UKAS PRODUCT CERTIFICATION
5386

UKCA Type Examination Certificate Number: **0120/SGS0137/R1**

Schneider Electric Pvt. Ltd

Hosur Main Road
12A, Attibele Industrial Area
Neralur (PO), Bangalore -562107
India

Instrument Identification
PM5331, PM5341, PM5111
Polyphase, Active Import/ Export (kWh), Transformer Operated, Electricity Meter

Instrument Traceable Number
0120/SGS0137

has been assessed and certified as meeting the requirements of

Measuring Instruments Regulations 2016 (as amended)

on Active electrical energy meters, Schedule 1B, 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 Schedule 1E, as referenced in the UK Measuring Instruments Regulations 2016, as amended

This certificate must be used in conjunction with a certificate covering the product verification as required in Schedule 1B, Module D or Schedule 1B, Module F

This certificate is valid for 10 years from 17 July 2023 until 17 July 2033
Issue 2

Certification is based on report number(s)
EMA180141/MID Issue 6 Issued 18th November 2014, EMA223584/1 Issued 7th June 2016
EMA225384/1/PM5341 Issued 21st June 2016
ERTL(N)/2020/201Q0101 issued 4th December 2020
ERTL(E)/TES/S724/0016/01-22/NABL issued 13th June 2022
ERTL(E)/TES/S724/0015/01-22/NABL issued 13th June 2022

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1. Technical Data

Manufacturer	Schneider Electric
Meter Type	PM5331, PM5341, PM5111
Voltage Rating *(Un)*	63.5/110-277/480V
Current Rating *(Imin – Iref (Imax))*	0.05-5(6)A
Frequency *(Fn)*	50Hz
Active Accuracy Class *(kWh)*	C(kWh)
Type of circuit	3P4W, 3P3W
Temperature Range	-25ºC to +70ºC
Software/ Firmware Version No's **Identification Location**	For HW Ver. A1 (Not in production) Model: PM5111 OS - New: v1.6.5 (Checksum 0x13 E1); Earlier: 1.6.4 / 1.6.2 / 1.6.0 / 1.4.7 / 1.2.2 / 1.2.1 Model: PM5331 OS - New: v1.6.5 (Checksum 0x CB 6B); Earlier: 1.6.4 / 1.6.2 / 1.6.0 / 1.4.7 / 1.2.2 / 1.2.1 Model: PM5341 OS - New: v1.6.5 (Checksum 0x D0 6F); Earlier: 1.6.4 / 1.6.2 / 1.6.0 / 1.4.7 / 1.2.2 For HW Ver. B1/B2 (In production) Model: PM5111 OS - New: 2.5.4 (Checksum 0x1B39) Earlier: 2.4.3/2.4.2/2.2.2/2.2.1/2.2.0 Model: PM5331 OS - New: 2.5.4 (Checksum 0xC2EA) Earlier: 2.4.3 / 2.4.2 / 2.2.2 / 2.2.1 / 2.2.0 Model: PM5341 OS - New: 2.7.0 (Checksum 0xEC30), New: 2.6.6 (Checksum 0x1CA6) Earlier: 2.4.4 / 2.4.3 / 2.2.3 / 2.2.1 / 2.2.0 LCD
Bill of Materials No's	**PM5111** Power Supply - HRB46840 or NVE50463 Controller – HRB47633 or EAV69955 or NVE50496 **PM5331** Power Supply - HRB46838 or NVE50412 Controller – HRB44401 or EAV69954 or NVE50494 **PM5341** Power Supply - HRB46838 or NVE50412 Controller – EAV69953 or NVE50488
IP Rating	IP54 Front Display Meter body not rated, must be fitted in an IP51 Enclosure
Insulation Protective Class	Class II
LED Pulse Constant	10,000imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Tamper evident self-locking rivet
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD

Terminal Arrangement(s)	DIN
Location of Manufacturers Address	Associated Documents

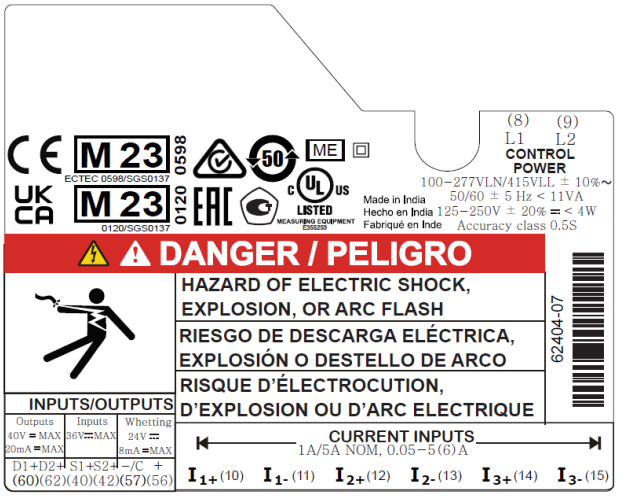
2. Photograph of Meter and Sealing Plan

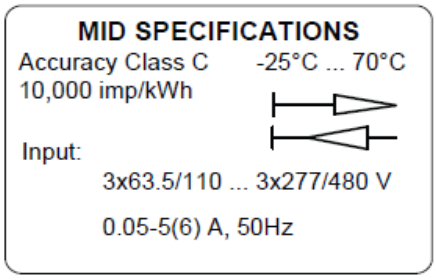
Voltage Terminal Cover Sealing Point

Current Terminal Cover Sealing Point

Main Cover Sealing Point

3. Examples 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	70°C
Imin	1.0	*0.42*	*0.28*	*0.16*	*0.18*	*0.26*	*0.36*	*0.38*
Itr	1.0	*0.42*	*0.27*	*0.16*	*0.19*	*0.28*	*0.40*	*0.46*
10Itr	1.0	*0.32*	*0.20*	*0.14*	*0.19*	*0.24*	*0.31*	*0.32*
Imax	1.0	*0.31*	*0.20*	*0.14*	*0.19*	*0.25*	*0.32*	*0.49*
Itr	0.5ind	*0.62*	*0.43*	*0.29*	*0.29*	*0.44*	*0.68*	*0.84*
10Itr	0.5ind	*0.61*	*0.41*	*0.27*	*0.30*	*0.42*	*0.60*	*0.76*
Imax	0.5ind	*0.60*	*0.40*	*0.27*	*0.30*	*0.41*	*0.61*	*0.76*
Itr	0.8cap	*0.42*	*0.22*	*0.13*	*0.18*	*0.24*	*0.30*	*0.30*
10Itr	0.8cap	*0.21*	*0.13*	*0.12*	*0.16*	*0.19*	*0.20*	*0.16*
Imax	0.8cap	*0.21*	*0.13*	*0.12*	*0.16*	*0.19*	*0.20*	*0.16*
Line 1								
Itr	1.0	*0.43*	*0.33*	*0.17*	*0.19*	*0.31*	*0.37*	*0.46*
10Itr	1.0	*0.36*	*0.24*	*0.20*	*0.23*	*0.28*	*0.34*	*0.35*
Imax	1.0	*0.34*	*0.21*	*0.17*	*0.21*	*0.23*	*0.34*	*0.34*
Itr	0.5ind	*0.64*	*0.42*	*0.36*	*0.29*	*0.36*	*0.59*	*0.82*
10Itr	0.5ind	*0.60*	*0.37*	*0.30*	*0.34*	*0.41*	*0.56*	*0.75*
Imax	0.5ind	*0.62*	*0.37*	*0.26*	*0.28*	*0.40*	*0.60*	*0.72*
Line 2								
Itr	1.0	*0.46*	*0.22*	*0.18*	*0.18*	*0.26*	*0.36*	*0.46*
10Itr	1.0	*0.23*	*0.16*	*0.13*	*0.18*	*0.23*	*0.27*	*0.29*
Imax	1.0	*0.27*	*0.17*	*0.14*	*0.19*	*0.25*	*0.31*	*0.29*
Itr	0.5ind	*0.63*	*0.34*	*0.23*	*0.33*	*0.40*	*0.71*	*0.78*
10Itr	0.5ind	*0.56*	*0.37*	*0.22*	*0.24*	*0.37*	*0.54*	*0.68*
Imax	0.5ind	*0.57*	*0.35*	*0.23*	*0.25*	*0.31*	*0.55*	*0.72*
Line 3		*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Itr	1.0	*0.35*	*0.22*	*0.13*	*0.23*	*0.25*	*0.44*	*0.52*
10Itr	1.0	*0.41*	*0.24*	*0.17*	*0.21*	*0.30*	*0.37*	*0.38*
Imax	1.0	*0.38*	*0.23*	*0.14*	*0.20*	*0.26*	*0.32*	*0.36*
Itr	0.5ind	*0.66*	*0.48*	*0.26*	*0.33*	*0.53*	*0.81*	*1.09*
10Itr	0.5ind	*0.73*	*0.47*	*0.37*	*0.39*	*0.53*	*0.76*	*0.86*
Imax	0.5ind	*0.70*	*0.36*	*0.30*	*0.32*	*0.39*	*0.69*	*0.87*

5. Annex of Variants

Product Variant Identification Details:

Type Designation	Description of meter

Model -	Description
PM5111 -	Polyphase, Active Import/ Export (kWh), Transformer Operated, RS485 with 1 Digital Output
PM5331 -	Polyphase, Active Import/ Export (kWh), Transformer Operated, RS485 with 2 Digital Outputs, 2 Digital Inputs, 2 Electromechanical Relays
PM5341 -	Polyphase, Active Import/ Export (kWh), Transformer Operated, RS485 with 2 Digital Outputs, 2 Digital Inputs, 2 Electromechanical Relays, Ethernet

Modifications to the meter(s) described according to approval No. **0120/SGS0137** 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	17/07/2023	Initial Issue
2	04/09/2024	New software versions and CRCs PM5111 2.5.4 0x1B39 PM5331 2.5.4 0xC2EA PM5341 2.6.6 0x1CA6 PM5341 2.7.0 0xEC30

END OF CERTIFICATE