

DESCRIPTION

FEATURES

- Accurate measurement of the **true RMS** value of input signals.
- Split-core current sensors for easy installation.
- Current transformers contain open-circuit protection.
- Signal conditioners and current sensors are calibrated as sets and provide a choice of analog outputs. (0-5Vdc, 0-10Vdc, 0-1mAac or 4-20mAac)
- Current measurement ranges up to 40kAac.
- Flexible Rogowski coils (air-core CTs) are used for current measurement ranges of 1kAac and larger.
- Rogowski coil models use CE-compliant sensors.

APPLICATIONS

- For use in existing applications requiring installation with split-core sensors.
- Designed to withstand motor start-up currents.
- Easy installation in tight areas.



MODEL SELECTION

SENSOR	INPUTS AC AMPS	STANDARD MODELS CTRS-			
		0-1mAac	4-20mAac	0-10Vdc	0-5Vdc
CURRENT TRANSFORMER	0 to 5	005B	005E	005D	005X5
	0 to 10	010B	010E	010D	010X5
	0 to 15	015B	015E	015D	015X5
	0 to 20	020B	020E	020D	020X5
	0 to 25	025B	025E	025D	025X5
	0 to 50	050B	050E	050D	050X5
	0 to 100	101B	101E	101D	101X5
	0 to 200	201B	201E	201D	201X5
	0 to 300	301B	301E	301D	301X5
	0 to 400	401B	401E	401D	401X5
	0 to 500	501B	501E	501D	501X5
0 to 1000	102B	102E	102D	102X5	
ROGOSKI COIL	0 to 1k	102RB	102RE	102RD	102RX5
	0 to 2k	202RB	202RE	202RD	202RX5
	0 to 5k	502RB	502RE	502RD	502RX5
	0 to 10k	103RB	103RE	103RD	103RX5
	0 to 15k	153RB	153RE	153RD	153RX5
	0 to 20k	203RB	203RE	203RD	203RX5
	0 to 25k	253RB	253RE	253RD	253RX5
	0 to 30k	303RB	303RE	303RD	303RX5
	0 to 40k	403RB	403RE	403RD	403RX5

5A to 1000A models use current transformers.
1kA to 40kA models use Rogowski coils.

AVAILABLE OPTIONS (add in order shown):

230Vac instrument Power - Add suffix "-22"

Rogowski coil size:

COIL INSIDE DIAMETER	COIL LENGTH	MODEL
6.5in. (16.5cm)	23.6in. (60cm)	(standard)
10.5in. (26.7cm)	35.4in. (90cm)	Add suffix "-1"
14.0in. (35.4cm)	47.2in. (120cm)	Add suffix "-2"
21.5in. (54.6cm)	70.9in. (180cm)	Add suffix "-3"

ORDERING INFORMATION

Example: 10kAac Input with 0-10Vdc Output, 230Vac instrument power & 10.5-inch diameter Rogowski coil

CTRS-103RD-22-1

SPECIFICATIONS

INPUT

Current Range See Table
Over range (w/o damage)..... 2 X F.S. (cont.)
5 X for 10s transient
10 X for 1s transient
Frequency Range Non-"R" models 50-60Hz
"R" models (see Accuracy)

DIELECTRIC TEST

Input/Output/Case/Instrument Power..... 1500Vac

INSTRUMENT POWER

Standard 115Vac, $\pm 15\%$, 50/60Hz, 3.5VA
Option "-22" 230Vac, $\pm 15\%$, 50/60Hz, 3.5VA

OUTPUT

Response Time (to 90%) Non-"R" models 100ms
"R" models 300ms

Loading

"B" models 0-1mAac 0-10k Ω
"D", "X5" models 0-10Vdc, 0-5Vdc 2k Ω min.
"E" models 4-20mAac 0-500 Ω
Field-adjustable Calibration Range $\pm 10\%$, approx.

ACCURACY (linearity and set point)

Current Transformer (Non-"R") Models

5A to 10A models $\pm 0.5\%$ F.S. @ 60Hz
15A to 1000A models $\pm 0.25\%$ F.S. @ 60Hz

Rogowski Coil ("R") Models

With conductor centered in window... $\pm 1.0\%$ F.S. @ 60Hz
Linearity $\pm 0.25\%$ F.S.

Set point variation with frequency

10Hz to 20Hz $\pm 2.0\%$ F.S.
20Hz to 2kHz $\pm 1.0\%$ F.S.
2kHz to 5kHz $\pm 3.0\%$ F.S.
5kHz to 7kHz $\pm 7.0\%$ F.S.
7kHz to 20kHz $\pm 30.0\%$ F.S.

Position Sensitivity $\pm 2.0\%$ F.S.

Output Ripple (all models) $< 1.0\%$ F.S.

PHYSICAL & ENVIRONMENTAL

Temperature Effect (-20°C to 60°C) ... $\pm 1.0\%$ Rdg., $\pm 0.1\%$ F.S.
Weight (not including sensor) 1.5 lbs



Ohio Semitronics, Inc.
What Can We Measure for You?

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4242 Reynolds Drive
Hilliard, Ohio 43026-1264

TELEPHONE: 614-777-1005

TOLL FREE: 1-800-537-6732

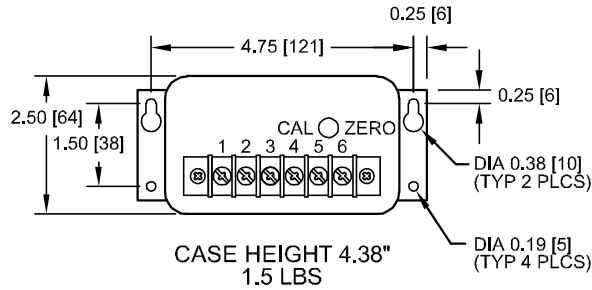
FAX: 614-777-4511

AC CURRENT TRANSFORMER/TRANSDUCER

MODEL CTRS-

CASE DIMENSIONS

DC output is absolute regardless of CT polarity.



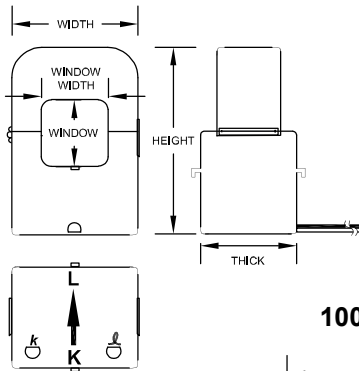
DIMENSIONS ARE IN INCHES [mm].
TOLERANCE = ±0.03 IN [±0.76mm]
UNLESS OTHERWISE SPECIFIED

Dwg# 0902-00854-B Rev-C

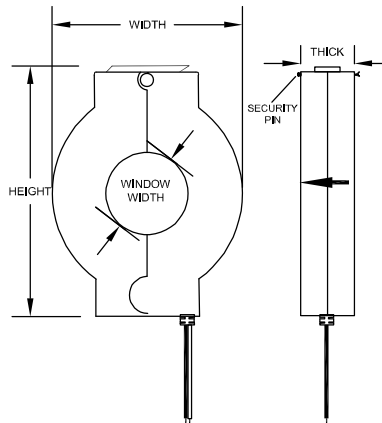
SENSOR DIMENSIONS

CURRENT TRANSFORMERS

5A-500A



1000A



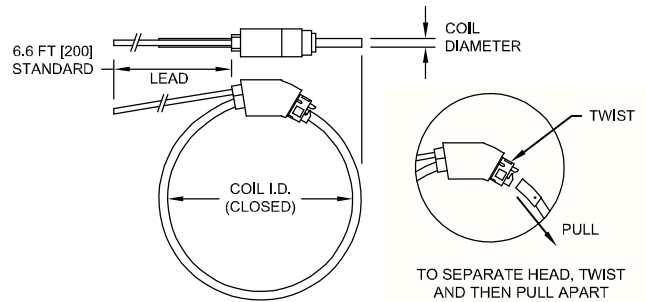
Lead Length.....40"
Wire..... WHITE = S1/K, 18AWG

SENSOR Size	Dimensions in Inches (mm)					Weight lbs. (grams)
	Height	Width	Thick	Window		
				High	Wide	
5-100A	2.62 (66.5)	1.77 (45)	1.35 (34.4)	0.94 (23.8)	0.94 (23.8)	0.40 (180)
200-500A	3.21 (81.5)	2.24 (57)	1.51 (38.4)	1.41 (35.7)	1.41 (35.7)	0.77 (350)
1000A	5.72 (145.2)	4.25 (108)	1.10 (28)	2.16 (55)	2.16 (55)	0.97 (440)

Dwg# 0902-01100-B Rev-A

Rogowski Coil

1kA to 40kA

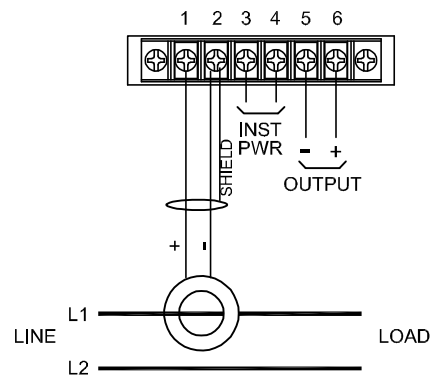


Dwg# 0902-00854-B Rev-E

COIL INSIDE DIAMETER	COIL LENGTH	MODEL
6.5 in. (16.5cm)	23.6 in (60cm)	STANDARD
10.5 in (26.7cm)	35.4 in (90cm)	Add suffix "-1"
14.0 in (35.6cm)	47.2 in (120 cm)	Add suffix "-2"
21.5 in (54.6cm)	70.9 in (180 cm)	Add suffix "-3"

COIL rating 100mV / 1kA

CONNECTION DIAGRAM



DC output is absolute regardless of input CT polarity.
Rogowski coil shield may be connected to terminal 2.

Dwg# 0902-00854-B Rev-E



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