

**PN : BJHCS-LT205M/S**

**IPN = 50A - 100A - 200A - 300A**

### Features

- Closed loop
- High accuracy
- Good linearity
- Fast response time
- Low temperature drift
- High anti-jamming capability
- Strong current overload
- Supply voltage :  $\pm 12$  to  $\pm 18$  V DC
- Current output
- Through hole primary
- Can be customized

### Applications

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

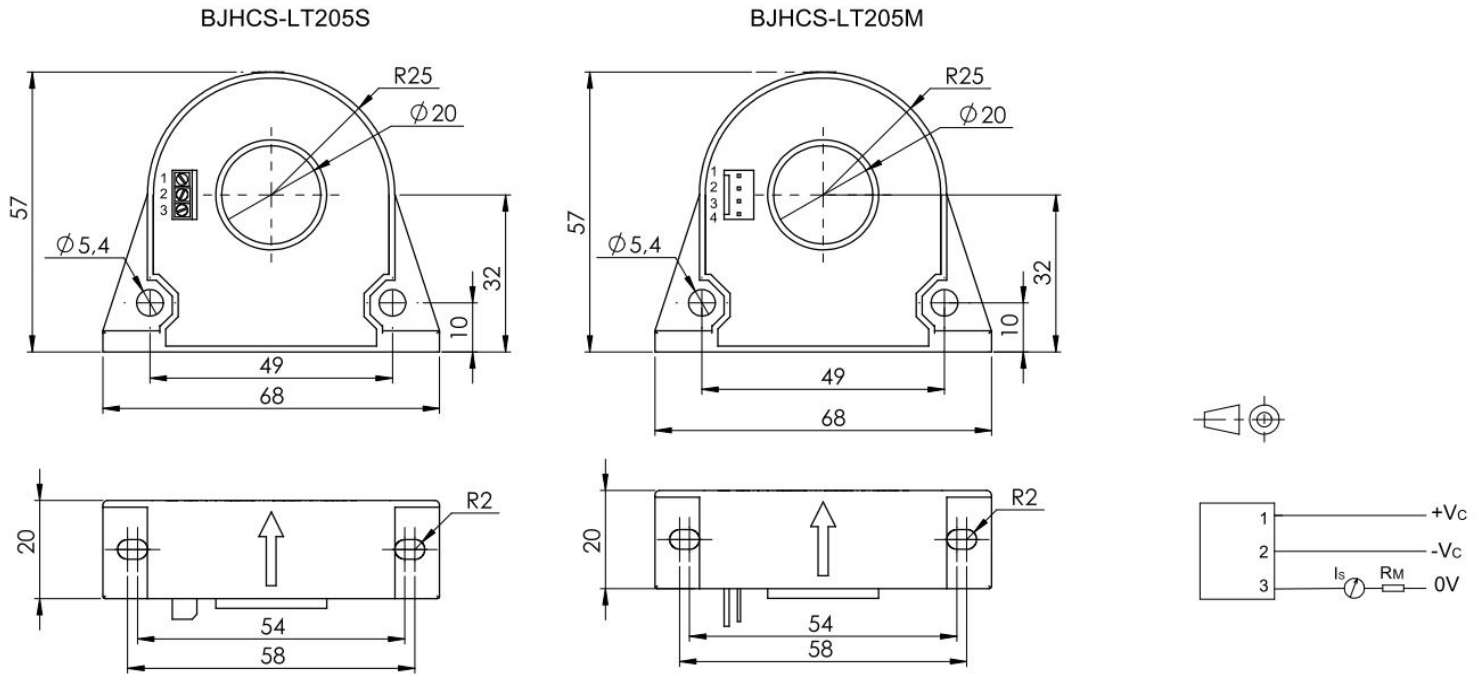


### ELECTRICAL DATA

BJHCS-LT205M/S-...		50A	100A	200A	300A1	300A2	
Nominal rms current $I_{PN}$ (A)		50	100	200	300	300	
Sensed current range $I_{PM}$ (A)		$\pm 150$	$\pm 300$	$\pm 600$	$\pm 600$	$\pm 900$	
with $V_C = \pm 18$ V and $R_M (\Omega) =$		100	90	35	35	20	
Measuring resistance with $V_C =$	$\pm 12$ V	@ $\pm I_P$ (A)	50	100	200	300	300
		$R_M \max(\Omega) =$	210	200	90	53	75
		@ $\pm I_P$ (A)	100	200	500	500	600
		$R_M \max(\Omega) =$	100	90	22	22	20
	$\pm 15$ V	@ $\pm I_P$ (A)	50	100	200	300	300
		$R_M \max(\Omega) =$	250	250	120	72	100
		@ $\pm I_P$ (A)	100	200	500	500	600
		$R_M \max(\Omega) =$	130	120	36	36	36
Coil turns ratio K ( $P^N:S^N$ )		1:1000	1:2000	1:2000	1:2000	1:3000	
Secondary coil resistance $R_S (\Omega)$		10	20	20	20	34	
Rated output current $I_{SN}$ (mA)		50	50	100	150	100	
Supply voltage $V_C$ (Vdc)		$\pm 12^{\pm 5\%}$ to $\pm 18^{\pm 5\%}$					
Static current consumption $I_{CO}$ (mA)		$\leq 20$					
Current consumption $I_C$ (mA)		$20 + I_S$					

ACCURACY DYNAMIC PERFORMANCE			GENERAL & ISOLATION CHARACTERISTICS		
Accuracy $X_G$ @ $I_{PN}$ , $T=25^\circ\text{C}$	$\pm 0,5$	%	Operating temperature	-40 to +85	$^\circ\text{C}$
Zero offset Current $I_O$ @ $I_P=0$ , $T=25^\circ\text{C}$	$\pm 0,2$	mA	Storage temperature	-40 to +125	$^\circ\text{C}$
Current offset drift $I_O$ @ $-40^\circ\text{C}$ to $85^\circ\text{C}$	$\leq \pm 0,5$	mA	Weight	70	g
Linearity error $\epsilon_L$	$\leq 0,1$	% FS	Insulation voltage (50Hz, 1mn)	6	KV
di/dt accurately followed	$> 200$	A/ $\mu\text{s}$			
Response time $t_r$	$< 1$	$\mu\text{s}$			
Bandwidth (-1db)	DC to 100	kHz			

## DIMENSIONS



## MECHANICAL CHARACTERISTICS

General tolerance	$\pm 0,5$ mm	
Through hole dimension	$\varnothing 20$ mm	
Transducer fastening	2 holes $\varnothing 5,4$ mm	
Terminal connection	BJHCS-LT205M	Molex 5045-04A
	BJHCS-LT205S	Terminal block 3 screw, 5mm pitch

### 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  $100^\circ\text{C}$ ;
- 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;
- For the required connection circuit, see the drawing above.

**WARNING : Incorrect wiring may cause damage to the sensor.**