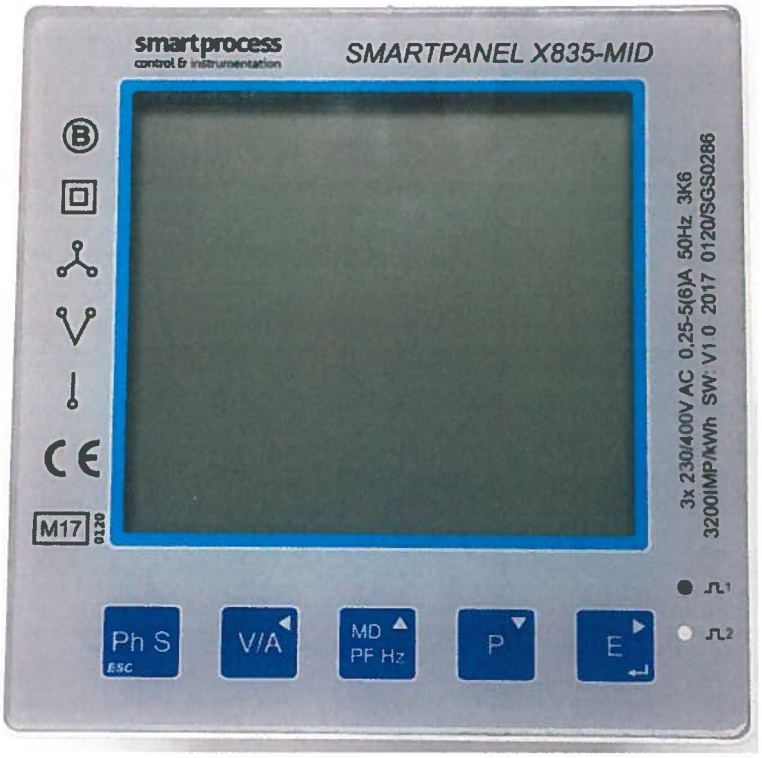
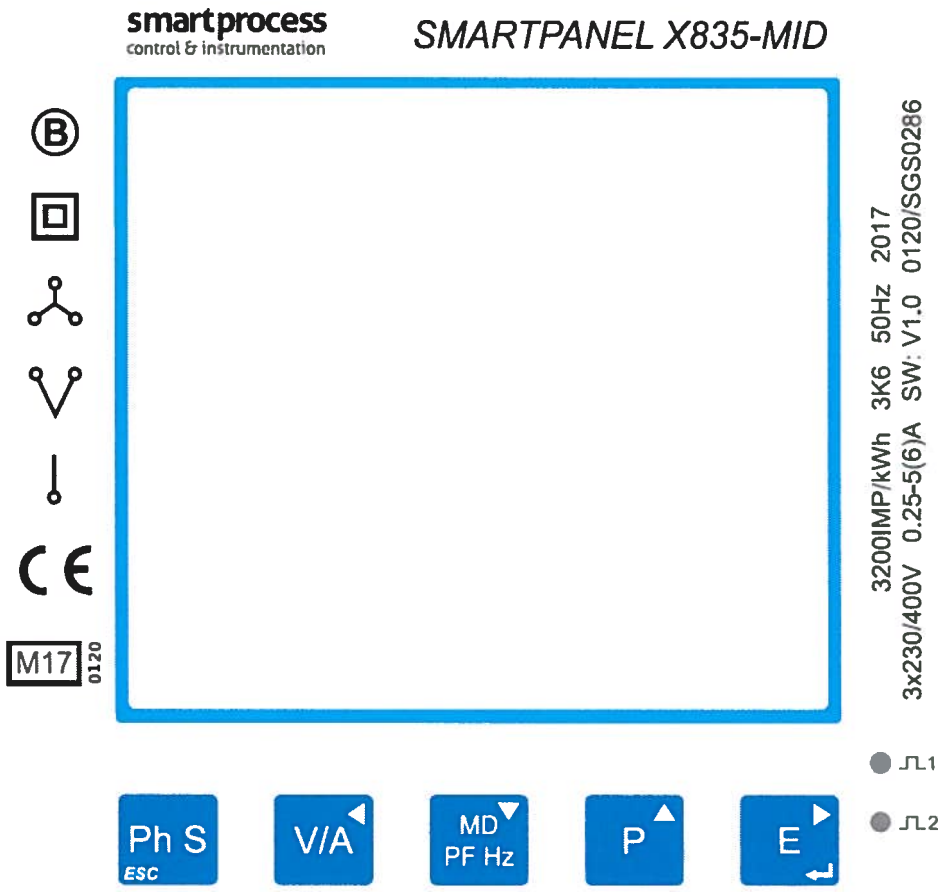
1. Technical Data

Manufacturer	SmartProcess & Control Ltd.
Meter Type	SmartPanel X835-MID
Voltage Rating *(Un)*	1P2W: 230V 3P3W: 3x230V 3P4W: 3 x 230/400V
Current Rating *(Imin – Iref (Imax))*	0.25-5(6)A
Frequency *(Fn)*	50Hz
Active Accuracy Class *(kWh)*	B or C (kWh)
Type of circuit	1p2w, 3p3w, 3p4w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No **CRC Checksum** **Identification Location**	V1.3 0x0059DD5E LCD
Bill Of Materials Number	DH-JS-160010-1.3
IP Rating	IP51 Front Display Meter body not rated. Must be installed in a suitable IP rated enclosure
Insulation Protective Class	Class I / Class II
LED Pulse Constant	3200imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Terminal Cover Sealing Type **Main Cover Sealing Type**	Wire & Crimp Laser Welded
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Location of Manufacturers Address	Associated Documents

2. Photograph of Meter and Sealing Plan



3. Example of Nameplate



4. 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:-

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

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

		Influence Factors for Temperature. Frequency & Voltage					
Current	**PF Cos**	-25°C	-10°C	5°C	30°C	40°C	55°C
Imin	1.0	0.21	0.20	0.14	0.07	0.19	0.39
Itr	1.0	0.25	0.24	0.20	0.10	0.17	0.37
10Itr	1.0	0.24	0.23	0.19	0.10	0.20	0.39
Imax	1.0	0.24	0.24	0.18	0.10	0.18	0.39
Itr	0.5ind	0.25	0.25	0.21	0.10	0.19	0.44
10Itr	0.5ind	0.20	0.06	0.11	0.31	0.56	0.70
Imax	0.5ind	0.23	0.19	0.10	0.36	0.51	0.51
Itr	0.8cap	0.25	0.25	0.20	0.12	0.18	0.37
10Itr	0.8cap	0.35	0.30	0.23	0.09	0.11	0.33
Imax	0.8cap	0.33	0.29	0.27	0.16	0.18	0.30
L1							
Itr	1.0	0.19	0.17	0.11	0.08	0.19	0.40
10Itr	1.0	0.18	0.17	0.11	0.10	0.20	0.41
Imax	1.0	0.18	0.16	0.10	0.10	0.20	0.40
Itr	0.5ind	0.21	0.19	0.13	0.07	0.20	0.45
10Itr	0.5ind	0.23	0.22	0.17	0.12	0.18	0.39
Imax	0.5ind	0.19	0.17	0.13	0.09	0.19	0.41
L2							
Itr	1.0	0.35	0.35	0.31	0.19	0.21	0.40
10Itr	1.0	0.29	0.30	0.25	0.16	0.22	0.47
Imax	1.0	0.30	0.30	0.27	0.15	0.20	0.43
Itr	0.5ind	0.31	0.32	0.28	0.16	0.16	0.35
10Itr	0.5ind	0.74	0.14	0.33	0.77	0.46	0.92
Imax	0.5ind	0.33	0.34	0.37	0.63	0.47	1.19
L3							
Itr	1.0	0.16	0.15	0.10	0.08	0.19	0.40
10Itr	1.0	0.18	0.16	0.10	0.10	0.20	0.41
Imax	1.0	0.17	0.16	0.10	0.11	0.21	0.41
Itr	0.5ind	0.17	0.20	0.17	0.12	0.26	0.58
10Itr	0.5ind	0.18	0.18	0.11	0.36	0.40	0.62
Imax	0.5ind		0.15	0.08	0.62	0.37	0.57

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter
SmartPanel X835-MID	Active Import/Export (kWh), 3x230/400V, 5(6)A, Transformer operated, Multifunction, RS485 Modbus RTU

Modifications to the meter(s) described according to approval No.**0120/SGS0286** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

6. Document Revision History

Issue	Date	Comments
1	08/09/2017	Initial Issue

END OF CERTIFICATE