

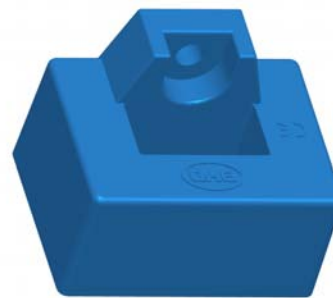


### Description

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
- ◆ Compact design for PCB mounting
- ◆ Low power consumption
- ◆ Extended measuring range (3 \*I<sub>PN</sub>)
- ◆ Insulated plastic case recognized according to UL 94-V0



$$I_{PN} = 50 \dots 600A$$

### Advantages

- ◆ Easy installation
- ◆ Excellent accuracy
- ◆ No insertion losses
- ◆ Excellent performance and price
- ◆ Only one design for wide current ratings range
- ◆ High immunity against external Interference

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

### Industrial applications

- ◆ AC variable speed drives
- ◆ Battery supplied applications
- ◆ Uninterruptible Power Supplies (UPS)
- ◆ Power supplies for welding applications
- ◆ Static converters for DC motor drives
- ◆ Switched-Mode Power Supplies (SMPS)

TYPES OF PRODUCTS		
Type	Primary nominal current r. m. s I <sub>PN</sub> (A)	Primary current measuring range I <sub>PM</sub> (A)
BSY2 -50IOV2-L	50	±150
BSY2 -75IOV2-L	75	±225
BSY2-100IOV2-L	100	±300
BSY2-150IOV2-L	150	±450
BSY2-200IOV2-L	200	±600
BSY2-300IOV2-L	300	±900
BSY2-400IOV2-L	400	±900
BSY2-500IOV2-L	500	±900
BSY2-600IOV2-L	600	±900



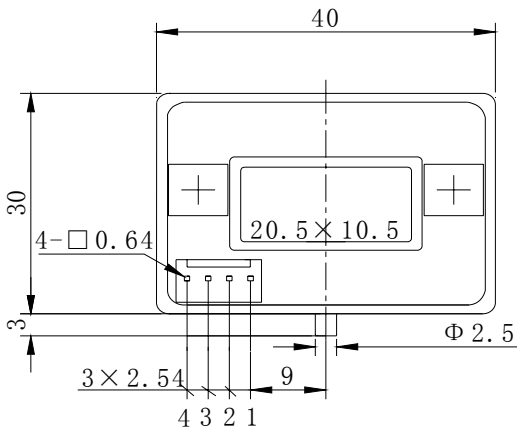
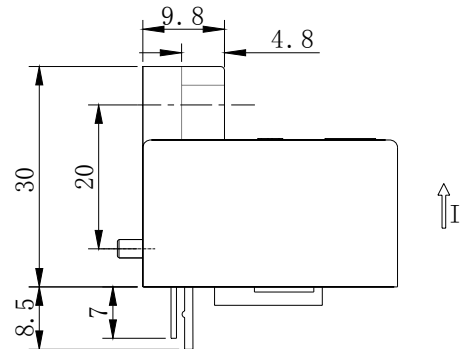
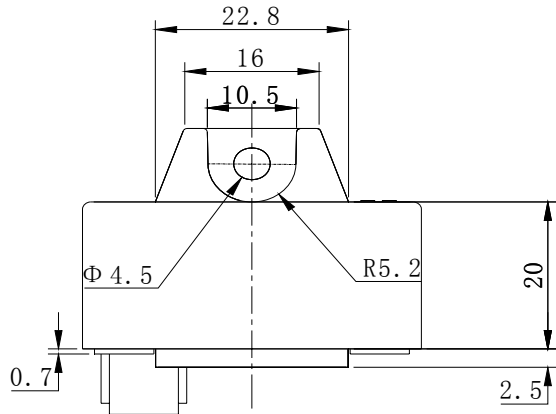
## Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
<b>Electrical data</b>				
Supply voltage( $\pm 5\%$ ) <sup>(1)</sup>	$V_C$	V	$\pm 15$	
Current consumption	$I_C$	mA	$\pm 15$	
Output voltage(Analog)	$V_{OUT}$	mV	$\pm 4V \pm 40$	@ $\pm I_{PN}$ , $R_L = 10\text{ k}\Omega$ , $T_A = 25^\circ\text{C}$
Overload capability(1ms)	$I_{PC}$	At	$50 * I_{PN}$	
Isolation resistance	$R_{IS}$	$M\Omega$	$> 1000$	@ 500 VDC
Output internal resistance	$R_{OUT}$	$\Omega$	100	approx
Load resistance <sup>(2)</sup>	$R_L$	$K\Omega$	$> 10$	
R. m. s voltage for AC isolation test	$V_d$	KV	3	@50Hz, 1 min
R. m. s rated voltage、 safe separation	$V_b$	V	500	
<b>Accuracy - Dynamic performance data</b>				
Linearity <sup>(3)</sup> ( $0 \dots \pm I_{PN}$ )	$\epsilon_L$	%of $I_{PN}$	$< \pm 1$	
Accuracy	X	%	$< \pm 1$	@ $I_{PN}$ , $T_A = 25^\circ\text{C}$ (without offset)
Electrical offset voltage	$V_{OE}$	mV	$< \pm 20$	@ $T_A = 25^\circ\text{C}$
Hysteresis offset voltage	$V_{OH}$	mV	$< \pm 20$	@ $I_P = 0$ ; after an excursion of $1 * I_{PN}$
Temperature coefficient of $V_{OE}$	$TCV_{OE}$	mV/K	$< \pm 2$	@BSY2 50--75IOV2-L
			$< \pm 1$	@BSY2 100--600IOV2-L
Temperature coefficient of $V_{OUT}$	$TCV_{OUT}$	%/K	$< \pm 0.1$	@% of reading
Response time	$t_r$	$\mu\text{S}$	$< 3$	@ 90% of $I_{PN}$ step
$d_i/d_t$ accurately followed	$d_i/d_t$	A/ $\mu\text{S}$	$> 50$	
Frequency bandwidth <sup>(4)</sup>	BW	kHz	DC~50	@-3dB
<b>General data</b>				
Ambient operating temperature	$T_A$	$^\circ\text{C}$	-20....+85	
Ambient storage temperature	$T_S$	$^\circ\text{C}$	-40....+105	
Mass	m	g	approx 60	

## Notes:

- (1) Operating at  $\pm 12V \leq V_C < \pm 15V$  will reduce the measuring range.
- (2) If the customer uses  $1\text{ K}\Omega$  of the load resistor, the primary current has to be limited as the nominal. To measure the full defined measuring range, the load resistor should be at minimum  $10\text{ K}\Omega$ .
- (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 BSY2-IOV2-L (in mm. 1 mm = 0.0394 inch)**



Pins Arrangement

1. +15V
2. -15V
3. OUTPUT
4. 0V

**◆ 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.



**RESTRICTIONS ON PRODUCT USE**

- The information contained herein is subject to change without notice.
- BYD Microelectronics Co., Ltd. (short for BME) exerts the greatest possible effort to ensure high quality and reliability. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing BME products, to comply with the standards of safety in making a safe design for the entire system, including redundancy, fire-prevention measures, and malfunction prevention, to prevent any accidents, fires, or community damage that may ensue. In developing your designs, please ensure that BME products are used within specified operating ranges as set forth in the most recent BME products specifications.
- The BME products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These BME products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury (“Unintended Usage”). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of BME products listed in this document shall be made at the customer’s own risk.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Industrial Current Sensors](#) category:*

*Click to view products by [BYD](#) manufacturer:*

Other Similar products are found below :

[CSNS181](#) [S28S500D24ZM](#) [CSNS300M-001](#) [L05Z800S15](#) [5SHT-151-E](#) [5SHT-500-E](#) [T60404-B4658-X030](#) [T60404-B4658-X029](#) [SAO-Q1N](#) [SAO-Q2N](#) [CSNS300F-002](#) [CSCA0075A000U12J01](#) [SAO-S1N](#) [L34S1T5D15T](#) [L34S500D15T](#) [L34S1T0D15T](#) [CSNS300M-500](#) [LA200-P](#) [ACS724LLCTR-10AB-T](#) [ACS711KEXLT-15AB-T](#) [20310200202](#) [ACS770LCB-050U-PFF-T](#) [LCS10T12](#) [20320500101](#) [20310508201](#) [CCT354571-300-24-00](#) [20320300101](#) [S29S1T0D24Z](#) [CCT272440-80-10-02](#) [DCSA20](#) [S21S180D15JN](#) [L31S300S05FS](#) [T60404-N4644-X021](#) [ECSL61AH](#) [ISB-300-A-802](#) [ISB-300-A-604](#) [ISB-175-A-802](#) [ISB-175-A-800](#) [ISB-175-A-604](#) [ISB-100-A-802](#) [LPMG12](#) [ECS41BC](#) [ECS41BD](#) [SAO-S5N](#) [DCSA50](#) [ECS21BC](#) [ACS726LLFTR-20B-T](#) [A-CS010B](#) [A-CS050B](#) [A-CS100B](#)