

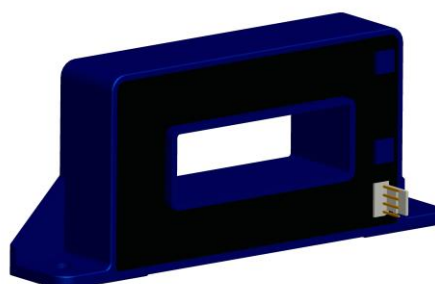


Description

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 ($3 \cdot I_{PN}$)
- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Insulated plastic case recognized according to UL 94-V0



$$I_{PN} = 500 \dots 2500A$$

$$V_{OUT} = \pm 4 V$$

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 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



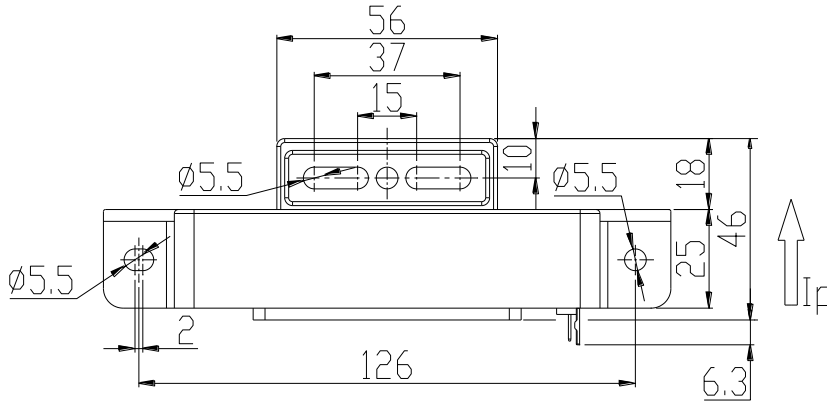
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage($\pm 5\%$) ⁽¹⁾	V _C	V	± 15	
Current consumption	I _C	mA	$< \pm 20$	
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	$\pm 4V \pm 40mV$	@ $\pm I_{PN}$, R _L = 10 k Ω , T _A = 25 °C
Isolation resistance	R _{IS}	M Ω	> 1000	@ 500 VDC
Output internal resistance	R _{OUT}	Ω	Approx. 100	
Load resistance ⁽²⁾	R _L	K Ω	> 1	
Accuracy - Dynamic performance data				
Linearity ⁽³⁾ (0... $\pm I_{PN}$)	ϵ_L	% of I _{PN}	$< \pm 1$	@ (0... $\pm I_{PN}$)
Accuracy	X	%	$< \pm 1$	@ I _{PN} , T _A = 25 °C (without offset)
Electrical offset voltage	V _{OE}	mV	$< \pm 20$	@ T _A = 25 °C
Hysteresis offset voltage	V _{OH}	mV	$< \pm 30$	@ I _P = 0; after an excursion of 1*I _{PN}
Thermal drift of V _{OE}	V _{OT}	mV/K	$< \pm 1$	
Thermal drift of the gain(% of reading)	TC _{EG}	%/K	$< \pm 0.1$	
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	°C	-40...+105	
Ambient storage temperature	T _S	°C	-40...+105	
Mass	m	g	300	

Notes:

- (1) Operating at $\pm 12V \leq V_C < \pm 15V$ will reduce the measuring range.
- (2) If the customer uses 1K Ω 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)



Pins Arrangement

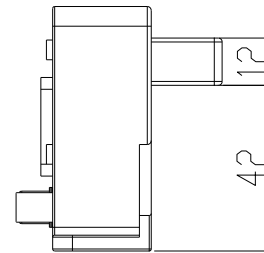
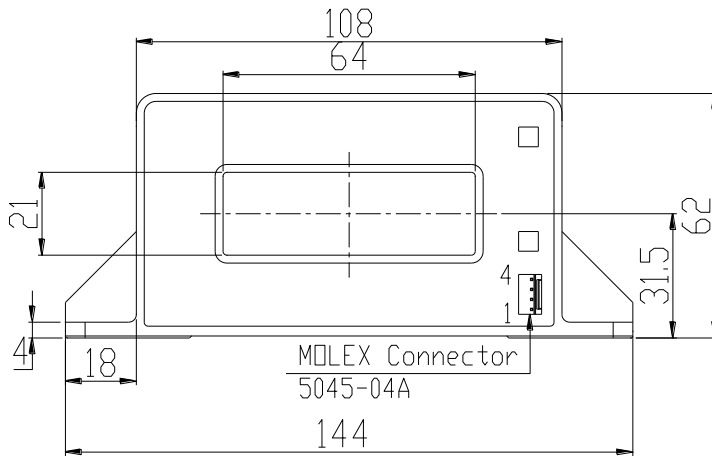
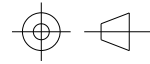
1.+15V

2.-15V

3.Vout

4.0V

General Tolerance: $\pm 0.5\text{mm}$



◆ 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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