

IRAN HALL EFFECT Group

“Transducer 4-20mA” Datasheet



In: 50~300 A Out: 4 to 20 mA

Features:

- Economical and precise AC/DC current sensing solutions
- Based on Hall Effect linear Current Sensors
- Low power consumption
- High immunity to external interference
- Bidirectional / Unidirectional Output proportional to input current: 0-16mA , 4-20mA
- Bidirectional / Unidirectional Input AC/DC/Pulse Current: $\pm 50\text{A}/100\text{A}/150\text{A}/200\text{A}/250\text{A}/300\text{A}$
- Optional input currents are available
- Tray /Surface Mount (Through 3mm Screws)
- Case Material: Polyamide –Poly Carbonate
- Withstanding Temperature :-15~85 Celsius
- Color Code :4205 (Optional)
- Size: 2.5Cm*6Cm*7Cm
- Conductor Shape and Diameter : Cylindrical, 2.2 Cm
- Single supply Operation (15~24 VDC)
- Output Accuracy : Better than 1%
- Operating temperature Range: -10 C~+60 C
- Maximum Output Voltage Swing 2V less than VSUPPLY
- Input frequency 0~10Khz (On demand Designs up to 250Khz)
- Very Low hysteresis
- Typical Applications include: Electromotor, Drivers, Soft starters, Industrial Power Supplies such as Battery chargers, Battery supplied applications, Inverters, AC variable speed drives, Uninterruptible Power Supplies (UPS systems) , Electric Vehicles , Welding Machines , Static converters for DC motor, Drives, Switched Mode Power Supplies(SMPS), DC-DC converters, load detection ,...

General Description

The 4-20mA Current Transducer is used to convert input current Signal passing through its hole to output current signal, the input signal current shape may be AC, DC, Pulsed, or mix of them.

This 4-20mA Current Transducer is ideal building block for system requiring noise immune signal transmission to operate Valves, Actuators and other control devices.

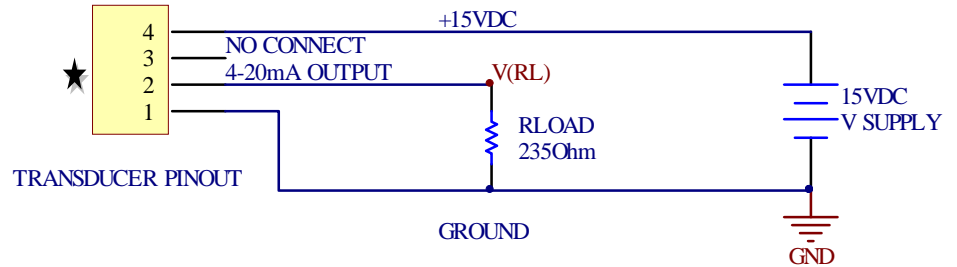
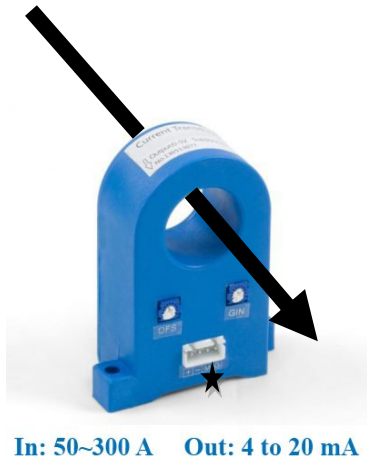
It is recommended as a replacement for discrete designs in a variety of applications in industrial process control, factory automation and system monitoring.

PRODUCT HIGHLIGHTS

- Simple calibration procedure
- An embedded reference pin for software adjustment to gain high accuracy(better than 0.5)%
- Input frequency 0~10Khz
- Very Low hysteresis

Nominal current	Parameter	50A	100A	200A	300A
Input	Hole diameter	Φ220mm	Φ220mm	Φ220mm	Φ220mm
	Current range(A)	-50~50	-100~100	-200~200	-300 ~ 300
	Overload	Fixed to nominal current			
	Frequency	0Hz~10KHz			
Output	Range	DC 4-20mA (Maximum Load Voltage=RL*IL<(VSupply-2V))			
	Load resistance	R Load: ≤230Ω(15V power supply);R Load ≤470Ω(24V power Supply)			
Accuracy	Better than1%				
Power supply	Voltage	15 to 24 VDC (Ripple <1%)			
	Consumption	≤0.5VA (DC15V) ; ≤1VA (DC 24V)			
Mounting	Tray Mount				

Sample Circuit diagram



$$Measured\ Current(A) = \left[\frac{\left(\frac{V(RL)}{R_{Load}} - 12 \right)}{8} \right] * Nominal\ Transducer\ Current(A)$$

Single Supply - Unidirectional Input Current (Iout 4mA-20mA)

Part Number	HITRU03AD09VD1%CSA206
Input	0~50 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRU04AD09VD1%CSA206
Input	0~100 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRU05AD09VD1%CSA206
Input	0~150 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRU06AD09VD1%CSA206
Input	0~200 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRU07AD09VD1%CSA206
Input	0~250 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRU08AD09VD1%CSA206
Input	0~300 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC

Single Supply - Bidirectional Input Current (Iout 4mA-20mA)

Part Number	HITRB03AD09VD1%CSA206
Input	-50 ~ 50 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRB04AD09VD1%CSA206
Input	-100 ~ 100 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRB05AD09VD1%CSA206
Input	-150 ~ 150 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRB06AD09VD1%CSA206
Input	-200 ~ 200 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRB07AD09VD1%CSA206
Input	-250 ~ 250 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC
Part Number	HITRB08AD09VD1%CSA206
Input	-300 ~ 300 A
Output	4 to 20 mA
Case Model	A2
Installation	Surface Mount-S
Accuracy	<1%
SUPPLY Voltage	15~24VDC