

Low Cost, 3 1/2 Digit Voltmeters

MODEL 201A & 201AN



201AN-5 shown
actual size.



STANDARD FEATURES

- ☑ ±1,999-count display span
- ☑ ±200 mV to ±200 Vdc ranges
- ☑ True-differential input with 80 dB CMR
- ☑ 3-wire ratio input
- ☑ Bright, 14.2 mm (0.56") LED display
- ☑ Automatic zero and polarity
- ☑ Display hold and test
- ☑ 115/230 Vac power
- ☑ 1/8 DIN case

OPTIONS

- ☑ Isolated 9-32 Vdc power
- ☑ Isolated 26-56 Vdc power
- ☑ Screw-terminal barrier strip
- ☑ NEMA-4 (IP65) splash-proof lens cover

Models 201A and 201AN are two pinout versions of the same low-cost 3 1/2 digit DC voltmeter. They fit a standard 1/8 DIN panel cutout and require a depth of less than 104 mm (4.1") behind the panel. With the addition of a screw-terminal barrier strip, they become low-cost, pin-compatible alternatives to the Q2000A and Q2000B in applications where indication-only is required.

INPUT RANGES

The 201A and 201AN offer voltage ranges of ±0.1999 V, ±1.999 V, ±19.99 V and ±199.9 V dc. The input is true-differential, with excellent common-mode noise rejection (CMR). By using an external DC voltage reference, any of these ranges can further be configured for 3-wire ratio measurement with readout from 0 to 1.999.

TWO PINOUTS

Model 201A is pin-compatible with Newport's older Model 201 and is recommended for existing 201 applications.

Model 201AN is pin-compatible with Newport's 202A, 2001A, 2002B Series and is recommended for new applications.

OPTIONS

The 201A and 201AN can be configured for four voltage input ranges, three decimal-point positions, and high-impedance 3-wire ratio input. Mechanical options include a screw-terminal barrier strip for signal and power and a splash-proof lens cover which meets NEMA-4 (IP65) standards.

Specifications

NOISE REJECTION

NMR: 56 dB, 50/60 Hz
CMR, AC GND to SIG GND: 120 dB, DC to 60 Hz
CMR, SIG LO to SIG GND: 80 dB, DC to 60 Hz
CMV, AC GND to SIG GND: 1500 Vp per HV test,
354 Vp per IEC spacing
CMV, SIG LO to SIG GND: ±1 Vp

POWER

AC voltage: 115 or 230 Vac, ±15%
AC frequency: 49-440 Hz
DC voltages: 9-32 Vdc, isolated to 300 Vp; 26-56 Vdc,
isolated to 300 Vp
Power consumption: 2.4 W (nominal)
Output voltages: +4.7 Vdc
and -4.6 Vdc ±5%, 10 mA max

DISPLAY

Type: 7-segment, red LED
Height: 14.2 mm (0.56")
Symbols: -1.8.8.8
Decimal points: Three positions programmable
internally or at connector
Overrange indication:
Three least-significant digits blank

ENVIRONMENTAL

Operating temperature: 0 to 60°C
 Storage temperature: -40 to 85°C
 Relative humidity: 95% at 40°C
 (non-condensing)

ANALOG INPUT

Range	±199.9 mV	±1.999 V	±19.99 V	±199.9 V
Resolution	100 µV	1 mV	10 mV	100 mV
Maximum Input	130 Vp	130 Vp	250 Vp	250 Vp
Input Resistance	1 Gohm	1 Gohm	1.1 Mohm	1.0 Mohm
Bias Current	50 pA	50 pA	5 pA	1 pA

3-WIRE RATIO REFERENCE

Analog Input Range	±200 mV	±2, ±20, ±200 V
External Reference Input	+0.05 to +0.2 V	+0.5 to +2.0 V
Load on Reference, STD	30.6 kohm	65.3 kohm
Load on Reference, OPT	100 Mohm	100 Mohm
Accuracy	99.9%	99.9%

ANALOG-TO-DIGITAL CONVERSION

Technique: Dual-slope, average-value
 Polarity: Automatic
 Signal integration period: 100 ms

SIGNALS

HOLD and TEST inputs: TTL or 5 V
 CMOS compatible

MECHANICAL

Bezel: 96 W x 48 H x 5.1 mm D
 (3.78 x 1.89 x 0.20")
 Depth Behind Bezel: 104 mm (4.09")
 Panel Cutout: 92 W x 45 mm H
 (3.62 x 1.77")
 Weight: 14 oz (400 g)
 Case material: 94V-0 UL-rated polycarbonate

ACCURACY AT 25°C

Maximum error: ±0.05% of reading
 ±1 count
 Span tempco: ±0.01% of reading/°C
 Step response: 1 s
 Warmup to rated accuracy: 10 min

INPUT CONFIGURATION

Configuration: Differential, bipolar
 Zero: Automatic
 Span Adjustment: ±5%

To Order Visit omega.com/info for Pricing and Details

Model No.		Description
201AN		3 ½ Digit Voltmeter for new applications
201A		3 ½ Digit Voltmeter
	-2	±199.9 mVdc
	-3	±1.999 Vdc
	-4	± 19.99 Vdc
	-5	±199.9 Vdc
	*	(Nothing, leave field blank) Standard 3-wire ratio input impedance
	,HZ	High impedance (100 mOhm)
	*	(Nothing, leave field blank) Programmable at D1 connector
	,DP1	1.999, internally-wired
	,DP2	19.99, internally-wired
	,DP3	199.9, internally-wired
	*	(Nothing, leave field blank) 115 Vac, 50/60 Hz power
	,C1	230 Vac, 50/60 Hz
	,C3C	Isolated 9-32 Vdc
	,C3E	Isolated 26-56 Vdc
	*	(Nothing, leave field blank) Red LED display
	,G	Green LED display
	*	(Nothing, leave field blank) No Option
	,D4	Screw-terminal barrier strip for power and signal (removes power and signal from D1) 201AN only. D4 option required for CE
	*	(Nothing, leave field blank) No Option
	,BL	Lens without Newport logo

NOTE: All combinations may not be valid, check spec sheet for valid part numbers.

Ordering Examples: 201AN-2-D4, for 3½ digit DC voltmeter with ±199.9 mV dc, screw terminal barrier strip