

DATA SHEET

Hall Effect Current Sensor

PN : HCS-CAS

IPN = 6A - 15A - 25A

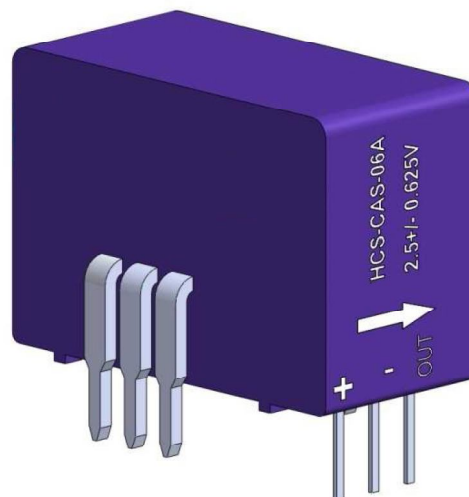
Features

- Closed loop
- High accuracy
- Supply voltage : +5V DC
- Voltage output
- Small PCB mounting
- Can be customized

Very good linearity
 Low power consumption
 Good over-current capability

Applications

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



ELECTRICAL DATA

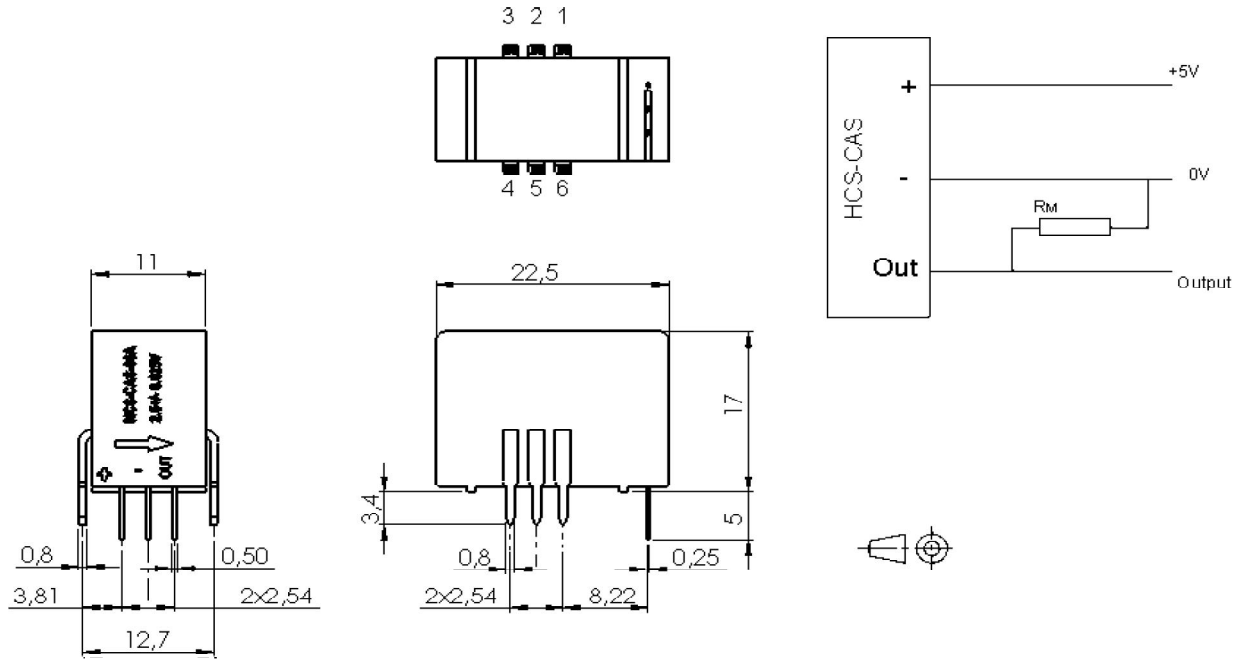
HCS-CAS-...	06A	15A	25A
Nominal rms current I_{PN} (A)	6	15	25
Sensed current range I_{PM} (A)	$\pm 19,2$	± 48	± 84
Measuring resistance R_M (Ω)	100	50	50
Secondary coil turns (T_s)	$960^{\pm 1}$	$1200^{\pm 1}$	$2000^{\pm 2}$
Rated output voltage (V)	$V_{OE} \pm 0,625$		
Supply voltage V_C (Vdc)	$+5^{\pm 5\%}$		
Static current consumption I_C (mA)	10		

ACCURACY DYNAMIC PERFORMANCE

GENERAL & ISOLATION CHARACTERISTICS

Accuracy	$\pm 0,7$	%	Operating temperature	-40 to +85	$^{\circ}\text{C}$
Zero offset voltage V_{OE} @ $IP=0$, $T=25^{\circ}\text{C}$	$2,5^{\pm 0,02}$	V	Storage temperature	-40 to +126	$^{\circ}\text{C}$
Offset voltage drift V_{OE} @ -40 $^{\circ}\text{C}$ to 85 $^{\circ}\text{C}$	$\leq \pm 0,5$	mV/ $^{\circ}\text{C}$	Weight	10	g
Linearity error ϵ_L	$\leq 0,1$	% FS	Insulation voltage (50 Hz, 1min)	3	KV
di/dt accurately followed	> 50	A/ μs	Impulse withstand voltage (1,2/50 μs)	>8	KV
Response time t_r	<1	μs	Creepage distance (shell)	15,4	mm
Bandwith (-1db)	DC to 200	kHz			

DIMENSIONS



WIRING DIAGRAM

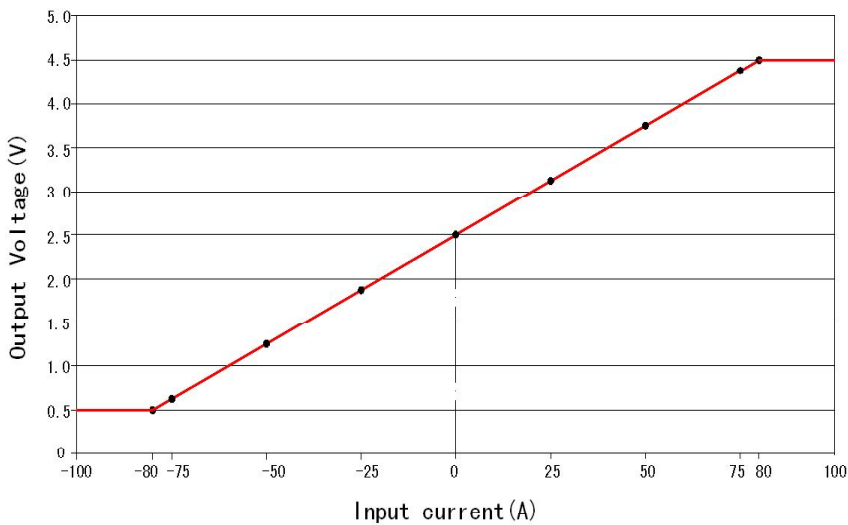
Cable hole current input (N ^{ber} primary turns)	Rated current CAS-...			Output rated (V)	Primary (mΩ)	Primary (μH)	PCB current input (Input Pin Connection)
	06A	15A	25A				
1	±6	±15	±25	2,5 ± 0,625	0,18	0,013	6 — 5 — 4 out in 1 — 2 — 3
2	±3	±7,5	±12,5	2,5 ± 0,625	0,81	0,05	6 — 5 — 4 out in 1 — 2 — 3
3	±2	±5	±8,3	2,5 ± 0,625	1,62	0,12	6 — 5 — 4 out in 1 — 2 — 3

Cautions :

Do respect the wiring diagram in accordance with the current value and its direction.

HCS-CAS-25A : Relation between Input Current and Output voltage :

Input current (A)	-80	-75	-50	-25	0	25	50	75	80
Output voltage (V)	0,5	0,625	1,25	1,875	2,5	3,125	3,75	4,375	4,5



MECHANICAL CHARACTERISTICS

General tolerance	± 0,2 mm
Primary pins	6, size 0,8x0,8 mm
Terminal connection	3 pins , size 0,25x0,5 mm

WARNING : Incorrect wiring may cause damage to the sensor.