



Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 14/2/70

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.

K-MAC Powerheads Model KMP1-50 Class 1 Electricity Meter

submitted by K-MAC Powerheads
 3/10 Crown Street
 South Geelong VIC 3220

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use as a legal measuring instrument 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 6-1 *Electricity Meters. Part 1: Metrological and Technical Requirements*, July 2012.

This approval becomes subject to review on 1/11/18, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – interim certificate issued	11/10/13
1	Pattern approved – certificate issued	28/02/14

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 14/2/70' and only by persons authorised by the submitter.

It is the submitter'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.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0B.

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

A handwritten signature in black ink, appearing to be 'Dr A Rawlinson', written over a horizontal line.

Dr A Rawlinson

TECHNICAL SCHEDULE No 14/2/70

1. Description of Pattern

approved on 11/10/13

A K-MAC Powerheads model KMP1-50 Class 1 electronic single phase direct connect 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 60°C
 - limit range of operation -25 to 70°C
- Rated voltage 240 V AC
- Rated currents:
 - Rated current, I_b 5 A
 - Maximum current, I_{max} 50 A
- Meter constant 1000 imp/kWh
- Accuracy class 1

1.2 Features/Functions

- One (1) element
- Electronic (LCD) digital indicator (backlighting optional)
- DIN-rail type mounting

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 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's name or mark	...
Model designation	...
Serial number	...
Pattern approval mark	NMI 14/2/70
Number of phases	...
Number or wires	...
Reference frequency	... Hz
Meter constant	...
Rated voltage	... AC
Rated currents:	I_b ... A
	I_{max} ... A
Accuracy index	Class 1

1.5 Sealing Provision

Provision is made for the instrument to be sealed by the application of one or more mechanical seals (Figure 1).

TEST PROCEDURE No 14/2/70

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*.

Evidence of verification shall be confirmed via the meter serial number and certificate of verification issued by a utility meter verifier in accordance with NITP 14.

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

FIGURE 14/2/70 – 1



K-MAC Powerheads Model KMP1-50 Class 1 Electricity Meter
(Including Typical Sealing)

~ End of Document ~