

RMS CURRENT TRANSDUCER

MODEL MCTR-

2-WIRE LOOP POWERED, TRUE RMS

FEATURES

- Accurate measurement of the true RMS value of input signals
- UL94V-0 Polyamide DIN-mount case
- Split-core CT option for easy installation
- Base unit and current sensor are calibrated as a set to provide a 4-20mA analog output.
- Current measurement ranges up to 1000A
- Slim profile allows maximum use of available space.
- Recessed terminals provide increased safety.
- Designed to withstand motor start-up currents

APPLICATIONS

- Use direct-input models with any CT with 0.1A, 1A, 5A or 0.333V secondary.
- Ideal for non-sinusoidal applications, such as VFDs and SCR-controlled loads.
- Retro-fit of existing applications requiring installation with split-core sensors (order with suffix "S")

5 YEAR WARRANTY



MODEL SELECTION

INPUTS AC AMPS	STANDARD OUTPUT MODEL MCTR-	SENSOR SIZE
	4-20mA _{dc}	
*0 to 0.333V	0.333E2	(direct input)
0 to 0.1	0.100E2	(direct input)
0 to 1	001E2	(direct input)
0 to 5	005E2	(direct input)
0 to 5	005E2S	1
0 to 10	010E2S	1
0 to 15	015E2S	1
0 to 20	020E2S	1
0 to 25	025E2S	1
0 to 50	050E2S	1
0 to 100	101E2S	1
0 to 200	201E2S	2
0 to 300	301E2S	2
0 to 400	401E2S	2
0 to 500	501E2S	2
0 to 1000	102E2S	3

ORDERING INFORMATION

Example: 0-50A Input, with an external, split-core sensor and 4-20mA loop-powered output.

MCTR-050E2S

SPECIFICATIONS

INPUT

Type See Table
 Over-range (without damage)
 Continuous 1.5 X F.S. Rating
 Transient 10s/hr 5 X F.S. Rating
 1s/hr 10 X F.S. Rating
 Frequency Range 50-60Hz
 Burden 0.1A & 1A models 0.05VA
 5A models 0.18VA
 0.333V models 0.004VA

OUTPUT

Scaling 0-F.S. Input = 4-20mA_{dc} Output
 Response (to 90%) 300ms
 Loading (@ 24V_{dc} loop-power) 0-500Ω
 Setpoint Adjustment ±5%, minimum

DIELECTRIC TEST

Input/Output 2200Vac
 *NOTE: 0.333V model requires isolation through external CT.

INSTRUMENT POWER

Loop-Powered..... Nominal 24V_{dc}
 Range 15-35V_{dc}

ACCURACY (Includes effects of linearity and setpoint)

Direct input models 10-100% F.S. ±0.25% F.S.
 "S" suffix (5-20A Input) 10-100% F.S. ±1.0% F.S.
 "S" suffix (25-1000A input) 10-100% F.S. ±0.5% F.S.
 Output Ripple <1.0% pk-pk

TEMPERATURE

Operating Range -20°C to 60°C
 Effect ±1.0% F.S.

PHYSICAL (Base unit)

Net Weight 0.4 lb
 Unit can be mounted on RAIL EN50035 (DIN 1)
 or
 RAIL EN50022 (DIN 3)



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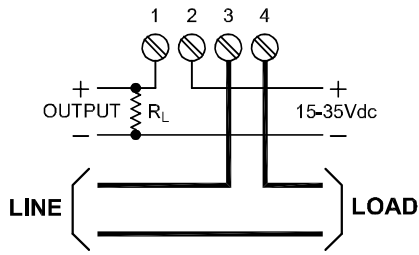
TOLL FREE: 1-800-537-6732

FAX: 614-777-4511

CONNECTION DIAGRAMS

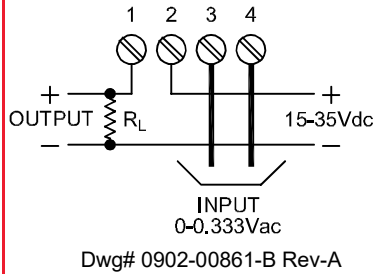
DC output is absolute regardless of CT polarity.

DIRECT CURRENT INPUT

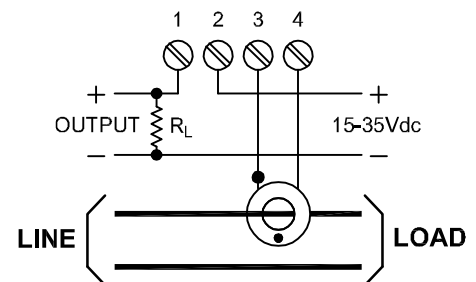


SENSOR SIZE 1, 2

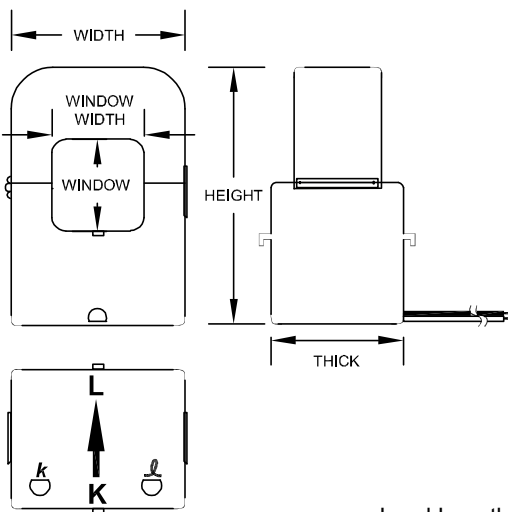
VOLTAGE INPUT



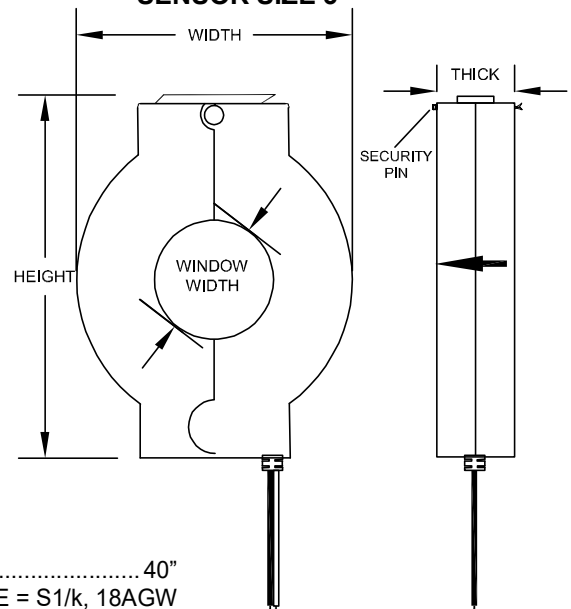
USING EXTERNAL CTs - "S" OPTION



SENSOR SIZE 3



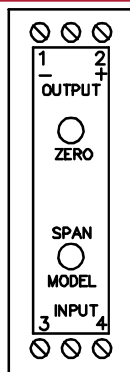
Dwg# 0902-01100-B Rev-A



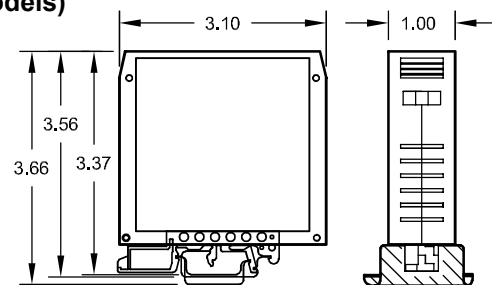
Lead Length.....40"
WireWHITE = S1/k, 18AGW

SENSOR Size	Dimensions in Inches (mm)					Weight
	Height	Width	Thick	Window		
				High	Wide	lbs. (grams)
1	2.62 (66.5)	1.77 (45)	1.35 (34.4)	0.94 (23.8)	0.94 (23.8)	0.40 (180)
2	3.21 (81.5)	2.24 (57)	1.51 (38.4)	1.41 (35.7)	1.41 (35.7)	0.77 (350)
3	5.72 (145.2)	4.25 (108)	1.10 (28)	2.16 (55)	2.16 (55)	0.97 (440)

CASE DIMENSIONS



BASE UNIT (All Models)



All dimensions in inches. Tolerance: ± 0.015 in.

Dwg# 0902-00861-B Rev-A



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