

# PANEL METERS



**NEXT**

## **Panel Meters**

Accessories	
Battery Indicator .....	.298
Illumination Kit .....	.298
AC .....	.298
Analog .....	.297, 298
Ammeter .....	.297, 298
DC .....	.297, 298
Digital .....	.297
Edge Reading .....	.298

## **Panel Meters (cont.)**

Front Panel .....	.298
LCD .....	.297
LED .....	.297
LPM Series Loop Power .....	.297
Microammeter .....	.298
Milliammeter .....	.298
Miniature .....	.297, 298
Panel Mount .....	.298
Surface Mount .....	.297, 298

## **Panel Meters (cont.)**

Wide-Vue .....	.298
Voltmeter .....	.297, 298
VU Type .....	.298

## **Manufacturers:**

Jewell .....	.297
Modutec .....	.298
Simpson / Mercer .....	.298

**Main  
Menu**

**New  
This Issue**

**Products**

**Vendors**

**Service**

**Spec  
Sheets**

**Help**

# Jewell Panel Meters and Loop Power Modules

## DIGITAL PANEL METERS

All of these Jewell Digital Panel meters have a common operating temperature of 0°C to +50°C and a storage temperature of -20°C to +70°C. The following features apply to all of the digital panel meters except where indicated otherwise.

### Display:

- Type: 7-segment reflective, dual edge, liquid crystal display
- Digits: 3 1/2 (1999) digits, 0.5" (12.7mm) height
- Polarity: displays (-) automatically
- Annunciators: 9 VDC powered meters have "LO BAT" when power <7.2 VDC
- Decimal point: user selectable 3 position decimal point
- Over/under range: over range displays "1" and under range displays "-1"
- Hold: feature optional

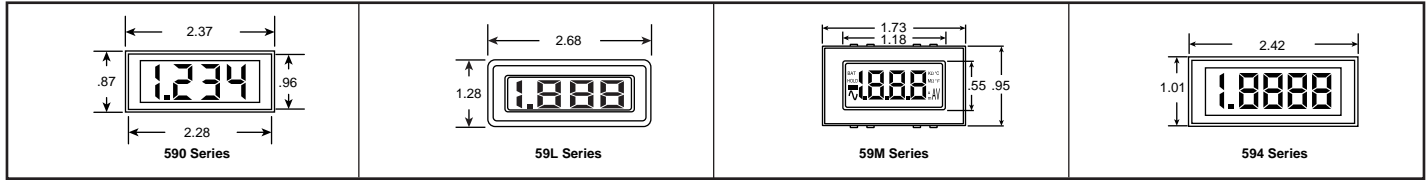
### Operation:

- Accuracy:  $\pm (0.1\% \text{ rdg} + 2 \text{ digit})$  with 5 VDC power  
 $\pm (0.1\% \text{ rdg} + 1 \text{ digit})$  with 9 VDC power
- Conversion rate: 2.5 per second
- Common mode voltage:  $\pm 1$  volt (maximum)
- Common mode reject: > 86 decibels
- Zeroing: automatic

### Analog Inputs:

- Full scale range: standard  $\pm 200\text{mVDC}$ ,  $\pm 2 \text{ VDC}$ ,  $\pm 20 \text{ VDC}$
- Configuration: true differential input and reference
- Protection: 250 VDC or 150 VRMS continuous  
300 VDC intermittent (maximum)
- Bias current: 1pA (typical), 10pA (maximum)
- Impedance: 10M $\Omega$  (typical)

DIMENSIONS (IN.)



## 590 Series 3-1/2 Digit LCD Meters

- Mounting: surface mount

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Jewell Part No.	Input Ranges	Supply Voltage (VDC)	Display Type	Price Each	
					1	5
564-5900	5900100090	200mV	9	No backlight	49.00	46.55
564-5901	5900100040	200mV	5	No backlight	49.00	46.55
564-5902	5900100190	2V	9	No backlight	49.00	46.55
564-5903	5900100140	2V	5	No backlight	49.00	46.55
564-5904	5900102091	200mV	9	Positive green backlight	68.25	64.84
564-5905	5900102041	200mV	5	Positive green backlight	68.25	64.84
564-5906	5900104091	200mV	9	Negative green backlight	68.25	64.84
564-5907	5900104041	200mV	5	Negative green backlight	68.25	64.84
564-5908	5900106091	200mV	9	Negative red backlight	69.75	66.26
564-5909	5900106041	200mV	5	Negative red backlight	69.75	66.26

## 59M Series Miniature 3-1/2 Digit LCD Meters

### Display:

- Annunciators: 12 different user selectable annunciators. (BAT, °C, °F, -, m, u, M $\Omega$ , k $\Omega$ , V, A, Hold 1 and Hold 2)

### Analog Inputs:

- Impedance: 10M $\Omega$  (typ.), 1M $\Omega$  (min.)

### Operation:

- Accuracy:  $\pm (0.2\% \text{ rdg} + 1 \text{ digit})$  with +5 VDC

- Mounting: mini snap-in bezel mounting

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Jewell Part No.	Input Ranges	Supply Voltage (VDC)	Display Type	Price Each	
					1	5
564-59M0	59M0660090	200mV	9	No backlight	47.00	44.65
564-59M1	59M0660040	200mV	5	No backlight	47.00	44.65
564-59M2	59M0660190	2V	9	No backlight	47.00	44.65
564-59M3	59M0660140	2V	5	No backlight	47.00	44.65

## 594 Series 4-1/2 Digit LCD Meters

### Display:

- Digits: 4 1/2 (19999) digits, 0.5" (13mm) height
- Annunciator: 9 VDC powered meters have "BT" when power <7.2 VDC
- Decimal point: user selectable 4 position decimal point
- Hold: standard feature

### Operation:

- Accuracy:  $\pm (0.06\% \text{ rdg} + 1 \text{ digit})$  with 9 VDC power or +5 VDC
- Conversion: 2 per second

### Analog Inputs:

- Bias current: 50pA (typical)
- Full scale range: standard  $\pm 200\text{mVDC}$ ,  $\pm 2 \text{ VDC}$
- Impedance: 1000M $\Omega$

- Mounting: surface mount

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Jewell Part No.	Input Ranges	Supply Voltage (VDC)	Display Type	Price Each	
					1	5
564-5940	594H100040	200mV	5	No backlight	110.00	104.50
564-5941	594H100140	2V	5	No backlight	110.00	104.50
564-5942	594H100090	200mV	9	No backlight	110.00	104.50
564-5943	594H100190	2V	9	No backlight	110.00	104.50

## 59L Series 3-1/2 Digit LED Meters

### Display:

- Type: 7-segment reflective LED
- Hold: standard feature

### Analog Inputs:

- Configuration: bipolar, fully differential
- Protection: 350 VDC,  $\pm 10 \text{ VDC}$  (200mV range)
- Bias current: 100pA typical, 1pA typical (200mV range)
- Impedance: 1M $\Omega$  typical, 1000M $\Omega$  typical (200mV range)

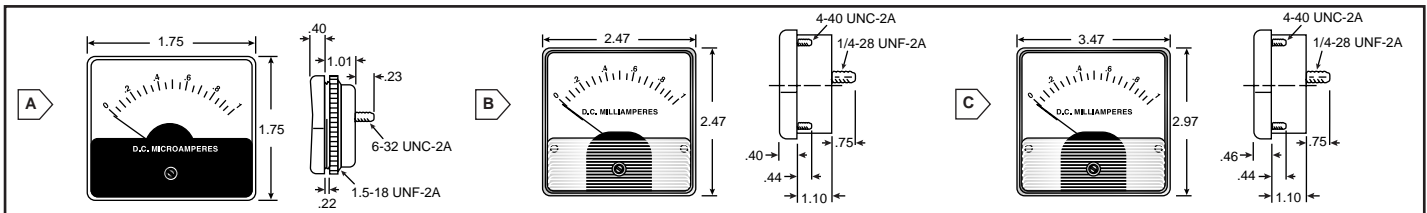
### Operation:

- Conversion rate: 3.4 per second

- Mounting: surface mount / window mount

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Jewell Part No.	Input Ranges	Supply Voltage (VDC)	Display Type	Price Each	
					1	5
564-59L0	59LH558040	200mV	5	Green LED	70.00	66.50
564-59L1	59LH558140	2V	5	Green LED	70.00	66.50
564-59L2	59LH559040	200mV	5	Red LED	70.00	66.50
564-59L3	59LH559140	2V	5	Red LED	70.00	66.50



DIMENSIONS (IN.)

## 2% ANALOG PANEL METERS

### Features:

- Meets ANSI C39.1 requirements
- External zero adjuster on cover
- One year limited warranty
- Compact self-shielded taut band movement
- Threaded stud-type terminals
- 1-1/2" meter mounted by single mounting ring which screws onto case barrel, 2-1/2" and 3-1/2" meters available in 4 stud mountings

## 1-1/2" Surface Mount Panel Meters

MOUSER STOCK NO.	Fig.	Type of Meter	Range	Standard Resistance	Price Each		
					1	5	10
564-MS1-5015	A	DC Voltmeter	0-15	1000	45.00	40.00	Call

## 2-1/2" Surface Mount Panel Meters

MOUSER STOCK NO.	Fig.	Type of Meter	Range	Standard Resistance	Price Each		
					1	5	10
564-72T-5030	B	DC Voltmeter	0-30	1000	48.00	43.20	Call

## 3-1/2" Surface Mount Panel Meters

MOUSER STOCK NO.	Fig.	Type of Meter	Range	Standard Resistance	Price Each		
					1	5	10
564-73T-3010	C	DC Ammeter	0-10	.005	48.00	43.20	Call
564-73T-5015	C	DC Voltmeter	0-15	1000	48.00	43.20	Call

## LPM SERIES LOOP POWER MODULES

### Specifications:

- Supply voltage: powered by milliamp control loop for LPM-590-20, LPM-59M-66, and LPM-594-20; +5VDC at 200mA for LPM-59L-55
- Input: 4-20mA DC for all series
- Accuracy:  $\pm 0.1\%$  reading  $\pm 2$  digit for LPM-590-20 and LPM-59L-20;  $\pm 0.6\%$  reading  $\pm 1$  digit for LPM-594-20;  $\pm 0.2\%$  reading  $\pm 1$  digit for LPM-59M-66
- Adjustments: SPAN (GAIN) and ZERO (OFFSET) for all series

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Jewell Part No.	Description	Price Each	
			1	5
564-59020	LPM-590-20	Process loop for 590 Series meters	36.00	32.76
564-59M66	LPM-59M-66	Process loop for 59M Series meters	47.50	43.23

- Decimal point: user selectable 3 position for LPM-590-20, LPM-59M-66, and LPM-59L-55; user selectable 4 positions for LPM-594-20
- Operating temperature: 0°C to +50°C
- Storage temperature: -10°C to +60°C
- Connection: two pin screw terminal for LPM-590-20, LPM-59M-66, and LPM-594-20; four pin screw terminal for LPM-59L-55

For quantities greater than listed, call for quote.

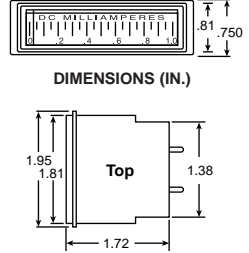
MOUSER STOCK NO.	Jewell Part No.	Description	Price Each	
			1	5
564-59L55	LPM-59L-55	Process loop for 59L Series meters	36.00	32.76
564-59420	LPM-594-20	Process loop for 594 Series meters	42.25	38.45

# Panel Meters

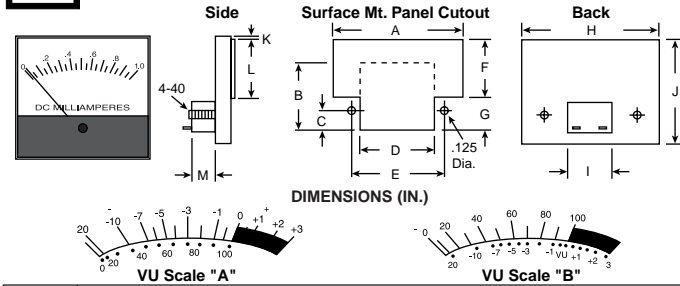
## Modutec EDGE READING

MOUSER STOCK NO.	Type of Meter	Range	Res. (Ω)	Price Each		
				1	5	10
541-ME-AAA-001	AC Ammeter	0-1	---	18.85	18.28	17.72
541-ME-AAA-005	AC Ammeter	0-5	---	18.85	18.28	17.72
541-ME-AAA-010	AC Ammeter	0-10	---	18.85	18.28	17.72
541-ME-AVV-150	AC Voltmeter	0-150	200/V	17.64	17.11	16.58
541-ME-DAA-005	DC Ammeter	0-5	.0002	15.44	14.98	14.51
541-ME-DAA-010	DC Ammeter	0-10	.0002	15.44	14.98	14.51
541-ME-DAA-020	DC Ammeter	0-20	.0002	15.44	14.98	14.51
541-ME-DMA-001	DC Milliammeter	0-1	2.3K	15.44	14.98	14.51
541-ME-DMA-005	DC Milliammeter	0-5	500	15.44	14.98	14.51

MOUSER STOCK NO.	Type of Meter	Range	Res. (Ω)	Price Each		
				1	5	10
541-ME-DMA-010	DC Milliammeter	0-10	244	15.44	14.98	14.51
541-ME-DMA-1U1	DC Milliammeter	1-0-1	700	15.44	14.98	14.51
541-ME-DUA-5H5	DC Microammeter	500-0-500	1.1K	17.10	16.59	16.07
541-ME-DVV-010	DC Voltmeter	0-10	200/V	16.22	15.73	15.25
541-ME-DVV-015	DC Voltmeter	0-15	200/V	16.22	15.73	15.25
541-ME-DVV-030	DC Voltmeter	0-30	200/V	16.22	15.73	15.25
541-ME-DVV-050	DC Voltmeter	0-50	200/V	16.22	15.73	15.25
541-ME-DVV-100	DC Voltmeter	0-100	200/V	16.22	15.73	15.25
541-ME-DVV-15U	DC Voltmeter	15-0-15	100/V	16.22	15.73	15.25



## Modutec PANEL MOUNT ±5% Accuracy



Meter Size (In.)	Dimensions (In.)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	1.45	1.14	.330	.950	1.20	.885	.64	1.51	.90	1.59	.06	.846	.50
2	2.32	1.25	.350	1.130	2.00	1.410	.71	2.48	1.10	2.36	.08	1.409	.51
3 1/2	3.58	1.71	.584	2.125	2.50	1.540	1.21	3.73	.94	2.90	.07	1.585	.47

### 1" Surface Mount

MOUSER STOCK NO.	Type of Meter	Range	Res. (Ω)	Price Each			
				1	5	10	50
541-OMS-AAA-001	AC Ammeter	0-1	---	20.26	19.65	19.04	18.44
541-OMS-AAA-005	AC Ammeter	0-5	---	20.26	19.65	19.04	18.44
541-OMS-AAA-010	AC Ammeter	0-10	---	20.26	19.65	19.04	18.44
541-OMS-AVV-150	AC Voltmeter	0-150	200/V	17.64	17.11	16.58	16.05
541-OMS-AVV-300	AC Voltmeter	0-300	200/V	17.64	17.11	16.58	16.05
541-OMS-DAA-005	DC Ammeter	0-5	.0002	16.22	15.73	15.25	14.76
541-OMS-DAA-020	DC Ammeter	0-20	.0002	16.22	15.73	15.25	14.76
541-OMS-DMA-001	DC Milliammeter	0-1	2.3K	16.22	15.73	15.25	14.76
541-OMS-DMA-005	DC Milliammeter	0-5	500	16.22	15.73	15.25	14.76
541-OMS-DMA-010	DC Milliammeter	0-10	244	16.22	15.73	15.25	14.76
541-OMS-DMA-1U1	DC Milliammeter	1-0-1	970	16.22	15.73	15.25	14.76
541-OMS-DVV-010	DC Voltmeter	0-10	200/V	17.64	17.11	16.58	16.05
541-OMS-DVV-015	DC Voltmeter	0-15	200/V	17.64	17.11	16.58	16.05
541-OMS-DVV-030	DC Voltmeter	0-30	200/V	17.64	17.11	16.58	16.05
541-OMS-DVV-050	DC Voltmeter	0-50	200/V	17.64	17.11	16.58	16.05
541-OMS-DVV-100	DC Voltmeter	0-100	200/V	17.64	17.11	16.58	16.05

### 2" Surface Mount

MOUSER STOCK NO.	Type of Meter	Range	Res. (Ω)	Price Each			
				1	5	10	50
541-MSQ-AAA-001	AC Ammeter	0-1	---	22.94	22.25	21.56	20.88
541-MSQ-AAA-005	AC Ammeter	0-5	---	22.94	22.25	21.56	20.88
541-MSQ-AAA-010	AC Ammeter	0-10	---	22.94	22.25	21.56	20.88
541-MSQ-AVU-AW	VU-Type Meter	VuScale A	---	25.57	24.80	24.04	23.27
541-MSQ-AVU-BW	VU-Type Meter	VuScale B	---	25.57	24.80	24.04	23.27
541-MSQ-AVV-150	AC Voltmeter	0-150	200/V	20.26	19.65	19.04	18.44
541-MSQ-AVV-300	AC Voltmeter	0-300	200/V	20.26	19.65	19.04	18.44
541-MSQ-AVV-005	DC Ammeter	0-5	.0002	18.85	18.28	17.72	17.15
541-MSQ-DAA-010	DC Ammeter	0-10	.0002	18.85	18.28	17.72	17.15
541-MSQ-DAA-020	DC Ammeter	0-20	.0002	18.85	18.28	17.72	17.15
541-MSQ-DAA-030	DC Ammeter	0-30	.0002	18.85	18.28	17.72	17.15
541-MSQ-DMA-001	DC Milliammeter	0-1	2.3K	18.85	18.28	17.72	17.15
541-MSQ-DMA-005	DC Milliammeter	0-5	500	18.85	18.28	17.72	17.15
541-MSQ-DMA-010	DC Milliammeter	0-10	244	18.85	18.28	17.72	17.15
541-MSQ-DMA-100	DC Milliammeter	0-100	2.3	18.85	18.28	17.72	17.15
541-MSQ-DMA-1U1	DC Milliammeter	1-0-1	970	18.85	18.28	17.72	17.15
541-MSQ-DVV-010	DC Voltmeter	0-10	200/V	20.26	19.65	19.04	18.44
541-MSQ-DVV-015	DC Voltmeter	0-15	200/V	20.26	19.65	19.04	18.44
541-MSQ-DVV-030	DC Voltmeter	0-30	200/V	20.26	19.65	19.04	18.44
541-MSQ-DVV-050	DC Voltmeter	0-50	200/V	20.26	19.65	19.04	18.44
541-MSQ-DVV-100	DC Voltmeter	0-100	200/V	20.26	19.65	19.04	18.44
541-MSQ-DVV-15U	DC Voltmeter	15-0-15	100/V	20.26	19.65	19.04	18.44

### 3 1/2" Surface Mount

541-MS-AVV-150	AC Voltmeter	0-150	200/V	21.63	20.98	20.33	19.68
541-MS-AVV-300	AC Voltmeter	0-300	200/V	21.63	20.98	20.33	19.68
541-MS-DAA-005	DC Ammeter	0-5	.0002	20.26	19.65	19.04	18.44
541-MS-DAA-010	DC Ammeter	0-10	.0002	20.26	19.65	19.04	18.44
541-MS-DMA-001	DC Milliammeter	0-1	1.1K	20.26	19.65	19.04	18.44
541-MS-DMA-010	DC Milliammeter	0-10	125	20.26	19.65	19.04	18.44
541-MS-DUA-5H5	DC Microammeter	500-0-500	1.1K	21.63	20.98	20.33	19.68
541-MS-DVV-015	DC Voltmeter	0-15	200/V	21.63	20.98	20.33	19.68
541-MS-DVV-030	DC Voltmeter	0-30	200/V	21.63	20.98	20.33	19.68
541-MS-DVV-050	DC Voltmeter	0-50	200/V	21.63	20.98	20.33	19.68

## SMD PANEL METER ILLUMINATION KIT

• For 6 volt or 12 volt use NOT AVAILABLE FOR EDGE-READING METERS

MOUSER STOCK NO.	Contains	Price Each		
		1	5	10
541-KM6-25P	Two 6V lamps, Two holders w/ spacers, & instructions	11.75	11.40	11.05

## Simpson WIDE-VUE PANEL METERS

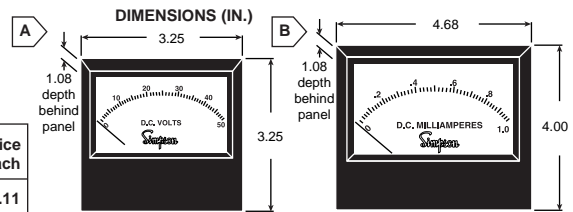
All DC wide-vue meters have the Simpson self-shielded movement - Calibration is not affected by stray magnetic fields or magnetic mounting. All AC wide-vue meters have an iron vane movement and are calibrated at 60Hz. The AC voltmeters have a frequency range of 25 to 125Hz.

### DC Ammeters

MOUSER STOCK NO.	Fig.	Size	Range	Approx. Resistance Ω/Volt	Price Each
529-02690	A	3 1/2	0-10	.005	53.56
529-02870	B	4 1/2	0-10	.005	58.11

### AC Voltmeters

MOUSER STOCK NO.	Fig.	Size	Range	Approx. Resistance Ω/Volt	Price Each
529-10340	B	4 1/2	0-300	50,000	58.11



## DC MINIATURE PANEL METERS

These miniature meters are small in size, but highly sensitive. They provide quick legible readings and are extremely durable mechanically.

### DIMENSIONS (IN.)

### Edge Reading

MOUSER STOCK NO.	Fig.	Scale	R <sub>DC</sub> (Ω)	Features	Price Each		
					1	10	25
391-0105	A	Balance	650	Zero Centering	10.45	8.71	7.92
391-0301	B	0-15+0-30	650	Dual Scaling	10.45	8.71	7.92
391-0115	C	20-0-20	650	Zero Centering	10.45	8.71	7.92

### Front Panel

MOUSER STOCK NO.	Fig.	Scale	R <sub>DC</sub> (Ω)	Features	Price Each		
					1	10	25
39TM601	D	0-15	600	70° Scale Angle	12.49	10.87	9.88

### Battery Indicator

MOUSER STOCK NO.	Fig.	Scale	R <sub>DC</sub> (Ω)	Features	Price Each		
					1	10	25
391-0001	E	Red-Green	350	Battery Indicator	18.06	16.42	14.92

