

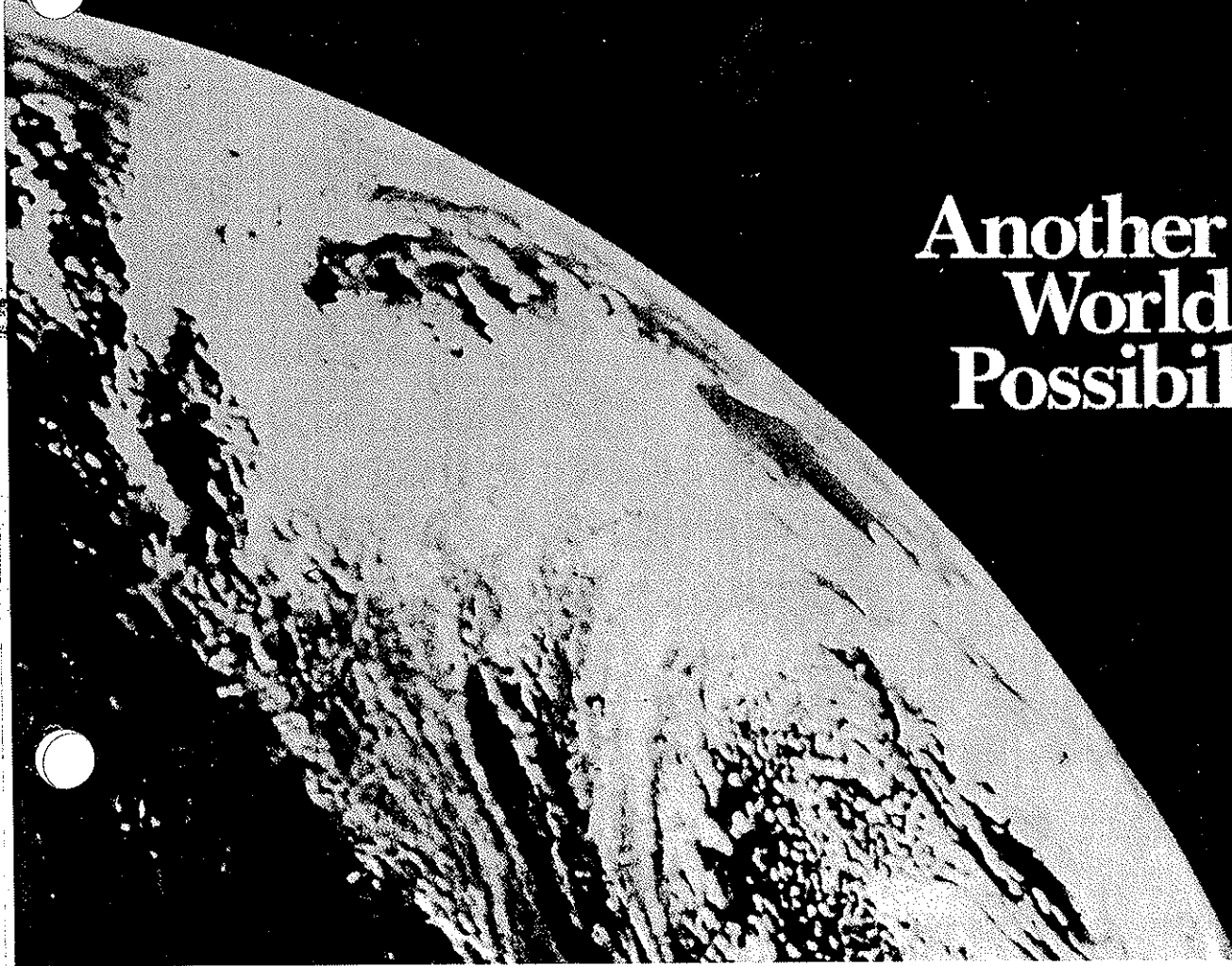


GE Instrument Transformers

**ACCTTM
BUTE**

**Instrument
Transformers**

**Another New
World of
Possibilities**



The Next Generation of 15KV Current & Voltage Transformers.

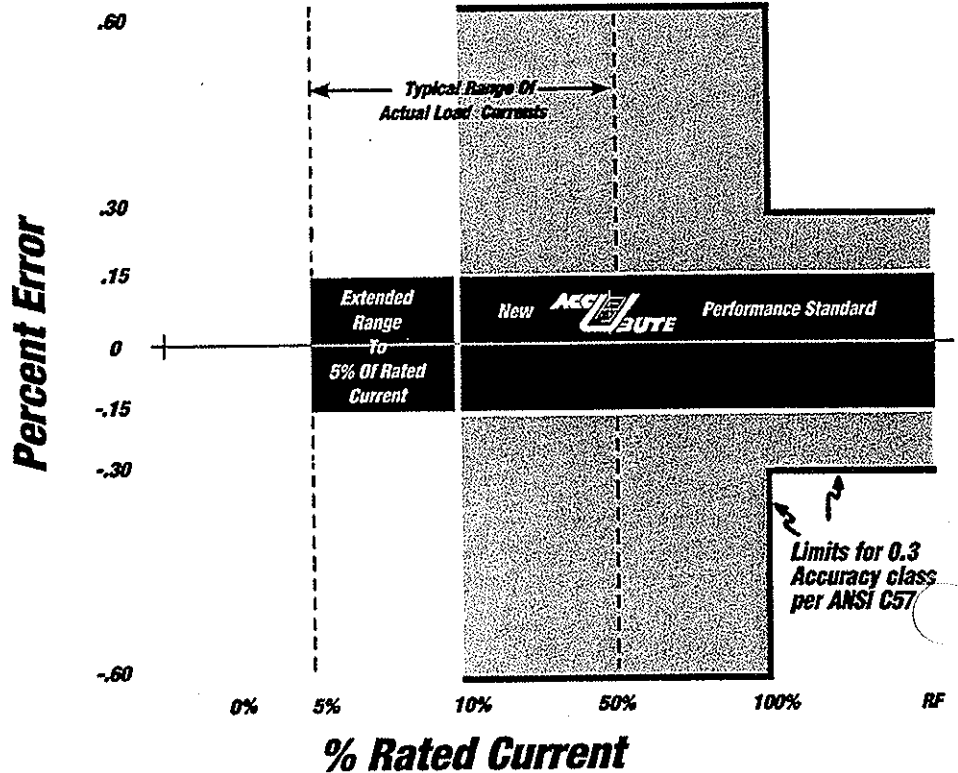
Extended operating range with GE's enhanced Accubute instrument transformer performance—the ideal match for use with today's electronic energy meters.

Solid State energy meters are significantly better than their electromechanical counterparts in terms of long term accuracy over wider dynamic operating ranges . . . which in turn creates a need for current transformers with wider dynamic operating ranges. GE's Accubute instrument transformer products provide the solution. Let's take a closer look.

Conventional 0.3 accuracy class CT's are designed to have optimum performance ($\pm 0.3\%$ error) at their rated current through their continuous thermal current rating factor (RF). But a typical metering application underutilizes the CT, where actual loads are less than 50% of rated and the required ANSI C57.13 accuracy drops to $\pm 0.6\%$ error. When the load current goes below 10% of rated, such as can happen during "off peak" periods or on cogeneration applications, there are no ANSI performance requirements at all, and CT errors are likely to be 1%–3%, and can be much worse.

GE's new Accubute CT's are designed for optimum performance over a much wider operating range . . . 5% of rated current through the rating factor, all the while maintaining $\pm 0.15\%$ error over this entire range! This enhanced performance now makes it possible to meter even the lightest of loads with the best accuracy available in the industry.

ACCUBUTE CT Performance



ACCUBUTE

Instrument Transformers

Certificate of Test

GE certifies that this instrument transformer has received insulation and accuracy tests, and that it is satisfactory for the rated ANSI C57.13 insulation level and accuracy classes. In addition, this unit is certified to meet GE's enhanced ACCUBUTE accuracy standard. The data presented are traceable to the National Institute of Standards and Technology.

Roger W. Lashane

Mgr. Quality Control
Meter and Control Business
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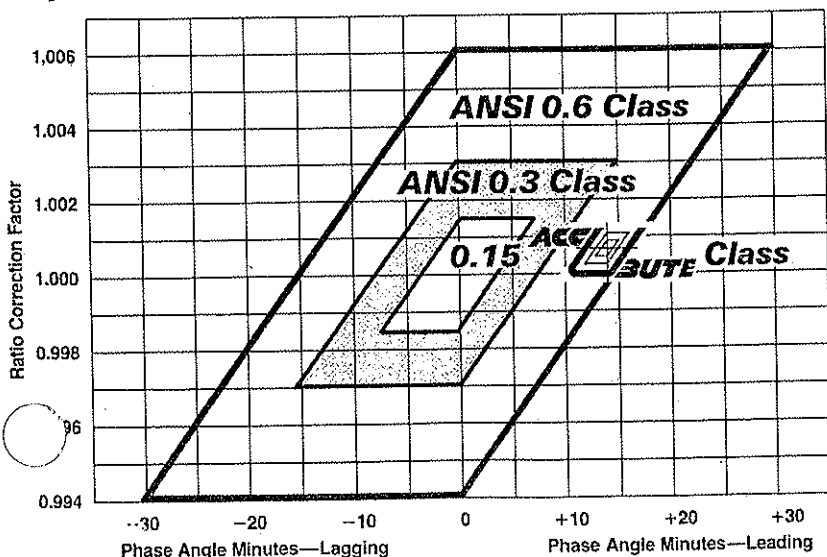
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Best accuracy in the industry with GE's certified 0.15% performance

GE's enhanced Accubute accuracy standard provides that the ratio and phase error of each Accubute instrument transformer product will be no greater than $\pm 0.15\%$ of rated current or voltage, which is **better than the best ANSI standard accuracy class in existence today**. This **state of the art** performance allows better energy measurement for your utility, which directly translates to more equitable revenue metering. In essence, it better assures that your utility company gets paid for the energy it produces.

Consider this comparison of the conventional ANSI C57.13 accuracy classes to the new 0.15 class for Accubute instrument transformers.

As you can see in the diagram below, GE's new Accubute instrument transformer accuracy class gives **two times better performance than the best ANSI accuracy class and four times better than the ANSI 0.6 class!** And for current transformers in particular, this 4:1 improvement means **significant** improvement in your overall energy metering resolution because most conventional 0.3 class CT's are applied well below their rated current, where their ANSI required performance at reduced currents can be 0.6. If the applied current is below 10% of rating, there are no ANSI requirements on performance at all!



Comparison of new 0.15 Accubute class to ANSI 0.3 and 0.6 classes

Pays for itself and then some

Each 0.1% improvement in metering resolution can have significant impact on revenues. Consider this example of a typical metering installation, where the resulting impact is over \$700 per year.

CT LOAD: 50% of rated current for 16 hours per day, 5 days per week, 5% of rated current for the balance of the time.

System: 4 wire Y, 3 phase 14,400 volts

CT rating: 200:5 amperes

Line power factor: 0.9

Energy price \$0.07/kwhr

Difference in energy metered for $\pm 0.1\%$ CT error: 872.809 kwhr/month; 10,473.708 kwhr/year

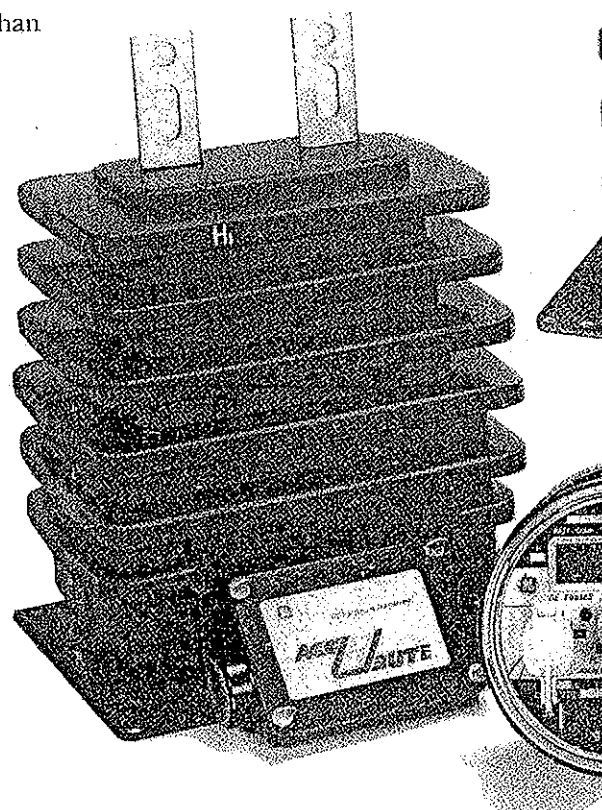
Energy cost for 0.1 improvement in resolution: \$61.09/month; \$733.08 per year

Had the CT rating been 800:5, instead of 200:5, the impact would have been \$2,932.32 per year!

Furthermore, if you consider the total annual dollar impact across your entire system, it's easily seen that using Accubute instrument transformer products can more than justify their cost in no time at all.

Building Block for the Future

The way of the future is to use the new electronic meters on more and more metering installations. And what better CT's and VT's to use with these meters than the new Accubute instrument transformer products. The cost of CT's and VT's is so little, compared to the revenue they bring in for your utility, isn't it worth putting in the best? Even if you don't plan to use the new EV meter just yet, you're still going to need to use CT's and VT's. Then, when you do upgrade to the new meters in the future, the building blocks for the "state of the art" metering are already in place—no need to changeout the old CT's and VT's for the new—as long as you start now by using GE's new Accubute instrument transformers on each and every new installation. Then all you need to do is changeout the new meter for the old when the time is right, or when new rates require, or your budget allows.





Benefits


- Accuracy matched to today's electronic meters
- Improved equity in billing at all loads especially light loads
- Ideal for all metering applications including cogeneration applications
- Certified accuracy over a much wider operating range
- Easily beats ANSI standards
- Helps improve revenue

Begin updating your system today—Accubute Transformers pay for themselves...and then some

ACCUBUTE INSTRUMENT TRANSFORMER PRODUCT SPECIFICATIONS

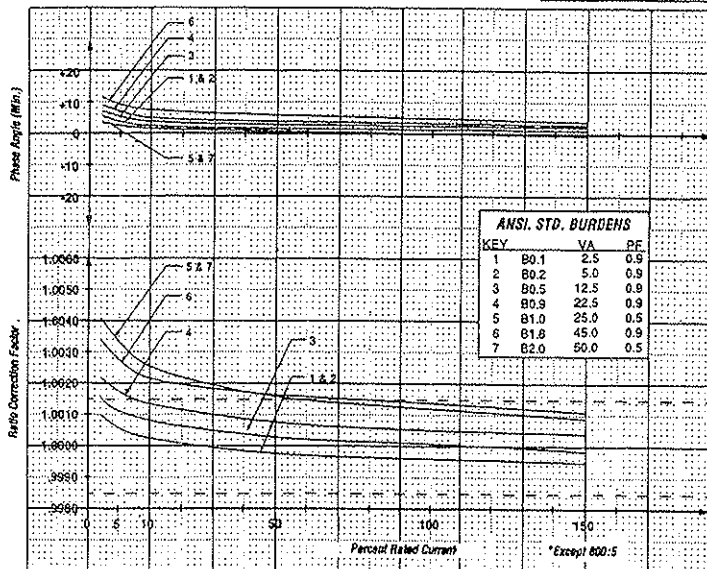
Current Transformers

Available Ratings	Type	Rating Factor 30°C	Catalog Number
5:5	JKW-5A	1.5	755X053101
10:5	JKW-5A	1.5	755X053102
15:5	JKW-5A	1.5	755X053103
20:5	JKW-5A	1.5	755X053104
25:5	JKW-5A	1.5	755X053105
30:5	JKW-5A	1.5	755X053106
40:5	JKW-5A	1.5	755X053107
50:5	JKW-5A	1.5	755X053108
75:5	JKW-5A	1.5	755X053109
100:5	JKW-5A	1.5	755X053110
150:5	JKW-5A	1.5	755X053111
200:5	JKW-5A	1.5	755X053112
250:5	JKW-5A	1.5	755X053113
300:5	JKW-5A	1.5	755X053114
400:5	JKW-5A	1.5	755X053115
600:5	JKW-5A	1.5	755X053117
800:5	JKW-5A	1.2	755X053118
1200:5	JKW-5A	1.0	755X053120


Current Transformer Type **JKW-5A** Ratio **400:5**
 BIL 110 KV NSV 14.4 KV 60 Hz
 RF @ 30C Amb = 1.5 Acc: 5% Thru RF: 6.15 B-0.1 - B-0.5
 Acc Cl: 0.3 B-0.1 - B-1.8 Cat 755X053 115
 General Electric Co. Somersworth, NH
ACCUBUTE
 Made in U.S.A.
 Caution: Read GEH-230 Ser 97688888

Characteristic Ratio And Phase Angle Curve

This curve applies only for 5-1200:5 ratio.




All ratings: 14.4KV NSV 110KV BIL
 0.15 Accuracy @ BO.1-BO.5 for 5% rated
 current thru rating factor
 0.3 ANSI Accuracy Class @ BO.1-B1.8 60HZ

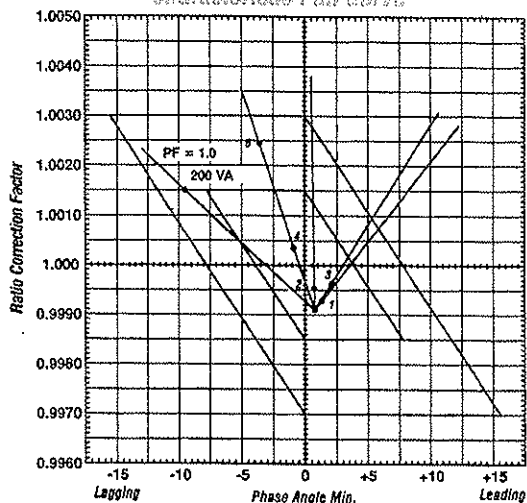
Voltage Transformers

Available Ratings	BIL	Type	Catalog Number
4800:120V	110KV	JVW-5A	765X032041
7200:120V	110KV	JVW-5A	765X032042
7620:120V	110KV	JVW-5A	765X032043
8400:120V	110KV	JVW-5A	765X032044
12000:120V	110KV	JVW-5A	765X032045
14400:120V	110KV	JVW-5A	765X032046
7200:120V*	110KV	JVW-5A	765X032051
8400:120V*	110KV	JVW-5A	765X032052
2400:120V	75KV	JVW-4A	764X031041
4200:120V	75KV	JVW-4A	764X031042
4800:120V	75KV	JVW-4A	764X031043
7200:120V	75KV	JVW-4A	764X031044

*Single bushing design


Voltage Transformer Type **JVW-5A** Ratio **63.5:1**
 BIL 110 KV Pri Volts 7620
 1500 VA @ 30C Amb 50 Hz Acc: 0.15 W, X, M, Y.
 Acc Cl: 0.3 W Thru Z Cat 765X032 043
 General Electric Co. Somersworth, NH
ACCUBUTE
 Made in U.S.A.
 Caution: Read GEH-230 Ser 97688888

Characteristic Fan Curve



KEY	BURDEN
1	W
2	X
3	M
4	Y
5	Z
6	ZZ

All ratings: 0.15 Accuracy @ W, X, M, Y
 0.3 ANSI Accuracy Class @ W, X, M, Y, Z
 1500VA 60HZ



GE Meter & Control