

DC Current/Voltage Single Signal Input Dual Signal Output Isolated Amplifier
(Electromagnetic Isolation) ISOEM Series

General characteristics

- Low cost, small size. Directly soldered on the PCB board mount.
SIP 16 anti- fire UL94V-0 package
- Easy to use, no zero adjustment except external gain adjustment.
- Full range with high linearity. (Non-linearity <0.2%)
- Power / signal input / two-way signal output, isolation 3000VDC, four-port isolated.
- Auxiliary power supply: 5V, 12V, 15V, 24V.
- SIP-16 meets UL94V-0 flame retardant package.
- 0-75mV/0-5V/0-10V/0-±100mV/0-±10V voltage signal or 0-10mA/4-20mA/0-±20mA current signal isolation, amplifier and converter
- Temperature range: -45~+85 °C

Applications

- Divided and monitor the sensor signal
- Industrial area signal isolation, conversion, amplification and long-term transmission
- 4-20mA signal one in two out ground interference suppression
- Analog signal ground interference suppression, isolation and collected of data.
- Power monitoring, medical device isolation monitoring barrier
- Detection of instrument, meter and sensor's signal transceiver
- 4-20mA/0-5V and other signal isolation, distribution and transformation
- Industrial site analog and digital signal to coexist monitoring and transmission

SunYuan ISO EM-U-P-O-O voltage input series and ISO EM A-P-O-O current input series analog signal dual output isolation transmitter, a (sensor output) single-channel analog voltage or current signal through the isolation, distribution, converted into a two-way precision, linearity match the hybrid integrated circuit of the standard analog signals. Analog signal isolation amplifier, the IC integrated on the same chip, high isolation DC / DC distribution power and magneto electric coupling magneto electric coupling low-cost program, mainly used no special requirements for EMC (Electro Magnetic Interference) occasions. Wide input and output side creepage distances and internal isolation measures so that the chip can achieve power, signal input, signal output of the two 3KVDC, four-port isolation. ISO EM series single signal input dual-output isolation transmitter IC products use very convenient, free zero-point adjustment, just an external gain adjustment potentiometer, can achieve the industrial field various sensor signal isolation, allocation, conversion functions, and can meet the industrial grade temperature, humidity, vibration and other adverse work environment requirements.

Part number and description:

ISOEM - U(A)□ - P□ - O□ - O□

Input signal:

U1: 0-5V	A1: 0—1mA
U2: 0-10V	A2: 0—10mA
U3: 0-75mV	A3: 0—20mA
U4: 0-2.5V	A4: 4—20mA
U5: 0-±5V	A5: 0—±1mA
U6: 0-±10V	A6: 0—±10mA
U7: 0-±100mV	A7: 0—±20mA
U8: User Define	A8: User Define

Power Supply:

P1: DC24V P2: DC12V
P3: DC5V P4: DC15V
P8: User Define

Output signal:

O1: 4-20mA O2: 0-20mA O4: 0-5V O5: 0-10V
O6: 1-5V O7: 0-±5V O8: User-Define O9: -20- +20mA O10: 0-±10V

Examples:

- (1) Input: 0-5VDC Output 1:0-5VDC Output 2:4-20mA Power: 24VDC
Model: ISO EM-U1-P1-O4-O1
- (2) Input: 4-20mA Output1: 0-5V Output2: 4-20mA Power: 24VDC
Model: ISO EM-A4-P1-O4-O1

General Parameter:

Accuracy Grade ----- 0.2 %	Return difference ----- < 0.5%
Auxiliary power supply----- DC5V、12V、24V、±10%	Isolation -----Vin/Vout 1/Vout 2/Power
Wore temperature----- -45 ~ +85℃	Insulation Resistance ----- ≥20MΩ
Work Humidity----- 10 ~ 90% (non-condensation)	Withstand voltage -----Signal input/Output 1/Output 2/Power
Storage temperature----- -45 ~ +70℃	3000VDC, 50Hz, 1min, Leakage current 1mA
Storage Humidity----- 10 ~ 95% (non-condensation)	Withstand impulse voltage----- 3KV , 1.2/50us(Peak)

Max operation range:

Continue isolation voltage value 3000VDC
Power Vin range: ±25%Vin
Jointing temperature(10sec.) +300°C

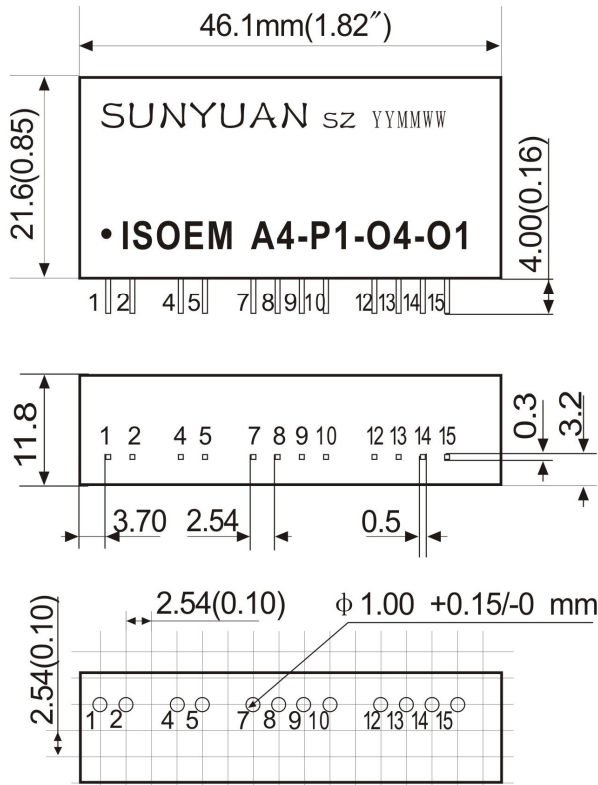
If over above range, it will cause products damaged permanently.

Technical parameter:

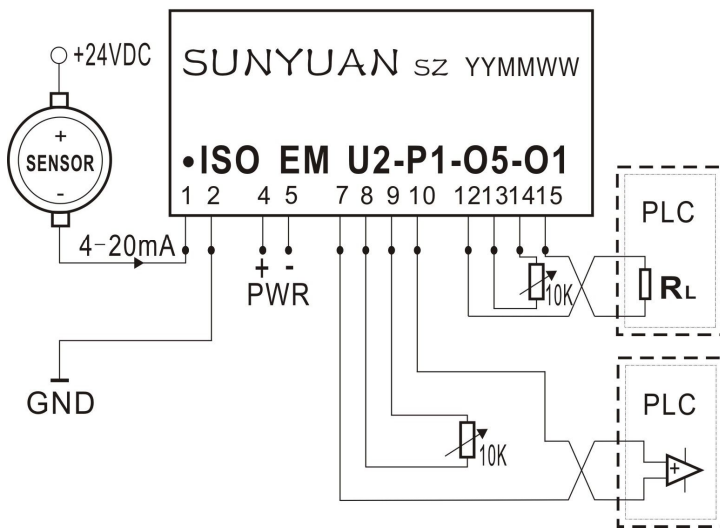
Note: If need special load capability of voltage/current signal, please explain.

Parameter		Test Condition	Min	Type	Max	Unit
Isolated voltage		AC,50Hz,1min	3000			V(rms)
G.Adj				1		V/V
G.Adj temperature drift				25		ppm/°C
Non-linearity				0.1	0.2	%FSR
Input signal	Voltage		0		15	V
	Current		0		30	mA
Input maladjusted voltage				2	5	mV
Input impedance	Voltage			1		M
	Current				50	Ω
Output signal	Voltage		0		15	V
	Current		0		20	mA
Load capability	Voltage	Vout=10V		2		kΩ
	Current		0	250	350	Ω
Frequency response				10		KHz
Signal output ripple		No-filter		10	20	mVRMS
Signal voltage temperature drift					1	mV/°C
Assistant power	Voltage	User-defined	3.3	12	24	VDC
	Power loss			0.5	1	W
Operating temperature			-45		85	°C
Storage temperature			-55		105	°C

Physical Dimensions and Pin Description:



IC封装SIP16PinPCB布板参考



Single-line straight insert (SIP 16Pin), need no “ZERO” adjustment.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Signal input +	Signal input -	N C	Power +	Power -	N C	Signal output V1+ Or I1+	Gain adj. RP1 11	Gain adj. RP1 12	Signal output V1-or I1-	N C	Signal output V2+ or I2+	Gain adj. RP2 21	Gain adj. RP2 22	Signal output V2-or I2-	NC

Note: The transmitter can not be used in the field of strong electromagnetic interference.