



Australian Government
Department of Industry,
Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 14/2/98

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 CET PMC-220-C35AE Electricity
Meter

submitted by CETA Australia Pty Ltd
2/40 Douglas Street
Milton QLD 4064

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 the document NMI M 6-1, *Active-energy electricity meters (a.c.) Part 1: Metrological and technical requirements*, 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	9/01/17
1	Pattern and variant 1 (Change of model name) approved – certificate issued	13/07/17
2	Pattern (Include measurement in both directions) approved – certificate issued	22/02/22
3	Variant 2 approved – certificate issued	05/07/23

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 14/2/98' 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 14/2/98

1. Description of Pattern

approved on 9/01/17

A CET ELECTRIC TECHNOLOGY INC. model CET PMC-220-C35AE single phase class 1 direct connected static watt hour meter (Figure 1) 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 ambient temperature ranges:
 - specified range of operation -25 to 70 °C
 - limit range of operation -25 to 70 °C
- Rated voltage 95 to 240 V AC
- Rated currents: Basic current, I_b 5 A
Maximum current, I_{max} 63 A
- Meter constant 1000 imp/kWh
- Accuracy class 1

1.2 Features/Functions

- Liquid crystal digital indicator having a maximum display of 999999.9 kWh
- DIN-rail mounting
- Measurement in both positive and negative directions

Note: The pattern is NOT fitted with an internal clock.

1.3 Verification Provision

Provision is made for the application of a verification mark.

1.4 Sealing Provision

Provision is made for the calibration adjustments to be sealed by the application of a mechanical seal (Figure 1).

1.5 Descriptive Markings

Instruments are marked with the following data, together in one location:

Manufacturer's mark, or name written in full
Model designation
Serial number
Pattern approval mark	NMI 14/2/98
Number of phases
Number of wires
Reference frequency Hz
Temperature limits (if other than -10 to 60°C)	... to ... °C
Meter constant
Rated voltage AC
Rated currents:	I _b A
	I _{max} A
Accuracy class	...

1.6 Harmonics

Instruments purporting to comply with this approval are suitable for use where the harmonics do not exceed those specified in NMI M 6-1:2022.

2. Description of Variant 1

approved on 13/07/17

This meter is also known as model IPD -163C. Please see the corresponding labels for IPD-163C (Figures 14/2/98 - 3 and 14/2/98 - 4).

3. Description of Variant 2

approved on 05/07/23

This meter is also known as MATElec branded - model FKW-11000-1. Please see the corresponding image in Figure 14/2/98 - 5.

TEST PROCEDURE No 14/2/98

Instruments tested for initial 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.

Meters shall be verified in accordance with NITP 14 *National Instrument Test Procedures for Utility Meters*.

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

FIGURE 14/2/98 – 1



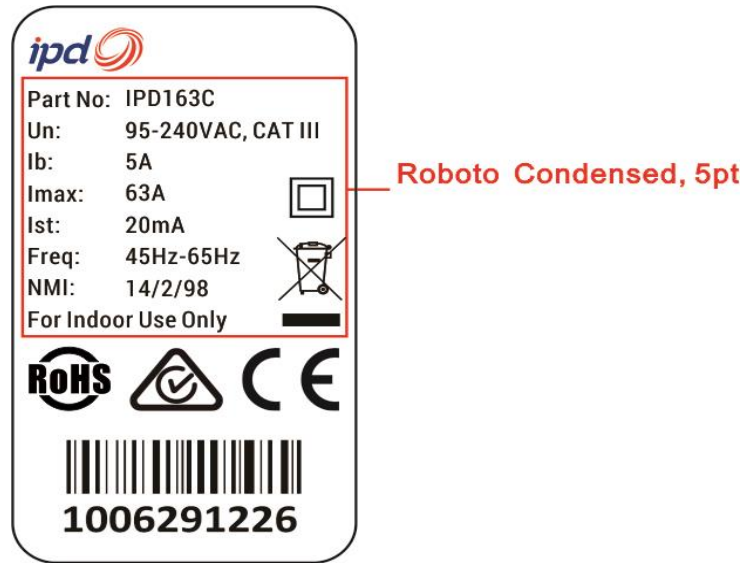
CET ELECTRIC TECHNOLOGY INC. model CET PMC-220-C35AE Electricity Meter Including Typical Mechanical Sealing

FIGURE 14/2/98 – 2



CET ELECTRIC TECHNOLOGY INC. model CET PMC-220-C35AE Electricity Meter Showing Markings

FIGURE 14/2/98 – 3



Variant 1 - CET ELECTRIC TECHNOLOGY INC. model IPD 163C Electricity Meter

FIGURE 14/2/98 – 4



Variant 1 - CET ELECTRIC TECHNOLOGY INC. model IPD 163C Electricity Meter

FIGURE 14/2/98 – 5



Variant 2 - MATElec branded - model FKW-11000-1 Electricity Meter

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