



Australian Government  
Department of Industry,  
Science and Resources

## National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

# Certificate of Approval

## NMI 14/2/46

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.

EDMI Model Atlas MK10A Class 1 Electricity Meter

submitted by EDMI Pty Ltd  
162 South Pine Road  
Brendale QLD 4500

**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 6-1 *Active-Energy Electricity Meters. 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 & variant 1 approved – interim certificate issued	20/11/09
1	Pattern & variant 1 approved – certificate issued	24/03/10
2	Pattern & variant 1 reviewed & updated – interim certificate issued	4/05/15
3	Pattern & variant 1 updated (NMI M 6-1) & reviewed – certificate issued	15/10/15
4	Variant 2 approved, pattern updated – certificate issued	13/02/25

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 14/2/46' 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.

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 14/2/46

**1. Description of Pattern**

**approved on 20/11/09**

An EDMI model Atlas MK10A electronic polyphase class 1 current transformer (CT) operated static watt hour meter 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 -25 to 60 °C
  - limit range of operation -40 to 70 °C
- Rated voltage 3 x 200/240 V AC
- Rated currents:
 

Basic current, $I_n$	5 A (*)
Maximum current, $I_{max}$	20 A (*)
- Meter constant 1000 imp/kWh
- Accuracy class 1 (#)

(\*) Alternatively, the meter may have rated current values of:

Basic current, $I_n$	1 A
Maximum current, $I_{max}$	6 A

(#) This approval is valid only for Accuracy Class 1 versions of the instruments.

**1.2 Features/Functions**

- Three (3) elements
- ANSI or FLAG optical port
- Liquid crystal digital indicator having a maximum display of 9 999 999.9 kW h
- Active energy measurement (Class 1)
- Reactive energy measurement (Class 2)
- Two (2) pulse output LEDs for Wh and VARh
- An RJ45 communications port via an RJ45 socket
- Load survey/profile and time of use data capabilities
- Internal synchronous and crystal clocks
- Bottom connect rectangular base
- Measurement in both positive and negative directions (export and import).

**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 one or more mechanical seals (Figure 1).

## 1.5 Descriptive Markings

Instruments are clearly and permanently marked with the following data, in the vicinity of the indicating device, in the form shown at right:

Manufacturer's name or mark	...
Model designation	...
Serial number	...
Pattern approval mark	NMI 14/2/46
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:	$I_n$ ... A
	$I_{max}$ ... A
Accuracy index	Class 1

(\*) Optional marking.

## 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 20/11/09**

The model Atlas MK10A electronic polyphase Class 1 (#) direct connect meter. This meter has the same characteristics and features as described for the pattern in clauses **1.1 Field of Operation** and **1.2 Features/Functions**, except as follows:

- Rated currents: Basic current,  $I_b$  10 A  
Maximum current,  $I_{max}$  100 A

(#) This approval is valid only for Accuracy Class 1 versions of the instruments.

## 3. Description of Variant 2

**approved on 13/02/25**

An EDM1 model Atlas MK10A electronic polyphase class 1 current transformer (CT) operated static watt hour meter used to measure electrical energy. The meter has the same Field of Operation and features as the pattern except as listed below:

- Changed R15 3M3 T/H resistor to R54, R79, R80, R81 470k SMD resistors
- Changed R10 3M3 T/H resistor to R50, R51, R52, R53 470k SMD resistors
- Changed R3 3M3 T/H resistor to R3, R4, R10, R15 470k SMD resistors

## TEST PROCEDURE No 14/2/46

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.

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 14/2/46 – 1



EDMI Model Atlas MK10A (CT) Electricity Meter (Pattern)  
Including Typical Sealing

FIGURE 14/2/46 – 2



EDMI Model Atlas MK10A (WC) Electricity Meter (Variant 1)  
Including Typical Sealing

~ End of Document ~