

DSCIA49

Voltage Output Signal Conditioners

Description

DSCIA49 voltage output module is single channel analog input, which is filtered, isolated, amplified & converted to standard level output. A Five-pole filter is provided with signal filtering which provides up to 100dB NMR at frequency >1KHz. The input signal is chopped by a proprietary converter circuit. After initial filter stage isolation is provided by transformer coupling which eliminates common mode spikes and surges.

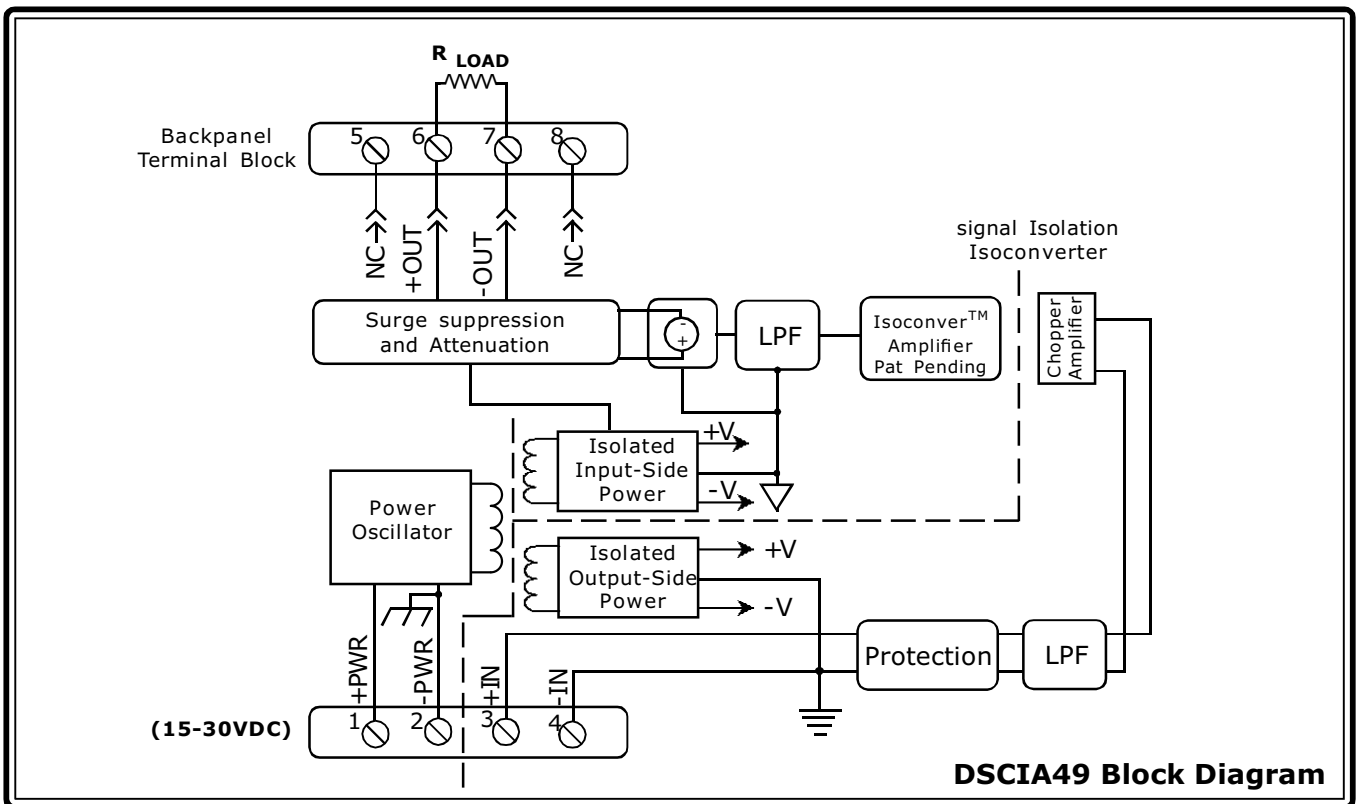
The output of this module is voltage, which is protected against 240V AC and transient. The output signal is isolated from power and input signal, hence it can be either floating or grounded.

Signal output has a output protection for 250V AC accidental connection and transient protection as per ANSI/IEEE C37.90.1. Output is also protected against short circuit, power supply input is protected against terminal reversal and transients. The signal and power wires can be connected directly on to heavy duty screw terminals provided.

These modules are most rugged, reliable and stable over long time and do not require frequent recalibration. However $\pm 5\%$ zero & span adjustment provides flexibility where fine tuning is warranted.

Features

- Wide range of milliamps & voltage input Signals
- Provides High level Voltage Output to $\pm 10V$ at 50mA
- 1.5KV Isolation
- ANSI/IEEE C37.90.1 Transient Protection
- 250VAC Continuous Protection on Output
- True 3-Way Isolation
- Wide range of supply voltage(15 to 30V DC)
- 110dB CMR
- 5 poles of filtering
- $\pm 0.05\%$ Accuracy
- $\pm 0.02\%$ NonLinearity
- Standard DIN Rail Mountable
- CSA , FM , CE and ATEX Compliant



Specifications

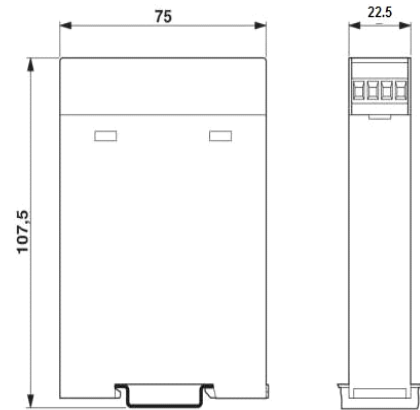
Typical at $T_A = +25^{\circ}\text{C}$ and +24V supply voltage

Module	DSCIA49-04,-05,-06
Output Range Over Range Capability Output Drive Output Resistance Output Current Limit Output Protection Continuous Transient	0 to +10V or -10 to +10V 5% $\pm 50\text{mA max.}$ 0.5 Ω 75mA 250Vrms max ANSI/IEEE C37.90.1
Input Range Input Resistance Normal Power off Overload input Protection Continuous Transient CMV, O/p to I/p, O/p to Power Continuous Transient CMV, Input to power Continuous CMR (50Hz or 60Hz)	0 to +10V or -10V to +10V 50M Ω 65K Ω 65K Ω $\pm 35\text{V max.}$ ANSI/IEEE C37.90.1 1500V rms max ANSI/IEEE C37.90.1 50V DC max 110dB
Accuracy ⁽¹⁾ Nonlinearity Adjustability Stability Zero Span Output Noise, 100KHz bandwidth	$\pm 0.05\%$ Span $\pm 0.02\%$ Span $\pm 5\%$ Zero and Span $\pm 20\text{ppm}/^{\circ}\text{C}$ $\pm 40\text{ppm}/^{\circ}\text{C}$ 2mV rms
Bandwidth, -3dB NMR Response Time, 90% span	1KHz 100dB/Decade above 1kHz 425 μs
Power Supply Typical Voltage Power Supply Current Power Supply Sensitivity Power Supply Protection Reverse Polarity Transient	24V DC (15 to 30VDC) 80mA $\pm 0.0003\%/%$ Continuous ANSI/IEEE C37.90.1
Environmental Operating Temp. Range Storage Temp. Range Relative Humidity Emissions EN61000-6-4 Radiated, Conducted Immunity EN61000-6-2 RF ESD,EFT, Surge, Voltage Dips	-40 $^{\circ}\text{C}$ to +80 $^{\circ}\text{C}$ -40 $^{\circ}\text{C}$ to +80 $^{\circ}\text{C}$ 0 to 95% Noncondensing ISM, Group 1 Class A ISM, Group 1 Performance A $\pm 0.05\%$ Span Error Performance B
Mechanical Dimensions (h) (w) (d) Mounting	2.95" x 0.89" x 4.13" (75mm x 22.5mm x 105mm) DIN EN 50022-35x7.5 or -35x15 rail

Ordering Information

Model	Input Range	Output Range
DSCIA49-04	0 to +10V	-10 to +10V
DSCIA49-05	-10 to +10V	-10 to +10V
DSCIA49-06	-10 to +10V	0 to +10V

Dimensioned drawing



NOTES:

(1) Includes non-linearity, hysteresis and repeatability.