

FEATURES

- Third Generation 1²L LSI Design
- Either Line Powered or Logic Powered
- Large 0.56" Red Orange LED's
- Balanced Differential Input/Floating 1000v, CMV
- Terminal Block Interface (ac Version)
- High Reliability: > 250,000 Hour MTBF
- Small Size and Weight
- Low Cost

GENERAL DESCRIPTION

The AD2026 is specifically designed to provide a digital alternative to analog panel meters. The AD2026 is available either logic powered (+5V dc) or ac line powered. Most of the analog and digital circuitry is implemented on a single 1²L LSI chip, the AD2020. Only 13 additional components are required to complete the AD2026 +5V dc version. The entire dc version is mounted on a single 3" X 1 5/8" PCB. AC line power is achieved with the addition of a second PCB containing the ac power transformer and power supply circuitry.

The AD2026, on both the ac line and logic powered versions, offers as a standard feature, 0.56" high LED Displays. Brightness is enhanced on both versions due to the Red Orange lens. In addition to the Red Orange lens, the AD2026 is also available with a dark red lens for applications where maximum brightness is not required and minimum backlighting is desired.

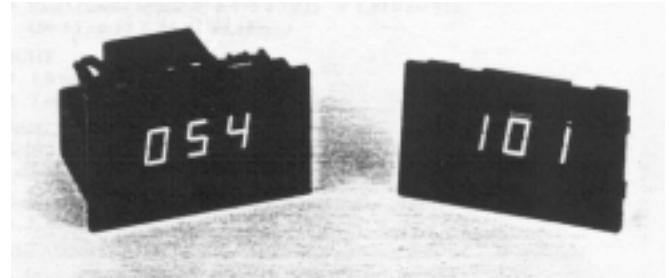
A unique patented case design utilizes molded-in fingers, both to capture the PCB in the case and to provide snap-in mounting of the DPM in a standard panel cutout. No mounting hardware of any kind is used. The dc version occupies less than 1" of space behind the panel. The line powered version offers the same mounting features but occupies 2 1/2" of behind-panel space.

EXCELLENT PERFORMANCE

The AD2026 offers the instrument designer digital accuracy, resolution and use of readout while occupying less space than its analog counterpart. Other features of analog meters such as reliability and instantaneous response are retained in the AD2026.

The AD2026 measures and displays inputs from -99mV to +999mV, with an accuracy of 0.1% of reading ± 1 digit. Zero shift is less than one bit over the full operating temperature range, resulting in the same performance as a DPM with auto zero. The balanced differential input of the dc powered AD2026 rejects common mode voltages up to 200mV, enough to eliminate most ground loop problems. The floating differential input inherent in the ac line powered version offers 1000V of common mode voltage rejection.

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Optional 10.0V full scale (F.S.) range is available on the ac line version that will accept inputs from -0.99V to 9.99V.

WIRING CONNECTIONS

For Balanced Differential operation with the AD2026 dc version, connect input as shown in Figure 1. The common mode loop must provide a return path for the bias currents internal to the AD2026. The resistance of this path must be less than 100k Ω and total common mode voltages must not exceed 200mV.

For applications where attenuation is required, scaling resistors can be connected between pins 6 and 7 and between pins F and H. Pin 5 must be used as the High Analog Input when scaling resistors are used and pin 4 when they are not. Pin E is the Analog Low Input.

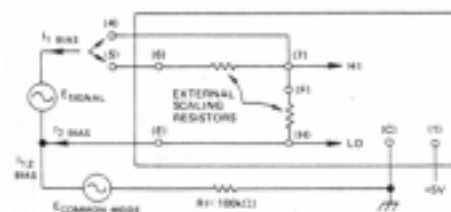


Figure 1.

Connection to the ac line powered AD2026 is via the terminal strip on the rear. AC line power is connected to terminals 4 and 5 and the signal input is connected to terminal I (Analog HI) and 2 (Analog Ground).