DATA SHEET
Hall Effect Current Sensor

PN : BJHCS-K5

IPN = 50A - 100A - 150A- 200A - 300A - 400A - 500A - 600A

Features

- **Open loop**
- **Supply voltage : +5V DC**
- **Through hole primary**
- **Small size**
- **Voltage output**
- **Can be customized**
- Easy installation
- Frame mounting
- Internal and external reference
- High immunity to external interferences

Applications

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

ELECTRICAL DATA

BJHCS-K5-…	50A	100A	150A	200A	300A	400A	500A	600A
Nominal rms current I_{PN} (A)	50	100	150	200	300	400	500	600
Sensed current range I_{PM} (A)	±100	±200	±300	±400	±600	±800	±900	±900
Output voltage @ I_P (V)	V_{OE} ± (0,625*I_P/I_{PN})							
Supply voltage V_C (Vdc)	+5 V $^{\pm 5\%}$							
Static current consumption I_C (mA)	15							

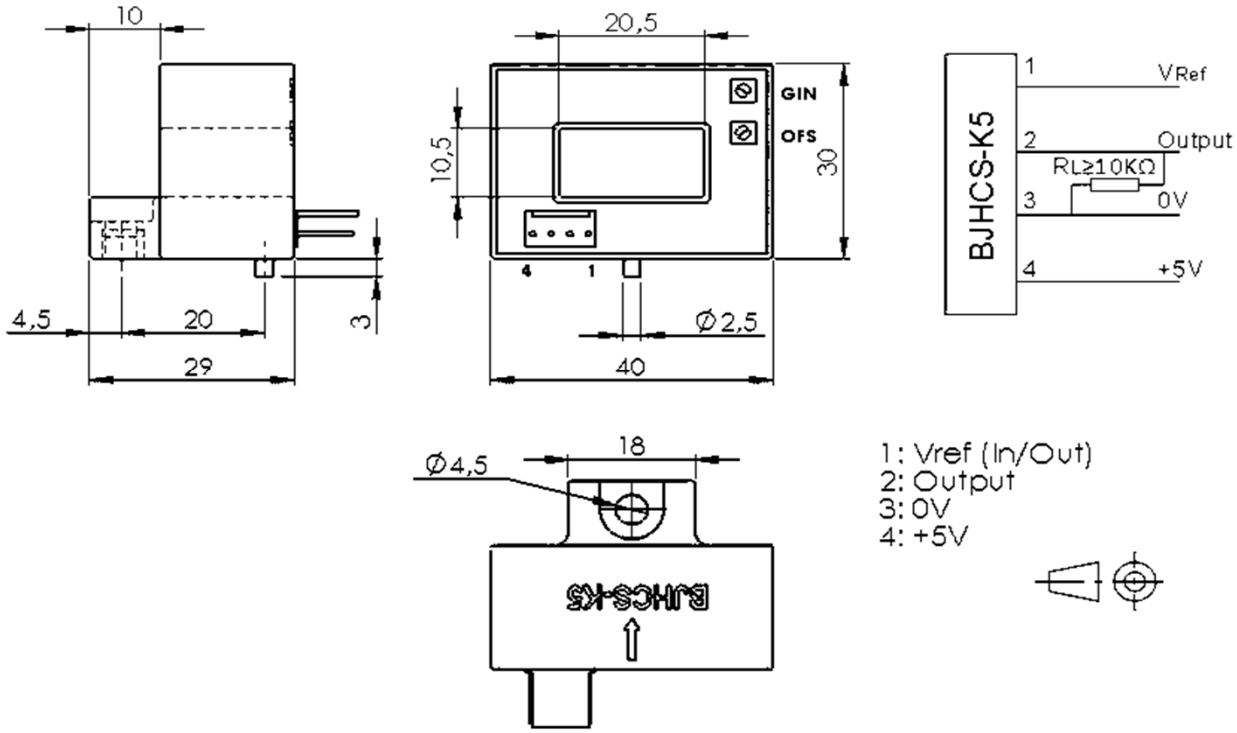
ACCURACY DYNAMIC PERFORMANCE

Accuracy X_G @ I_{PN}, T=25°C		± 1	%
Offset voltage V_{OE} @ I_P=0, T=25°C		2,5±0,025	V
Offset voltage drift @ -40 to +85 °C	I_{PN}=50A	≤ ± 2	mV/°C
	Other	≤ ± 1	
Hysteresis offset voltage V_{OH} @ -40 to +85 °C	I_{PN}=50A	± 20	mV
	Other	± 15	
Linearity error ε_L		≤ 1	% FS
Response time tr		≤ 3	µs
di/dt accurately followed		>100	A/µs

GENERAL & ISOLATION CHARACTERISTICS

Operating temperature range	-40 to +85	°C
Storage temperature	-40 to +125	°C
Insulation voltage (50Hz, 1mn)	2,5	KV
Weight	65	g

DIMENSIONS



MECHANICAL CHARACTERISTICS

General tolerance	± 0,2 mm
Primary square through hole size	20,5 x 10,5 mm
Transducer fastening	M4
Recommended fastening torque	< 1,5 Nm
Terminal connection	Molex 5045-04A

Cautions :

- I_S is positive when I_P flows in accordance with the arrow direction (see the top of the sensor);
- Primary conductor temperature should not exceed 100°C;
- 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.

Required connection circuit :

- See drawing above.

WARNING : Incorrect wiring may cause damage to the sensor.