

**WORLDS  
FIRST**

**A. C. SIGNAL POWERED METERS  
REPLACE ANALOG METERS  
FOR NUCLEAR, MIL & INDUSTRIAL**

**SERIES  
ACS**

U.S. Patent No. 4,908,569 and Others Pending

Model ACS-0



Model ACS-1



Model ACS-2



Model ACS-3



Model ACS-4



Model ACS-5



Model ACS-6



Model ACS-7



Model ACS-8



**New! Model ACS-A  
Auto Tri-color  
Bargraph**

**DESCRIPTION:**

Now you can replace your 19th Century Technology with **OTEKs** 21st Century Meters for AC Volts, Amps, Frequency and Watts! All you need is the signal (2 or 4 wires)! The **ACV & Hz** work directly from the mains 2 wire up to 240VAC. The **ACA** from a 5 Amp C.T. (2 wire) and the **Watts** from AC Line (or P.T.) and C.T. (4 wire).

The **ACS** Series uses ASIC and Nanotechnology Microcontroller to achieve the greatest reliability (Life-time Warranted) at the lowest power consumption (<50mW) with the greatest accuracy ( $\pm 0.1\%$  of F.S.). Now You Have A Choice!

**IF YOU DON'T SEE IT  
ASK FOR IT!**



**SPECIFICATIONS @ 25°C AND INPUT RANGE:**

- \*Accuracy & Linearity:  $\pm 0.1\%$  of F.S.
- \*Input Range (V, Hz & W): 40-250VAC
- \*Input Range Amps: 0.1 to 5A (10A Spike Max.)
- \*Power Consumption: 50mW (Typical)
- \*Zero/Span Adjustment:  $\pm 30\%$
- \*Operating Temp:  $-20 + 70^{\circ}\text{C}$
- \*Storage Temp:  $-30 + 80^{\circ}\text{C}$
- \*Measuring Method: RMS Calibrated
- \*Humidity: 5-95% RH, N.C.
- \*CMTBF: >100,000 Hours
- \*Connector: Plug-In Screw Terminal or #10 Lug
- \*Auto-Tricolor Backlite: Per Note 5
- \*LCD Image: Positive (Std.) Negative on Request

520-748-7900  
FAX: 520-790-2808  
E-MAIL: sales@otekcorp.com  
http://www.otekcorp.com

**O TEK** <sup>TM</sup> **CORP.**  
SINCE 1974

4016 E. TENNESSEE ST.  
TUCSON, AZ. 85714 U.S.A.

MADE  
IN  
USA

## PERFORMANCE/COMPARISON CHART

MODEL	BAR	DIGITS	LCD/LED	BACKLITE	ACCY(F.S.)	RESOLUTION	CASE TYPE (HXWXD)
ACS-0	None	4 1/2	LCD	Green or Red	+0.1%	0.05%	Metal/Plastic 2.9 X 1.5 X 1.5"
ACS-1	None	4 1/2	LED	None	+0.1%	0.05%	Metal/Plastic 2.9 X 1.5 X 1.5"
ACS-2	None	4 1/2	LCD	Green or Red	+0.1%	0.05%	Plastic Standard 3 1/2" Barrel
ACS-3	None	3 1/2	LED	None	+0.1%	0.05%	Plastic Standard 3 1/2" Barrel
ACS-4	101 Bars	4 1/2	LCD	Tricolor	+0.1%	0.05%	Metal/Plastic Std. 6 x 2.1 X 2.5"
ACS-5	101 Needles	4 1/2	LCD	Tricolor	+0.1%	0.05%	Metal/Plastic Std. ANSI 4"
ACS-6	101 Bars	4/12	LCD	Tricolor	+0.1%	0.05%	Metal/Plastic Std. ANSI 4"
ACS-7	51 Bars	None	LED	None	1%	2%	Metal/Plastic Std. ANSI 4"
ACS-8	51 Bars	None	LED	None	1%	2%	Plastic 6 X 1 X 2" Deep
ACS-9	Custom Part Number: Contact OTEK						
ACS-A	51 Bars	4	LED	Tricolor	0.1%	0.05%	Metal/Plastic Std. ANSI 4"

### NOTES:

1. Nuclear Qualified to 10CCFR50-B only in metal case.
2. Mil Qualified to specific specs (send list) and only in metal case.
3. All measurements are A.C. Average RMS Calibrated. **V** & **Hz** Range: 40-240V; **A** Range: 0.05-5A nominal (Uses existing C.T., for optional C.T. see Note 4)
4. Order C.T. separately P/N: 70-CT-0 = 100:5, 70-CT-1 = 300:5, 7-CT-2 = 600:5, 70-CT-3 = 1200:5. All C.T.'s are "Metering" Class 0.3%. Always use largest gauge wire from your external C.T. to the **ACS**.
5. All **LCD** units have built-in backlite.
6. Bar-Digital Models (4, 5, 6 & A) have automatic tricolor backlite that changes vs. input. Standard is: <10 = Red; <20 = Amber; <80 = Green; <90 Amber; <100 = Red unless you specify different at time of ordering ( $\mu$ C Programmed).
7. Standard silkscreened filter per input type selected. Use #9 to specify custom scale printing.
8. Standard V, Hz & W input range is 40-240VAC and 0.05 - 5A AC (C.T.). Use #9 and contact **OTEK** for your custom operating input range.
9. See Front page and Mechanical Drawing for Model number vs. case type.
10. Other models sharing the same case type (for blending purposes). -0 & -1 = LPM, PM, LEDPM, LPE, BCDPM, HI-QREM. -2 & -3 = None, 4 = LBD, EBD, HI-Q119, 5, 6 & 7 = TBS, 123, 124, 126, LSB, SEB, LPB-1, 8 = LPB-0 & HI-QSLIM.

## PRELIMINARY ORDERING INFORMATION 10-1-08

<p><b>Model:</b> ACS - <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6</p> <p><b>DISPLAY TYPE (1,2,4)</b></p> <p>0 ..... 4 1/2 LCD Digital</p> <p>1 ..... 4 1/2 LED Digital</p> <p>2 ..... 4 1/2 LCD Digital</p> <p>3 ..... 3 1/2 LED Digital</p> <p>4 ..... LCD Bar-Digital</p> <p>5 ..... LCD "Needle" -Digital</p> <p>6 ..... LCD Bar-Digital</p> <p>7 ..... Circular LED Bargraph</p> <p>8 ..... Edgewise LED Bargraph</p> <p>9 ..... Custom (Consult Factory)</p> <p>A .. Circular Tricolor LED Bar-Digital</p> <p><b>CASE TYPE (3)</b></p> <p>0 ..... Plastic</p> <p>1 ..... Metal</p> <p>9 ..... Custom (Specify)</p> <p><b>INPUT TYPE (4)</b></p> <p>V ..... Volts</p> <p>A ..... Amps</p> <p>H ..... Frequency</p> <p>W ..... Watts</p> <p>9 ..... Custom (Consult Factory)</p>	<p><b>RANGE/CALIBRATION</b></p> <p>0 ..... STANDARD</p> <p>9 ..... CUSTOM</p> <p><b>SCALE PLATE</b></p> <p>0 ..... STANDARD (0-100%)</p> <p>9 ..... CUSTOM</p> <p><b>GRADE (3)</b></p> <p>I ..... Industrial (As Specified)</p> <p>M ..... Mil-Std. (To Specific MS)</p> <p>N ..... Nuclear (To 10CFR50-B)</p>
--	--

### NOTE:

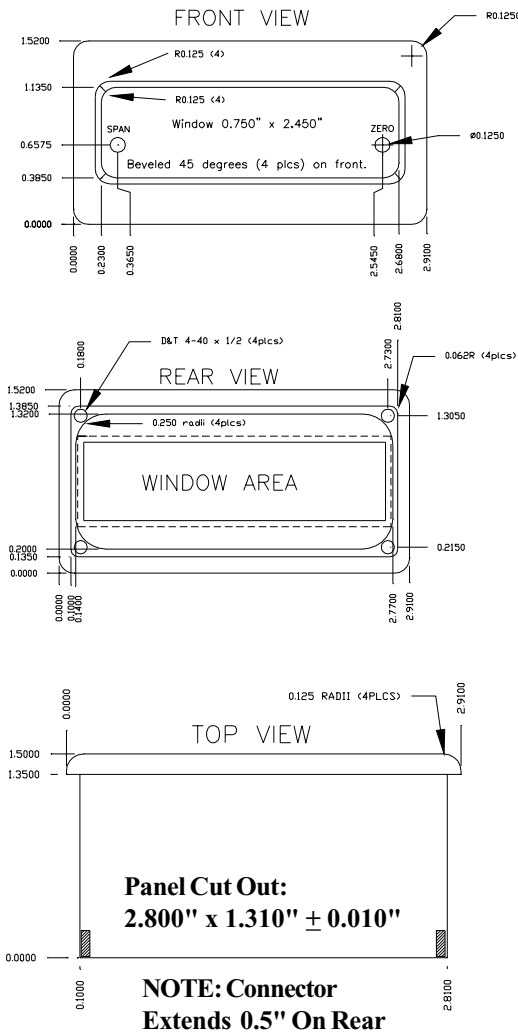
1. All LCD Models have positive image. For negative image (illuminated digits & bars). Use Option 9 & specify negative image.
2. ACS-A is automatic tricolor bargraph that changes color at specific limits. Specify limits for red, orange and green.
3. ACS-2, ACS-3 and ACS-8 Not Available In Metal Case. Mil or Nuclear Grades on Request.
4. Watts and Amps not yet available in display types 0-3.

### WARNING: Lethal Volt - Current

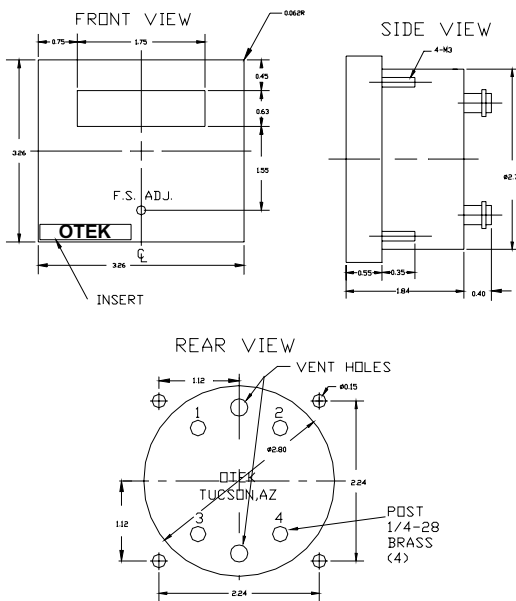
Potential Might Be Present When A C.T. Opens Or Instrument Might NOT Display Data Due To Under-Range (Just Like Analog Meters).

# MECHANICAL INFORMATION

## ACS-0 & -1



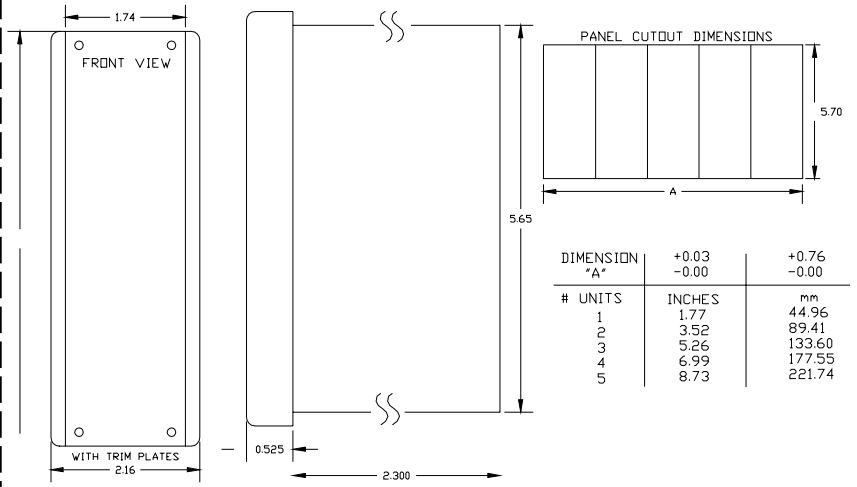
## 3 1/2" Analog Meter Case ACS-2 & ACS-3



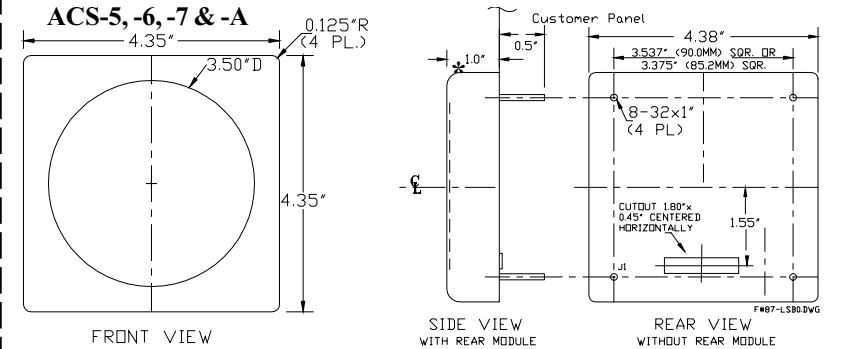
### CONNECTIONS:

AMPS: 3 & 4; VOLTS: 1 & 2; Hz: 1 & 2;  
WATTS: 1 & 2; VOLTS & 3 & 4 AMPS

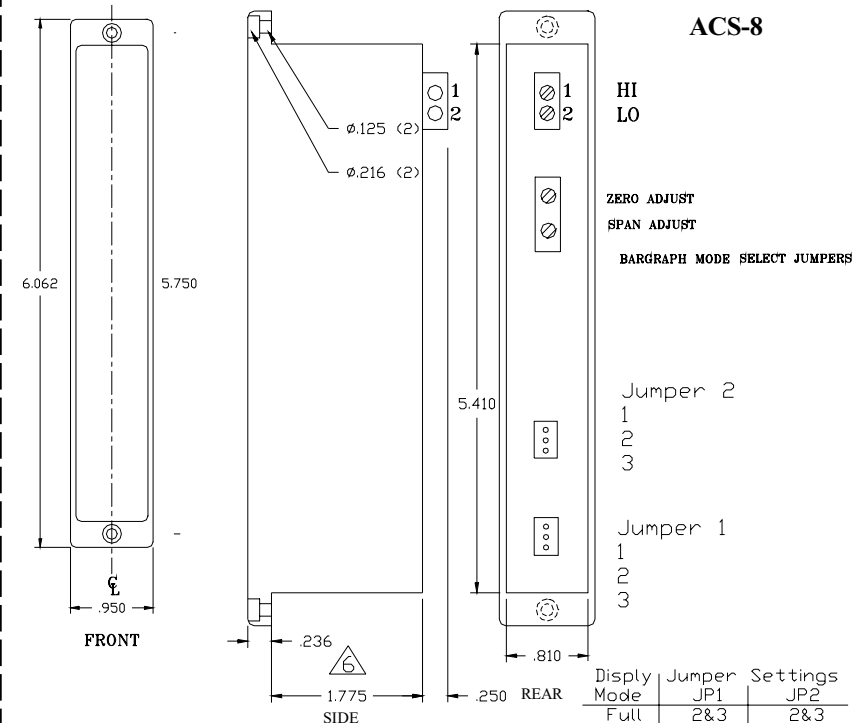
## ACS-4



## ACS-5, -6, -7 & -A



## ACS-8



### NOTES:

1. RECOMMENDED PANEL CUTOUT: 0.840 x 5.452
2. MOUNTING HOLES (2) FOR #4 CLEARANCE HARDWARE SUPPLIED
3. WIRE SIZE ACCEPTED > 24 < 16 GA.
4. ALL DIM ±0.010"
5. FOR STACKED APPLICATIONS MAKE MOUNTING HOLES ON 0.960" CENTERS.