

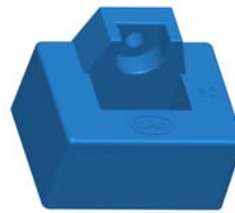


Description

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_{PN})
- ◆ Insulated plastic case recognized according to UL 94-V0



I_{PN} = 50...600A

V_{OUT} = ± 4 V

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

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 _{PN} (A)	Primary current measuring range I _{PM} (A)
BSY2 – 50/4IOV2	50	±150
BSY2 -75/4IOV2	75	±225
BSY2-100/4IOV2	100	±300
BSY2-150/4IOV2	150	±450
BSY2-200/4IOV2	200	±600
BSY2-300/4IOV2	300	±900
BSY2-400/4IOV2	400	±900
BSY2-500/4IOV2	500	±900
BSY2-600/4IOV2	600	±900



Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage($\pm 5\%$) ⁽¹⁾	V_C	V	± 15	
Current consumption	I_C	mA	± 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}	Ω	100	approx
Load resistance ⁽²⁾	R_L	$K\Omega$	> 1	
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	
Accuracy - Dynamic performance data				
Linearity ⁽³⁾ ($0 \dots \pm I_{PN}$)	ϵ_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 VOE	TCV_{OE}	mV/K	$< \pm 2$	@BSY2 50--75IOV2-M
			$< \pm 1$	@BSY2 100--600IOV2-M
Temperature coefficient of V_{OUT}	TCV_{OUT}	%/K	$< \pm 0.1$	@% of reading
Response time	t_r	μS	< 3	@ 90% of I_{PN} step
d_i/d_t accurately followed	d_i/d_t	A/ μS	> 50	
Frequency bandwidth ⁽⁴⁾	BW	kHz	DC~50	@-3dB
General data				
Ambient operating temperature	T_A	$^\circ\text{C}$	-40...+85	
Ambient storage temperature	T_S	$^\circ\text{C}$	-40...+105	
Mass	m	g	approx 60	

Notes:

- (1) Operating at $\pm 12\text{V} \leq V_C < \pm 15\text{V}$ 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.



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