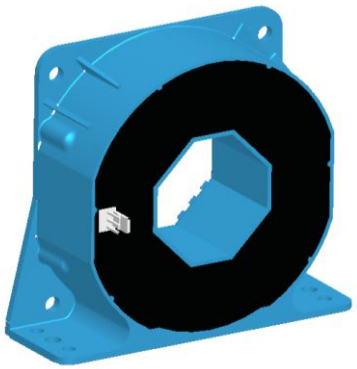
BSH-1000ICV5M

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).



I_{PN} = 1000A

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

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 ℃ R_M (Ω)	T_A=85 ℃ R_M (Ω)	CONDITIONS
BSH-1000ICV5M	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

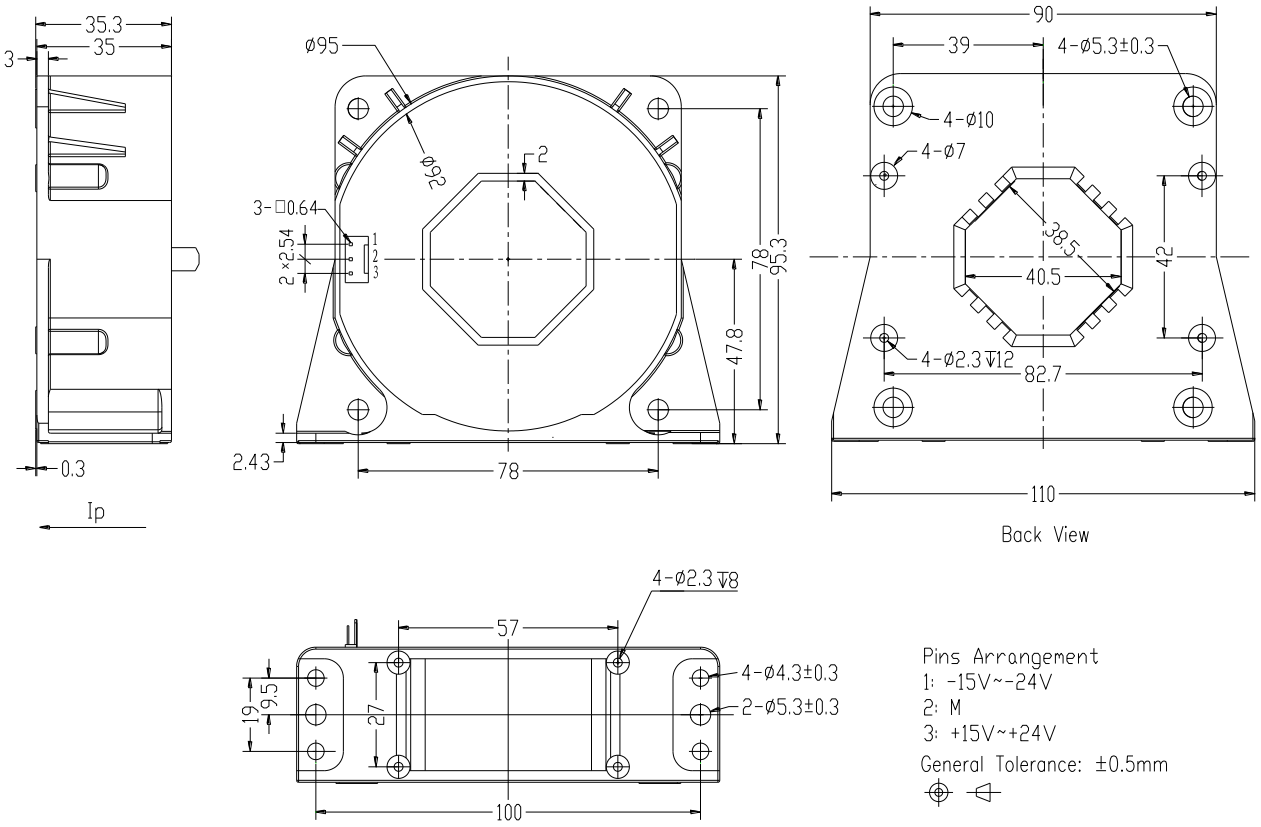
Parameters Table

PARAMETERS	SYMBOL	UNIT	VALUE	CONDITIONS
Electrical data				
Supply voltage(±5%)	V_C	V	±15…24	
Current consumption	I_C	mA	28(@±24)+Is	
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	%	<±0.1	
Accuracy	X_G	%	<±0.4	@ I_{PN} , T_A = 25℃
Offset current	I_O	mA	<±0.4	@ I_P = 0,T_A = 25℃
Magnetic offset current	I_{OM}	mA	<±0.2	@ I_P = 0,after an overload of 3×I_{PN}
Thermal drift of Io	I_{OT}	mA	<±0.5	@ I_P = 0,－10℃～+85℃
			<±0.8	@ I_P = 0,－40℃～－10℃
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)	BW	kHz	DC~150	@-1dB
General data				
Ambient operating temperature	T_A	℃	-40 ~ +85	
Ambient storage temperature	T_S	℃	-45 ~ +100	
Secondary coil resistance	Rs	Ω	48	@ T_A = 70℃
			51	@ T_A = 85℃
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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