

MODEL APLI/V - CURRENT OR VOLTAGE METER

APOLLO SERIES

APLI - CURRENT INPUT

APLV - VOLTAGE INPUT



EMC
COMPLIANT



NEMA 4 /
IP65

- FOUR MULTI-RANGE UNITS COVER:
199.9 μ A to 1.999 A, 199.9 mV * (A.C. or D.C.)
1.999 V to 300 V (A.C. or D.C.)
- 3 1/2-DIGIT, 0.56" (14.2 mm) HIGH LED DISPLAY
W/POLARITY
- BUILT-IN SCALING PROVISIONS
- SELECTABLE DECIMAL POINT LOCATION
- AUTO ZEROING CIRCUITS
- FRONT PANEL CALIBRATION ADJUSTMENT
- OVER-RANGE INDICATION

* Accessory Shunts Available For Higher Current Ranges.

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User Bulletin



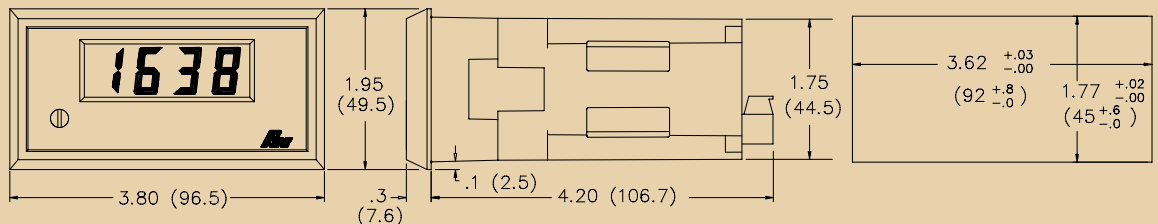
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DOC # 04004

Product Features

Apollo Volt and Current Meters are premium quality instruments designed for tough industrial applications. With multi-range capability, built-in provision for scaling, and DIP switch selectable decimal points, these units offer the ultimate in application flexibility. Just four basic models, off-the-shelf, from your local distributor, cover your voltage and current indicator needs, as well as your requirements for direct readout from pressure, speed or flow transducers, or any other variable that can be translated to voltage or current.

The attractive die-cast metal bezel of the Apollo not only enhances the appearance of any panel, it can also be sealed in the front panel for use in wash-down areas and tough, dirty industrial environments. The 3 1/2-digit bi-polar display (minus sign displayed when current or voltage is negative) features 0.56" (14.2 mm) high, 7-segment LED's for easy reading. Also featured are removable terminal blocks on the rear that facilitate installation wiring and change-outs.

DIMENSIONS "In inches (mm)"



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General Specifications

- DISPLAY:** 3 1/2-digit, 0.56" (14.2 mm) high, 7-segment LED, (-) minus sign displayed when current or voltage is negative. Decimal points inserted before 1st, 2nd, or 3rd least significant digits by DIP switch selection.
- POWER:** Available in either 115 VAC or 230 VAC versions. Allowable power line variation $\pm 10\%$, 50/60 Hz, 6 VA. **Isolation:** 2300 Vrms for 1 min. between input and supply (300 V working voltage).
- TEMPERATURE COEFFICIENTS:**

	<u>Current meters</u>	<u>Voltmeters</u>
	D.C.: ± 100 PPM/ $^{\circ}$ C	D.C.: ± 75 PPM/ $^{\circ}$ C
	A.C.: ± 200 PPM/ $^{\circ}$ C	A.C.: ± 150 PPM/ $^{\circ}$ C
- ENVIRONMENTAL CONDITIONS:**

Operating Temperature : 0 $^{\circ}$ to 60 $^{\circ}$ C
Storage Temperature : -40 $^{\circ}$ to 80 $^{\circ}$ C
Operating and Storage Humidity: 85% max. relative humidity (non-condensing) from 0 $^{\circ}$ C to 50 $^{\circ}$ C.
 Altitude: Up to 2000 meters
- CERTIFICATIONS AND COMPLIANCES:**

SAFETY
 EN 61010-1, IEC 1010-1
ELECTROMAGNETIC COMPATIBILITY
 Immunity to EN 50082-2
 Emissions to EN 50081-2
- CONSTRUCTION:** Metal die-cast front bezel with black, high impact plastic insert case. This unit is rated for NEMA 4/IP65 indoor use when properly installed (panel gasket and mounting clips included). Installation Category II, Pollution Degree 2.
- WEIGHT:** 1.2 lbs. (0.54 Kg)

Input Specifications

- INPUT RANGES:** (Selectable by input and jumper connections.)

A.C. Voltmeters	A.C. Current Meters	D.C. Voltmeters	D.C. Current Meters
0-1.999 Volts (basic range)	0-199.9 μ A	± 1.999 Volts (basic range)	± 199.9 μ A
0-19.99 Volts	0-1.999 mA	± 19.99 Volts	± 1.999 mA
0-199.9 Volts	0-19.99 mA	± 199.9 Volts	± 19.99 mA
0-300 Volts	0-199.9 mA	± 300 Volts	± 199.9 mA
	0-1.999 amps		± 1.999 amps
	0-199.9 mV (basic range)		± 199.9 mV (basic range)

- ACCURACY:**

DC Volts: $\pm(0.1\%$ of Reading + 1 digit)
AC Volts: $\pm(0.1\%$ of Reading + 2 digits) (45-500 Hz)
DC Current
199.9 μ A, 1.999 mA, 19.99 mA: $\pm(0.1\%$ of Reading + 1 digit)
199.9 mA: $\pm(0.15\%$ of Reading + 1 digit)
1.999 A: $\pm(0.5\%$ of Reading + 1 digit)
AC Current (45-500 Hz)
199.9 μ A, 1.999 mA, 19.99 mA: $\pm(0.1\%$ of Reading + 2 digits)
199.9 mA: $\pm(0.15\%$ of Reading + 2 digits)
1 A: $\pm(0.5\%$ of Reading + 2 digits)
- OVER-RANGE INDICATION:** on all modes is indicated by blanking 3 least significant digits.
- MAX. VOLTAGE ON BASIC RANGE INPUTS:** 75 VAC or DC (Term. 8 to 3 on voltmeters, Term. 9 to 3 on current meters).
- MAX. VOLTAGE ON TERMINAL BLOCK:** 300 VAC or DC (Both voltmeters and current meters).
- MAX. SHUNT CURRENTS (ON CURRENT METERS):**
199.9 μ A through 19.99 mA: 10 x max. range current
199.9 mA: 1 amp
1.999 amp: 3 amps
Caution: In circuits where fault currents can exceed the maximum shunt current, a fast-blow fuse should be installed in series with the input signal. Otherwise, a slow blow 10 amp fuse is recommended that will allow for start-up over current situations, while still protecting the instrument.
- RESPONSE TIME TO STEP CHANGE INPUT:** 1 sec. nominal
- READING RATE:** 2.5 readings/sec., nominal
- NORMAL MODE REJECTION:** 50 dB 50/60 Hz (D.C. units only)
- COMMON MODE REJECTION:** 110 dB D.C. or 50/60 Hz (D.C. units only)
- COMMON MODE VOLTAGE (COMM. TO EARTH):** 350 volt peak

Ordering Information

MODEL NO.	DESCRIPTION	PART NUMBERS	
		230 VAC	115 VAC
**APLVD	Apollo DC Voltmeter	APLVD410	APLVD400
**APLVA	Apollo AC Voltmeter	APLVA410	APLVA400
**APLID	Apollo DC Current Meter	APLID410	APLID400
**APLIA	Apollo AC Current Meter	APLIA410	APLIA400
---	*10 amp Current Shunt	APSCM010	
---	*100 amp Current Shunt	APSCM100	

* Voltage drop at full current = 100.0 mV maximum. Continuous current should not exceed 115% of rating.

** Units are shipped calibrated to the following readings:

MODEL NO.	DISPLAY @ INPUT
APLVD	1999 @ 1.999 VDC
APLVA	1999 @ 1.999 VAC
APLID	1999 @ 199.9 mVDC
APLIA	1999 @ 199.9 mVAC