



Australian Government
National Measurement
Institute

Bradfield Road, West Lindfield NSW 2070

Notification of Change
Supplementary Certificate of Approval No S390
Change No 1

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

The following changes are made to the approval documentation for the

WF Energy Controls Model S/45 Current Transformer

submitted by WF Energy Controls
 The Rydalmere Metro Centre
 Unit 28, 38-46 South Street
 Rydalmere NSW 2116.

In Supplementary Certificate of Approval No S390 dated 29 October 2001;

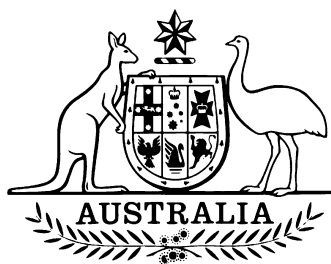
1. The Condition of Approval referring to the review of the approval should be amended to read:

 “This approval becomes subject to review on 1 October 2012, and then every 5 years thereafter.”
2. The FILING ADVICE should be amended by adding the following:

 “Notification of Change No 1 dated 21 September 2007”

Signed by a person authorised by the Chief Metrologist
to exercise his powers under Regulation 60 of the
National Measurement Regulations 1999.

A handwritten signature in black ink, appearing to be 'J. G. T.', is written over the signature line.



National Standards Commission

12 Lyonpark Road, North Ryde NSW

Supplementary Certificate of Approval

No S390

Issued 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

WF Energy Controls Model S/45 Current Transformer

submitted by WF Energy Controls
The Rydalmere Metro Centre
Unit 28, 38-46 South Street
Rydalmere NSW 2116.

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.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 October 2006, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No S390 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 Commission 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 the Commission's Document NSC P106.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 17 September 2001

- A WF Energy Controls model S/45 single ratio Class 0.5 ME 2 current transformer approved for use with compatible Commission-approved watt hour meters.

Variants: approved 17 September 2001

1. Certain other models of the S series.

Technical Schedule No S390 describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No S390 dated 29 October 2001
Technical Schedule No S390 dated 29 October 2001 (incl. Test Procedure)
Figures 1 to 3 dated 29 October 2001

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.



TECHNICAL SCHEDULE No S390

Pattern: WF Energy Controls Model S/45 Current Transformer.

Submittor: WF Energy Controls
Unit 28, 38-46 South Street
Rydalmere NSW 2116.

1. Description of Pattern

A WF Energy Controls model S/45 extended range window-type single ratio Class 0.5 ME 2 current transformer (Figure 1) approved for use with compatible Commission-approved watt hour electricity meters.

1.1 Field of Operation

- Rated current ratio 200/5
- Reference frequency 50 Hz
- Current range 5 to 400 A
- Rated burden 0.2 Ω @ 5 V A
- Rated voltage 660 V AC
- Rated short time current 40 kA for 0.5 s
- Reference ambient temperature ranges:
 - specified range of operation -10 to 60°C
 - limit range of operation -25 to 70°C
- Accuracy class 0.5 ME 2

1.2 Features/Options

The pattern has a coil window of 45 mm diameter. Instruments are fitted with either silver plated brass terminal studs (Figure 1) or brass tunnel terminals (Figure 2).

1.3 Markings

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark	...
Model designation	...
Serial number	...
Pattern approval mark	NSC No S390
Rated transformer ratio	...
Reference frequency	... Hz
Current range	... to ... A
Rated burden	... Ω
Rated voltage	... V AC
Temperature limits (if other than -10 to 60°C)	... to ...°C
Accuracy class	...

1.4 Verification/Certification

Provision is made for the application of a verification/certification mark.

1.5 Sealing Provision

The pattern is encapsulated in epoxy resin so no sealing is required.

2. Description of Variant 1

Certain other models of the S series having different features to the pattern, as listed below:

- With a coil window diameter of 32 mm in which case it is known as a model S/32 (Figure 3).
- With a V A rating of 10 V A in which case the model number has an 'A' suffix, namely either S/45A or S/32A.

Instruments have a rated burden of $0.2 \Omega @ 10 \text{ V A}$.

TEST PROCEDURE

Instruments tested for initial verification shall comply with the certificate of approval and technical schedule, and the maximum permissible errors for initial and subsequent verifications/certifications at the operating conditions in effect at the time of verification.

TESTS

Tests shall be carried out in accordance with the clauses listed below from Australian Standard AS 1675 – 1986 *Current transformers – Measurement and protection*:

- Clause 1.13.2 – Verification of terminal markings;
- Clause 1.13.5 – Voltage withstand: secondary winding(s) to earth;
- Clause 1.13.8 – Voltage withstand: between turns of the secondary winding; and
- Clause 2.8.2 – Routine tests.

FIGURE S390 - 1



WF Energy Controls Model S/45 Current Transformer

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FIGURE S390 - 2



Showing Brass Tunnel Terminals

FIGURE S390 - 3



WF Energy Controls Model S/32 Current Transformer