

**PN : BJHCS-ES3A**

**IPN = 25A - 50A - 75A**

### Features

- Closed loop
- High accuracy
- Good linearity
- Low power consumption
- Good over-current capability
- Supply voltage : +3,3V DC
- Voltage output
- Small PCB mounting
- Can be customized

### Applications

- Frequency drive control home appliances
- Solar power management system
- Inverter applications
- Uninterruptible power supplies (UPS)
- Current monitoring



### ELECTRICAL DATA

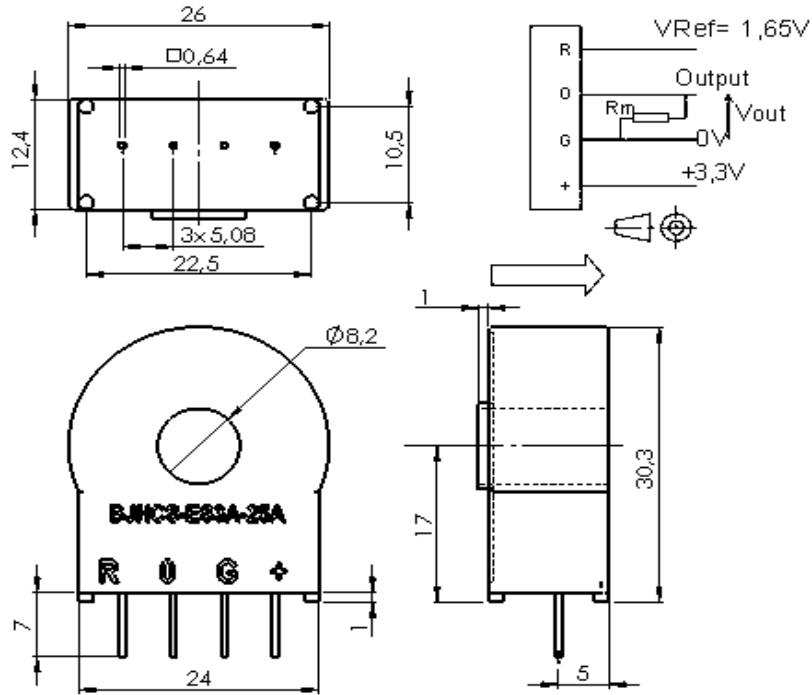
BJHCS-ES3A-...	25A	50A	75A
Nominal rms current $I_{PN}$ (A)	25	50	75
Sensed current range $I_{PM}$ (A)	$\pm 50$	$\pm 100$	$\pm 150$
Measuring resistance $R_M$ ( $\Omega$ )	$50 \pm 0,1\%$ 25 PPM	$25 \pm 0,1\%$ 25 PPM	$16,5 \pm 0,1\%$ 25 PPM
Secondary coil turns ( $T_S$ )	$2000 \pm 2$	$2000 \pm 2$	$2000 \pm 2$
Rated output voltage (V)	$V_{OE} \pm 0,625$		
Supply voltage $V_C$ (Vdc)	$+3,3 \pm 5\%$		
Static current consumption $I_C$ (mA)	$\leq 10$		

### 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 voltage $V_{OE}$ @ $I_P=0$ , $T=25^\circ\text{C}$	$1,65 \pm 0,5\%$	V	Storage temperature	-40 to +125	$^\circ\text{C}$
Offset voltage drift $V_{OE}$ @ - 40 $^\circ\text{C}$ to 85 $^\circ\text{C}$	$\leq \pm 0,5$	mV/ $^\circ\text{C}$	Weight	13	g
Linearity error $\epsilon_L$	$\leq 0,1$	% FS	Insulation voltage (50 Hz, 1min)	3	KV
di/dt accurately followed	$> 100$	A/ $\mu\text{s}$	Impulse withstand voltage (1,2/50 $\mu\text{s}$ )	$> 8$	KV
Response time $t_r$	$\leq 1$	$\mu\text{s}$			
Bandwidth (- 3db)	DC to 200	kHz			

## DIMENSIONS

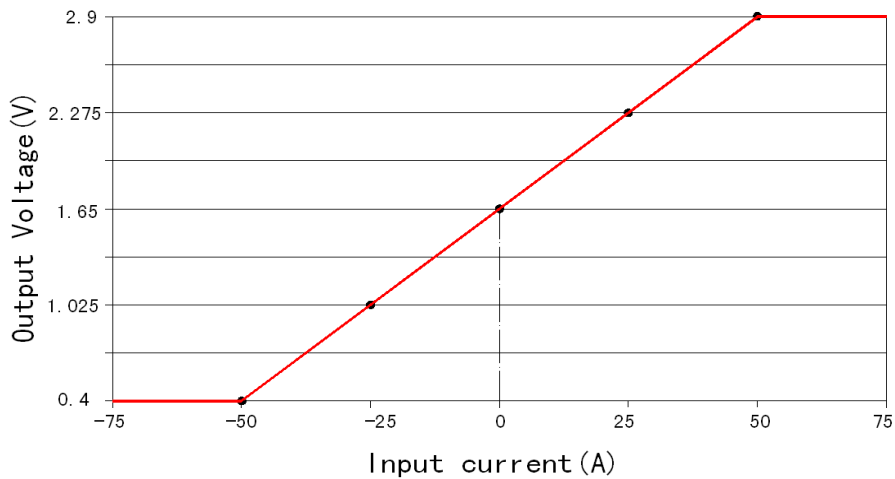


## MECHANICAL CHARACTERISTICS

Primary through hole	Ø 8,2 mm
Terminal connection	4 pins, size 0,64 mm x 0,64 mm
General tolerance	± 0,2 mm

**BJHCS-ES3A-25A : Relation between Input Current and Output voltage :**

Input current (A)	- 50	- 25	0	25	50
Output voltage (V)	0,4	1,025	1,65	2,275	2,9



### **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.

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