

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Electrical measuring transducers for converting AC and DC electrical quantities to analogue or digital signals

Transducteurs électriques de mesure convertissant les grandeurs électriques alternatives ou continues en signaux analogiques ou numériques



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL MEASURING TRANSDUCERS FOR CONVERTING AC AND DC ELECTRICAL QUANTITIES TO ANALOGUE OR DIGITAL SIGNALS

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This edition includes the following significant technical changes with respect to the previous edition:

- a) updating normative references;
- b) updating definitions;
- c) updating structure;
- d) adding DC power measurement.

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INTRODUCTION

Energy distribution systems need to guarantee energy efficiency, availability, and network performance to address the following challenges:

- meet sustainable development requirements, where energy measurement is necessary to identify sources of energy savings, and to improve the energy performance of manufacturing, commercial organisations, and public services;
- adjust to technological evolutions (electronic loads, electronic measuring methods, etc.);
- address end-user needs (cost saving, compliance building regulations, etc.) regarding electrical energy management;
- ensure safety and continuity of service;
- adjust to the evolution of installation standards;
- meet the needs of new applications for DC systems (photovoltaic, electrical vehicle, DC distribution, etc.).

Monitoring electrical quantities in internal networks contributes to addressing these challenges.

To set up this monitoring, transducers:

- perform the measurement of different types of electrical quantities,
- convert AC and DC electrical quantities to analogue or digital signals,
- can be combined with measuring equipment to monitor and analyse electrical quantities.

NOTE Some of the terms used in this document are different from those used in IEC 60051 (all parts) due to the fundamental differences between indicating instruments and measuring transducers.