Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Certificate of Approval

NMI 14/2/103

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.

Kamstrup OMNIPOWER CT meter 351C

submitted by Kamstrup A/S
Industrivej 28
Skanderborg 8860
DENMARK

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use as a legal measuring instrument 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 01/03/23, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variants 1,2,and 3 approved – Certificate issued	15/02/18

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number ‘NMI 14/2/103’ 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*.

Darryl Hines

TECHNICAL SCHEDULE No 14/2/103

1. Description of Pattern approved on 15/02/18

A Kamstrup OMNIPOWER CT model 351C class 0.5 electronic polyphase transformer operated 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		-40 to 70°C
limit range of operation		-40 to 70°C
• Rated voltage		3×230 (400) V AC
• Rated currents:	Rated current, I_n	1 or 5 A
	Maximum current, I_{max}	6 A
• Meter constant		10000 imp/kWh
• Accuracy class		0.5

1.2 Features/Functions

- Three (3) elements
- Internal synchronous and crystal clocks
- Liquid crystal digital indicator having a maximum display of 9999999.99 kWh

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 14/2/103
Number of phases	...
Number of wires	...
Reference frequency	... Hz
Meter constant	...
Rated voltage	... AC
Rated currents:	I_n ... A
	I_{max} ... A
Accuracy index	Class …

1.5 Sealing Provision

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

2. Description of Variant 1 approved on 15/02/18

A Kamstrup OMNIPOWER CT model 451C class 0.5 electronic polyphase transformer operated static watt hour meter used to measure electrical energy.

This variant has the same Field of Operation and Features as the pattern.

3. Description of Variant 2 approved on 15/02/18

A Kamstrup OMNIPOWER CT model CT class 1 electronic polyphase transformer operated 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 for the following:

- Rated currents: Rated current, I_n 5 A
- Accuracy class 1

4. Description of Variant 3 approved on 15/02/18

A Kamstrup OMNIPOWER CT model CT2 class 0.5 electronic polyphase transformer operated static watt hour meter used to measure electrical energy.

This variant has the same Field of Operation and Features as the pattern.

TEST PROCEDURE No 14/2/103

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*.

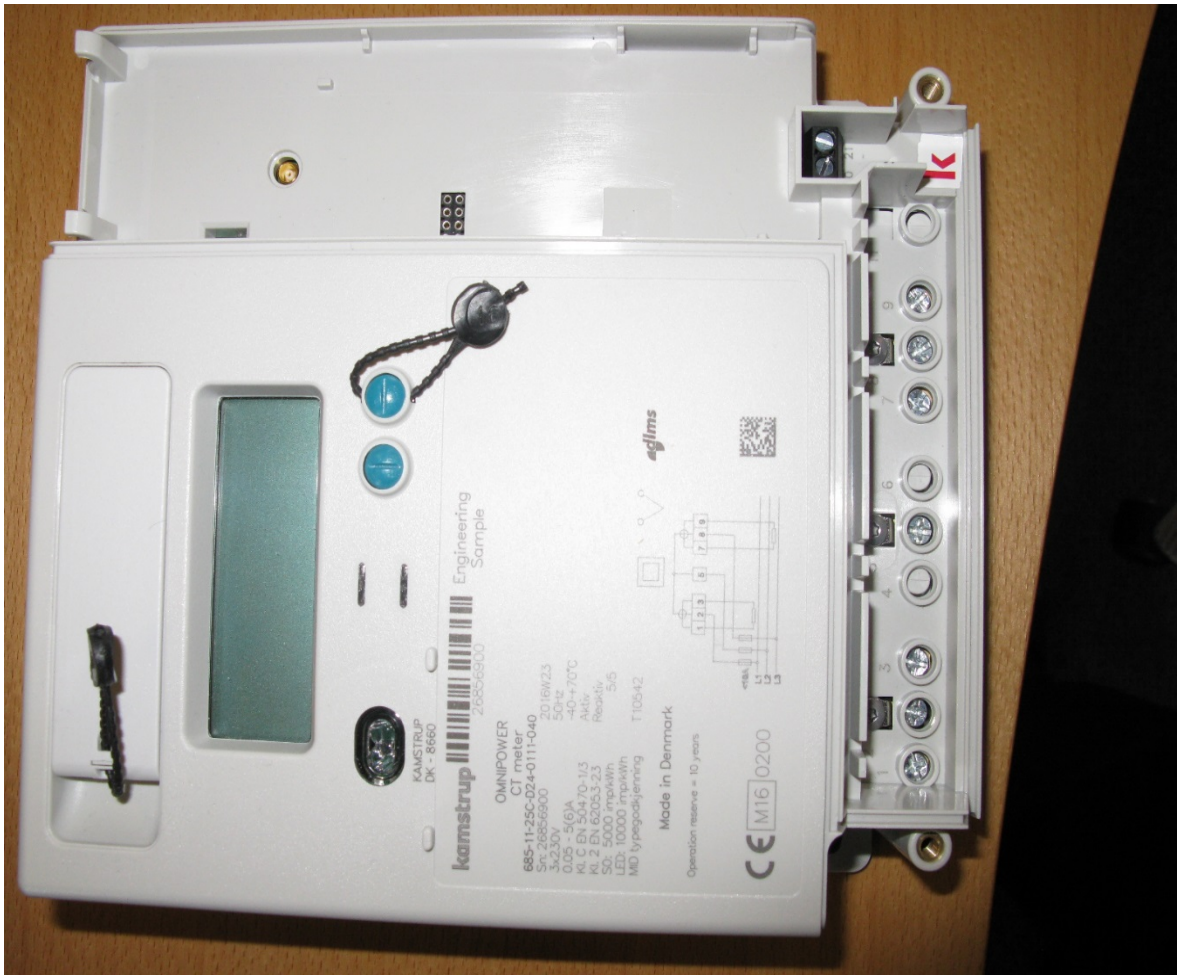
Evidence of verification shall be confirmed via the meter serial number and certificate of verification issued by a utility meter verifier in accordance with NITP 14.

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

FIGURE 14/2/103 – 1

Kamstrup OMNIPOWER CT model 351C Electricity Meter (The Pattern)

FIGURE 14/2/103 – 2



Typical Mechanical Sealing

FIGURE 14/2/103 – 3

Kamstrup OMNIPOWER CT model CT Electricity Meter (Variant 2)

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