BSX1-IOV1HA

Current Sensors

Description

For the electronic measurement of currents: DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit and the secondary circuit.

Features

- Open loop transducer using the Hall effect
- Low voltage application
- Unipolar +5VDC power supply
- Primary current measuring range up to ±300…±900A
- Operating temperature range: -40℃< T_A<+125℃
- Output voltage: fully ratio-metric(gain and offset)

I_{PN} = 300...900A

Advantages

- High accuracy
- Excellent linearity
- Low temperature drift
- Hermetic package

Industrial applications

- Standard battery monitoring
- Hybrid and EVbattery pack current sensing
- Fuel cell current control
- DC/DC converters and AC/DC inverters
- Hybrid and EV motor inverter drive
- EPS and X-by-wire applications
- Electric compressors for air conditioning

TYPES OF PRODUCTS

Type	Primary nominal current I_{PN} (A)	Primary current measuring range I_P (A)
BSX1-300IOV1HA	300	±300
BSX1-400IOV1HA	400	±400
BSX1-500IOV1HA	500	±500
BSX1-600IOV1HA	600	±600
BSX1-700IOV1HA	700	±700
BSX1-800IOV1HA	800	±800
BSX1-900IOV1HA	900	±900

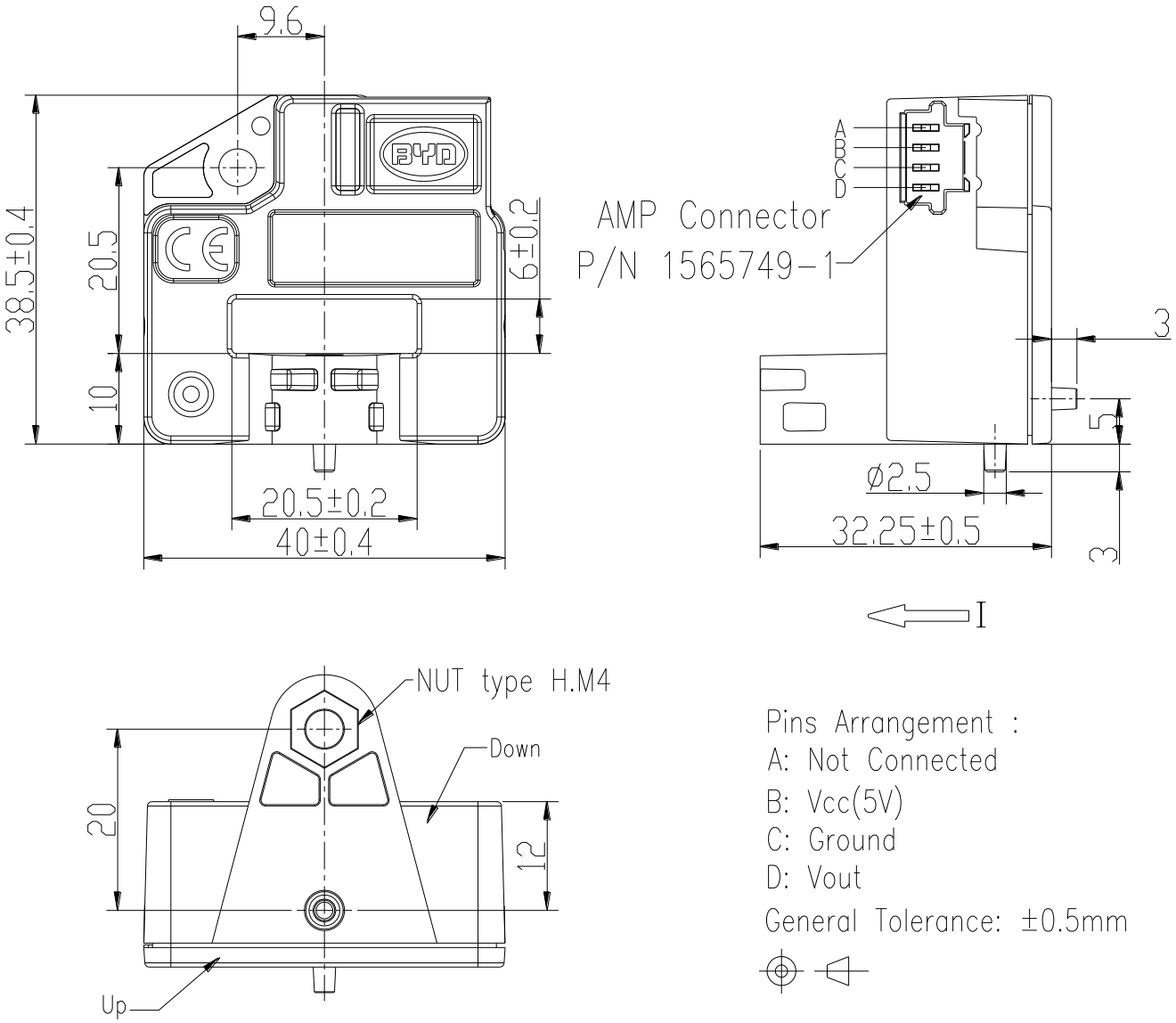
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE			CONDITIONS
			Min.	Typ.	Max.	
Electrical data						
Supply voltage	Vcc	V	-	5	-	
Current consumption	Icc	mA	-	9.2	12	@T_A = 25°C
Output Load Resistance	R_L	kΩ	4.7	-	-	@V_{OUT} to V_{CC}
	R_L	kΩ	4.7	-	-	@V_{OUT} to GND
Output Load Capacitance	C_L	nF	-	-	10	@V_{OUT} to GND
Performance data						
Output voltage	V_{OUT}	V	Vc /5×(2.5+2/Ipn×Ip)			@T_A = 25°C
Output Linearity	ε_L	%	−1%	−	+1%	@T_A = 25°C
Accuracy	X	%	−1%	−	+1%	@T_A = 25°C
Quiescent Output Voltage(1)	V_{OUTQ}	V	2.5±20mV			@T_A = 25°C B=0
Sensitivity Temperature Coefficient	TCS_{ENS}	%/℃	-0.025	0	0.025	
Output Resistance	R_{OUT}	Ω	-	<1	-	
Output Bandwidth	BW	kHz	-	-	50	@-3dB
Response time	t_r	μS	-	5	8	
Rms voltage isolation test	V_d	kV	-	-	2	@AC 50Hz 1Min
General data						
Ambient operating temperature	T_A	℃	-40～+125			
Ambient storage temperature	T_S	℃	-40～+150			

Notes:

(1) The indicated offset voltage is the one after the core hysteresis is removed.

Dimensions BSX1-IOV1HA (in mm. 1 mm = 0.0394 inch)



◆Instructions of use

1. When the test current passes through the sensors, you can get the size of the output voltage. (Warning: wrong connection may lead to sensors damage).
2. Based on user needs, the output range of the sensors can be appropriately regulated.
3. According to user needs, different rated input currents and output voltages of the sensors can be customized.

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