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BSH-1000ICV5M

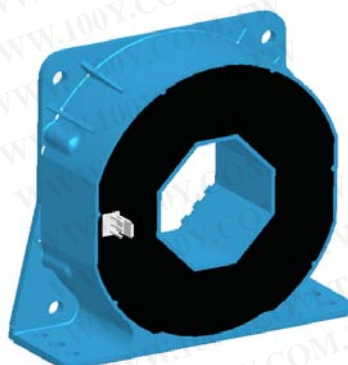
Current Sensors

Description

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

Features

- ◆ Hall effect measuring principle
- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Low power consumption
- ◆ Extended measuring range
- ◆ Insulated plastic case recognized according to UL 94-V0



$I_{PN} = 1000A$

Advantages

- ◆ Very good linearity
- ◆ Excellent accuracy
- ◆ Low temperature drift
- ◆ Wide frequency bandwidth
- ◆ Optimized response time
- ◆ No insertion losses
- ◆ High immunity against external Interference
- ◆ Excellent performance and price

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_P (A) (@±24)	Measuring resistance		
			$T_A=70^{\circ}C$ $R_M(\Omega)$	$T_A=85^{\circ}C$ $R_M(\Omega)$	CONDITIONS
BSH-1000IC V5M	1000	0~±1500	0 ~ 18	0~15	with±15V@±1000Amax
			0 ~ 7	0~4	with±15V@±1200Amax
			5 ~ 60.5	10~57.5	with±24V@±1000Amax
			5 ~ 24	10~21	with±24V@±1500Amax

**Parameters Table**

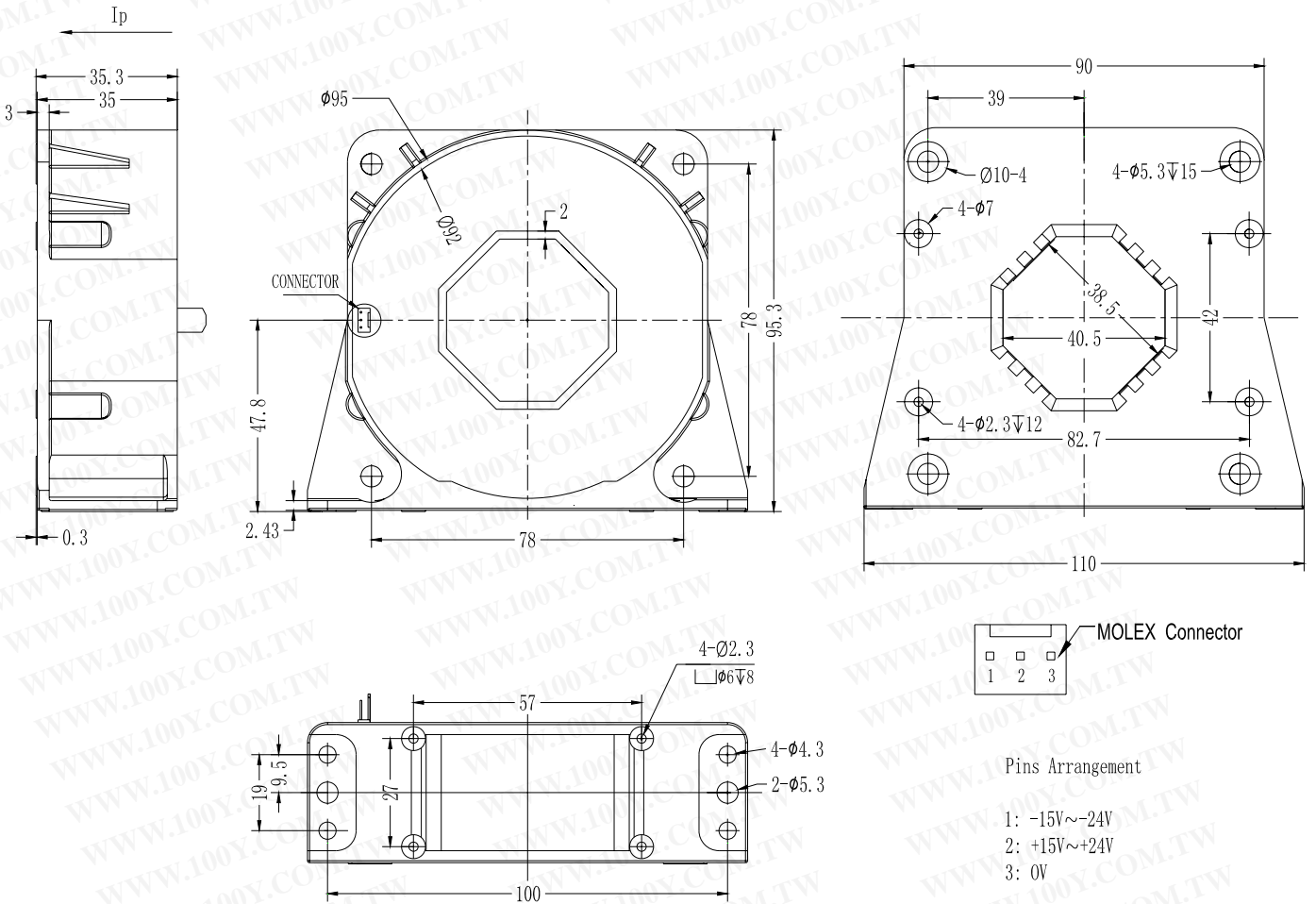
PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage($\pm 5\%$)	V_C	V	$\pm 15 \dots 24$	
Current consumption	I_C	mA	$28(@\pm 24)+I_S$	
Secondary nominal r.m.s. current	I_{SN}	mA	200	@ I_{PN}
Conversion ratio	K_N		1:5000	
Accuracy - Dynamic performance data				
Linearity	ϵ_L	%	$< \pm 0.1$	
Accuracy	X_G	%	$< \pm 0.4$	@ I_{PN} , $T_A = 25^\circ\text{C}$
Offset current	I_O	mA	$< \pm 0.4$	@ $I_P = 0, T_A = 25^\circ\text{C}$
Magnetic offset current	I_{OM}	mA	$< \pm 0.2$	@ $I_P = 0$, after an overload of $3 \times I_{PN}$
Thermal drift of I_O	I_{OT}	mA	$< \pm 0.5$	@ $I_P = 0, -10^\circ\text{C} \sim +85^\circ\text{C}$
			$< \pm 0.8$	@ $I_P = 0, -40^\circ\text{C} \sim -10^\circ\text{C}$
Response time	t_r	μs	< 1	@ 90% of I_{PN} step
d_i/d_t accurately followed	d_i/d_t	A/ μs	> 100	
Frequency bandwidth ⁽¹⁾	f	kHz	DC~150	@ -1dB
General data				
Ambient operating temperature	T_A	$^\circ\text{C}$	-40 ~ +85	
Ambient storage temperature	T_S	$^\circ\text{C}$	-45 ~ +100	
Secondary coil resistance	R_S	Ω	48	@ $T_A = 70^\circ\text{C}$
			51	@ $T_A = 85^\circ\text{C}$
Mass	m	g	550	
Isolation characteristics				
R. m. s voltage for AC isolation test	V_d	KV	3.8	@ 50Hz, 1 min
Impulse withstand voltage 1.2/50us	V_w	KV	16	
Creepage distance	dCp	mm	20.6	
Clearance distance	dCI	mm	19.6	
Comparative Tracking Index	CTI		175	Group IIIa

Notes:

- (1) Please refer to derating curves in the technical file to avoid excessive core heating at high frequency.



Dimensions BSH-1000ICV5M (in mm. 1 mm = 0.0394 inch)



◆ Instructions of use

1. When the test current passes through the sensor, you can get the size of the output current.
(Warning: wrong connection may lead to sensors damage)
2. I_s is positive when I_p flows in the direction of the arrow.
3. According to user needs, different rated input currents and output currents of the sensors can be customized.



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