

# VerifEye™ Series 1000 Single Phase Meter Kits

## Submetering Solutions for Accurate Measurement & Verification



- kWh meter and optional demand reset
- 100 - 800 Amps
- Pulse output—standard features
- Large LCD display
- Kit includes submeter and required Current Transformers (CTs)

### DESCRIPTION

The Leviton VerifEye™ Series 1000 line of revenue-grade meters meets all measurement and verification-based opportunities including load management and LEED rating achievement. Designed to provide a simple and effective process for accurately capturing measurements of power consumption, Series 1000 Meters are easy to specify and install for new construction and retrofits.

Leviton meters utilize highly accurate current transformers for revenue-grade performance certified to ANSI standards. Competing products use current sensors that do not provide the same level of performance. Leviton offers CTs in solid and split core styles to accommodate all phases of installation and construction.

Solid core CTs are ideal for new construction, when power is not live and wires can easily be threaded through the core. Split core CTs can be installed at any time without having to disconnect wire terminations, making them the optimal choice for retrofitting an existing structure.

Split core CTs close securely for fast, precise installation with no need for time-consuming tie wraps and no worries about improper seating or core half separation. Both solid and split core CTs offer high quality, long term accuracy and reliability.

Every Series 1000 Meter has an installer-friendly feedback feature. The red reverse phase indicator acts as an installation diagnostics tool and illuminates if a meter is improperly installed. After installation, the green duty cycle light shows that the meter is collecting the electrical consumption data at the appropriate rate. All 100 and 200 Amp solid core CTs have color-coded labels to easily identify correct line/load orientation.

### APPLICATIONS

Use Series 1000 Meters in commercial, institutional, industrial and government applications for:

- Load profiling and benchmarking
- AMR/BAS/BMS/EMS integration
- Usage aggregation
- Tenant cost allocation
- Measurement and verification
- Energy conservation and cost reduction
- Green building initiatives and government mandates

## PRODUCT DATA

### FEATURES

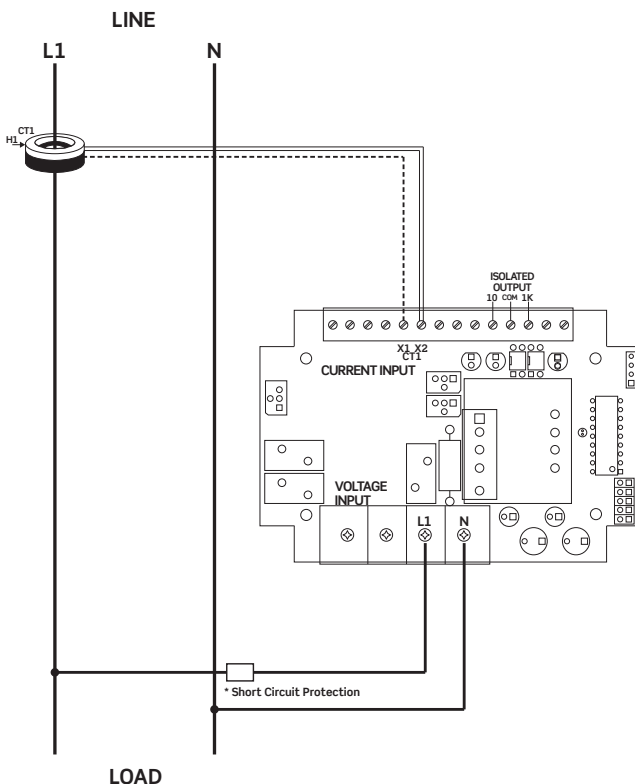
- Measures kWh and peak demand (optional)
- Conforms to all applicable standards of ANSI C12.1
- Equipped standard with an Isolated Pulse Output channel for easy AMR/BAS/BMS/EMS interface
- Utilizes either revenue-grade 0.5% accuracy class 0.1A secondary solid core current transformers (CTs) that conform to all applicable ANSI requirements or 1.0% accuracy split-core CTs
- Up to three sets of CTs per phase can be paralleled per meter without the need for a meter multiplier
- Enclosure options include surface mount industrial grade JIC steel indoor and NEMA 4X outdoor
- Interfaces with numerous communication systems
  - Hardwired Automatic Meter Reading (AMR) or wireless AMR
- Large LCD display shows kWh and optional peak and instantaneous kW with Demand Reset
- Load Indicator LED verifies meter functionality
- Reverse Phase Indicator LED illuminates if the meter is improperly installed
- CT lead length maximum: 48"
- UL/cUL Listed Energy Usage Monitor per CCN FTRZ
- Ten year warranty

### CONFIGURATIONS\*

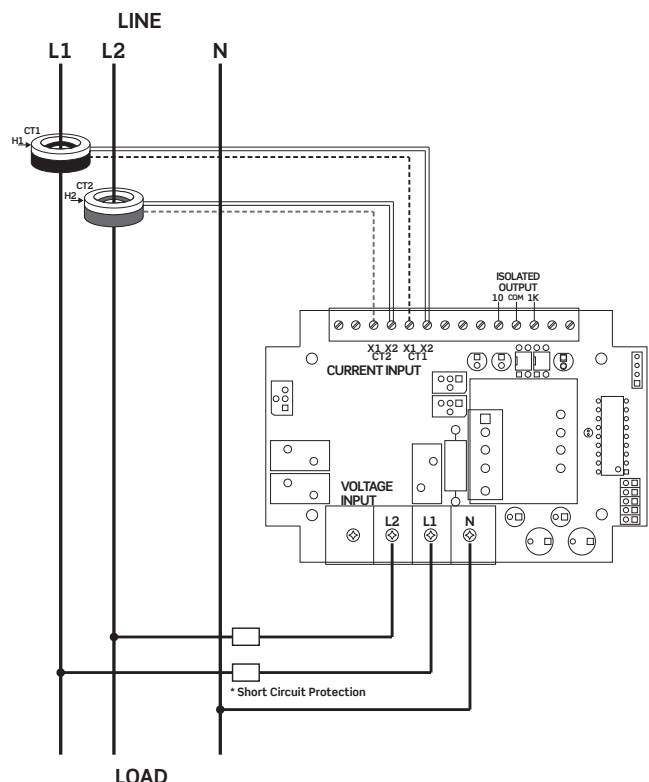
AMPERAGES	PHASE/VOLTAGES
100-800A	1Ø/2W-120V
100-800A	1Ø/3W-120/208/240V
100-800A	1Ø/2W - 277V
100-800A	1Ø/3W - 277/480V

\* Contact factory for non-US voltage configurations.

### SINGLE ELEMENT SERIES 1000 HOOKUP DIAGRAM

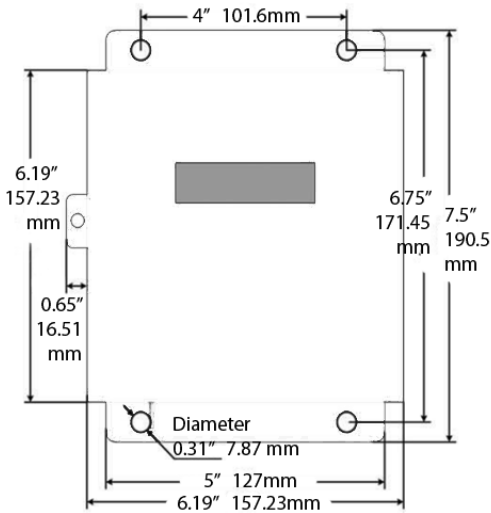


### DUAL ELEMENT SERIES 1000 HOOKUP DIAGRAM

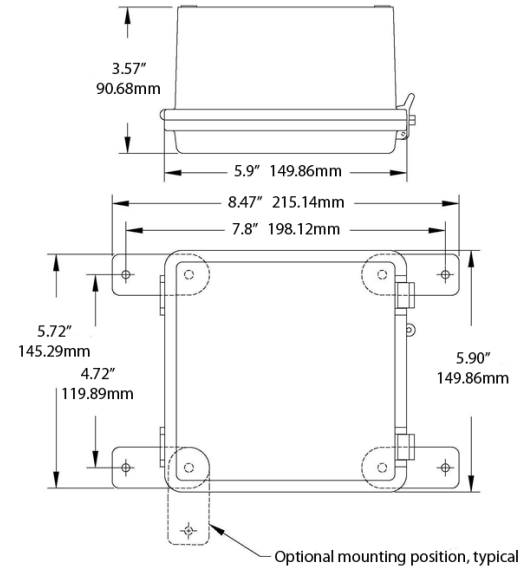


Leviton recommends solid core transformers (CTs) for revenue-grade accuracy. Our 100A and 200A color coded CTs assist with correct installation by indicating phase monitored. Split core CTs are also available upon request for applications where power cannot be interrupted during installation. Our 100-800 Amp Split Core CTs offer +/-1.0% accuracy.

**DIMENSIONS  
INDOOR ENCLOSURE**



**OUTDOOR ENCLOSURE**



**ORDERING INFORMATION**  
**Series 1000 Single Phase Meter Kits - Indoor Enclosure**

**NOTE:** All kits include meter, specified enclosure and Current Transformers (CTs)

Voltage	Amps	CTs Included	Leviton P/N
120V 1 PH 2 W	100	1 Split CT	1K120-01W
	200	1 Split CT	1K120-02W
	400	1 Split CT	1K120-04W
	800	1 Split CT	1K120-08W
	100	1 SOLID CT	1K120-1SW
	200	1 SOLID CT	1K120-2SW
120/208V 1 PH 3 W or 120/240V 1 PH 3 W (Split Phase)	100	2 Split CTs	1K240-01W
	200	2 Split CTs	1K240-02W
	400	2 Split CTs	1K240-04W
	800	2 Split CTs	1K240-08W
	100	2 SOLID CTs	1K240-1SW
	200	2 SOLID CTs	1K240-2SW
277V 1 PH 2W	100	1 Split CT	1K277-01W
	200	1 Split CT	1K277-02W
	400	1 Split CT	1K277-04W
	800	1 Split CT	1K277-08W
	100	1 SOLID CT	1K277-1SW
	200	1 SOLID CT	1K277-2SW

## PRODUCT DATA



### ORDERING INFORMATION, CONT'D

#### Series 1000 Single Phase Meter Kits—Outdoor Enclosure

Voltage	Amps	CTs Included	Leviton P/N
120V 1 PH 2 W	100	1 Split CT	10120-01W
	200	1 Split CT	10120-02W
	400	1 Split CT	10120-04W
	800	1 Split CT	10120-08W
120/208V 1 PH 3 W or 120/240V 1 PH 3 W (Split Phase)	100	2 Split CTs	10240-01W
	200	2 Split CTs	10240-02W
	400	2 Split CTs	10240-04W
	800	2 Split CTs	10240-08W
277V 1 PH 2 W	100	1 Split CT	10277-01W
	200	1 Split CT	10277-02W
	400	1 Split CT	10277-04W
	800	1 Split CT	10277-08W

#### Series 1000 Single Phase Standalone Meters

**NOTE:** Current Transformers (CTS) sold separately - see Current Transformers product data sheet for ordering information.

Voltage	Leviton P/N*
<b>INDOOR SINGLE ELEMENT METER, 1PH 2W</b>	
120V	1N120-xxx
277V	1N277-xxx
<b>INDOOR DUAL ELEMENT METER, 2PH 3W</b>	
120/208/240V	1N240-xxx
277/480V	1N480-xxx
<b>OUTDOOR SINGLE ELEMENT METER, 1PH 2W</b>	
120V	1R120-xxx
277V	1R277-xxx
<b>OUTDOOR DUAL ELEMENT METER, 2PH 3W</b>	
120/208/240V	1R240-xxx
277/480V	1R480-xxx

\* When ordering a Series 1000 Standalone Meter, replace xxx with the following to indicate amperage ratings:

- 011: 100:0.1A, Max 100A
- 021: 200:0.1A, Max 200A
- 041: 400:0.1A, Max 400A
- 081: 800:0.1A, Max 800A
- Demand Option (for indoor models only): replace the last digit in the suffix with a "D"

The following products are also part of the Leviton line of integrated metering solutions:

Series 2000 Meters	Mini Meters
Series 3500 Meters	Multiple Meter Units (MMUs)
Series 4000/4100 Meters	Current Transformers (CTs)
Series 8000 Meters	Energy Monitoring Software and Hardware
EMH+ Meter & Hub	

# Current Transformers

## Submetering Solutions for Accurate Measurement & Verification



### DEFINITION

Leviton Current Transformers (CTs) support our full line of VerifEye™ revenue-grade meters and help meet all measurement and verification-based opportunities—including smart metering and LEED rating achievement. Designed as part of a simple and effective process for accurately capturing measurements of power consumption, CTs are easy to specify and install for new construction and retrofits.

The better the equipment, the better the measurement. Leviton meters utilize highly accurate current transformers for revenue-grade performance certified to ANSI standards. Competing products use current sensors that do not provide the same level of performance. CTs come as solid core standard for high-quality, long-term accuracy and reliability. Solid core CTs deliver  $\pm 0.3\%$  accuracy. Split core and Rogowski Coil CTs deliver  $\pm 1.0\%$  accuracy. For added safety, all Leviton current transformers come with built-in voltage suppression devices that prevent hazardous voltages from developing on CT secondaries should they become disconnected from a meter with load current present. Leviton CTs are UL and cUL listed devices.

### SOLID CORE

Leviton solid core CTs are cost effective and less susceptible to damage during installation. Solid core CTs slip over power lines to measure the electrical current flowing through the line. The CT “secondary” wires connect to the meter facilitating power and energy calculations. They are compact and cost effective. Solid core CTs are accurate (0.3% maximum error). For installation, power must be de-energized and the circuit opened in order to slip the CT over the power line.

### SPLIT CORE

Split core CTs can be disassembled or ‘split’ into halves eliminating the need to turn power off and open the circuit during installation. This time-saving installation is ideal for critical loads that cannot be disconnected. Split core CTs close securely for fast, precise installation with no need for time-consuming tie wraps and no worries about improper seating or core half separation.

- Indoor type for measurement category Class IV, accessory equipment for energy meters
- Designed to meet the requirements of UL916 plus CSA C22.2 No. 61010-1
- Suitable for installation on 600V uninsulated bus duct

### ROGOWSKI COIL

Rogowski Coil CTs are flexible rope style CTs with high amperage ranges from 20-5000A. The coil opens at the connector junction for fast and easy installation into an existing cable or bus bar. The Rogowski Coil's flexible core is ideal for tight enclosures and odd-sized conductors with three length options: 12”, 18” and 24”. Rogowski Coil CTs are for use with VerifEye Series 4000 Industrial ModBus Meter Kits only.

### APPLICATIONS

Use current transformers in commercial, institutional, industrial and government applications to support:

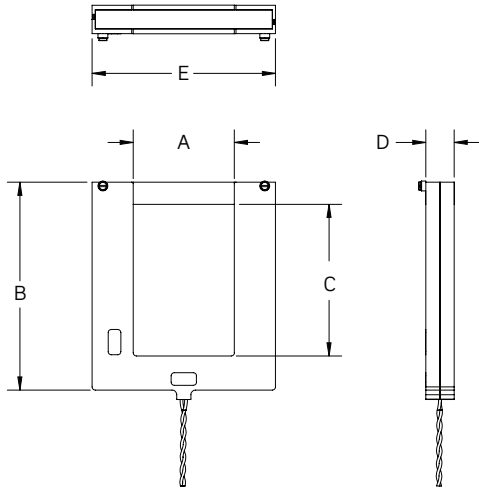
- Load profiling and benchmarking
- AMR/BAS/BMS/EMS integration
- Power quality analysis
- Usage aggregation
- Tenant cost allocation
- Measurement and verification
- Net metering
- Energy conservation and cost reduction
- Green building initiatives and government mandates

## PRODUCT DATA



## DIMENSIONAL DIAGRAMS

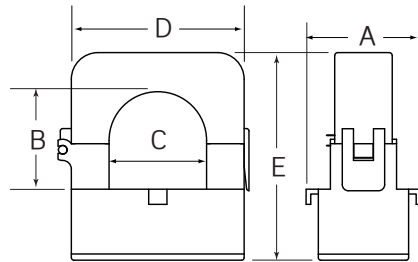
**SPLIT CORE—FOR USE WITH  
SERIES 1000, 2000, 3500, 8000  
METERS AND SERIES 2000 MULTIPLE  
METER UNITS (MMUs) ONLY**



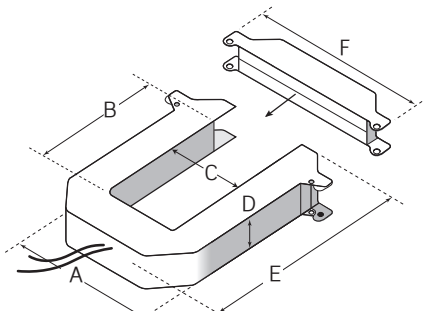
**SPLIT CORE—FOR USE WITH SERIES 1000, 2000, 3500, 8000 METERS  
AND SERIES 2000 MULTIPLE METER UNITS (MMUs) ONLY**

CT Size	A	B	C	D	E
100:0.1A	0.75" (19.05mm)	2.53" (64.16mm)	0.75" (19.05mm)	0.95" (24.13mm)	2.58" (65.53mm)
200:0.1A	1.00" (25.4mm)	2.86" (72.64mm)	1.00" (25.4mm)	0.75" (19.05mm)	2.75" (69.85mm)
400:0.1A	1.50" (38.1mm)	3.31" (84.07mm)	1.50" (38.1mm)	1.07" (27.18mm)	3.74" (95mm)
800:0.1A	3.00" (76.2mm)	5.38" (136.65mm)	3.50" (88.9mm)	1.25" (31.75mm)	5.39" (136.91mm)
1200:0.1A	4.00" (101.6mm)	8.23" (209.04mm)	6.00" (152.4mm)	1.12" (28.45mm)	7.25" (184.15mm)
1600:0.1A	4.00" (101.6mm)	8.23" (209.04mm)	6.00" (152.4mm)	1.12" (28.45mm)	7.25" (184.15mm)
3000:0.1A	5.00" (127mm)	9.86" (250.44mm)	7.00" (177.8mm)	1.44" (36.58mm)	8.44" (214.38mm)
5000:0.1A	5.00" (127mm)	9.86" (250.44mm)	7.00" (177.8mm)	1.44" (36.58mm)	8.44" (214.38mm)

**SPLIT CORE—FOR USE WITH  
EMH+ AND SERIES 4000 & 4100  
INDUSTRIAL MODBUS METER KITS  
ONLY**



100 &amp; 200A



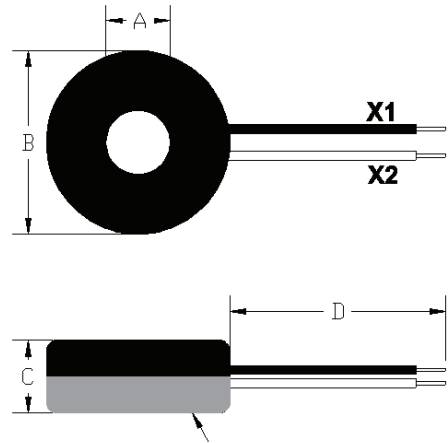
400 &amp; 800A

**SPLIT CORE—FOR USE WITH EMH+ AND SERIES 4000 & 4100  
INDUSTRIAL MODBUS METER KITS ONLY**

CT Size	A	B	C	D	E	F
100:0.333V	1.5" (38.10mm)	0.8" (20.32mm)	0.7" (17.78mm)	1.6" (40.64mm)	2.1" (53.34mm)	-
200:0.333V	1.5" (38.10mm)	1.25" (31.75mm)	1.25" (31.75mm)	2.25" (57.15mm)	2.8" (71.12mm)	-
400:0.333V & 800:0.333V	4.9" (124.46mm)	2.29" (58.16mm)	2.25" (63.5mm)	1.2" (30.48mm)	5.2" (132.08mm)	6.0" (152.40mm)

PRODUCT DATA

**DIMENSIONAL DIAGRAMS**  
**SOLID CORE—FOR USE WITH SERIES 8000 METERS, MINI METERS AND MMUs ONLY**

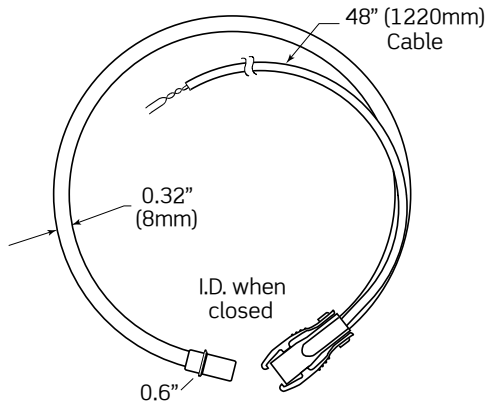


**SOLID CORE—FOR USE WITH SERIES 8000 METERS, MINI METERS AND MMUs ONLY**

CT Size	A	B	C	D
100:0.1A & 200:0.1A 0.67"	0.67" (17mm)	1.65" (42mm)	0.71" (18mm)	48.00" (1219mm)
100:0.1A & 200:0.1A 0.72"	0.72" (18.3mm)	2.06" (52.3mm)	0.82" (20.8mm)	48.00" (1219mm)
400:0.1A 1.5"	1.50" (38.1mm)	3.60" (76.2mm)	1.38" (34.9mm)	48.00" (1219mm)

**NOTE:** Lead lengths may be extended up to 500'. Consult factory for details

**ROGOWSKI COIL—FOR USE WITH SERIES 4000 & 4100 INDUSTRIAL MODBUS METER KITS ONLY**



**ROGOWSKI COIL—FOR USE WITH SERIES 4000 & 4100 INDUSTRIAL MODBUS METER KITS ONLY**

LENGTH	INSIDE DIAMETER WITH CLOSED CONNECTOR
12" (305mm)	3.85" (98mm)
18" (458mm)	5.75" (147mm)
24" (610mm)	7.65" (195mm)



## PRODUCT DATA



### ORDERING INFORMATION

NOTE: Meters sold separately

AMP	CAT. NO.	DESCRIPTION
<b>SINGLES</b>		
<b>SOLID CORE—FOR USE WITH SERIES 8000 METERS, MINI METERS AND MMUs ONLY</b>		
100:0.1A	CDE01-K11	Solid Core, 0.67", Black
100:0.1A	CDE01-L11	Solid Core, 0.67", Blue
100:0.1A	CDE01-R11	Solid Core, 0.67", Red
100:0.1A	CDA01-K12	Solid Core, 0.72", Black
100:0.1A	CDA01-L12	Solid Core, 0.72", Blue
100:0.1A	CDA01-R12	Solid Core, 0.72", Red
200:0.1A	CDE02-K11	Solid Core, 0.67", Black
200:0.1A	CDE02-L11	Solid Core, 0.67", Blue
200:0.1A	CDE02-R11	Solid Core, 0.67", Red
200:0.1A	CDA02-K12	Solid Core, 0.72", Black
200:0.1A	CDA02-L12	Solid Core, 0.72", Blue
200:0.1A	CDA02-R12	Solid Core, 0.72", Red
400:0.1A	CDF04-K24	Solid Core, 1.5", Black
<b>SPLIT CORE—SERIES 1000, 2000, 3500 METERS, SERIES 8000 METERS AND SERIES 2000 (MMUs) ONLY</b>		
100:0.1A	CTD01-K16	Split Core, .75" x .75"
200:0.1A	CTD02-K16	Split Core, 1" x 1"
400:0.1A	CTD04-K23	Split Core, 1.5" x 1.5"
800:0.1A	CTC08-K46	Split Core, 3" x 3.5"
1200:0.1A	CTC12-K46	Split Core, 4" x 6"
1600:0.1A	CTC16-K96	Split Core, 4" x 6"
3000:0.1A	CTC30-57B	Split Core, 5" x 7"
5000:0.1A	CTC50-57B	Split Core, 5" x 7"
<b>SPLIT CORE—FOR USE WITH EMH+ AND SERIES 4000 &amp; 4100 INDUSTRIAL MODBUS METER KITS ONLY</b>		
100:0.333V	CTV01-K21	Split Core, 1.6" x 2.1"
200:0.333V	CTV02-K21	Split Core, 2.2" x 2.8"
400:0.333V	CTV04-K40	Split Core, 6" x 5.2"
800:0.333V	CTV08-K40	Split Core, 6" x 5.2"
<b>ROGOWSKI COIL—FOR USE WITH SERIES 4000 &amp; 4100 INDUSTRIAL MODBUS METER KITS ONLY</b>		
20-5000A	CRV50-K62	Rogowski Coil, 12"
20-5000A	CRV50-K93	Rogowski Coil, 18"
20-5000A	CRV50-KC2	Rogowski Coil, 24"

AMP	CAT. NO.	DESCRIPTION
<b>KITS—FOR USE WITH MINI-METERS AND MMUs ONLY</b>		
100:0.1A	CDE01-211	CT Kit, 0.67", Red, Black
100:0.1A	CDE01-311	CT Kit, 0.67", Blue, Red, Black
100:0.1A	CDA01-212	CT Kit, 0.72", Red, Black
100:0.1A	CDA01-312	CT Kit, 0.72", Blue, Red, Black
200:0.1A	CDE02-211	CT Kit, 0.67", Red, Black
200:0.1A	CDE02-311	CT Kit, .067", Blue, Red, Black
200:0.1A	CDA02-212	CT Kit, 0.72", Red, Black
200:0.1A	CDA02-312	CT Kit, 0.72", Blue, Red, Black

Leviton recommends solid core transformers (CTs) for revenue-grade accuracy. Our 100A and 200A color coded CTs assist with correct installation by indicating phase monitored. Split core CTs are also available upon request for applications where power cannot be interrupted during installation. Our 100-5,000A split core and 20-5000A Rogowski Coil CTs offer +/-1.0% accuracy.

#### The following products are also part of the Leviton line of VerifEye integrated metering solutions:

Series 1000 Meters  
 Series 2000 Meters  
 Series 3500 Meters  
 Series 4000 & 4100 Industrial ModBus Meter Kits  
 Series 8000 Meters  
 EMH+ Integrated Meter & Hub  
 Mini Meters  
 Multiple Meter Units (MMUs)  
 Energy Monitoring Software and Hardware

Current Transformers