

DATA SHEET

Hall Effect Current Sensor

PN : HCS-P

IPN = 3A - 5A - 10A - 15A - 25A - 30A - 50A

Features

- Closed loop
- High accuracy
- Supply voltage : $\pm 15V$ DC
- Voltage output
- Small PCB mounting
- Can be customised

Very good linearity
 Low response time
 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-P-...	03A	05A	10A	15A	20A	25A	30A	50A
Nominal current rms IPN (A)	3	5	10	15	20	25	30	50
Sensed current range I _{PM} (A)	± 9	± 15	± 30	± 45	± 60	± 75	± 90	± 150
Coils turns ration K (P ^{ty} :S ^{ty})	6:1800	4:2000	3:3000	2:3000	1:2000	1:2500	1:3000	1:3125
Sampling resistor R _M (Ω)	400	400	400	400	400	400	400	250
Rated output voltage Vo (V)	± 4							
Supply voltage V _C (Vdc)	$\pm 15 \pm 0,5\%$							
Static current consumption I _c (mA)	< 15							

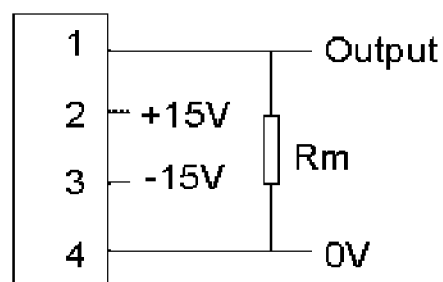
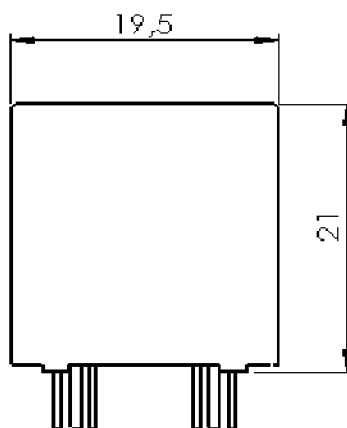
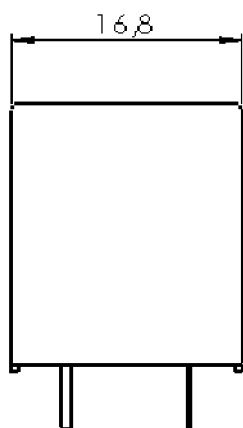
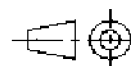
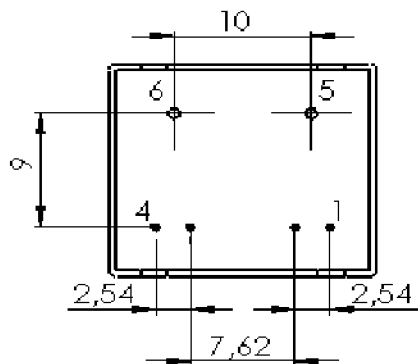
ACCURACY DYNAMIC PERFORMANCE

GENERAL & ISOLATION CHARACTERISTICS

Accuracy X _G @ I _{PN} , T=25°C	$\pm 0,5$	%	Operating temperature	-40 to +85	°C
Zero offset voltage V _{OE} @ I _P =0, T=25°C	± 20	mV	Storage temperature	-40 to +125	°C
Offset voltage drift V _{OE} @ -40°C to 85°C	$\leq \pm 0,5$	mV/°C	Weight	12	g
Linearity error ϵ_L	$\leq 0,1$	% FS	Insulation voltage (50Hz, 1mn)	5	KV
di/dt accurately followed	> 50	A/ μ s			
Response time tr	≤ 1	μ s			

DIMENSIONS

- 1: Out
- 2: +15V
- 3: -15V
- 4: 0V
- 5: -In
- 6: +In



MECHANICAL CHARACTERISTICS

HCS-P-...	03A	05A	10A	15A	20A	25A	30A	50A
Input pin (mm)	Ø 0,6	Ø 0,8	Ø 0,8	Ø 1,0	Ø 1,4	Ø 1,4	Ø 1,6	Ø 2
Terminal connection	4 pins, size 0,25 mm x 0,5 mm							
General tolerance	± 0,2 mm							

Cautions :

Do respect the wiring diagram in accordance with the current value and its flow direction;
For the required connection circuit, see the drawing above.

WARNING : Incorrect wiring may cause damage to the sensor.