



Description

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

Features

- ◆ Hall effect measuring principle
- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Low power consumption
- ◆ Single power supply +5V
- ◆ Ratio metric offset
- ◆ Fixation by M3 nuts and screws
- ◆ Isolated plastic case recognized according to UL 94-V0



Advantages

- ◆ Small size and space saving
- ◆ Only one design for wide current ratings range
- ◆ High immunity to external interference.

Industrial applications

- ◆ Standard battery monitoring
- ◆ Hybrid and EV battery 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 r. m. s I_{PN} (A)	Primary current measuring range I_P (A)
BSX3-200IOV1MA	200	± 300
BSX3-400IOV1MA	400	± 600
BSX3-600IOV1MA	600	± 800
BSX3-800IOV1MA	800	± 1200



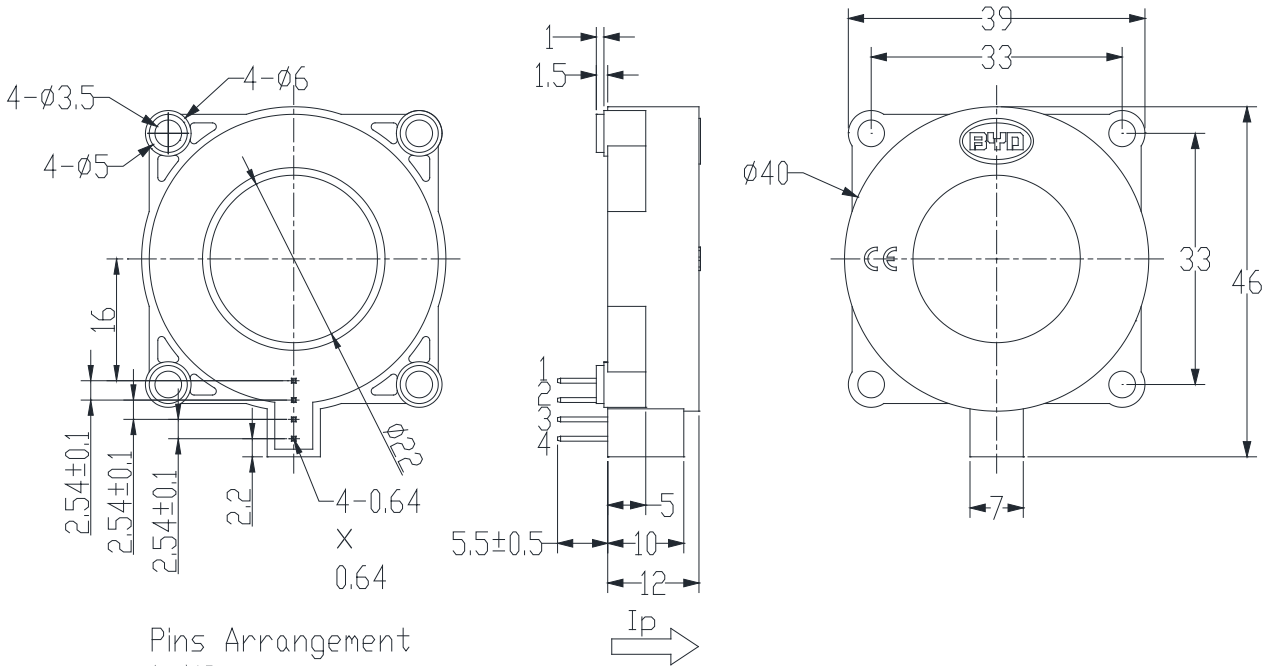
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE			CONDITIONS
			Min.	Typ.	Max.	
Electrical data						
Supply voltage	V _{CC}	V	-	5	-	
Current consumption	I _{CC}	mA	-	9.2	12	@No load on V _{OUT}
Output voltage	V _{OUT}	V	V _{REF} ± (1.25 · I _P /I _{PN})			@T _A = 25°C V _{CC} = 5V
Reference voltage	V _{REF}	V	1/2V _{CC} ± 0.025 V			
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						
Accuracy	X	%	≤ ± 1.5%			@T _A = 25°C
Output Linearity	ε _L	%	≤ ± 1%			@T _A = 25°C
Sensitivity Temperature Coefficient	TC _{SENS}	%/°C	-0.025		+0.025	
Output Resistance	R _{OUT}	Ω	-	<1	-	
di/dt accurately followed	di/dt	A/μs	100	-	-	
Output Bandwidth	BW	kH	-	50	-	@-3dB
Response time	t _r	μS	-	-	7	
Rms voltage isolation test	V _d	kV	-	-	2	@AC 50Hz 1Min
General data						
Ambient operating temperature	T _A	°C	-40~+105			
Ambient storage temperature	T _S	°C	-40~+125			

Notes:

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

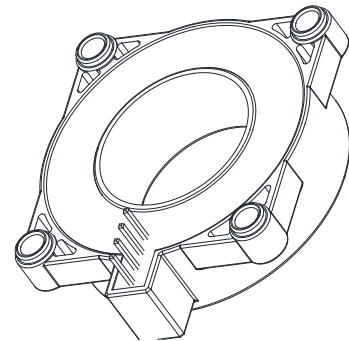
Dimensions BSX3-IOV1MA (in mm. 1 mm = 0.0394 inch)



Pins Arrangement

1. NC
2. Vout
3. 0V
4. +5V

General Tolerance: ±0.3mm
 Transducer Fastening: 4Hole φ3.5mm
 4-M3 steel screw
 It is recommended to use spring washers
 Max fastening torque: 1.0N.M
 Projection:



◆ **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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