

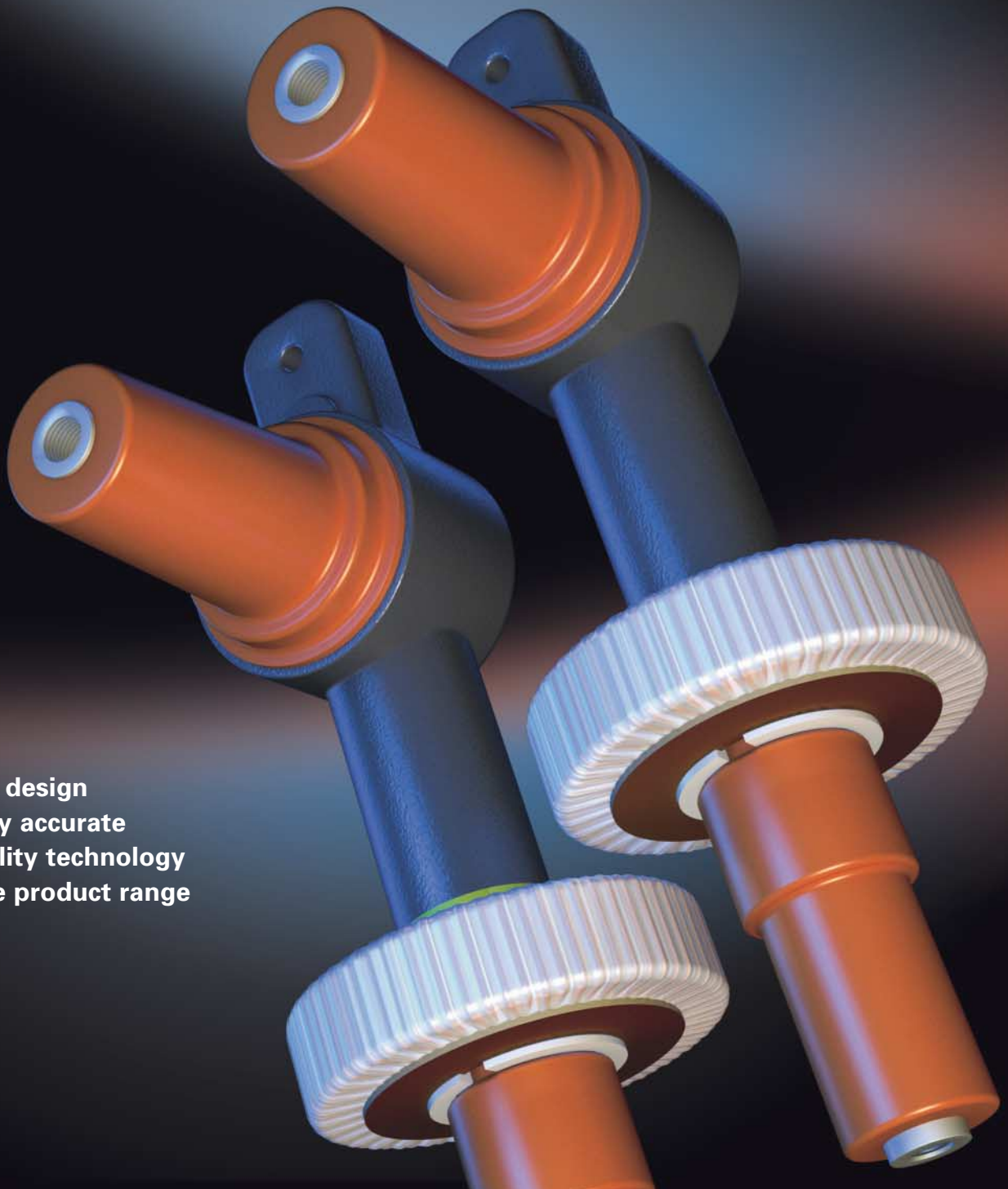


Current transformers type CTS

Product Focus

- Complying with IEC 60044-1, IEC 60298, IEC 60466 and IEC 60694

- Compact design
- Extremely accurate
- High-quality technology
- Extensive product range





In the liberalised energy market, it is of the highest importance to be able to determine the power consumption correctly. For MV switchgear this means that it must be possible to use current transformers with the required ratio, output and accuracy class. With the type CTS current transformers, which have been developed and are produced in-house, Eaton offers a trustworthy and reliable solution for almost every application. Eaton has already years of experience in the design and production of these current transformers.

Current transformers type CTS

High quality Eaton type CTS current transformers are of high quality and comply with all of the relevant requirements and are in accordance with the international standards. As the primary winding of the current transformer is functionally integrated in the primary part of the switchgear, the transformers are forming an integral component of the product design. The secondary coil is manufactured according to customer specification.

Flexible Eaton type CTS current transformers can be used in a very flexible way, because numerous combinations of measurement and protection can be realised. The result is that for almost every application the often extensive requirements in the area of transformation ratio, output and accuracy class can be realised.

Compact Thanks to a sophisticated combination of material selection, dimensions and method of wiring, almost all desired specifications can be realised within the available panel space. This means that irrespective of your requirements, no concessions need to be made to the desired functionality of the switchgear.

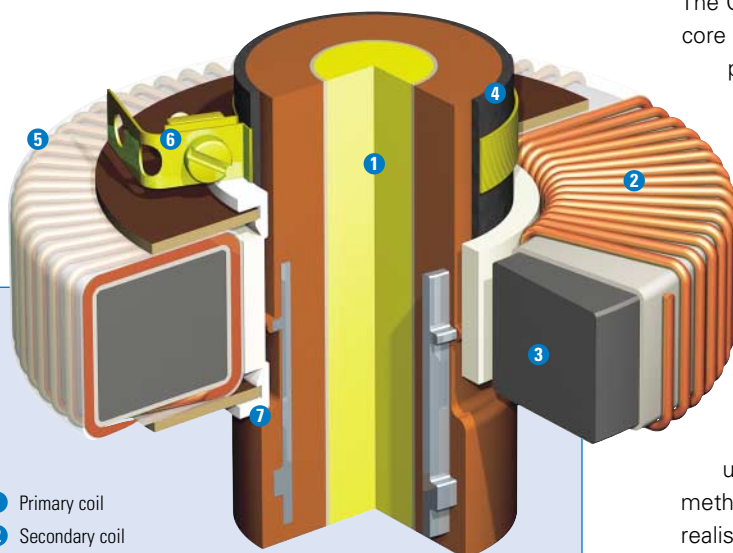
Application Eaton type CTS current transformers are used for measurement and protection in the Eaton Holec systems SVS/06, SVS/08 and SVS/12, MMS single and double busbar, High Voltage Capitole and in the Magnefix circuit breaker unit.



Compact and Accurate

Details

The CTS current transformers consist of a primary coil, core material and one or more secondary coils. The primary coil consists of a silver-plated copper conductor that is completely epoxy resin insulated and is electrically screened with a thin earthed layer of conducting material. Because of this principle the electrical field is blocked and only the magnetic field is used for transformation. The primary coil is functionally integrated in the primary part of the switchgear. If required, use can be made of a primary coil with one or more windings, depending on the panel type and the desired specifications. The secondary coil consists of core material and copper windings. By using various types of core material and various methods of winding, a wide range of specifications can be realised, both for measurement and protection. For instance, Eaton uses different core materials for protection and measurement applications.



- 1 Primary coil
- 2 Secondary coil
- 3 Core material
- 4 Earthed layer
- 5 Insulation
- 6 Earth connection
- 7 Fixation ring



Current transformers type CTS as used in Innovac SVS.



Current transformer type CTS as used in Innovac MMS.

Wound primary type current transformers

Eaton type CTS current transformers with a wound primary are used for special applications in the Innovac SVS and High Voltage Capitole systems. Here the primary coil is executed with two or more windings, resulting in a higher accuracy class achieved at lower transformation ratios. This wound primary is suitable for the use of a various number of secondary coils per current transformer.



Wound primary type current transformers.

Guaranteed and registered quality

The quality of the CTS current transformers is guaranteed in accordance with ISO 9001. KEMA Registered Quality checks this quality assurance system on a regular base. The accuracy class of the type CTS current transformers can be traced, using the certification diagram as shown here, in which the accuracy class is guaranteed through calibration at KEMA in Arnhem, the Netherlands. This certification can be traced internationally via the Dutch Council for Accreditation to the international European co-operation Accreditation of Laboratories (E.A.L.). Type CTS current transformers are tested in accordance with the Hohle-bridge principle, in which the transformation ratio and accuracy class per unit is checked during routine testing. All measurement values are recorded and processed by an automated system. The measurement reports can be made available on request.

EAL European co-operation Accreditation of Laboratories
RvA Raad van Accreditatie (Dutch council for accreditation)
ZERA Accreditation nr. DKD-K-23801
Eaton Electric B.V. Measuring bridge 84243

Technical specifications

Rated primary currents (A)	25, 30, 40, 50, 60, 75, 100, 125, 150, 200, 250, 300, 400, 500, 600, 750, 1000, 1250, 1500, 2000, 2500, 3000, 4000
Rated secondary currents (A)	1, 5
Rated output (VA)	2.5, 5, 7.5, 10, 15, 30
Class	0.2, 0.2S, 0.5, 0.5S, 1, 3, 5P, 10P
Instrument security factor	Fs5, Fs10
Accuracy limit factor	5, 10, 15, 20, 30
Rated frequency (Hz)	50/60
Rated insulation levels (kV)	3.6/10/40, 7.2/20/60, 12/28/75, 17.5/38/95, 24/50/125
Short-time thermal current (kA/s)	16/1, 16/2.5, 20/1, 20/2.5, 25/1, 25/3, 31.5/1, 31.5/3
Rated dynamic current (kA)	40, 50, 63, 79

Combinations should be specified separately.

Standards

Eaton current transformers type CTS are type-tested complying with the international standard IEC 60044-1. In addition, the primary coils – as part of the primary design of the switchgear – comply with the international standards as formulated in IEC 60298, IEC 60466 and IEC 60694.

More information

Specifications of transformer ratio, output and accuracy class are varying for every application. Because of this reason, current transformers are specified on customer demand. We will be pleased to advise you about the possible applications.



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