



THE DATASHEET OF CR5RL-102



Commercial & Metering Class Current Transformers

Current Transformers

F



RL



SFT



SFL



SHT



SHL



RT



RBT



RBL

The CR Magnetics line of Instrumentation Grade Electrical Current Transformers are available in either Commercial or ANSI Metering Class. The Commercial Class transformers are lower cost and well-suited for current monitoring applications. The ANSI Metering Class transformers are higher-cost units intended for power monitoring applications where high accuracy and minimum phase angle error are required. Twelve different window openings and eight different mounting styles along with numerous secondary ratios are available to meet most applications. This short form catalog shows an overview of our most popular 5 amp secondary transformers. Contact factory for different sizes or unique electrical requirements.

Applications

Ammeters
Energy Measurement
Watt/VAR/Watthour Measurement
Current Sensing Relays

Features

Low Cost
Core Secured via Epoxy Resin
Hand Tuned Accuracy
Common Ratios in Stock

Regulatory Agencies



BASIC SPECIFICATIONS

| | |
|-----------------------|-------------------------|
| Basic Accuracy | 10% FS or Better (ANSI) |
| Thermal Drift | 100 PPM/°C |
| Operating Temperature | -20° C to +75° C |
| Installation Category | CAT II |
| Pollution Degree | 2 |
| Insulation Voltage | 3500 Vac/1min |
| Frequency Range | 50Hz - 400Hz |
| Torque Spec on Studs | 10 in/lb. |

CUSTOM OPTIONS

Ultra-Low Frequency to 20 Hz

1.0, 0.2, and 0.1 Amp Secondary Ratios

Commercial & ANSI Metering Class Current Transformers

DIMENSIONS

Current Transformers

F



Commercial Class Current Transformers

Current Transformers

F

| PART NUMBERS | | | DIMENSIONS | | | | | | | ACCURACY SPECIFICATIONS | | | | | | |
|--------------|-------|--------------|----------------|-----------------|----------------|------|---|---|---|-------------------------|------------------|--------------------|--------------|--------|------|---------------|
| SERIES | STYLE | RATIO SUFFIX | A | B | C | D | E | F | G | CURRENT RATIO | ACCURACY AT 60HZ | BURDEN VA AT 60 HZ | | | | |
| CR2 | RL | 500 | 1.13 (28.7) | 2.46 (62.5) | 1.05 (26.7) | | | | | 50:5 | ± 3% | 2.0 | | | | |
| | | 600 | | | | | | | | 60:5 | ± 2% | 2.0 | | | | |
| | | 750 | | | | | | | | 75:5 | ± 2% | 2.0 | | | | |
| | SFT | 800 | | 2.68 (68.1) | 2.00 (50.8) | | | | | 1.75 (44.5) | 1.75 (44.5) | .27 (6.9) | .31 (7.9) | 80:5 | ± 2% | 2.0 |
| | | 101 | | 2.68 (68.1) | 2.00 (50.8) | | | | | 1.75 (44.5) | 1.75 (44.5) | .27 (6.9) | .31 (7.9) | 100:5 | ± 1% | 2.0 |
| | | 121 | | | | | | | | | | | | 120:5 | ± 1% | 2.5 |
| | 1250 | 125:5 | | | | | | | | | | | | ± 1% | 2.5 | |
| | SHT | 151 | | 2.71 (68.8) | 0.95 (24.1) | | | | | | | | | 150:5 | ± 1% | 4.0 |
| | | 201 | | 2.71 (68.8) | 0.95 (24.1) | | | | | | | | | 200:5 | ± 1% | 4.0 |
| | SHL | 251 | | | | | | | | | | 250:5 | ± 1% | 6.0 | | |
| 301 | | 300:5 | ± 1% | 8.0 | | | | | | | | | | | | |
| CR5 | RL | 500 | 1.56 (39.6) | 3.56 (90.4) | 1.10 (27.9) | | | | | 50:5 | ± 2% | 1.0 | | | | |
| | | 750 | | 75:5 | ± 2% | | | | | 1.5 | | | | | | |
| | SFT | 101 | | 3.78 (96.0) | 2.2 (54.6) | | | | | 2.75 (69.9) | 1.77 (45.0) | .21 (5.3) | .31 (7.9) | 100:5 | ± 2% | 2.0 |
| | | 151 | | 3.78 (96.0) | 2.15 (54.6) | | | | | 2.75 (69.9) | 1.77 (45.0) | .21 (5.3) | .31 (7.9) | 150:5 | ± 1% | 5.0 |
| | 201 | 200:5 | | | | | | | | | | | | ± 1% | 5.0 | |
| | SHT | 251 | | 3.83 (97.3) | 1.09 (27.7) | | | | | | | | | 250:5 | ± 1% | 10.0 |
| | | 301 | | | | | | | | | | | | 300:5 | ± 1% | 12.5 |
| | SHL | 401 | | 3.83 (97.3) | 1.09 (27.7) | | | | | | | | | 400:5 | ± 1% | 12.5 |
| | | 501 | | 3.62 (91.9) | 1.13 (28.7) | | | | | | | | | 500:5 | ± 1% | 20.0 |
| | RT | 601 | | | | | | | | 3.62 (91.9) | 1.13 (28.7) | | | | | 600:5 |
| | RBT* | 751 | | 3.90 (99.1) | 1.25 (31.8) | | | | | 3.88 (98.6) | 4.50 (114.3) | | | | | .44 (11.2) |
| | | 801 | | | | | | | | | | 800:5 | ± 1% | 25.0 | | |
| | RBL* | 102 | | 3.70 (94.0) | 1.25 (31.8) | | | | | 3.88 (98.6) | 4.50 (114.3) | .44 (11.2) | .27 (6.9) | 1000:5 | ± 1% | 25.0 |
| 122 | | 1200:5 | ± 1% | | | 30.0 | | | | | | | | | | |
| CR7 | RL | 101 | 2.50 (63.5) | 4.70 (119.4) | 1.10 (27.4) | | | | | 100:5 | ± 2% | 2.5 | | | | |
| | | 151 | | 150:5 | ± 1% | | | | | 5.0 | | | | | | |
| | SFT | 201 | | 4.85 (123.2) | 2.13 (54.1) | | | | | 3.78 (96.0) | 1.75 (44.5) | .25 (6.4) | .31 (7.9) | 200:5 | ± 1% | 5.0 |
| | | 251 | | 4.85 (123.2) | 2.13 (54.1) | | | | | 3.78 (96.0) | 1.75 (44.5) | .25 (6.4) | .31 (7.9) | 250:5 | ± 1% | 5.0 |
| | 301 | 300:5 | | | | | | | | | | | | ± 1% | 12 | |
| | SHT | 401 | | 4.70 (119.4) | 1.10 (27.9) | | | | | | | | | 400:5 | ± 1% | 15 |
| | | 501 | | | | | | | | | | | | 500:5 | ± 1% | 25 |
| | SHL | 601 | | 4.70 (119.4) | 1.10 (27.9) | | | | | | | | | 600:5 | ± 1% | 30 |
| | | 751 | | 4.61 (117.1) | 1.10 (27.9) | | | | | | | | | 750:5 | ± 1% | 30 |
| | RT | 801 | | | | | | | | 4.61 (117.1) | 1.10 (27.9) | | | | | 800:5 |
| | RBT | 102 | | 4.94 (125.5) | 1.25 (31.8) | | | | | 5.75 (146.1) | 6.5 (7.1) | | | | | .28 (6.5) |
| | | 122 | | | | | | | | | | 1200:5 | ± 1% | 35 | | |
| | RBL | 152 | | 4.70 (125.5) | 1.25 (31.8) | | | | | 5.75 (146.1) | 6.5 (7.1) | .28 (7.1) | .28 (7.1) | 1500:5 | ± 1% | 40 |
| 162 | | 1600:5 | ± 1% | | | 40 | | | | | | | | | | |

Commercial Class Current Transformers

Current Transformers

F

| PART NUMBERS | | | DIMENSIONS | | | | | | | ACCURACY SPECIFICATIONS | | | |
|--------------|-------|--------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|-------------------------|------------------|--------------------|------|
| SERIES | STYLE | RATIO SUFFIX | A | B | C | D | E | F | G | CURRENT RATIO | ACCURACY AT 60HZ | BURDEN VA AT 60 HZ | |
| CR56 | RL | 500 | 2.06 (52.3) | 3.50 (88.9) | 1.09 (27.7) | 2.70 (68.6) | 1.70 (43.2) | .21 (5.3) | .31 (7.9) | 50:5 | ± 3% | 2.0 | |
| | | 750 | | | | | | | | | 75:5 | ± 1% | 0.5 |
| | SFT | 101 | | | | | | | | | 100:5 | ± 1% | 1.0 |
| | | 151 | | 3.63 (92.2) | 2.15 (54.6) | 2.70 (68.6) | 1.70 (43.2) | .21 (5.3) | .31 (7.9) | 150:5 | ± 1% | 2.5 | |
| | SFL | 201 | | | | | | | | | 200:5 | ± 1% | 4.0 |
| | | 251 | | 3.63 (92.2) | 2.15 (54.6) | | | | | | 250:5 | ± 1% | 6.0 |
| | RT | 301 | | | | | | | | | 300:5 | ± 1% | 7.5 |
| | | 401 | | 3.62 (91.9) | 1.10 (27.9) | | | | | | 400:5 | ± 1% | 10.0 |
| | RBT | 501 | | | | | | | | | 500:5 | ± 1% | 12.5 |
| | | 601 | | | | | | | | | 600:5 | ± 1% | 15.0 |
| | RBL | 751 | | 3.90 (99.1) | 1.25 (31.8) | 3.88 (98.6) | 4.50 (114.3) | .27 (6.9) | .44 (11.2) | 750:5 | ± 1% | 7.0 | |
| | | 801 | | | | | | | | 800:5 | ± 1% | 8.0 | |
| | | | | 102 | 3.70 (94.0) | 1.25 (31.8) | 3.88 (98.6) | 4.50 (114.3) | .27 (6.9) | .44 (11.2) | 1000:5 | ± 1% | 10.0 |
| | | | | 122 | | | | | | | 1200:5 | ± 1% | 12.5 |
| CR76 | RL | 201 | 3.00 (76.2) | 4.50 (114.3) | 1.09 (27.7) | | | | | 200:5 | ± 1% | 5.0 | |
| | | 251 | | | | | | | | 250:5 | ± 1% | 5.0 | |
| | SFT | 301 | | 4.68 (128.9) | 2.08 (52.8) | 3.70 (44.0) | 1.75 (44.5) | .25 (6.4) | .31 (7.9) | 300:5 | ± 1% | 6.0 | |
| | | 401 | | | | | | | | 400:5 | ± 1% | 10.0 | |
| | SFL | 501 | | | | | | | | 500:5 | ± 1% | 10.0 | |
| | | 601 | | 4.68 (118.9) | 2.08 (52.8) | 3.70 (44.0) | 1.75 (44.5) | .25 (6.4) | .31 (7.9) | 600:5 | ± 1% | 10.0 | |
| | RT | 751 | | | | | | | | 750:5 | ± 1% | 10.0 | |
| | | 801 | | 4.62 (117.3) | 1.10 (27.9) | | | | | 800:5 | ± 1% | 12.5 | |
| | RBT | 102 | | | | | | | | 1000:5 | ± 1% | 10.0 | |
| | | 122 | | 4.94 (125.5) | 1.25 (31.8) | 5.75 (146.1) | 6.50 (165.1) | .28 (7.1) | .28 (7.1) | 1200:5 | ± 1% | 10.0 | |
| | RBL | 152 | | | | | | | | 1500:5 | ± 1% | 12.5 | |
| | | 162 | | | | | | | | 1600:5 | ± 1% | 12.5 | |
| | | | | 202 | 4.70 (119.4) | 1.25 (31.8) | 5.75 (146.1) | 6.50 (165.1) | .28 (7.1) | .28 (7.1) | 2000:5 | ± 1% | 15.0 |
| | CR1A | RL | | 500 | .64 (16.3) | 1.99 (31.8) | 1.25 (31.8) | | | | | 50:5 | ± 2% |
| 600 | | | 60:5 | ± 1% | | | | | | | | 2.0 | |
| 750 | | | 75:5 | ± 1% | | | | | | | | 2.0 | |
| 800 | | | 80:5 | ± 1% | | | | | | | | 2.0 | |
| 101 | | | 100:5 | ± 1% | | | | | | | | 2.5 | |
| 121 | | | 120:5 | ± 1% | | | | | | | | 3.0 | |
| 1250 | | | 125:5 | ± 1% | | | | | | | | 3.0 | |
| 151 | | | 150:5 | ± 1% | | | | | | | | 4.0 | |
| 201 | | | 200:5 | ± 1% | | | | | | | | 5.0 | |
| 251 | | | 250:5 | ± 1% | | | | | | | | 7.5 | |

ANSI Metering Class Current Transformers

Current Transformers

F

| PART NUMBERS | | | DIMENSIONS | | | | | | | ANSI METERING CLASS @ 60 HZ | | | | | |
|--------------|-------|--------------|----------------|-----------------|----------------|---|---|---|---|-----------------------------|------|------|------|------|------|
| SERIES | STYLE | RATIO SUFFIX | A | B | C | D | E | F | G | CURRENT RATIO | BO.1 | BO.2 | BO.5 | BO.9 | B1.8 |
| CR2DA | RL | 500 | 1.0 (25.4) | 2.47 (62.7) | 1.75 (44.5) | | | | | 50:5 | 4.8 | - | - | - | - |
| | | 600 | | | | | | | | 60:5 | 1.2 | 4.8 | - | - | - |
| | | 750 | | | | | | | | 75:5 | 1.2 | 2.4 | - | - | - |
| | | 800 | | | | | | | | 80:5 | 1.2 | 2.4 | 4.8 | - | - |
| | | 101 | | | | | | | | 100:5 | 1.2 | 2.4 | 4.8 | - | - |
| | | 121 | | | | | | | | 120:5 | 1.2 | 2.4 | 2.4 | 4.8 | - |
| | | 1250 | | | | | | | | 125:5 | 0.6 | 1.2 | 2.4 | 4.8 | - |
| | | 151 | | | | | | | | 150:5 | 0.6 | 0.6 | 1.2 | 2.4 | 4.8 |
| | | 201 | | | | | | | | 200:5 | 0.3 | 0.3 | 1.2 | 1.2 | 2.4 |
| | | 251 | | | | | | | | 250:5 | 0.3 | 0.3 | 0.6 | 1.2 | 2.4 |
| | | 301 | | | | | | | | 300:5 | 0.3 | 0.3 | 0.6 | 0.6 | 1.2 |
| CR5A | RL | 500 | 1.56 (39.6) | 3.56 (90.4) | 1.10 (27.9) | | | | | 50:5 | 4.8 | - | - | - | - |
| | | 101 | | | | | | | | 100:5 | 2.4 | 4.8 | - | - | - |
| | | 151 | | | | | | | | 150:5 | 0.6 | 1.2 | 2.4 | 4.8 | - |
| | SFT | 201 | | 200:5 | 0.6 | | | | | 0.6 | 1.2 | 2.4 | 4.8 | | |
| | | 251 | | 250:5 | 0.6 | | | | | 0.6 | 1.2 | 2.4 | 2.4 | | |
| | | 301 | | 300:5 | 0.3 | | | | | 0.3 | 0.6 | 1.2 | 2.4 | | |
| | SFL | 401 | | 400:5 | 0.3 | | | | | 0.3 | 0.6 | 1.2 | 1.2 | | |
| | | 501 | | 500:5 | 0.3 | | | | | 0.3 | 0.6 | 0.6 | 1.2 | | |
| | SHT | 601 | | 600:5 | 0.3 | | | | | 0.3 | 0.3 | 0.6 | 1.2 | | |
| | | 751 | | 750:5 | 0.3 | | | | | 0.3 | 0.3 | 0.6 | 0.6 | | |
| | | 801 | | 800:5 | 0.3 | | | | | 0.3 | 0.3 | 0.6 | 0.6 | | |
| | SHL | 102 | | 1000:5 | 0.3 | | | | | 0.3 | 0.3 | 0.3 | 0.6 | | |
| | | 122 | | 1200:5 | 0.3 | | | | | 0.3 | 0.3 | 0.3 | 0.3 | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| CR6A | RL | 101 | 2.06 (52.3) | 4.08 (103.6) | 1.10 (27.9) | | | | | 100:5 | 1.2 | 2.4 | - | - | - |
| | | 151 | | | | | | | | 150:5 | 1.2 | 1.2 | 2.4 | 4.8 | - |
| | | 201 | | | | | | | | 200:5 | 0.6 | 1.2 | 2.4 | 2.4 | 4.8 |
| | SFT | 251 | | 250:5 | 0.3 | | | | | 0.6 | 1.2 | 2.4 | 4.8 | | |
| | | 301 | | 300:5 | 0.3 | | | | | 0.3 | 1.2 | 2.4 | 2.4 | | |
| | | 401 | | 400:5 | 0.3 | | | | | 0.3 | 0.6 | 1.2 | 1.2 | | |
| | SFL | 501 | | 500:5 | 0.3 | | | | | 0.3 | 0.6 | 1.2 | 1.2 | | |
| | | 601 | | 600:5 | 0.3 | | | | | 0.3 | 0.6 | 0.6 | 1.2 | | |
| | | 751 | | 750:5 | 0.3 | | | | | 0.3 | 0.3 | 0.6 | 1.2 | | |
| | SHT | 801 | | 800:5 | 0.3 | | | | | 0.3 | 0.3 | 0.6 | 0.6 | | |
| | | 102 | | 1000:5 | 0.3 | | | | | 0.3 | 0.3 | 0.3 | 0.6 | | |
| | | 122 | | 1200:5 | 0.3 | | | | | 0.3 | 0.3 | 0.3 | 0.3 | | |
| | SHL | 152 | | 1500:5 | 0.3 | | | | | 0.3 | 0.3 | 0.3 | 0.3 | | |
| | | | | | | | | | | | | | | | |

ANSI Metering Class Current Transformers

Current Transformers

F

| PART NUMBERS | | | DIMENSIONS | | | | | | | ANSI METERING CLASS @ 60 HZ | | | | | | | | | | | |
|--------------|------------|--------------|----------------|-----------------|----------------|----------------|-------|-----|-----|-----------------------------|----------------|--------------|--------------|-------|------|-------|-----|-----|-----|-----|-----|
| SERIES | STYLE | RATIO SUFFIX | A | B | C | D | E | F | G | CURRENT RATIO | BO.1 | BO.2 | BO.5 | BO.9 | B1.8 | | | | | | |
| CR7A | RL | 101 | 2.50 (63.5) | 4.70 (119.4) | 1.10 (27.9) | | | | | 100:5 | 1.2 | 4.8 | - | - | - | | | | | | |
| | | 151 | | 150:5 | 0.6 | | | | | 1.2 | 4.8 | 4.8 | - | | | | | | | | |
| | | 201 | | 200:5 | 0.6 | | | | | 1.2 | 2.4 | 4.8 | 4.8 | | | | | | | | |
| | SFT | 251 | | 4.85 (123.2) | 2.13 (54.1) | | | | | 3.78 (96.0) | 1.75 (44.5) | .25 (6.4) | .31 (7.9) | 250:5 | 0.3 | 0.6 | 1.2 | 2.4 | 4.8 | | |
| | | 301 | | 300:5 | 0.3 | | | | | 0.3 | 1.2 | 2.4 | 2.4 | | | | | | | | |
| | | 401 | | 400:5 | 0.3 | | | | | 0.3 | 0.6 | 1.2 | 2.4 | | | | | | | | |
| | SFL | 501 | | 4.85 (123.2) | 2.13 (54.1) | | | | | 3.78 (96.0) | 1.75 (44.5) | .25 (6.4) | .31 (7.9) | 500:5 | 0.3 | 0.3 | 0.6 | 1.2 | 1.2 | | |
| | | 601 | | 600:5 | 0.3 | | | | | 0.3 | 0.6 | 0.6 | 1.2 | | | | | | | | |
| | | 751 | | 750:5 | 0.3 | | | | | 0.3 | 0.6 | 0.6 | 0.6 | | | | | | | | |
| | SHT | 801 | | 4.70 (119.4) | 1.10 (27.9) | | | | | | | | | 800:5 | 0.3 | 0.3 | 0.3 | 0.6 | 0.6 | | |
| | | 102 | | 1000:5 | 0.3 | | | | | | | | | 0.3 | 0.3 | 0.6 | 0.6 | | | | |
| | | 122 | | 1200:5 | 0.3 | | | | | | | | | 0.3 | 0.3 | 0.3 | 0.6 | | | | |
| | SHL | 152 | | 1500:5 | 0.3 | | | | | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | |
| | | 162 | | 1600:5 | 0.3 | | | | | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | |
| | CR8 | RL | | 201 | 3.25 (82.6) | | | | | 5.73 (145.5) | 1.15 (29.2) | | | | | 200:5 | 1.2 | 1.2 | 2.4 | 4.8 | 4.8 |
| | | | | 251 | | | | | | 250:5 | 0.6 | | | | | 0.6 | 1.2 | 2.4 | 4.8 | | |
| 301 | | | 300:5 | 0.6 | | 0.6 | 1.2 | 2.4 | 2.4 | | | | | | | | | | | | |
| 401 | | | 400:5 | 0.3 | | 0.3 | 0.6 | 1.2 | 2.4 | | | | | | | | | | | | |
| 501 | | | 500:5 | 0.3 | | 0.3 | 0.6 | 0.6 | 1.2 | | | | | | | | | | | | |
| 601 | | | 600:5 | 0.3 | | 0.3 | 0.6 | 0.6 | 1.2 | | | | | | | | | | | | |
| 751 | | | 750:5 | 0.3 | | 0.3 | 0.3 | 0.6 | 1.2 | | | | | | | | | | | | |
| SHT | | | 801 | 5.73 (145.5) | | 1.15 (29.2) | 800:5 | 0.3 | 0.3 | 0.3 | 0.6 | | | | | 0.6 | | | | | |
| | | | 102 | 1000:5 | | 0.3 | 0.3 | 0.3 | 0.3 | 0.6 | | | | | | | | | | | |
| | | | 122 | 1200:5 | | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | | | | |
| | | 152 | 1500:5 | 0.3 | | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | | | | | |
| | | 162 | 1600:5 | 0.3 | | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | | | | | |
| | | 202 | 2000:5 | 0.3 | | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | | | | | |
| SHL | | 252 | 2500:5 | 0.3 | | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | | | | | |
| | | 302 | 3000:5 | 0.3 | | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | | | | | |
| | | 322 | 3200:5 | 0.3 | | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | | | | | |
| | 402 | 4000:5 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | | | | | | | | | | | | | | |



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