



Australian Government
Department of Industry,
Science and Resources

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

General Certificate of Approval
NMI 14/4/0

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:

Electric vehicle supply equipment.

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 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 approved – Certificate issued	07/08/24

CONDITIONS OF APPROVAL

General

This approval is published to support the implementation of a metrological control framework for electric vehicle supply equipment used to measure active electrical energy. This approval does not specify any requirements for electric vehicle charging stations that do not measure active electrical energy.

As of 07/08/24, electric vehicle supply equipment used to measure active electrical energy shall operate within the base maximum permissible errors specified in Table 1 when tested for accuracy.

As of 01/04/26, electric vehicle supply equipment manufactured on or after this date and used to measure active electrical energy shall comply with this approval in all respects.

Instruments purporting to comply with this Certificate of Approval shall be marked NMI 14/4/0 in addition to other required markings (see clause 1.2 – Markings).

It is the manufacturer's responsibility to ensure that all instruments purporting to comply with this approval are constructed as described in this Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the *National Measurement Act 1960*.

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

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 14/4/0

1. Description of Pattern

Electric vehicle supply equipment (EVSE), AC or DC, used to measure active electrical energy (kWh) supplied to or from an electric vehicle.

1.1 Construction

1.1.1 Verification Provision

Provision shall be made for the application of a verification mark.

Note: This means that space shall be provided somewhere on the EVSE for the affixing of an NMI issued verification mark (generally in the form of a small voidable foil sticker).

1.1.2 Sealing

The EVSE shall be sealed appropriately to prevent any unauthorised access to components which may affect the metrological performance of the EVSE.

1.2 Markings

EVSE shall be marked with the following data:

Manufacturer's name or mark

Manufacturer's model

Year of manufacture

Serial number

Voltage range (minimum and maximum output voltage)

Current range (starting current, minimum current, transitional current and maximum current)

Frequency

Temperature range

Minimum measured quantity (MMQ)

Accuracy class

Certificate of Approval No. '**NMI 14/4/0**'

1.2 Accuracy

The EVSE shall operate accurately within the base maximum permissible errors stated in Table 1 for the specified current ranges.

Table 1: Base maximum permissible errors

Quantity		Base maximum permissible errors (%) for class		
Current, I	Power factor	A (2%)	B (1%)	C (0.5%)
$I_{st} \leq I < I_{min}$	> 0.9	±25	±15	±10
$I_{min} \leq I < I_{tr}$	> 0.9	±2.5	±1.5	±1.0
$I_{tr} \leq I \leq I_{max}$	> 0.9	±2.0	±1.0	±0.5

The base maximum permissible errors specified in Table 1 are only applicable for EVSE tested in a laboratory environment under reference conditions.

Note: Class A is not recommended for public EVSE.

TEST PROCEDURES No 14/4/0

Where required, accuracy testing shall be carried out individually and as described in clause 9 of *OIML G 22:2022 - Electric Vehicle Supply Equipment*.

Accuracy shall be determined at the connection point to the vehicle. The base maximum permissible errors are specified in Table 1.

EVSE not marked with an accuracy class shall be treated as class A.

Note: There are currently no verification test procedures for EVSEs. The test procedures for verification and the base maximum permissible errors for field testing will be developed in future as appropriate.