

# Low-cost, 3½ Digit Process Meter

1/8 DIN



202A-P



Meter shown larger than actual size.

- ✓ Zero and Span Adjustments of 2,000 Counts Each
- ✓ ±1,999-count Display Span
- ✓ Standard Signal Ranges of 4-20 mA, 1-5 V, 0-10 V
- ✓ 120 dB CMR, 56 dB NMR
- ✓ Bright, 0.56 in (14.2 mm) LED Display
- ✓ Automatic Polarity
- ✓ Display Hold and Test
- ✓ 115/230 Vac Power
- ✓ EMI/RFI Filter for AC Power
- ✓ Screw-Terminal Barrier Strip
- ✓ Short 104 mm (4.1") Deep 1/8 DIN Case

## Options

- ✓ Isolated 9 to 32 Vdc Power
- ✓ Isolated 26-56 Vdc Power
- ✓ NEMA 4 (IP65) Splash-Proof Lens Cover

Model 202A-P is a low-cost 3½ digit process meter for applications where indication-only is required. It provides a span adjustment of 2,000 counts for all signals, a zero adjustment of ± 1,000 counts for input signals of 4-20 mA and 1-5 V and a zero adjustment of -1,500 to +500 counts for input signals of 0-10 V. Scaling and calibration are easily accomplished in the field by multiturn potentiometers accessible behind the lens. Accuracy is 99.9% of reading.

The 202A-P can also be used in ratiometric potfollower applications to determine liquid level or valve setting from the position of a potentiometric wiper. The required external reference voltage can be derived from the meter's own 4.7 V dc supply.

## Compact Case

The 202A-P is housed in a 1/8 DIN case that requires less than 4.1 in (104 mm) behind the panel. A screw-terminal barrier strip for signal and power is standard.

## Options

Options are isolated 9-32 V dc or 26-56 V dc power, a PCB edge connector for display control and output of +4.7 V dc and -4.7 V dc power, and a splash-proof lens cover which meets NEMA-4 requirement.

## Specifications

### Input

**Range:** 4-20 mA 1-5 V 0-10 V

**Input Resistance:** 13Ω 1 MΩ 1 MΩ

**Bias current:** 50 pA 10 pA 5 pA

**Maximum Input:** 55 mA 250 V 250 V

**Ratiometric reference:**

0.1 or 1.0 V dc + 100%/-50%

### Noise Rejection

**NMR, SIG HI to SIG LO:**

56 dB, 50/60 Hz

**CMR, SIG GND to SIG HI:**

120 dB, DC to 60 Hz

**CMR, SIG GND to PWR GND:**

120 dB, DC to 60 Hz

**CMV, SIG GND to PWR GND:**

1500 Vp per HV test,

354 Vp per IEC spacing

### Accuracy at 25°C

**Maximum error:** ±0.05% of reading  
±1 count

**Zero tempco:** ±0.01% of offset/°C

**Span tempco, ratiometric:** ±0.01%  
of reading/°C

**Span tempco, non-ratiometric:**

±0.03% of reading/°C

**Full-scale step response:** 1 s

**Warmup to rated accuracy:** 1 min

## Analog-to-Digital Conversion

**Technique:** Dual-slope, average value

**Signal integration period:** 100 ms

**Read rate:** 2.5/s

### Display

**Display Type:** 7-segment, red LED

**Height:** 0.56 in (14.2 mm)

**Symbols:** -1.8.8.8

**Decimal points:** Three positions,  
programmable by jumpers or at  
connector, 10 mA sink

**Overrange indication:**

Three least-significant digits blank

### Digital Inputs

**Level:** TTL or 5 V CMOS compatible

### Power

**AC voltages:** 115 or 230 Vac ±15%

**AC frequency:** 49-440 Hz

**DC voltages:**

9-32 V dc isolated to 300 Vp

26-56 V dc, isolated to 300 Vp

**Power Consumption:** 3.7 W

**Output voltages:** +4.7 Vdc

and -4.7 V dc ±5% 10 mA max

## Environmental

**Operating Temp:** 0 to 60°C

**Storage Temperature:** -40 to 85°C

**Humidity:** 95% RH to 40°C  
(non-condensing)

### 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:** 425 g (15 oz)

**Case material:** 94V-0 UL-rated  
polycarbonate

To Order Visit <a href="http://newportUS.com/202a_p">newportUS.com/202a_p</a> for Pricing and Details				
Model No.				Description
202A-P				3½ digit process meter (default calibration: 4-20 mA = 00.0 - 100.0)
	*			(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
		,FS		Custom calibration, specify volts or mA: min/max input, min/max display
			,BL	Lens without Newport logo
Accessories				Description
	RP18			19" rack panel for one ½ DIN instrument (92 x 45 mm panel cutout)
	RP28			19" rack panel for two ½ DIN instrument (92 x 45 mm panel cutout)
	RP38			19" rack panel for three ½ DIN instrument (92 x 45 mm panel cutout)
	TP1			Trimplate panel adapter. 109 x 64 mm (4.3" x 2.5"). Adapts DIN1A/DIN2A cases to larger panel cutouts.
	SPC4			NEMA 4 splash-proof lens cover (includes gasketed bezel and clear cover)

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