

Filtering signal conditioner for sensor signal matching with symmetrical ± 3.5 Volt voltage output

Features

- low noise and low drift
- no regulated supply voltage necessary
- internal generation of negative operating voltage
- integrated reverse polarity protection
- outputs are short circuit proof
- highly stable voltage supply for operation of a sensor
- zero position and gain adjustable via potentiometers
- electronic components hermetically sealed
- optionally frequency programmable, active 5th order low pass filter
- optional high pass filter
- different connector options

Description

The NV4a amplifies, filters and normalizes the output signals of SEIKA sensors. The symmetrical output signal enables unproblematic subsequent signal processing with standard measuring instruments such as oscilloscopes, transient recorders, A/D converters, multimeters, etc. Multiple internal switching variants allow for optimal adaptation of signal processing parameters, such as settling time, filter cut-off frequencies and amplification and zero point adjustment, to the measuring task.

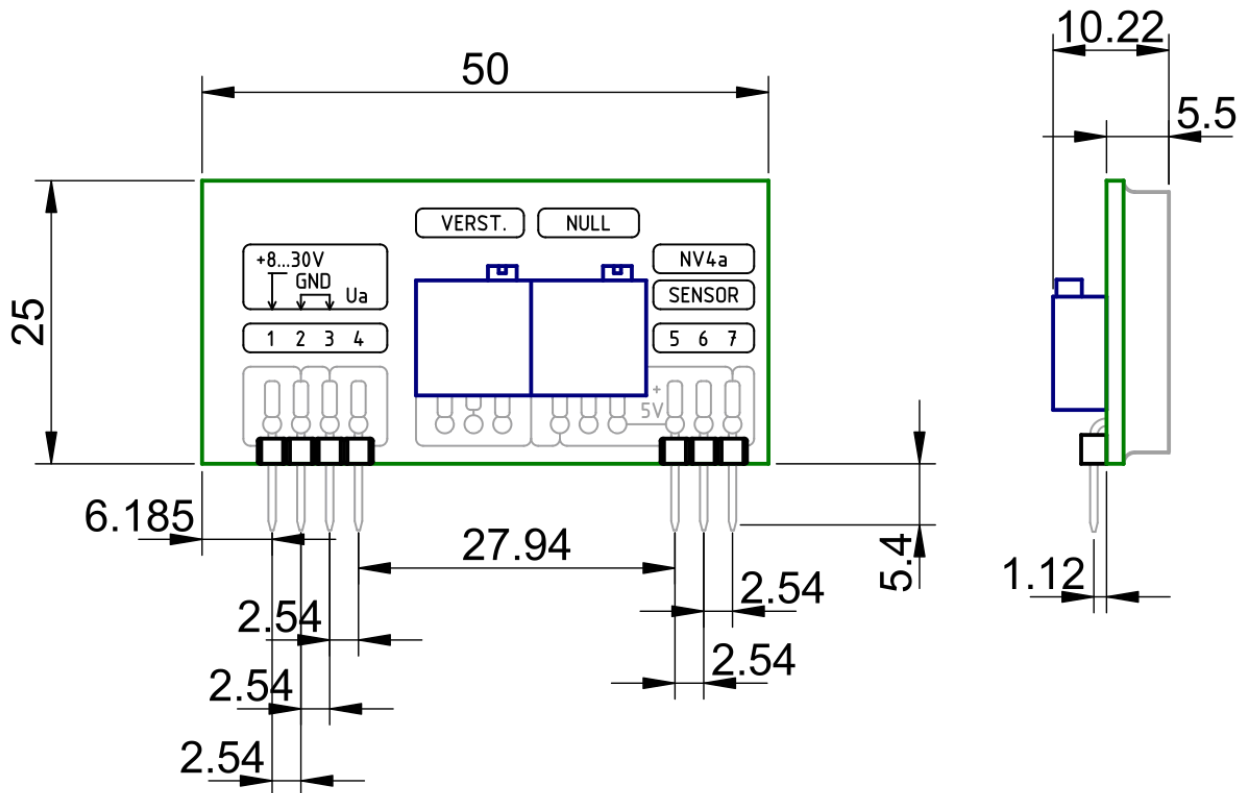
Application

The NV4a has its application anywhere a SEIKA sensor is, without much expenditure and under optimal compatibility, to be connected to application specific measuring equipment with optimal matching conditions, and where subsequent adjustments to amplification and zero voltage are necessary.

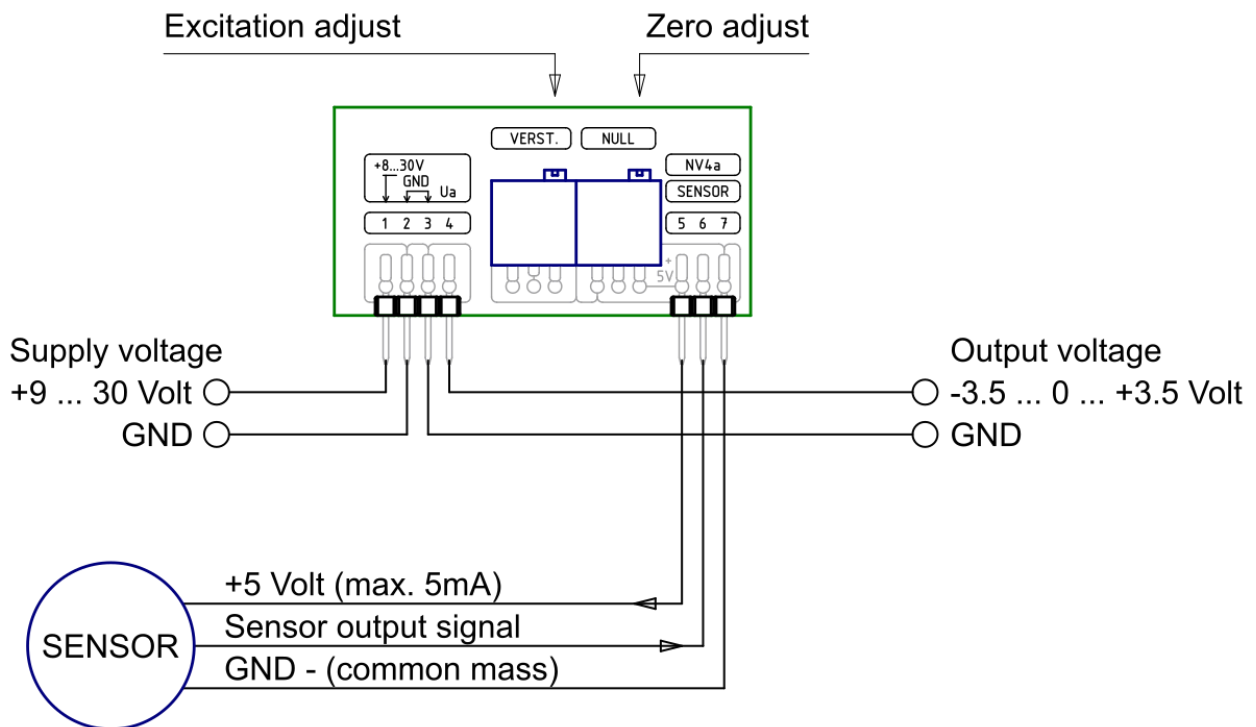
Specifications

Dimensions	see dimension drawing
Supply voltage	9V ... 30V (polarity protected up to -70 Volt)
Current drawn excluding sensors	approx. 2mA
Operating temperature	0°C ... 70°C
Internally generated sensor supply voltage	5.00 Volt
Temperature drift of sensor supply voltage	5 ppm/K
Output signal range	±3.5 Volt
Offset adjust range	2.4V ... 2.6V (larger ranges on request, e.g. for B1 in Z-direction)
Output impedance	approx. 100 Ohm
Thermal noise	30µV _{p,p.}
Signal-to-noise ratio with standard sensors	approx. 80dB
Frequency range	0...10Hz, 0...200Hz, 0...2kHz; custom ranges on request
Electrical connections	pin connector 2.54mm, length 5.7mm, Ø 0.63mm gold-plated solder pads optional
Weight	approx. 11g

Dimensions (in mm)



Connections



Attention! Do not short circuit the supply voltage (9 to 30 V) with the output. The negative operating voltage for the symmetrical output voltage is internally generated in the NV4a from the purely positive

supply voltage.