DATA SHEET
Hall Effect Current Sensor

PN : BJHCS-LF | **IPN = 500A - 1000A**

Features

- **Closed loop**
- **High accuracy**
- **Supply voltage : ±15 to ±24V DC**
- **Current output**
- **Through hole primary**
- **Can be customized**
- Good linearity
- Fast response time
- Low temperature drift
- High anti-jamming capability
- Strong current overload

Applications

- AC/DC variable speed motor driver
- Battery applications
- Uninterruptible power supplies (UPS)
- Power supplies for welding applications
- Switching power supplies (SMPS)

ELECTRICAL DATA

BJHCS-LF-…			1000A	2000A
Nominal rms current I_{PN} (A)			1000	2000
Sensed current range I_{PM} (A)			±1800	±3800
Measuring resistance with V_C=	± 15 V	@ ± I_P (A)	*1000*	*2000*
		R_M max(Ω) =	5	5
		@ ± I_P max (A)	*1500*	*2500*
		R_M max(Ω) =	1	1
	± 24 V	@ ± I_P max (A)	*1000*	*2000*
		R_M max(Ω) =	25	25
		@ ± I_P max (A)	*1800*	*3800*
		R_M max(Ω) =	1	1
Coil turns ratio K (P^{ry}:S^{ry})			1:5000	1:4000
Secondary coil resistance Ω			32	24
Rated output current I_{SN} (mA)			200	500
Supply voltage V_C (Vdc)			±12 ±5% to ±24 ±5%	
Static current consuption I_{C0} (mA)			≤ 28	
Current consuption I_C (mA)			28 + I_S	

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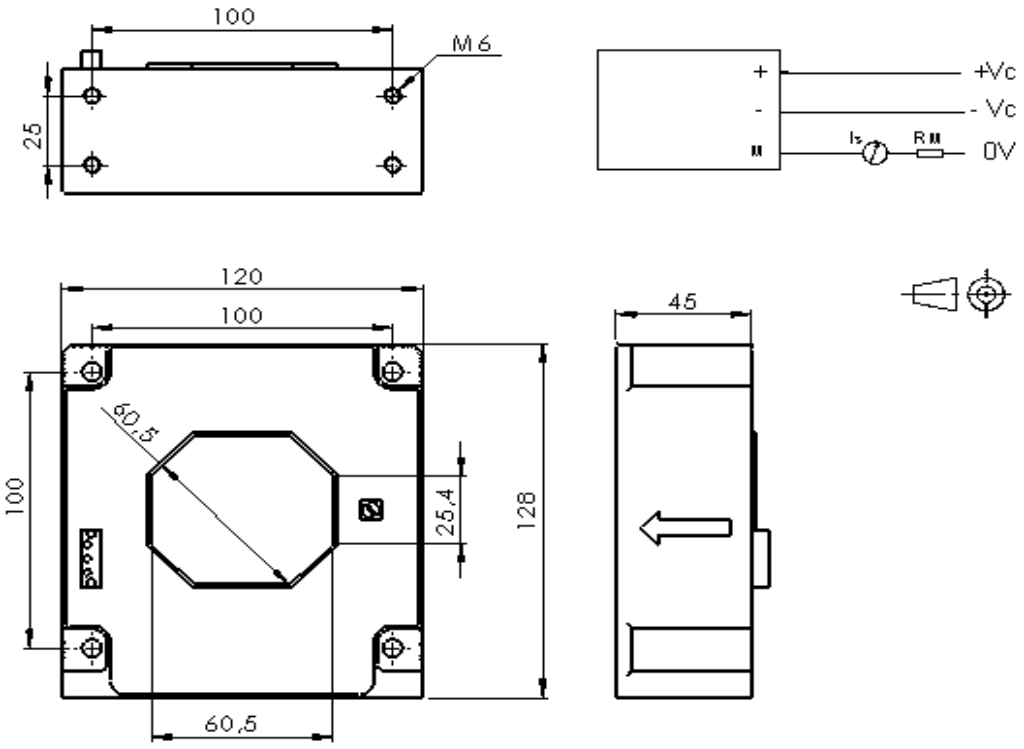
ACCURACY DYNAMIC PERFORMANCE			GENERAL & ISOLATION CHARACTERISTICS			
Accuracy X_G @ I_{PN}, T=25℃	± 0,2	%	Operating temperature		-40 to +85	℃
Zero offset Current I_O @ I_P=0, T=25℃	≤ ±0,2	mA	Storage temperature		-40 to +125	℃
Current offset drift @ -40℃ to 85℃	≤ ± 0,5	mA	Weight	BJHCS-LF-1000A	1000	g
				BJHCS-LF-2000A	1100	g
Linearity error ε_L	≤ 0,1	% FS	Insulation voltage (50Hz, 1mn)		6	KV
di/dt accurately followed	> 100	A/µs				
Response time tr	< 1	µs				
Bandwidth (-1db)	DC to150	kHz				

DIMENSIONS

LF



MECHANICAL CHARACTERISTICS

General tolerance		± 0,5 mm
Octagonal through hole size		max 60,5 mm
Transducer fastening	vertical position	4 holes metric M6
	horizontal position	4 holes ∅ 6,5 mm
Terminal connection		

Cautions :

- I_S is positive when I_P flows in accordance whith the arrow direction (see the top of the sensor);
- Primary conductor temperature should not exceed 100 ℃;
- Best dynamic performances (di/dt and response time) are achieved with a single electrical conductor completely filling the through hole ;
- To achieve the best magnetic coupling, the primary winding must be wound around the top edge of the sensor;
- For the required connection circuit, see the drawing above.

WARNING : Incorrect wiring may cause damage to the sensor.