

DATA SHEET

Hall Effect Current Sensor

PN : HCS-BR

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

Features

- Open loop
- Supply voltage : $\pm 15V$ DC
- Through hole primary
- Frame mounting
- Voltage output
- Can be customized

Connection by 4 wire cable
Small size
Easy installation
High anti jamming capability



Applications

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

ELECTRICAL DATA

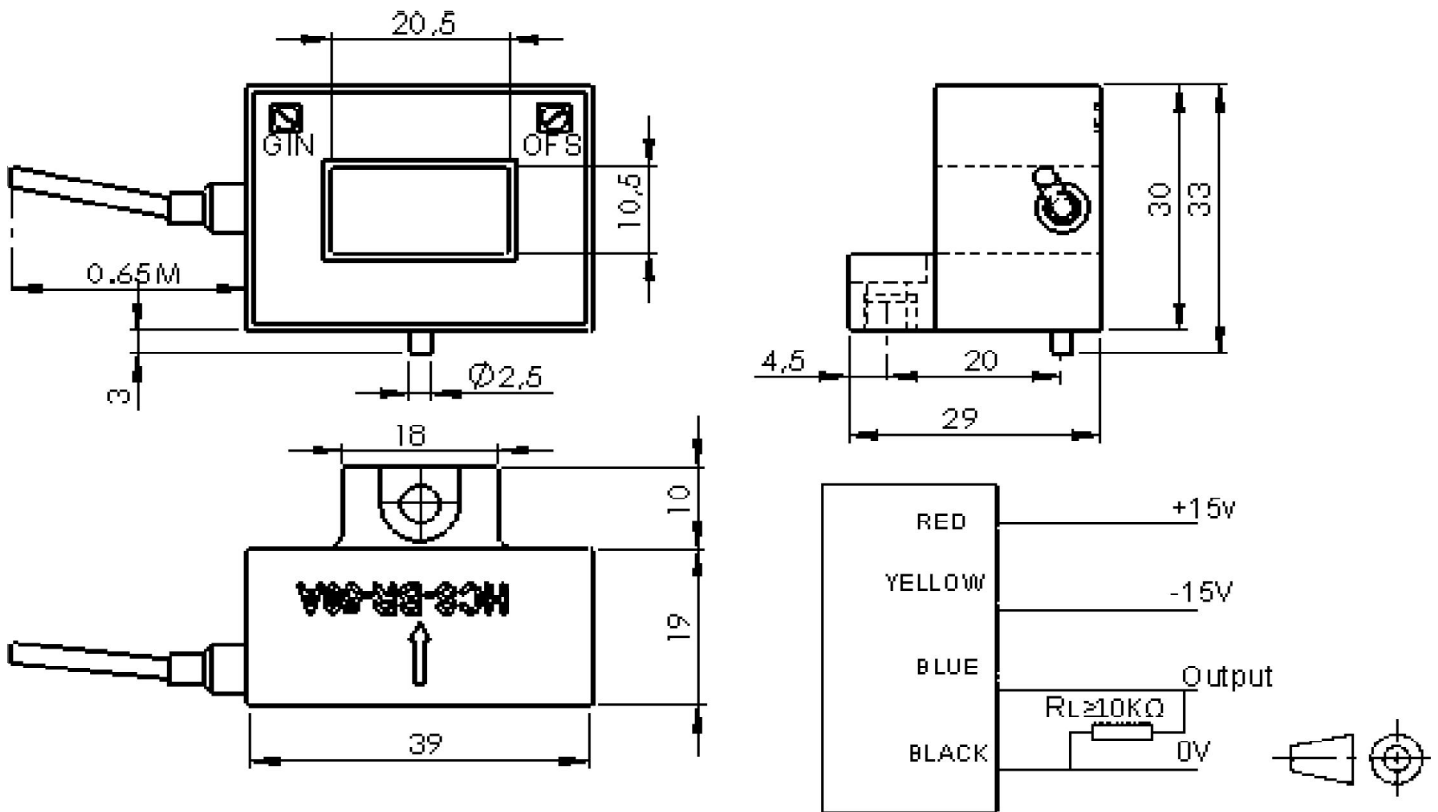
HCS-BR-...	50A	100A	150A	200A	300A	400A	500A	600A
Nominal current rms I_{PN} (A)	50	100	150	200	300	400	500	600
Sensed current range I_{PM} (A)	± 150	± 300	± 450	± 600	± 900	± 900	± 900	± 900
Rated output voltage @ I_{PN} (V)	± 4							
Supply voltage V_C (Vdc)	$\pm 15 V^{\pm 5\%}$							
Static current consumption I_C (mA)	≤ 15							

ACCURACY DYNAMIC PERFORMANCE

GENERAL & ISOLATION CHARACTERISTICS

Accuracy X_G @ I_{PN} , $T=25^\circ C$	± 1	%	Operating temperature range	-40 to +85	$^\circ C$
Zero Offset voltage V_{OE} @ $I_P=0$, $T=25^\circ C$	± 25	mV	Storage temperature	-40 to +125	$^\circ C$
Offset voltage drift @ -40 to +85 $^\circ C$	$I_{PN}=50A$	$\leq \pm 1$	Weight	75	g
	Other	$\leq \pm 0,5$			
Hysteresis offset voltage V_{OH} @ -40 to +85 $^\circ C$	$I_{PN}=50A$	± 25	Lead length	650	mm
	Other	± 20			
Linearity error ϵ_L	≤ 1	% FS	Insulation voltage (50Hz, 1mn)	2,5	KV
Response time t_r	≤ 3	μs			

DIMENSIONS



MECHANICAL CHARACTERISTICS

General tolerance	$\pm 0,2$ mm
Primary square through hole size	20,5 x 10,5
Transducer fastening	M4
Recommended fastening torque	$< 1,5$ Nm
Terminal connection	4 wires cable 650mm lenght, stripped and tinned leads

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.