



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Cancellation
Certificate of Approval
No 14/2/32

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

This is to certify that the approval for use for trade granted in respect of the
Energy Intellect Model VMP3020-230 Electricity Meter

submitted by Energy Intellect Limited
 189 Willis Street
 Wellington 6011
 NEW ZEALAND

has been cancelled in respect of new instruments as from 1 January 2013.

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

A handwritten signature in black ink, consisting of stylized cursive letters, positioned to the right of the signature text.



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

Energy Intellect Model VMP3020-230 Electricity Meter

submitted by Energy Intellect Limited
189 Willis Street
Wellington 6011
NEW ZEALAND.

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 6, *Pattern Approval and Initial Verification of Electricity Meter and Associated Transformers: Definitions, Metrological and Technical Requirements*, July 2004.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 November 2012, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 14/2/32' 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.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

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

DESCRIPTIVE ADVICE

Pattern: approved 16 October 2007

- An Energy Intellect model VMP3020-230 poly phase Class 0.5 current transformer (CT) connected static watt hour meter used to measure electrical energy.

Technical Schedule No 14/2/32 describes the pattern.

Variant: approved 19 December 2007

1. Model VMP3120-230 Class 1 direct connected electricity meter.

Technical Schedule No 14/2/32 Variation No 1 describes variant 1.

Variant: approved 22 January 2009

2. Model VMP3010-63 C02 Class 0.2 and model VMP3010-63 C05 Class 0.5 CT connected electricity meter.

Technical Schedule No 14/2/32 Variation No 2 describes variant 2.

FILING ADVICE

Certificate of Approval No 14/2/32 dated 7 March 2008 is superseded by this certificate, and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 14/2/32 dated 31 March 2009

Technical Schedule No 14/2/32 dated 4 December 2007 (incl. Test Procedure)

Technical Schedule No 14/2/32 Variation No 1 dated 7 March 2008 (incl. Notification of Change)

Technical Schedule No 14/2/32 Variation No 2 dated 31 March 2009 (incl. Notification of Change)

Figure 1 dated 7 March 2008

Figure 2 dated 4 December 2007

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



TECHNICAL SCHEDULE No 14/2/32

Pattern: Energy Intellect Model VMP3020-230 Electricity Meter

Submittor: Energy Intellect Limited
189 Willis Street
Wellington 6011
NEW ZEALAND

1. Description of Pattern

An Energy Intellect model VMP3020-230 poly phase Class 0.5 current transformer (CT) connected static watt hour meter (Figure 1) used to measure electrical energy.

1.1 Field of Operation

- Number of phases 3
- Number of wires 4
- Reference frequency 50 Hz
- Reference ambient temperature ranges:
 - specified range of operation -10 to 60°C
 - limit range of operation -20 to 70°C
- Rated voltage 230/400 V AC
- Rated currents: Basic current, I_n 5 A
Maximum current, I_{max} 20 A
- Accuracy index 0.5

1.2 Features/Functions

- 3 elements.
- IEC 61107 or ANSI optical interface.
- Liquid crystal digital indicator having a maximum display of 99999999 kW h.
- Active energy measurement (Class 0.5).
- Reactive energy measurement (Class 2).
- Serial communication port, e.g. RS 232.
- Internal lithium battery.
- Internal data and event logger.
- Bottom connect rectangular base.

1.3 Verification/Certification

Provision is made for the application of a verification/certification mark.

1.4 Sealing Provision

Provision is made for the calibration adjustments to be sealed by the application of mechanical seals (Figures 1 and 2).

1.5 Descriptive Markings

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 14/2/32
Number of phases	...
Number of wires	...
Reference frequency	... Hz
Temperature limits (if other than -10 to 45°C)	... to ...°C
Meter constant	...
Rated voltage	... V AC
Rated currents:	I_n ... A
	I_{max} ... A
Accuracy index	...

TEST PROCEDURE

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

TESTS

1. AC Voltage Test - at initial verification only.
2. Running With No Load - at subsequent verifications/certifications.
3. Starting.
4. Accuracy.

TECHNICAL SCHEDULE No 14/2/32

VARIATION No 2

Pattern: Energy Intellect Model VMP3020-230 Electricity Meter

Submittor: Energy Intellect Limited
189 Willis Street
Wellington 6011
NEW ZEALAND

1. Description of Variant 2

The model VMP3010-63 C02 Class 0.2 and model VMP3010-63 C05 Class 0.5 (active energy) CT connected electricity meters.

These models have the same general features as described for the pattern (model VMP3020-230) in Technical Schedule No 14/2/32, and the field of operation is the same, except for the following:

- Number of wires: 3 or 4 (#)
- Rated voltage: 63.5/110 V
- Rated currents: Basic current, I_n 5 A
Maximum current, I_{max} 10 A
- Accuracy index: Model VMP3010-63 C02 0.2
Model VMP3010-63 C05 0.5

(#) The model meters of this variant can operate in either 3 phase **3** wire or 3 phase **4** wire configurations, and this is reflected in the instrument markings which include the following:

“3P4W/3P3W” or similar.

NOTIFICATION OF CHANGE

In Technical Schedule No 14/2/32 Variation No 1 dated 7 March 2008, the symbol for ‘Basic current’ in the 1st dot point should be amended to read:

“Basic current, I_b ...”

FIGURE 14/2/32 – 1



Energy Intellect Model VMP3020-230 Electricity Meter

14/2/32
4 December 2007

FIGURE 14/2/32 – 2



Showing Typical Cover Sealing