



# RITZ INSTRUMENT TRANSFORMERS, INC.

Instrument Transformers

## Low-Voltage Extended-Range Current Transformers (ERCTs)

### Overview

Ritz has long been regarded as the industry leader in providing cutting-edge metering accuracy performance for instrument transformers. In the 1990's, Ritz introduced the Medium-Voltage Extended-Range Current Transformer (MV ERCT). This technology is now available in the Ritz Low-Voltage CT offering for utility metering applications.

The Ritz ERCT design offers 0.15% accuracy performance from 1% nominal current up to the rating factor. This performance surpasses all of the metering accuracy classes defined under IEEE and CSA.

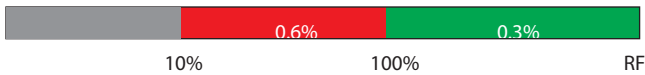
### Applications

Since CT error gets more negative as the current level decreases, having better accuracy performance at lower current levels can result in less lost revenue at instrument-rated metering points. Also, the wider than normal current range of the Ritz ERCT offers the opportunity for users to drastically reduce the number of different ratios needed for a given style CT, thus reducing the amount of inventory needed to respond to customer demands.

### Accuracy Class Definitions

The historical revenue metering class is 0.3 and in recent years, standards have defined high-accuracy revenue metering classes of 0.15 and 0.15S. The Ritz ERCT rating offers better accuracy down to lower currents than any standard defined accuracy class.

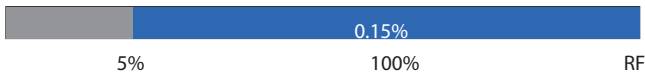
#### Class 0.3 - Revenue Accuracy



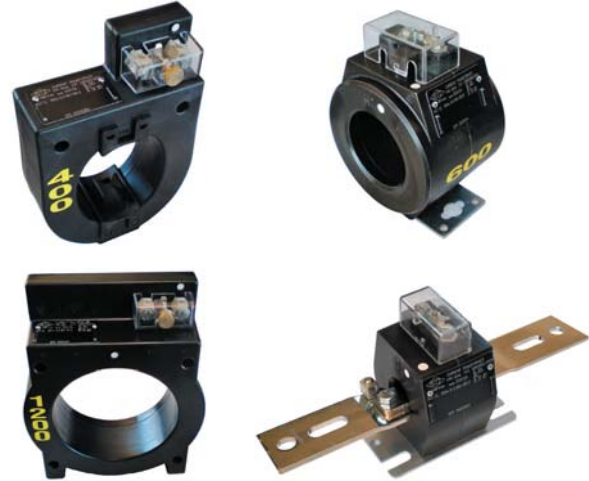
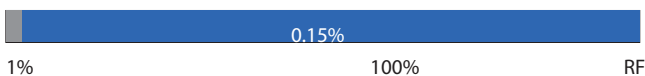
#### Class 0.15 - High Accuracy



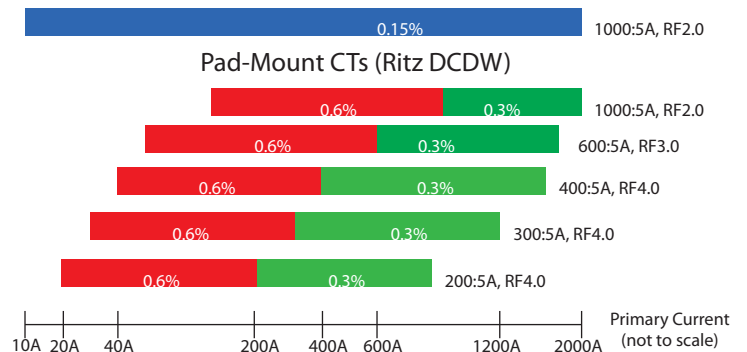
#### Class 0.15S - High Accuracy



#### Ritz Extended-Range (ERCT)



### Example of Ritz ERCT Consolidation



### Advantages

- Increases revenue due to more accurate and wider range
- Reduction of inventory levels
- Consolidation to 1 or 2 ratios per CT type
- Standardization of meter multipliers
- Reduces chance of incorrect CT sizing
- Eliminates the need for dual-ratio designs

**DCAW/B**

The DCAW/B is for use in 600V metering circuits, normally in an enclosure or transocket. This unit can be purchased as a window-type (W) or a bar-type (B). The DCAW/B ERCT design is offered with a 600:5A ratio offering 0.15% performance from 6A up to 1200A.

Ratings: 600:5A, 0.15S B0.2, 6A to 1200A, RF2.0 @ 30C (RF1.5 @ 55C)

Type	Catalog Number	Feature
DCAW	110601001.0810	No Base
DCAW	110601002.0811	Low Base
DCAW	110601003.0812	High Base
DCAB	110601001.0813	No Base
DCAB	110601002.0814	Low Base
DCAB	110601002.0815	High Base

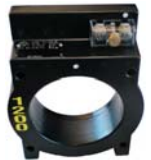


**DCEW/B**

The DCEW/B is for use in 600V metering circuits, normally in an enclosure or in switchgear. This unit can be purchased as a window-type (W) or a bar-type (B). The DCEW/B ERCT design is offered with a 2000:5A ratio offering 0.15% performance from 20A up to 4000A.

Ratings: 2000:5A, 0.15S B0.9, 20A to 4000A, RF2.0 @ 30C (RF1.5 @ 55C)

Type	Catalog Number	Feature
DCEW	110601012.0816	Without Mounting Bracket
DCEW	110601012.0817	With Mounting Bracket
DCEB	110601012.0818	Without Mounting Bracket
DCEB	110601012.0819	With Mounting Bracket



**DCCW/B**

The DCCW/B is for use in 600V metering circuits, normally in an enclosure or for overhead services. This unit can be purchased as a window-type (W) or a bar-type (B). The DCCW/B ERCT design is offered with a 600:5A ratio offering 0.15% performance from 6A up to 1800A.

Ratings: 600:5A, 0.15S B0.5, 6A to 1800A, RF3.0 @ 30C (RF2.2 @ 55C)

Type	Catalog Number	Feature
DCCW	110601007.0800	No Base
DCCW	110601008.0801	Low Base
DCCW	110601009.0802	High Base
DCCW	110601010.0803	Wide Base
DCCB	110601007.0804	No Base
DCCB	110601008.0805	Low Base
DCCB	110601009.0806	High Base
DCCB	110601010.0807	Wide Base



**DCDW**

The DCDW is for use in 600V metering circuits, normally in pad-mount distribution transformers. This unit is available in a 500:5A, 1000:5A, or 2000:5A ratio with 0.15% performance from 1% Inom to RF.

Ratings: 500:5A, 0.15S B0.2, 5A to 2000A

Type	Catalog Number	Feature
DCDW	0601011.0832 - RF4.0 @ 30C (RF3.0 @ 55C)	
DCDW	0601011.1133 - RF4.0 @ 85C	

Ratings: 1000:5A, 0.15S B0.5, 10A to 2000A

Type	Catalog Number	Feature
DCDW	110601011.0808 - RF2.0 @ 30C (RF1.5 @ 55C)	
DCDW	110601011.0809 - RF2.0 @ 85C	



Ratings: 2000:5A, 0.15S B0.5, 20A to 4000A

Type	Catalog Number	Feature
DCDW	110601011.0822 - RF2.0 @ 30C (RF1.5 @ 55C)	
DCDW	110601011.0823 - RF1.5 @ 85C	

**Comparison to Competitor Designs**

The following is a comparison to offerings from other manufacturers based on the printed literature.

The Ritz ERCT design offers 0.15% accuracy performance down to 5 times lower current levels than the ABB AccuRange design.

Ritz ERCT - DCDW 1000:5A

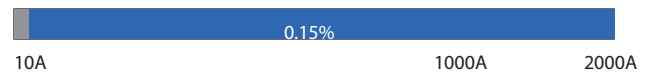
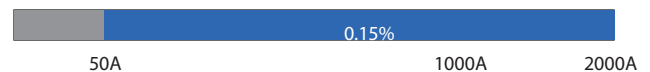
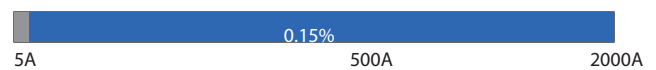


ABB AccuRange - CMV-S 1000:5A

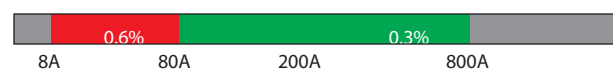


The Ritz ERCT design is more accurate across a wider range than the GE Encompass design and the GEC Durham Eliminator design. The ERCT accuracy performance is rated 4 times better at low current levels where customers tend to lose the most revenue.

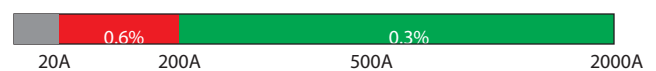
Ritz ERCT - DCDW 500:5A ERCT



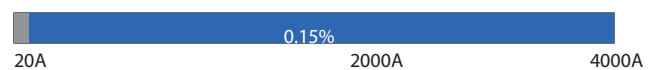
Durham Eliminator 200:5A



GE Encompass / Durham Eliminator 500:5A



Ritz ERCT - DCDW 2000:5A ERCT



GE Encompass / Durham Eliminator 1500:5A



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