



EU Type Examination Certificate Number: **0120/SGS0427**

## **CET Electric Technology Inc.**

8/F, Westside  
Building 201  
Terra Industrial & Tradepark  
Che Gong Miao  
Shenzhen  
Guangdong 518040  
China

Instrument Identification:  
**PMC-53A Series**

**Polyphase, Multi-function, Multi-rate, Transformer Operated, Electricity meter**

Instrument Traceable Number  
**0120/SGS0427**

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 for 10 years from 24<sup>th</sup> September 2019 until 23<sup>rd</sup> September 2029  
Issue 1

Certification is based on report number(s) SHES190701881801 dated 19<sup>th</sup> September 2019  
EMA271385/1

Authorised Signature


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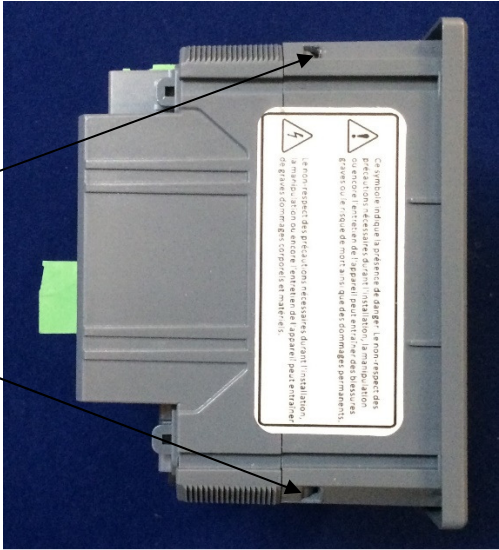
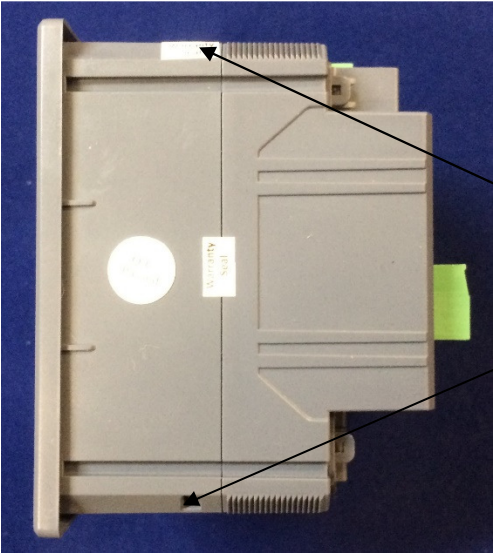
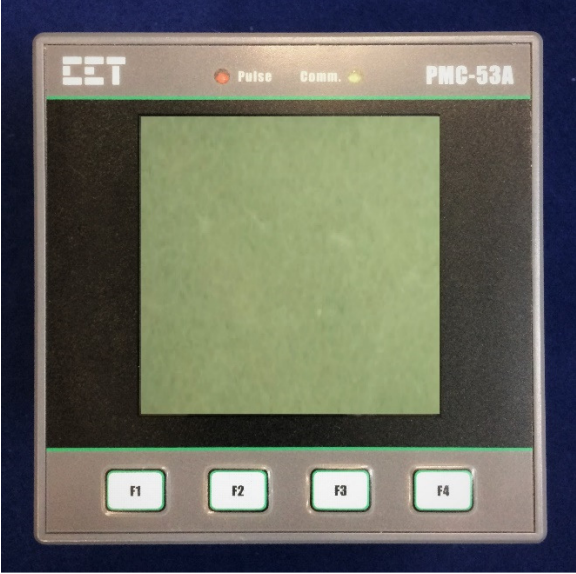
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## 1. Technical Data


<b>Manufacturer</b>	CET Electric Technology Inc.
<b>Meter Types</b>	PMC-53A-B5925E PMC-53A-A5925E PMC-53A-15925E PMC-53A-25925E PMC-53A-35925E
<b>Voltage Rating (<math>U_n</math>)</b>	3x230/400V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	0.05-5(10)A
<b>Frequency (<math>F_n</math>)</b>	50Hz
<b>Active Accuracy Class (<math>kWh</math>)</b>	C (kWh)
<b>Type of circuit</b>	3p4w
<b>Temperature Range</b>	-25°C to +55°C
<b>Software Version No.</b>	V1.00.08
<b>CRC Checksum No.</b>	5c0669289596ab2fda21553919eedf20
<b>Identification Location</b>	LCD
<b>Bill Of Materials No's.</b>	PMC-53A-15925E: 2019091601 PMC-53A-25925E: 2019091602 PMC-53A-35925E: 2019091603 PMC-53A-A5925E: 201909160A PMC-53A-B5925E: 201909160B
<b>IP Rating</b>	IP51 Front Display Meter body not rated. Must be installed in a suitable IP rated enclosure
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	1000 imp/kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	4 x clips. One sealed with tamperproof tape
<b>Integrity of meter</b>	Inaccessible without breaking seals
<b>Intended Location of the Meter</b>	Indoor
<b>Type of Register</b>	LCD
<b>Location of Manufacturers Address</b>	Associated Documents

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**2. Photograph of Meter and Sealing Plan**



















Main Cover Sealing Points









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
### 3. Examples of Nameplates


Model: PMC-53A-15925E Power Supply: 95-250V $\approx$ , 47-440Hz, 2W, OVC III Voltage Inputs: 3x230/400V Current Inputs: 0.05-5(10)A Frequency: 50Hz/60Hz Constant: 1000imp/kWh, 1000imp/kvarh	 1801103096
-25°C to 55°C 	
    CL.C EN 50470-1 EN 50470-3	
  0120/SGS0427	

Model: PMC-53A-25925E Power Supply: 95-250V $\approx$ , 47-440Hz, 2W, OVC III Voltage Inputs: 3x230/400V Current Inputs: 0.05-5(10)A Frequency: 50Hz/60Hz Constant: 1000imp/kWh, 1000imp/kvarh	 1801103095
-25°C to 55°C 	
    CL.C EN 50470-1 EN 50470-3	
  0120/SGS0427	

Model: PMC-53A-35925E Power Supply: 95-250V $\approx$ , 47-440Hz, 2W, OVC III Voltage Inputs: 3x230/400V Current Inputs: 0.05-5(10)A Frequency: 50Hz/60Hz Constant: 1000imp/kWh, 1000imp/kvarh	 1801103094
-25°C to 55°C 	
    CL.C EN 50470-1 EN 50470-3	
  0120/SGS0427	

Model: PMC-53A-A5925E Power Supply: 95-250V $\approx$ , 47-440Hz, 2W, OVC III Voltage Inputs: 3x230/400V Current Inputs: 0.05-5(10)A Frequency: 50Hz/60Hz Constant: 1000imp/kWh, 1000imp/kvarh	 1801103093
-25°C to 55°C 	
    CL.C EN 50470-1 EN 50470-3	
  0120/SGS0427	

Model: PMC-53A-B5925E Power Supply: 95-250V $\approx$ , 47-440Hz, 2W, OVC III Voltage Inputs: 3x230/400V Current Inputs: 0.05-5(10)A Frequency: 50Hz/60Hz Constant: 1000imp/kWh, 1000imp/kvarh	 1801103092
-25°C to 55°C 	
    CL.C EN 50470-1 EN 50470-3	
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#### 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:-

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

where

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



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		<b>Influence Factors for Temperature. Frequency &amp; Voltage</b>					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I <sub>min</sub>	1.0	0.21	0.20	0.20	0.22	0.18	0.18
I <sub>tr</sub>	1.0	0.08	0.09	0.10	0.09	0.08	0.08
10I <sub>tr</sub>	1.0	0.10	0.12	0.12	0.11	0.10	0.08
I <sub>max</sub>	1.0	0.09	0.10	0.11	0.10	0.10	0.08
I <sub>tr</sub>	0.5ind	0.25	0.19	0.18	0.13	0.13	0.13
10I <sub>tr</sub>	0.5ind	0.13	0.10	0.08	0.07	0.07	0.07
I <sub>max</sub>	0.5ind	0.16	0.10	0.07	0.05	0.05	0.05
I <sub>tr</sub>	0.8cap	0.22	0.29	0.29	0.25	0.24	0.21
10I <sub>tr</sub>	0.8cap	0.20	0.22	0.21	0.19	0.17	0.15
I <sub>max</sub>	0.8cap	0.21	0.22	0.21	0.94	0.17	0.15
					0.00	0.00	0.00
L1							
I <sub>tr</sub>	1.0	0.11	0.13	0.13	0.10	0.12	0.09
10I <sub>tr</sub>	1.0	0.12	0.14	0.12	0.10	0.11	0.08
I <sub>max</sub>	1.0	0.13	0.14	0.14	0.12	0.12	0.10
I <sub>tr</sub>	0.5ind	0.17	0.16	0.13	0.09	0.09	0.09
10I <sub>tr</sub>	0.5ind	0.12	0.08	0.06	0.06	0.06	0.05
I <sub>max</sub>	0.5ind	0.14	0.11	0.09	0.07	0.07	0.07
L2							
I <sub>tr</sub>	1.0	0.24	0.26	0.26	0.23	0.21	0.19
10I <sub>tr</sub>	1.0	0.14	0.15	0.16	0.15	0.13	0.11
I <sub>max</sub>	1.0	0.12	0.13	0.13	0.14	0.12	0.10
I <sub>tr</sub>	0.5ind	0.34	0.29	0.23	0.17	0.16	0.17
10I <sub>tr</sub>	0.5ind	0.09	0.07	0.06	0.07	0.06	0.06
I <sub>max</sub>	0.5ind	0.10	0.10	0.09	0.08	0.07	0.07
L3							
I <sub>tr</sub>	1.0	0.15	0.17	0.17	0.15	0.15	0.13
10I <sub>tr</sub>	1.0	0.06	0.08	0.09	0.08	0.09	0.06
I <sub>max</sub>	1.0	0.08	0.09	0.12	0.10	0.09	0.08
I <sub>tr</sub>	0.5ind	0.13	0.10	0.07	0.06	0.06	0.06
10I <sub>tr</sub>	0.5ind	0.12	0.09	0.04	0.03	0.05	0.07
I <sub>max</sub>	0.5ind	0.22	0.15	0.12	0.01	0.09	0.09



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## 5. Annex of Variants

Product Variant Identification Details:

Product Code	Description
<b>PMC-53A Intelligent Multifunction Meter</b>	
<b>Basic Function</b>	
1	Dot-Matrix LCD, 1xRS-485 with Multiple Protocol, Monthly Energy Log
2*	Model 1 + Monthly & Daily Freeze Log, Data Recording Log, 4MB Memory
3*	Model 1 + 4xDI + 2xSS Pulse Output
A*	Model 1 + 4xDI + 2xRO (Relay Output)
B*	Model A + Monthly & Daily Freeze Log, Data Recording Log, 4MB Memory
<b>Input Current</b>	
5	5A/1A Auto-Scaling (Class 0.5S for 5A and Class 1 for 1A)
1	1A
<b>Input Voltage</b>	
9	400VLN/690VLL
<b>Power Supply</b>	
2	95-250 VAC/DC, 47-440Hz
3	20-60VDC
4	95-480 VAC/DC, 47-440Hz
<b>Frequency</b>	
5	45Hz-65Hz
<b>Language</b>	
E	English
<b>Expansion A*</b>	
A1	1xRS-485
A2	I4 (5A/1A Auto-Scaling)
<b>Expansion B*</b>	
B1	2xDI + 2xRO (Relay Output)
B2	2xRTD (PT100 sensors not included)
B3	1xAI + 1xAO (0/4-20mA)
B4	2xDI + 2xSS Pulse Output
B5	2xAO (0/4-20mA)
PMC-53A - 1 5 9 2 5 E - -	PMC-53A-15925E (Standard Model)

\* Additional charges apply

- 1) Model No. with only one Expansion can be written as PMC-53A-15925E-Ax or PMC-53A-15925E-Bx
- 2) Model No. with both Expansions can be written as PMC-53A-15925E-Ax-Bx
- 3) Options B1 and B4 for Expansion B are invalid with options 1, and 2 under Basic Function.

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## 6. Document Revision History

Issue	Date	Comments
1	24/09/2019	Initial Issue

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