

Mini M135 & M145 Digital Panel Meters



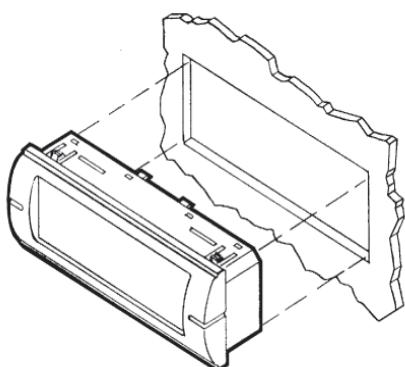
- 3/64 DIN Indicator
- Minimum depth - requires less than 0.7" (17mm) behind the panel
- Snaps right into panel - no mounting hardware required

Input Specifications

DC Voltage			
Range	M135 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	M135 Resolution	Voltage Drop	Max Input (Unfused)
200µA	100nA	200mV	10mA
2mA	1µA	200mV	40mA
20mA	10µA	200mV	100mA
200mA	100µA	200mV	400mA

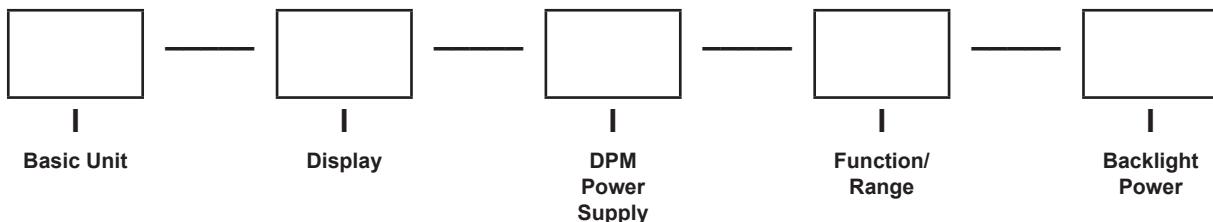


Specifications

DISPLAY	
Type	7- segment LCD
Height	0.5" (12.7mm)
Decimal Point Position	User-Selectable
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
POWER REQUIREMENTS	
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 48 DCV, 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)
ENVIRONMENTAL	
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
NOISE REJECTION	
NMRR	60dB, 50/60 Hz
CMRR	(with 1KΩ unbalanced @ 60Hz) 90dB min
A TO D CONVERSION	
Technique	Integrating
Rate	3 samples/second-typical
MECHANICAL	
Bezel	0.94" x 2.83"
Depth	0.43"
Panel cutout	0.89" x 2.71" (22.6 mm x 68.8 mm)
Weight	1.0 oz. (28.3 g)
Case Material	94-VO, UL-rated ABS

Ordering Information -

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



Select From Each One Below		
Basic Unit		
	M135	3 1/2 Digit LCD
	M145	4 1/2 Digit LCD
Display		
	0	Non Backlit
	1	Negative Red Backlight
DPM Power Supply		
	0	+ 5 DCV
	1	± 5 DCV
	2	+ 9 DCV

Select From Each One Below		
Function / Range		Backlight Power
11	200 DCmV	0 None
12	2 DCV	1 5 DCV
13	20 DCV	2 10 DCV
14	200 DCV	3 12 DCV
		4 24 DCV
21	200 DC μ A	5 48 DCV
22	2 DCmA	
23	20 DCmA	
24	200 DCmA	

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.

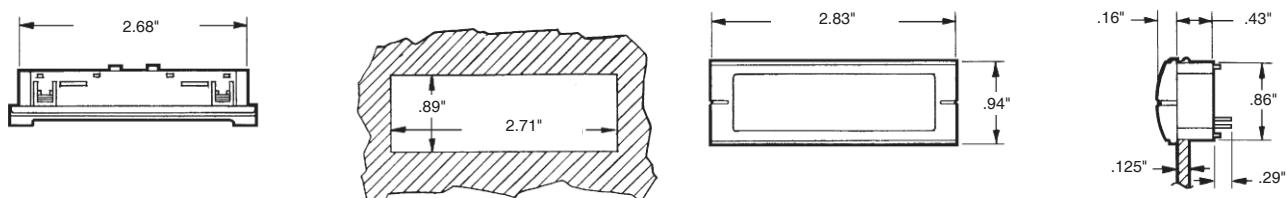
The depth behind the panel, including terminals, is 0.7" (17.8mm).

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.

Installation and Panel Cutout -



Mouser Electronics

Authorized Distributor

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Simpson:

[M135-0-0-13-0](#) [M135-0-0-23-0](#) [M145-0-0-23-0](#) [M145-1-0-13-1](#) [M135-1-0-13-1](#) [M135-1-0-23-1](#) [M145-1-0-23-1](#)
[M135-1-0-14-1](#) [M135-1-0-12-1](#) [M135-1-0-11-1](#) [M145-1-0-11-1](#) [M145-1-0-14-1](#) [M145-1-0-12-1](#) [M135-0-0-24-0](#) [M145-0-0-24-0](#)
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[M135-1-0-24-1](#) [M145-1-0-24-1](#) [M145-1-2-12-4](#) [M14502120](#) [M145-0-1-12-0](#) [M14502240](#) [M13502140](#)