



2842 Series Digital Panel Meters

- Five Current Ranges: 20 μ A, 200 μ A, 2mA, 20mA, 200mA
- Jumper-Selectable Decimal Point
- Input Edge Connector
- 4-1/2 digit, 0.56" Red LED Display
- 120VAC Power Supply
- Optional Display Hold
- Additional Rear Terminal Connector Available
- Optional "U" Shaped Mounting Bracket



Simpson's 2842 Series meters offer high accuracy with up to 1nA resolution. Model 2842 requires a 120VAC power supply at 50-400Hz. The large 4-1/2-digit display is easily read from a distance of about 25 feet. Panel adapters are available for 1/8 DIN panel cutouts. In addition, a large "U" shaped mounting bracket is available for applications where the panel strength is unknown or weak.

The optional Display Hold is activated from the rear connector (when ordered). Typically a switch (not supplied) is used to activate the Display Hold so the operator may take a reading from the display.

Installation and Panel Cutout

Mounting Instructions

The 2842 indicators are installed with the mounting hardware provided. Slide the meter through the panel cutout. Next, insert a side mounting bracket to each side of the meter. Use the two holes located near the bezel to attach them to the meter. Slide the brackets back until they lock into the meter. Turn the screws in each bracket until they firmly contact the panel surface. Attach the wiring connections to the meter.

Specifications

DISPLAY

Type: 7-segment, Red LED
Height: 0.56" (14.2mm)
Decimal point: Jumper-selectable
Overrange indication:
 All digits blink "0", "1" digit off

POWER REQUIREMENTS

AC Voltages:
 117V, $\pm 10\%$, 50Hz to 400Hz, 6VA
 234V, $\pm 10\%$, 50Hz to 400Hz, 6 A
Rated Circuit to Ground Voltage: 250VDC

ACCURACY @ 23°C, $\pm 2^\circ\text{C}$
 $\pm 0.05\%$ of input +1 count

ENVIRONMENTAL

Operating Temperature: 0 to 55°C
Storage Temperature: -40 to 60 °C
Relative Humidity: 0 to 85%, non-condensing

Temp. Coefficient:
 $\pm(0.01\%$ of input + 0.1 digit)/per °C

Warmup time: 15 minutes

ANALOG TO DIGITAL CONVERSION

Technique: Dual slope
Rate: 2.5 samples/second-nominal

MECHANICAL

Bezel: 1.93" x 3.9" (49mm x 99mm)
Depth: 4.72" (120mm)
Panel cutout: 1.68" x 3.622" (42.72mm x 92mm)
Weight: 12.5oz (354.3g)

INPUTS : DC Current

Range	Display Resolution	Maximum Input
20 μA	1 μA	5mA
200 μA	10 μA	15mA
2mA	100 μA	20mA
20mA	1 μA	100mA
200mA	10 μA	500mA

Voltage Drop on all ranges = 200mV

Connections



These instruments are designed for maximum safety to the operator when mounted in a panel according to instructions. They are not to be used unmounted or for exploratory measurements in unknown circuits.

Pin Connections

The signal and power inputs are made on the rear connector. Make sure the connector is firmly attached to the meter. Connections for each pin are summarized in the table below. This allows the meter to be used in multiple locations by moving it from connector to connector. Additional connectors are available.

Input Signal

The "+" signal input is connected to Pin S. The "-" signal input (common) is connected to Pin P.

Display Hold

This optional feature must be specified when ordering. By shorting Pin H to Pin J, the displayed value can be held indefinitely. This short can be controlled by a switch (optional). This will allow the operator to flip the switch

Pin Number	2842 Circuit	Pin Number	2842 Circuit
1	3rd wire GND	A	3rd wire GND
2	NC	B	NC
3	NC	C	120VAC Neutral
4	NC	D	NC
5	NC	E	120VAC High
6	NC	F	NC
7	(Strobe)	H	(Hold/Remote DP Common)
8	(LSD, A0)	J	Digital Common
9	(A1)	K	(A, B1, or DP3)
10	(A2)	L	(B, B2, or DP2)
11	(A3)	M	(C, B3, or DP1)
12	(MSD, A4)	N	(D, B4, or DP4)
13	Polarity	P	"-" Input Common
14	NC	R	NC
15	NC	S	"+" Input

(holding the display) and to take a reading. The switch is then turned off, and the display functions normally again.

Supply Power

If the unit is VAC powered, attach the neutral to Pin C. The Ground is connected to Pin #1 and A. The High (or Hot) is connected to Pin E. If your application changes and you want the unit to be 220 VAC power supplied, return the unit to our factory or to an Authorized Service Center.

If the unit is powered by VDC, attach the VDC return to Pin #1 and A. The "+" VDC is connected to Pin #4.

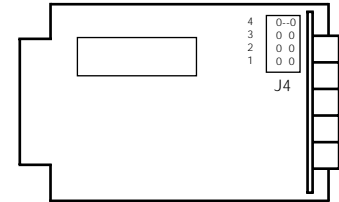
Remote Decimal Point

This option allows you to remotely select different decimal points without opening the meter to make the changes. This option can be installed by the factory or one of our Authorized Service Centers. Remote Decimal Point uses the same terminal points as BCD outputs, eliminating the BCD capabilities if specified.

Jumper Decimal Point

The decimal point can be changed by moving Jumper J4 inside the unit. The meter must be disassembled, exposing the main board. The Edge Connector should be removed first. Next, remove the two screws on the back of the bezel. Remove the front bezel, and slide out the main board.

Jumper Position	Decimal Point Position
4	1000.0
1	100.00
2	10.000
3	1.0000



The Jumper Positions are printed on the main circuit board of the meter. After moving the jumper to the location you selected, slide the circuit board back into the meter case and reassemble the meter.

Accessories

Optional Mounting Hardware	Catalog Number
1/8 DIN Panel Adapter	22992
"U" Type Mounting Bracket	22991
Extra Edge Connector	22991

Please see the Accessory Section for full details on Mounting Hardware.

Safety Symbols



The WARNING sign denotes a hazard. It calls attention to a procedure, practice, or the like, which if not correctly performed or adhered to, could result in personal injury.



The CAUTION sign denotes a hazard. It calls attention to an operating procedure, practice, or the like, which if not correctly adhered to could result in damage to or destruction of part or all of the instrument.

Ordering Information

Range	Model 2842 117VAC
20 μA	24864
200 μA	24865
2mA	24866
20mA	24867
200mA	24868