

# Mini M135 & M145 Digital Panel Meters



- **3/64 DIN Indicator**
- **Minimum depth - requires less than 0.7" (17mm) behind the panel**
- **Snaps right into panel - no mounting hardware required**

## Mounting Requirements

The Mini indicators require a panel cutout of 2.71" (68.8mm) wide by 0.89" (22.6mm) high, and a panel area of 0.94" (24mm) high by 2.83" (72mm) wide. The depth behind the panel, including terminals, is 0.7" (17.8mm). The front bezel protrudes 0.16" (4mm) from the front of the mounting surface. The unit will snap-mount into panels from 0.050" to 0.125" thick. A 12-pin connector with 6" wire leads is included with each unit for quick installation.

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## Specifications

<b>DISPLAY</b>	
Type	7-segment LCD
Height	0.5" (12.7mm)
Decimal point	3 or 4 position user-programmable
Overrange indication	Most significant = "1" other digits blank
Backlighting	Optional negative image, red backlighting at 5, 10, 12, 24 or 48 DCV
Polarity	Auto with "-" indication, "+" indication implied
<b>POWER REQUIREMENTS</b>	
DC Power	±5V, +5V and +9V Low Power Indication included with 9V units
Power supply current	2mA max
Backlight supply current	50mA typical. For 24 and 48DCV, 10mA typical
ACCURACY @ 25°C	3 1/2 digit: ±(0.1% of reading + 1 count) 4 1/2 digit: ±(0.04% of reading + 1 count)
<b>ENVIRONMENTAL</b>	
Operating Temperature	0 to 55°C
Storage Temperature	-10 to 60°C
Relative Humidity	0 to 85% non-condensing @ 40°C
Warmup time	Less than 20 minutes
Temperature Coefficient	(All inputs) ± (0.02% of input ± 0.2 digit)/°C
<b>NOISE REJECTION</b>	
NMRR	60dB, 50/60Hz
CMRR	(with 1KΩ unbalanced @ 60 Hz) 90dB min
<b>A TO D CONVERSION</b>	
Technique	Integrating
Rate	3 samples/second-typical
<b>MECHANICAL</b>	
Bezel	0.94" x 2.83"
Depth	0.43"
Panel cutout	0.89" x 2.71" (22.6mm x 68.8mm)
Weight	1.0oz (28.3g)
Case Material	94-VO, UL-rated ABS

## Input Specifications

### DC Voltage

Range	Resolution	Input Impedance	Max Input (Unfused)
200mV	100µV	>100mΩ	50V
2V	1mV	10mΩ	250V
20V	10mV	10mΩ	250V
200V	100mV	10mΩ	250V

### DC Current

Range	Resolution	Voltage Drop	Max Input (Unfused)
200µA	100µA	200mV	10mA
2mA	1µA	200mV	40mA
20mA	10µA	200mV	100mA
200mA	100µA	200mV	400mA



For more information, visit [www.simpsonelectric.com](http://www.simpsonelectric.com)

## Ordering Information

Mini Indicators can be configured by making an entry in each section. Example: M135-0-2-11-0



Selection	Description	Selection	Description
<b>Basic Unit</b>		<b>Function/Range</b>	
M135	3-1/2 Digit LCD	11	200 DCmV
M145	4-1/2 Digit LCD	12	2 DCV
		13	20 DCV
		14	200 DCV
<b>Display</b>		<b>Backlight Power</b>	
0	Non Backlit	21	200 DCμA
1	Negative Red Backlight	22	2 DCmA
		23	20 DCmA
		24	200 DCmA
<b>DPM Power Supply</b>		<b>Backlight Power</b>	
0	+ 5 DCV	0	None
1	± 5 DCV	1	5 DCV
2	+ 9 DCV	2	10 DCV
		3	12 DCV
		4	24 DCV
		5	48 DCV

## Installation and Panel Cutout



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