AS 1675—1986

Australian Standard®

Current transformers—Measurement and protection

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The following interests are represented on Committee EL/13:

Australian and Electrical and Electronic Manufacturers Association

CSIRO, National Measurement Laboratory

Electrical testing laboratories

Electricity Supply Association of Australia

Institution of Engineers, Australia

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PREFACE

This standard was prepared by the Association's Committee on Measurement and Protection Transformers, to supersede AS 1675—1974.

In the preparation of this standard, consideration was given to IEC 185, Current Transformers. Acknowledgement is made of the assistance received therefrom.

This edition differs substantially from IEC 185 as follows:

(a) *For measurement current transformers*. Although designations and classifications used are the same as in IEC, the CTs are quite different because the power factor of the test burdens, the limits of error, and the test conditions are substantially different.

(b) *For protection current transformers*. Although the requirements are similar, the designations are completely different (see Appendix H). Also the interturn overvoltage test on secondary windings is more arduous than IEC for certain CTs.

This edition differs from AS 1675—1974 as follows:

(i) Requirements for each class of current transformer (CT) are specified separately and directly.

(ii) For measurement CTs, accuracy requirements for Class ME are displayed in a similar format to those for Class M to facilitate comparison. Class ME is no longer referred to as 'extended range' (see Clause 2.3). For Class 1M CTs, limits of variations in current and phase errors have been deleted.

(iii) For protection CTs, the previously used terms 'low-reactance' and 'high-reactance', have been discarded as being misleading (see Clause 3.3). For Class PCTs, the designated (previously 'declared') composite error must now not be exceeded, however measured.

(iv) A warning is given concerning the use of a Class P CT on a protection scheme requiring good transient response. A Class PL CT is intended for such use (see Clause 3.3 and Appendix B, Paragraph B2.4).

(v) For Class PS CTs, three possibilities are recognized to allow for variations to Classes P and PL as well as for CTs not easily definable in that manner (see Clause 3.3).

(vi) Reference is made to updated standards on insulation coordination and high voltage testing techniques.

(vii) The symbol for voltage is now *U* in accordance with AS 1046, Part 1—1978. Previously it was *V*.

(viii) The measurement of partial discharges and their per-missible levels have been specified as a routine test for certain high-voltage current transformers (see Clause 1.13.10).

(ix) Methods for measuring radio influence voltage and for checking thermal stability are included but no limits are specified (see Clause 1.15).

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