

AccuRange™ current transformers

High accuracy, extended range current transformers

ABB's AccuRange current transformers offer improved accuracy and an extended range beyond that of traditional current transformers, providing savings through higher accuracy metering and reduced inventory requirements.

Overview

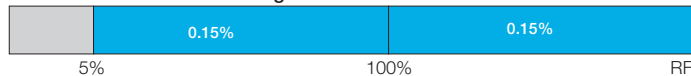
With the introduction of the newly designed AccuRange current transformers, ABB is the industry leader in metering accuracy for dry-type current transformer (CT) applications. These low voltage, high accuracy current transformers, designed for secondary revenue metering applications, deliver high accuracy and stable performance over a wide load swing, making them a great fit for variable load applications. Accuracy is guaranteed to meet the IEEE 0.15S accuracy class of 0.15% from 5% of nominal current through rating factor.

AccuRange current transformers can help utilities save money by preventing metering losses, reducing inventory and part numbers, and avoiding stockouts.

IEEE metering accuracy definition

IEEE has five accuracy classes, consisting of three metering classes and two less accurate indicating classes, to help utilities better understand the accuracy levels of instrument transformers. ABB exceeds the highest recognized accuracy class with many of our current transformers. The standard three metering accuracy classes, defined by IEEE C57.13, are illustrated below.

Class 0.15S - ABB's AccuRange current transformers



Class 0.15



Class 0.3 revenue grade



Savings calculations

The table below is provided for calculating potential savings when using ABB's AccuRange current transformers versus standard revenue grade current transformers.

Potential savings calculation

A	Annual energy bill (\$)	
B	Time (%) above nominal current	
C	Time (%) below nominal current	
D	$(A * B) * .0015$	
E	$(A * C) * .0045$	
D+E	Potential annual revenue improvement (\$)	

AccuRange™ portfolio of products

The AccuRange portfolio consists of the CMV-S, CBT-S, and CMF-S. All three units have a urethane insulating material that is permanently molded to the core and coil assembly, resulting in compact units with improved mechanical, thermal, and dielectric characteristics.

CMV-S

The CMV-S current transformer is designed for pad-mounted distribution transformer metering. Designed for metering on 600 volt systems inside high ambient temperature environments up to 85°C, it can be mounted directly upon the energized busbar. The CMV-S also offers protection when in contact with the mounting bolts for the bus bar by extending the window liner to the back of the transformer. A single 1000:5 ratio unit will perform at the 0.15S metering class from 50A - 2000A for extended range metering.

CBT-S

The CBT-S bar-type current transformer is designed for use in metering 600 volt circuits, typically installed inside of a transocket. Applicable to single or polyphase low voltage circuits, a single 600:5 ratio unit will perform at the 0.15S metering class from 30A - 1200A for extended range metering.

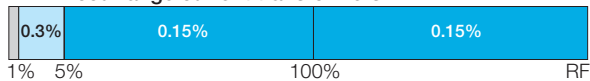
CMF-S

The CMF-S current transformer is used with watt-hour meters, with or without thermal demand attachments. Applicable to single or polyphase low voltage circuits, a single 600:5 ratio unit will perform at the 0.15S metering class from 30A - 1200A for extended range metering.

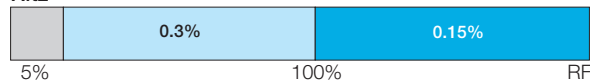
Competitive comparison

The illustration below compares ABB's AccuRange current transformers to the units of competitors.

ABB AccuRange current transformers



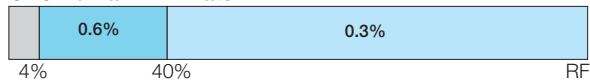
Ritz



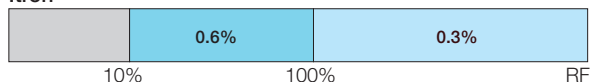
GE Encompass



GEC Durham Eliminator



Itron



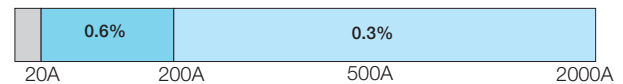
Competitive comparison (cont'd)

When comparing ABB's CMV-S to GE's equivalent Encompass model, ABB's AccuRange current transformers are much more accurate over a wider range. The higher accuracy over a wide range, provided by AccuRange current transformers, is especially important for low load applications where utilities are susceptible to losing money.

ABB AccuRange current transformer (CMV-S) 1000:5



GE Encompass 500:5



When comparing ABB's CMV-S to a similar high accuracy unit made by Ritz, both units have the same range; however, ABB excels at low load applications where revenue is typically lost.

ABB AccuRange current transformer (CMV-S) 1000:5



Ritz 1000:5



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