BSY9-IOV2M

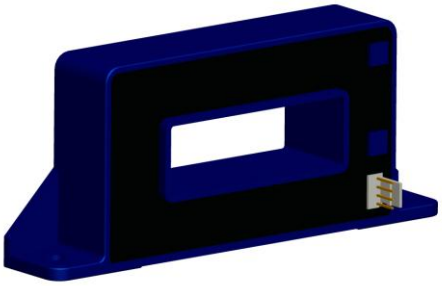
Current Sensors

Description

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

Features

- Hall effect measuring principle
- Low power consumption
- Isolation voltage 5000 V
- Extended measuring range (3 *I_{PN})
- Galvanic isolation between primary and secondary circuit
- Insulated plastic case recognized according to UL 94-V0



I_{PN} = 500…2500A
V_{OUT} = ±4 V

Advantages

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

Industrial applications

- AC motor speed control
- Battery supplied applications
- Uninterruptible Power Supplies(UPS)
- Power supplies for welding ,cable TV and telecommunication applications.

TYPES OF PRODUCTS

Type	Primary nominal r. m. s current I_{PN} (A)	Primary current measuring range I_P (A)
BSY9-500IOV2M	500	±1500
BSY9-600IOV2M	600	±1800
BSY9-850IOV2M	850	±2550
BSY9-1000IOV2M	1000	±3000
BSY9-1200IOV2M	1200	±3600
BSY9-1500IOV2M	1500	±4500
BSY9-2000IOV2M	2000	±5500
BSY9-2500IOV2M	2500	±5500

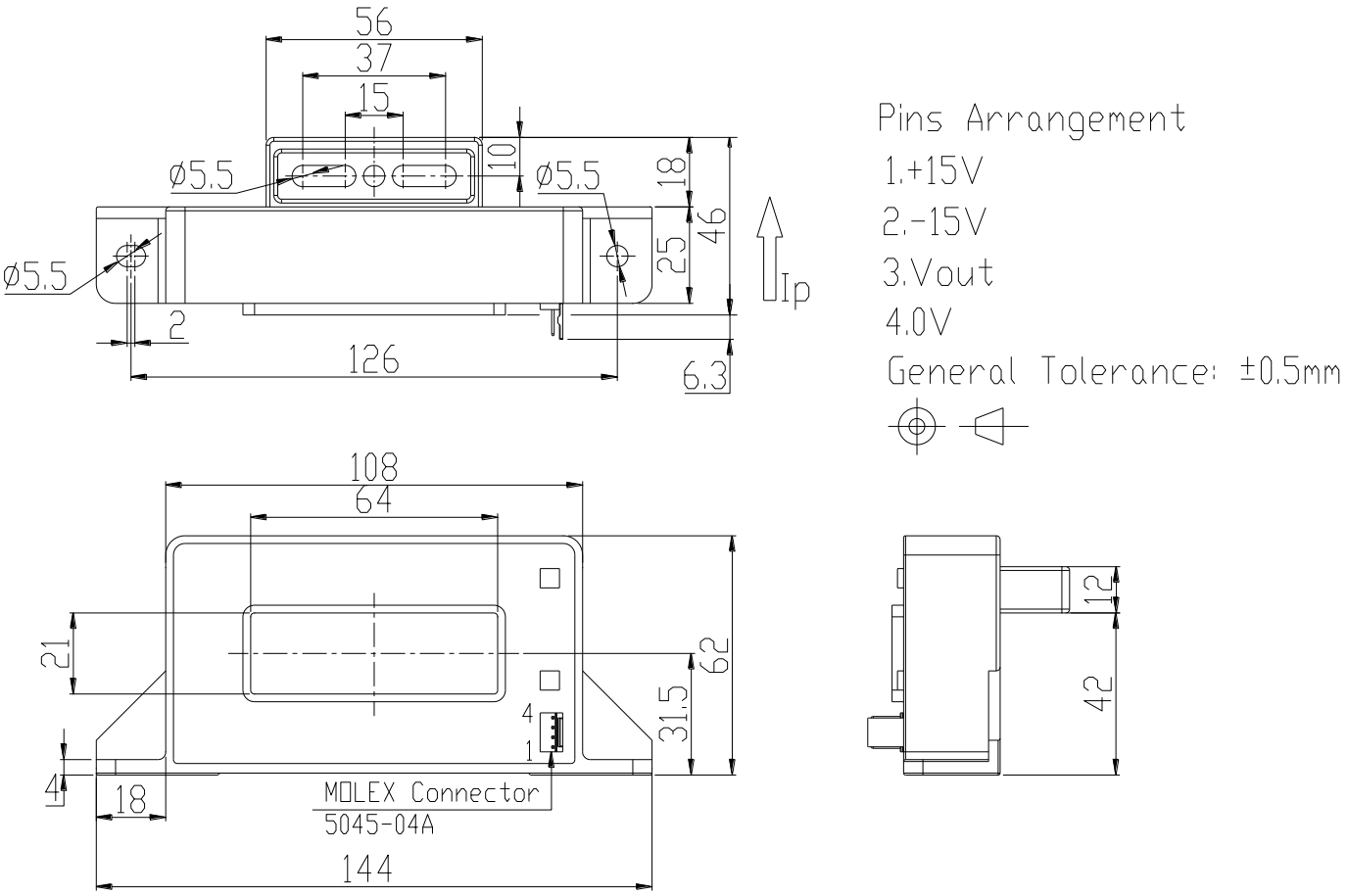
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage(±5%)(1)	V_C	V	±15	
Current consumption	I_C	mA	<±20	
Overload capacity	I_{CC}	At	30000	
R.M.S voltage for AC isolation test	V_d	KV	5	@ 60Hz,1min
R.M.S rated voltage , safe separation	V_b	V	500	
Output voltage	V_{OUT}	V	±4V ±40mV	@ ± I_{PN}, R_L = 10 kΩ, T_A = 25 ℃
Isolation resistance	R_{IS}	MΩ	>1000	@ 500 VDC
Output internal resistance	R_{OUT}	Ω	Approx.100	
Load resistance(2)	R_L	KΩ	>1	
Accuracy - Dynamic performance data				
Linearity(3) (0… ±I_{PN})	ε_L	% of I_{PN}	<±1	@ (0..±I_{PN})
Accuracy	X	%	<±1	@ I_{PN}, T_A = 25 ℃ (without offset)
Electrical offset voltage	V_{OE}	mV	<±20	@T_A = 25 ℃
Hysteresis offset voltage	V_{OH}	mV	<±30	@ I_P= 0;after an excursion of 1*I_{PN}
Thermal drift of V_{OE}	V_{OT}	mV/K	<±1	
Thermal drift of the gain(% of reading)	TCε_G	%/K	<±0.1	
Response time	t_r	μS	<5	@ 90% of I_{PN}
di/dt accurately followed	di/dt	A/μS	>50	
Frequency bandwidth(-3dB) (4)	f	kHz	DC…25	
General data				
Ambient operating temperature	T_A	℃	-40…+85	
Ambient storage temperature	T_S	℃	-40…+85	
Mass	m	g	300	

Notes:

(1) Operating at ±12V ≤V_C< ±15V will reduce the measuring range.
(2) If the customer uses 1KΩ of the load resistor, the primary current has to be limited as the nominal.
(3) Linearity data exclude the electrical offset.
(4) Please refer to derating curves in the technical file to avoid excessive core heating at high frequency.

Dimensions BSY9-IOV2M(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 sensors output range 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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