4-20mA Current Loop Isolator

ISO 4-20mA(0-20mA) Analog Signal Isolator

Features：

●4-20mA current input/output, high precision (distortion <0.2%)
● High linearity in the full span(non-linearity<0.2%).
● Isolation between signal input and output: 3KV or 6KVDC
●Low impedance (volt. drop<2V), no external instruments or power supply required.
● SIP 12Pin small size, UL94V-0 standard for flame retardant encapsulation.
●4-20mA signal extra-wide range volt. Input (8.5~28VDC).
● Frequency response (small signal band-width): 2KHZ (Io=20mA)
● Industrial operating temperature: - 45℃ ~ + 85℃

Applications：

●2321312312321321312distancetransmissionin industrialsite
●PLC,DCSanalogsignalsdataacquisitionand isolation
●Groundloopelimination
●TransmissionandMonitoringofsignalsof instrumentsandmeters,sensors,etc
●Analogsignaldataacquisition,isolationandlong distancenon-distortiontransmission.
●Monitorandcontrolelectricalinstrumentsand meters,medicalequipments,isolatedsafetybar.
●IsolatedsafetybarinrailtransitDChighvoltage monitoring

Generalization:

SunYuan SIP12 Pin current loop isolated module: ISO 4-20mA module is a kind of single-chip two-wire isolated interface IC chip. Inside the IC, there are current signal modulation circuit, magnetoelectric isolation transform circuit and signal reduction demodulation circuit,etc. The low input equivalent resistance makes the IC module achieve wide range input voltage (8.5~28VDC) to realize the long-distance, non-distortion transmission of signals without external power supply. By adopting SMD technological structure and new isolation technology, the modules posses the features: 3KVDC isolation between signal input and output (total isolation type), and operates in normal in abominable industrial conditions like wide temperature, humidity and vibration.

Maximum Rated Values:

(If exceed the value below, may cause irremediable defect.)

Continuous Isolation Volt.:	3KVDC/rms
Input Signal Volt. (Max.):	32VDC
Operating Ambient Temp.:	- 45℃ ~ + 85℃
Welding Temp.(<10S):	+300℃
Output Short-circuit Time:	Main-tenability

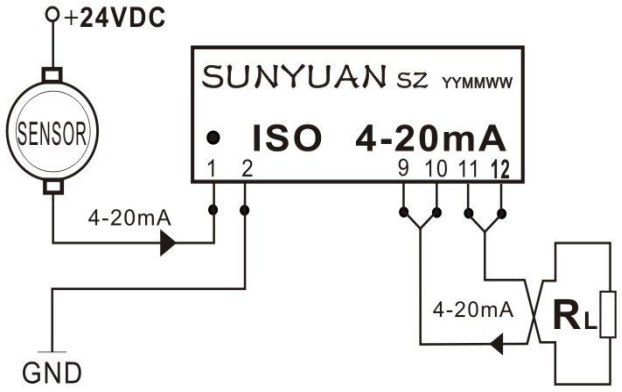
General Technical Parameters:

Accuracy, linearity error grade ---------- 0.1, 0.2	Hysteresis error ---------- < 0.5%
Auxiliary power---------- No	Isolation ---------- signal input and output
Operating Temp. ---------- -20 ~ +70℃	Insulation Resistance ---------- ≥20MΩ
Operating Humidity ---------10~90% (no condensation)	Withstand Voltage ---------- 3KV(60HZ/S), leak current 1mA
Storage Temp.---------- -20 ~ +70℃	Impact Resistance Volt. ---------- 3KV, 1.2/50us (peak value)
Storage Humidity -------10 ~ 95% (no condensation)	

Specifications：

Parameter	Conditions	Min.	Typical Value	Max.	Unit
Isolation Volt. AC, 60Hz **Insulation Impedance** **Leak current**	10S 240Vrms，60Hz	1000	2500 10^{12}‖1 0.5	6000	Vrms Ω‖Pf uA
Temp. Drift **Non-linearity**	-45~+85℃ In range of full span		 ±50 ±0.1	 ±100 ±0.2	PPm/℃ %FSK
Input Signal Volt. Range		7.5	12	32	V
Output Linearity Range **Output Current Io** **Output Voltage Drop Voh**	 Io=20mA	0 0.1	4 2	20 40	mA mA V
Output Signal Ripple			5		mV
Frequency Response (small signal bandwidth)	Io=20mA		2		KHz

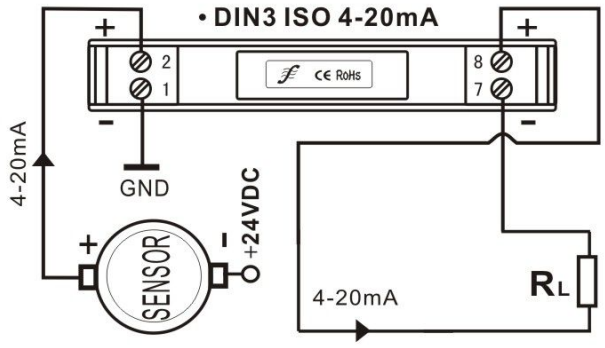
Typical Applications:



ISO 4-20mA Signal Isolator IC Typical Connection Diagram



SIP12PIN PCB-mounted Package



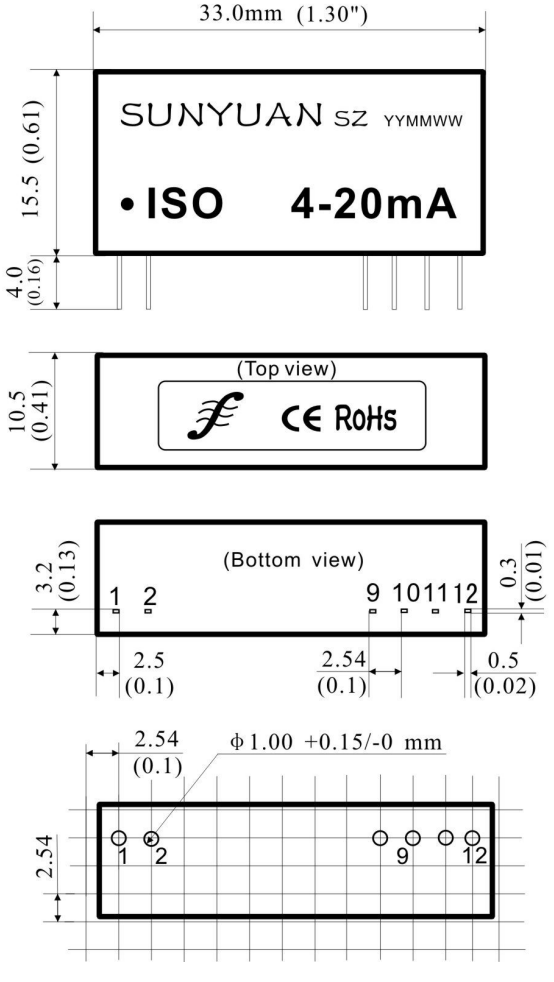


DIN3ISO4-20mASignalIsolatorTypicalApplicationDiagram25mmDINRail-mountedPackage

PIN Description:

PIN	PIN Definition	
1	Iin+	Signal Input
2	GND	Signal Input
3~8		Null
9	Io-	Signal Output
10	Io-	Signal Output
11	Io+	Signal Output
12	Io+	Signal Output

Outline Dimensions:



External Forms and Dimensions

