A222
Selectable Gain Amplifier

The A222 is a non-inverting operational amplifier with high input impedance. A precision voltage divider is connected between output and ground with taps at ratios of 1.0, 0.5, 0.25, and 0.125. This module is used with an A124 Analog Multiplexer in the AD15 Analog Subsystem to provide computer-controlled gain selection in the AD15. An IOT instruction causes two AC bits to be transferred to an AD15 buffer register. These bits are decoded by the A124 to select one of four available gains: 1, 2, 4, or 8.

INPUTS: Inverting input (pin S) – Connect to the desired feedback tap through a series resistance of 3000 ohms or less (A124 Analog Multiplexer).

Non-inverting input (pin P) – Gain of 1, 2, 4, or 8 ±.02% with .02% linearity error over a ±10V output range. Input impedance greater than 1000 megohms in parallel with 10 pF. Protected against overload up to ±20V.

OUTPUTS:

Analog Input Range	Selected Gain	Output Selected
±1.25V	8	Pin V
±2.5V	4	Pin U
±5.0V	2	Pin T
±10.0V	1	Pin R

POWER: +15V, ±1%, 20 mA, max. (Pin D)
-15V, ±1%, 20 mA, max. (Pin E)