



Australian Government  
Department of Industry,  
Science and Resources

**National  
Measurement  
Institute**

36 Bradfield Road, West Lindfield NSW 2070

**Certificate of Approval**

**NMI 14/2/83**

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.

Secure Model Sprint 210 Class 1 Electricity Meter

submitted by           Secure Meters (Australia) Pty Ltd  
39 – 41, Fennell Street  
Port Melbourne       VIC 3207

**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 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**

<b>Rev</b>	<b>Reason/Details</b>	<b>Date</b>
0	Pattern approved – interim certificate issued	22/05/15
1	Pattern approved – certificate issued	15/10/15
2	Variant 1 approved – certificate issued	9/01/17
3	Variant 2 approved – certificate issued	20/09/17
4	Pattern amended (addition of bi-directional measurement and harmonics) Variant 3 approved (Pathway 2) – certificate issued	29/07/22

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 14/2/83' 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 14/2/83

**1. Description of Pattern** **approved on 22/05/15**

A Secure model Sprint 210 class 1 electronic polyphase 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 -10 to 60°C
  - limit range of operation -20 to 70°C
- Rated voltage 3×230 (400) V AC
- Rated currents:
 

Basic current, $I_b$	10 A
Maximum current, $I_{max}$	100 A
- Meter constant 1 Wh/imp
- Accuracy class 1

**1.2 Features/Functions**

- Three (3) elements
- Electronic (LCD) digital indicator
- Measurement in both positive and negative directions (export and import)
- Optional integrated 100 A mains supply contactor
- Optional integrated load control relays (2 A, 31.5 A or 60 A)
- Field replaceable AMI communication module
- Bottom connect type base
- Internal synchronous and crystal clocks

**1.3 Verification Provision**

Provision is made for the application of a verification mark.

**1.4 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 14/2/83
Number of phases	...
Number or wires	...
Reference frequency	... Hz
Meter constant	...
Rated voltage	... AC

Rated currents:	$I_n \dots A$
	$I_{max} \dots A$
Accuracy index	Class ...

### 1.5 Sealing Provision

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

### 1.6 Harmonics

Instruments purporting to comply with this approval (the pattern and the variants 1 & 2) are suitable for use where the harmonics do not exceed those specified in NMI M 6-1:2012.

## 2. Description of Variant 1 approved on 9/01/17

A Secure model Sprint 211 polyphase direct connect static watt hour meter (Figure 3) used to measure electrical energy. This variant has the same Field of Operation and Features as the pattern except that it features an optional fitted cellular communication module.

## 3. Description of Variant 2 approved on 20/09/17

A Secure model Sprint 231 polyphase direct connect static watthour meter (Figure 4) used to measure electrical energy. This variant has the same Field of Operation and Features as the pattern except that it features an optional fitted cellular communication module (Skyline – i533/033).

Note: This meter is also approved to measure single phase loads.

## 4. Description of Variant 3 approved on 29/07/22

A Secure model Sprint 210 polyphase direct connect static watthour meter used to measure electrical energy. This variant has the same Field of Operation and Features as the pattern except the following:

- Rated voltage 3x240 (415) V AC

Note 1: Approval for Variant 3 has been granted with reference to NMI M 13-1 *Active-energy electricity meters*, June 2022, which was also specified as Pathway 2 in the NMI M 6-1 *Active-Energy Electricity Meters. Part 1: Metrological and Technical Requirements*, July 2020.

Note 2: Instruments purporting to comply with this approval as variant 3, are suitable for use where the harmonics do not exceed those specified in NMI M 13-1:2022.

### TEST PROCEDURE No 14/2/83

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.

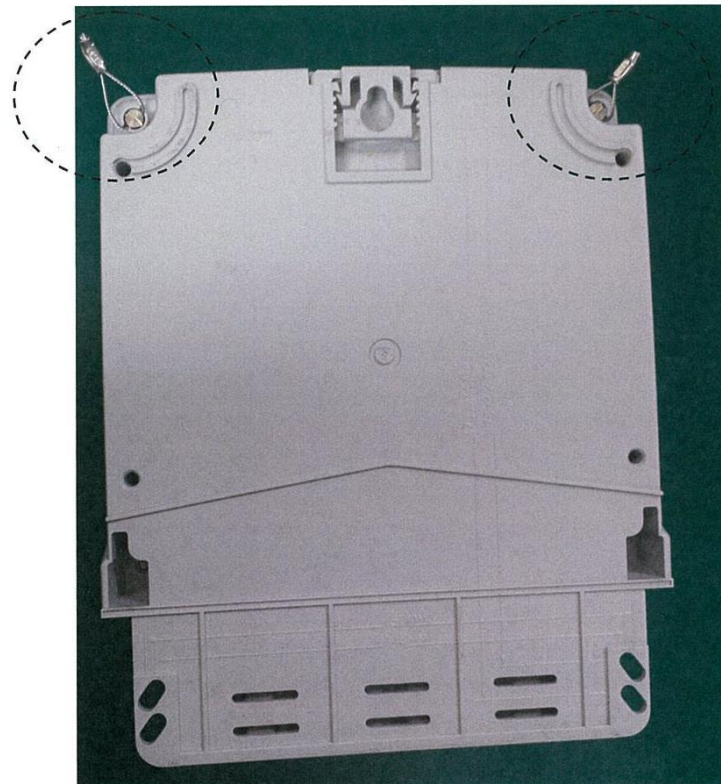
NOTE: NMI reserves the right to vary this procedure. Any such variation shall be notified in writing by NMI.

FIGURE 14/2/83 – 1



Secure Model Sprint 210 Electricity Meter (The Pattern)

FIGURE 14/2/83 – 2



Typical Mechanical Sealing

FIGURE 14/2/83 – 3



Secure Model Sprint 211 Electricity Meter (Variant 1)



FIGURE 14/2/83 – 4



Secure Model Sprint 231 Electricity Meter (Variant 2)

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