Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

# Certificate of Approval
# NMI 14/2/89

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.

Schneider Electric Model iEM3350 Class 1 Electricity Meter

submitted by Schneider Electric (Australia) Pty Ltd
78 Waterloo Road
Macquarie Park NSW 2113

**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 *Electricity Meters. Part 1: Metrological and Technical Requirements*, July 2012.

This approval becomes subject to review on 1/09/20, and then every 5 years thereafter.

DOCUMENT HISTORY

| Rev | Reason/Details | Date |
|---|---|---|
| 0 | Pattern & variant 1 approved – interim certificate issued | 19/08/15 |
| 1 | Pattern & variant 1 approved – certificate issued | 21/01/16 |
| 2 | Variant 2 approved – interim certificate issued | 5/07/16 |
| 3 | Variant 2 approved – certificate issued | 8/02/17 |
| | | |

CONDITIONS OF APPROVAL

## General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 14/2/89' 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.

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*.

**Mario Zamora**

TECHNICAL SCHEDULE No 14/2/89

## 1. Description of Pattern approved on 19/08/15

A Schneider Electric model iEM3350 class 1 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 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 -25 to 70°C
- Reference voltage 3×100/173 277/480 V AC
- Reference currents: Basic current, $I_b$ 20 A
  Maximum current, $I_{max}$ 125 A
- Meter constant 200 imp/kWh
- Accuracy class 1

### 1.2 Features/Functions

- Electronic (LCD) digital indicator
- Internal crystal clock

### 1.3 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 14/2/89 |
| Number of phases | ... |
| Number or wires | ... |
| Reference frequency | ... Hz |
| Meter constant | ... |
| Reference voltage | ... AC |
| Reference currents: | $I_b$ ... A |
| | $I_{max}$ ... A |
| Accuracy index | Class 1 |

### 1.4 Verification Provision

Provision is made for the application of a verification mark.

### 1.5 Sealing Provision

Provision is made for the instrument to be sealed by the application of one or more destructible adhesive labels (Figure 2).

### 2. Description of Variant 1 approved on 19/08/15

Certain other models of the iEM3300 series as listed below:

- iEM3300 basic energy meter
- iEM3310 energy meter with pulse output
- iEM3350 (the pattern) energy meter & electrical parameter plus RS485 comm port
- iEM3355 advanced multi-tariff energy meter & electrical parameter plus RS485 comm port.
- iEM3365 advanced multi-tariff energy meter & electrical parameter plus BACnet MS/TP comm port
- iEM3375 advanced multi-tariff energy meter & electrical parameter plus LON TP/FT-10 comm port

All of the models have the same field of operation. The differences relate to features and functions.

### 3. Description of Variant 2 approved on 5/07/16

Certain other models of the iEM3100 series having the same Field of Operation as the pattern, except as listed below:

- Reference currents: Basic current, $I_b$ 10 A
  Maximum current, $I_{max}$ 63 A

The approved models of the iEM3100 series are listed below:

- iEM3100 basic energy meter
- iEM3110 energy meter with pulse output
- iEM3115 multi-tariff energy meter
- iEM3150 (the pattern) energy meter & electrical parameter plus RS485 comm port
- iEM3155 advanced multi-tariff energy meter & electrical parameter plus RS485 comm port.
- iEM3165 advanced multi-tariff energy meter & electrical parameter plus BACnet MS/TP comm port
- iEM3175 advanced multi-tariff energy meter & electrical parameter plus LON TP/FT-10 comm port

# TEST PROCEDURE

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).

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 14/2/89 – 1


Schneider Electric Model iEM3350 Electricity Meter

FIGURE 14/2/89 – 2


Showing Typical Mechanical Sealing

FIGURE 14/2/89 – 3


Typical Schneider Electric iEM3150 Series Electricity Meter

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