

SCIM7B22

Isolated Bipolar Voltage Output Modules

Description

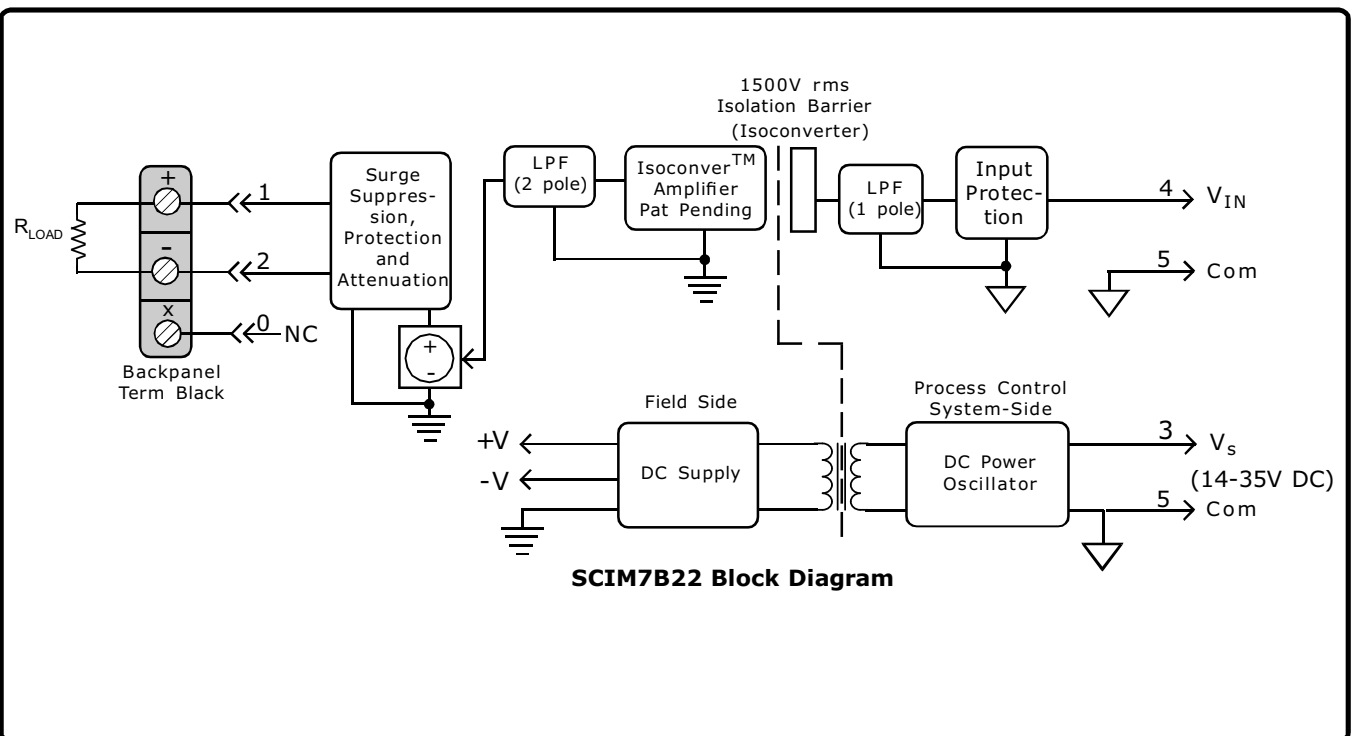
SCIM7B22 voltage output modules is a single channel analog output which if filtered, isolated, amplified, and converted to standard-level voltage output. A five pole filter is provided with signal filtering, this module accepts input signals in +10V range.

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 signal is then reconstructed and filtered for process control system output.

These modules accepts a wide 14 - 35VDC power supply range (+24VDC nominal). The mechanical size (2.13"x1.705"x0.605" max.) save space and are ideal for high channel density applications. They are designed for easy DIN Rail mounting using any of the "DIN"

Features

- Accepts High Level Input to $\pm 10V$
- Standard High Level output to $\pm 10V$
- 1.5KV Isolation
- Accuracy $\pm 0.03\%$ of span typical, $\pm 0.1\%$ max
- ANSI/IEEE C37.90.1 Transient Protection
- 120V rms Continuous Protected on Output
- Input Protected to 120V rms
- Noise, 2mV Peak (5MHz), 1mV rms (100KHz)
- CMRR, 100dB
- 80dB per Decade of Attenuation above 400Hz
- Easy DIN Rail Mounting
- CSA, FM, CE and ATEX Compliant



Specifications Typical at $T_A=+25^{\circ}\text{C}$ and +5V Power supply

Module	SCIM7B22
Input	
Signal Range	$\pm 10\text{V}$
Bias Current	$\pm 0.5\text{nA}$
Resistance	$2\text{M}\Omega$ min
Protection	120V rms (no damage)
Output	
Signal Range ⁽¹⁾	$\pm 10\text{V}$
Effective available power ⁽¹⁾	20mW
Resistance	$< 1\Omega$
Protection	
Continuous	120V rms
Transient	ANSI/IEEE C37.90.1
Voltage/Current Limit	$\pm 12.5\text{V}, \pm 40\text{mA}$
CMV (Input to Output)	
Continuous	1500V rms max
Transient	ANSI/IEEE C37.90.1
CMRR (50 or 60Hz)	100dB
Accuracy ⁽²⁾	$\pm 0.03\%$ Span typical, $\pm 0.1\%$ Span max
Nonlinearity ⁽³⁾	$\pm 0.01\%$ Span typical, $\pm 0.02\%$ Span max
Stability (-40°C to $+85^{\circ}\text{C}$)	
Gain	$\pm 35\text{ppm}/^{\circ}\text{C}$
Output Offset	$\pm 0.001\%$ Span/ $^{\circ}\text{C}$
Noise	
Peak at 5MHz B/W	2 mV
RMS at 10Hz to 100kHz B/W	1 mV
Peak at 0.1Hz to 10Hz B/W	10nV RTI
Frequency and Time Response	
Bandwidth, -3dB	400Hz
NMR (50/60Hz)	80dB/Decade above 400Hz
Step Response, 90% span	1ms
Power supply voltage	19 to 29V DC
Power supply Current ⁽¹⁾	16 mA
Power supply Sensitivity	$\pm 0.0001\%/V_S$
Mechanical Dimensions (H) (W) (D)	2.13"x1.705"x0.605"max (54.1 x 43.3 x 15.4mm) max
Environmental	
Operating Temp. Range	-40°C to $+85^{\circ}\text{C}$
Storage Temp. Range	-40°C to $+85^{\circ}\text{C}$
Relative Humidity	0 to 95% Noncondensing
Emissions EN61000-6-4	ISM, Group 1
Radiated, Conducted	Class A
Immunity EN61000-6-2	ISM, Group 1
RF	Performance A $\pm 0.5\%$ Span Error
ESD,EFT,Surge, Voltage Dips	Performance B

Ordering Information

Model	Input Range	Output Range
SCIM7B22	$\pm 10\text{V}$	$\pm 10\text{V}$

Note:

- (1). Output range and supply current specifications are based on minimum output load resistances. Minimum output load resistance is calculated by V_{out}^2/P_E where P_E is the output effective available power that guarantees output range, accuracy, and linearity specifications.
- (2). Accuracy includes the effects of repeatability, hysteresis, and linearity.
- (3). Non-linearity is calculated using the best-fit straight line method.