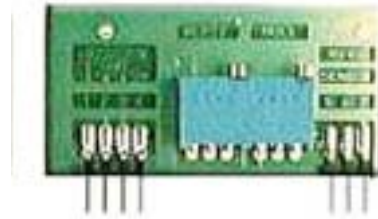


## Signal Amplifier/ Conditioner Provides Symmetrical $\pm 4V$ DC Analog Voltage Output



### Description

The NV4A signal amplifier is used to excite, filter, normalize, and convert the different output signals of select sensors to a  $\pm 4VDC$  output. This symmetrical output signal allows for a problem-free signal transfer to measurement equipment such as oscilloscopes, AD-cards in PC's, or to other OEM equipment.

Even with large fluctuations at the unit's power supply, the NV4A will act very stable for offsetting the sensor's zero point and supplying a stable  $\pm 4VDC$  output, which is linear to the sensor's working range.

### Applications

Well suited for use in combination with a select sensor where the demand for high voltage output and/or special filtering of the sensor's signal is needed. This signal amplifier is also useful when a non-stabilized 8 to 30VDC supply is required.

### Features

- Low noise, low drift
- Works directly on +8 to 30VDC non-regulated input power supply
- Internal generation of negative operating voltage
- Reverse polarity protection
- Short-circuit protection for output
- Internal voltage regulation to sensor
- Zero and gain adjustable potentiometers
- Electronic components hermetically sealed
- Optional frequency programmable active 5th order low pass filter
- Optional high pass filter
- Optional connector options

### Alternative Output Amplifiers

- *NV6A for 4-20mA output*
- *NV8A for 0-5VDC output*

MECHANICAL CHARACTERISTICS	
OPERATING TEMPERATURE	32°F TO 158°F (0°C to +70°C)
DIMENSIONS	1.97" (50mm) l x 0.984" (25mm) w x 0.402" (10.22mm) d
ELECTRICAL CONNECTIONS	Pin connector: 0.10" (2.54mm) w x 0.224" (5.7mm) l
	Optional 0.025" (0.63mm) gold plated soldering pads
SUPPLY VOLTAGE	+8 to +30 VDC Non-Regulated (reverse polarity protected to -70V)
OUTPUT SPECIFICATIONS	
SENSOR SUPPLY	+5.00 Volt
SENSOR SUPPLY - TEMP. DRIFT	20ppm /°C
MAX. OUTPUT VOLTAGE	$\pm 4$ Volt
ACTIVE MEASURING RANGE	$\pm 3.5$ Volt (Equal to Sensor Range)
OFFSET RANGE	2.4...2.6 Volt (larger ranges available upon request)
POWER SUPPLY NOISE	30 $\mu$ V <sub>pp</sub>
SIGNAL TO NOISE RATIO	Approx. 80dB (with standard sensor)
FREQUENCY RANGE	0...10Hz; 0...200Hz; 0...2kHz (custom ranges available)
CURRENT CONSUMPTION	Approx. 2mA (without sensor)
OUTPUT IMPEDANCE	100 OHMS

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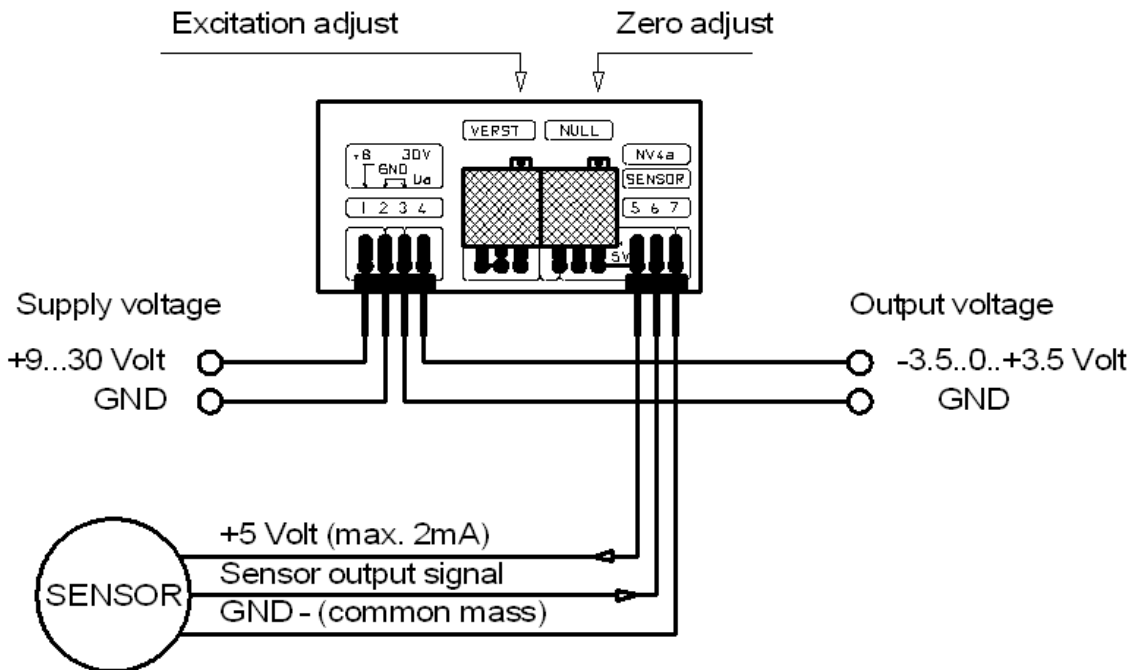
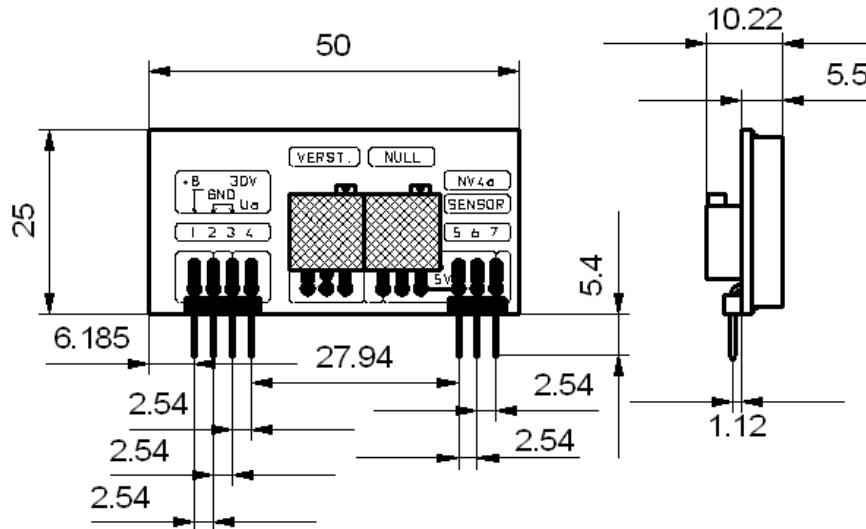
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**Figure 1:** Dimensions (mm) and Connections

**CAUTION!** Do not short circuit the operating voltage (8...30V) with the outputs. The negative operating voltage of the symmetrical VDC output is generated from the positive one.



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