Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 14/2/119

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

CET Electric Technology Inc. model PMC-230-BC35AE Class 1 Electricity Meter

submitted by CET Electric Technology Inc.
8/F West Side, Building 201
Terra Industrial & Trade Park, Che Gong Miao
Shenzhen
Guang Dong
P.R. China - 518040

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI M 13-1 *Active-energy electricity meters (a.c.), Part 1: Metrological and technical requirements*, dated June 2022.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	11/11/24

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number ‘NMI 14/2/119’ and only by persons authorised by the submittor.

It is the submittor’s responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 14/2/119

1. Description of Pattern approved on 11/11/24

A CET Electric Technology Inc. model PMC-230-BC35AE single phase class 1 direct connected static watt hour meter used to measure electrical energy.

1.1 Field of Operation

The field of operation of the measuring system is determined by the following characteristics:

- Number of phases 1
- Number of wires 2
- Reference frequency 50 Hz
- Reference temperature 23 °C

- Rated voltage 230/240 V AC
- Rated current, I_b 5 A
- Maximum current, I_{max} 65 A
- Meter constant 1000 imp/kWh
- Accuracy class 1

1.2 Features/Functions

The pattern (Figure 1) has features/functions as listed below:

- Digital indicators having a maximum display of 999,999.99 kWh
- DIN-rail mounting
- Measurement in both positive and negative directions (import and export)
- RS485 supporting Modbus RTU protocol
- Crystal clock with back up battery – Clock synchronisation to be up to the third party software such that clock adjustment does not cross an interval boundary.

1.3 Verification Provision

Provision is made for the application of a verification mark.

1.4 Sealing Provision

Provision is made for the parameters that have a metrologically significant effect and that determine the measurement result by the application of solid state sealing.

1.5 Descriptive Markings

Instruments are clearly and permanently marked with the following data (Figure 2), visible following installation, in the form shown right:

Manufacturer's mark, or name written in full	……..
Model designation	……..
Serial number	……..
Pattern approval mark	NMI 14/2/119
Number of phases	……..
Number or wires	……..
Reference frequency	…….. Hz
Reference temperature (if different from 23 °C)	…….. °C
Meter constant	……..
Rated voltage	…….. AC
Rated currents	I_b …… A
	I_{max} ……. A
Accuracy class	1
Environment	Indoor meter or IM

1.6 Harmonics

Instruments purporting to comply with this approval are suitable for use where the harmonics do not exceed those specified in AS 62053.22 (2018).

TEST PROCEDURE No 14/2/119

Instruments tested for verification shall comply with the certificate of approval and technical schedule, and the maximum permissible errors for verifications at the operating conditions in effect at the time of verification.

The maximum permissible errors are specified in the *National Trade Measurement Regulations 2009* (Cth).

Electricity meters shall be verified in accordance with the following National Instrument Test Procedures:

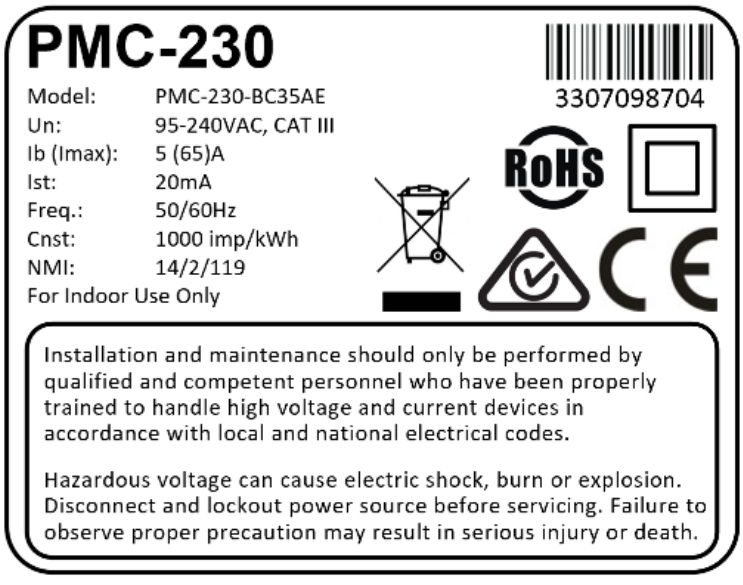
- NITP 14.0 – Utility meters – general requirements
- NITP 14.2 – Utility meters – electricity meters

NOTE: NMI reserves the right to vary this procedure. Any such variation shall be notified in writing by NMI.

FIGURE 14/2/119 – 1

CET Electric Technology Inc. model PMC-230-BC35AE Class 1 Electricity Meter (the pattern)

FIGURE 14/2/119 – 2



Example of required markings

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