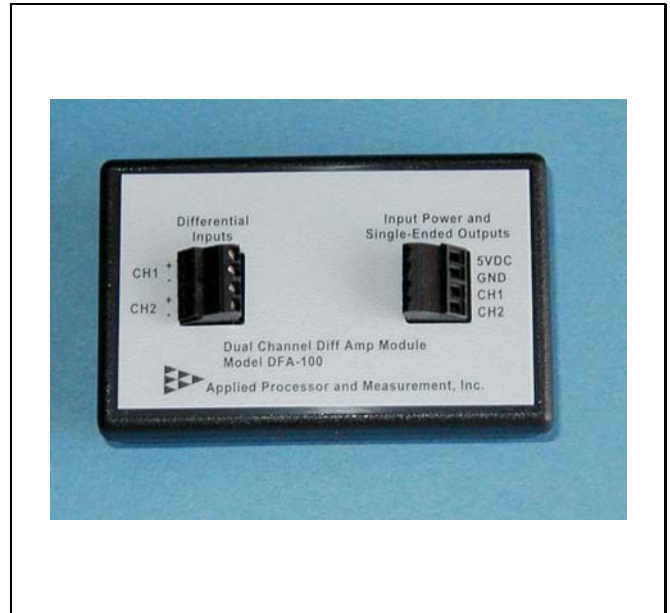


Model DFA-100 Dual Channel Differential Input Buffer Amplifier

FEATURES

- signal conditioning unit, small form factor
- differential input to single-ended output
- two independent channels
- differential analog input buffer with greater than +/- 100V common mode rejection
- powered by +5V, input and outputs capable of +/- 5V output
- low power consumption (< 2 mA per channel)
- standard model (DFA-100) with fixed unity gain
- OEM versions available on request
fixed gain 1 to 100
with or without enclosure



ADJUNCT FOR APM, INC. PWM CONTROLLERS

- Plug-in adapter for Model 200-01 and Model 205 APM, Inc. PWM Controllers – differential input buffer for analog control port
- elimination of ground loops between PWM driver output and control system analog signal
- supplied with wiring harness and connector for input to PWM Controller analog port (see DFA-100 Install Guide for PWM Controllers)

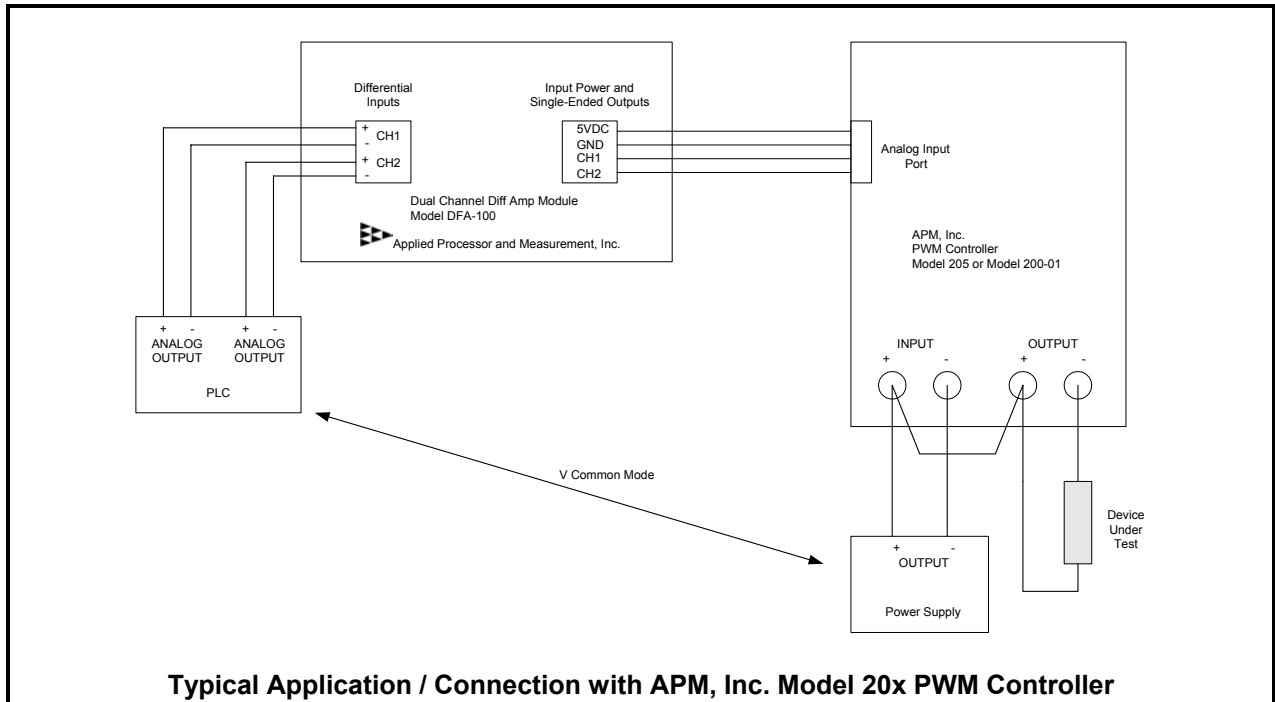
DESCRIPTION

The Model DFA-100 Difference Amplifier from Applied Processor and Measurement, Inc. provides two buffer amplifiers for differential inputs to single ended outputs for various signal conditioning applications. The DFA-100 may be used for any general purpose signal conditioning applications for data systems where common mode voltages between different ground systems exist. The DFA-100 is also a drop-in solution for ground loop elimination in systems using APM, Inc. Model 20x PWM Controllers in the analog control mode.

APPLICATIONS

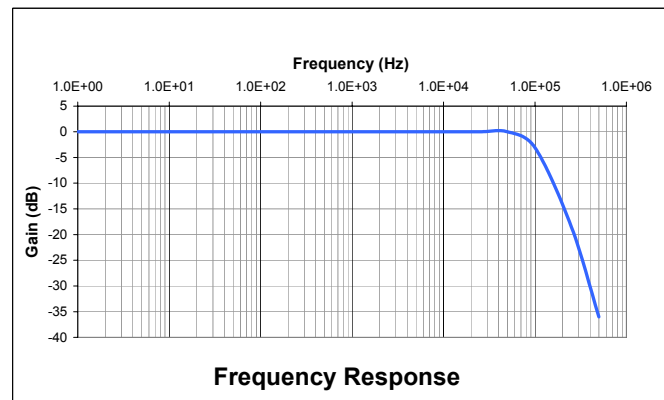
- ground loop elimination in voltage measurements
- process instrumentation / interface
- embedded applications, automotive test and development
- general purpose signal conditioner for data acquisition and control applications
- current shunt amplifier

A typical connection using the difference amplifier with a PWM Controller is shown in the diagram below. The DFA-100 is used to eliminate the common mode issues between the PLC analog outputs and the power supply ground for the PWM Controller. The DFA-100 Differential Amplifier may be used in this configuration or any general purpose ground loop elimination application.



SPECIFICATIONS

- Operating Voltage: 5V, +/- 0.5V
- Power Consumption: 4 mA typical (with no output load)
- Analog Input (each input)
 - Differential Input, DC coupled, Not Isolated
 - Voltage Range: +/- 5V
 - Input Impedance: 2 MΩ typical
 - Common Mode Voltage: +/- 100V typical
- Analog Output (each output)
 - Single Ended, DC coupled
 - Output referenced to GND supply terminal
 - Slew Rate: 0.8V / usec typical
 - Internal 1000pF output filter capacitor
- Operating Temperature: -40 °C to 60 °C
- Connectors: screw-clamp terminal blocks, 14AWG max
- Size: 3.625 in. x 2.25 in. x 1 in.
(1.375 in. height by I/O connectors)



Test Conditions: VCC = 5V, 10kΩ load, 1 channel, 25°C

ORDERING INFORMATION - Model DFA-100 Difference Amp

- Order Number: DFA-100 - Dual Channel Difference Amp
- Order Number: DFA-100-DIN - Dual Channel Difference Amp, DIN mountable
- Order Number: DFA-100H - Dual Channel Difference Amp, includes 4 in. (approx.) wire harness with connector for Model 200-01 or Model 205 PWM Controller

OEM version (no enclosure), amp with gain, extended temp range, or custom versions: contact factory