

DATA SHEET

Hall Effect Current Sensor

PN : HCS-F

**IPN = 200A - 400A - 600A - 800A
1000A - 2000A**

Features

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

Low power consumption
Fast response time
Frame mounting



Applications

Monitoring and measurement
Battery applications
Uninterruptible power supplies (UPS)
Switching power supplies (SMPS)

ELECTRICAL DATA

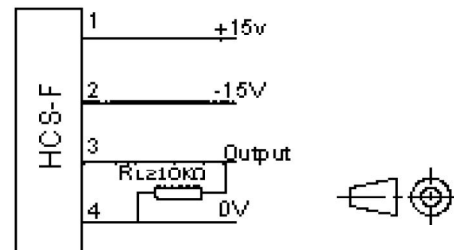
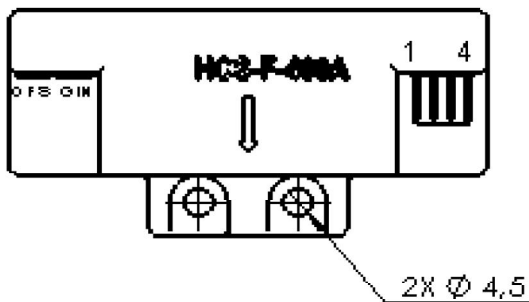
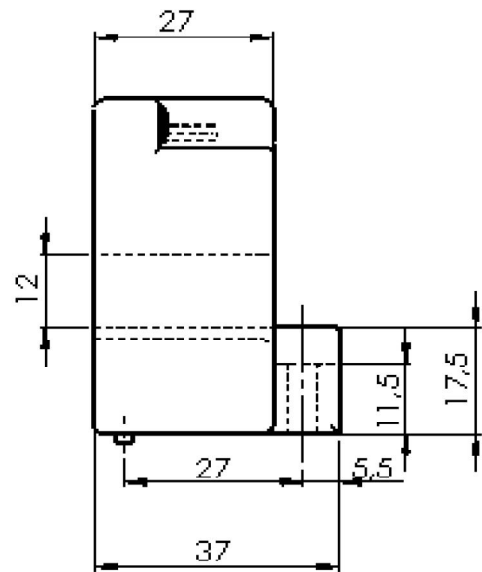
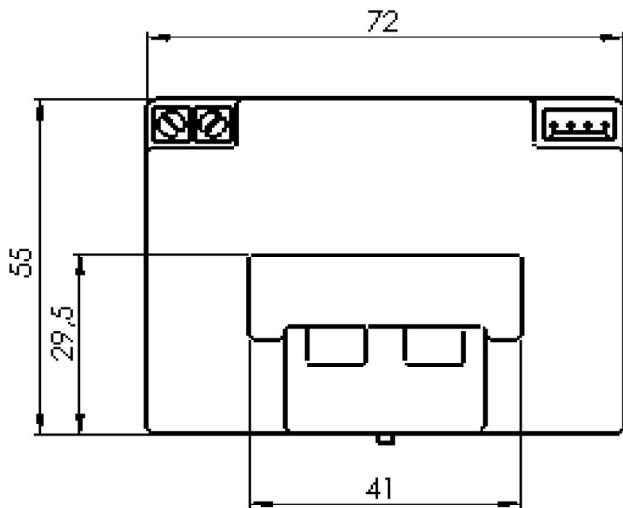
HCS-F-...	200A	400A	600A	800A	1000A	2000A
Nominal rms current I_{PN} (A)	200	400	600	800	1000	2000
Sensed current range I_{PM} (A)	± 400	± 800	± 1200	± 1600	± 2000	± 3000
Rated output voltage @ I_{PN} (V)	± 4					
Static current consumption I_C (mA)	15					
Supply voltage V_C (Vdc)	$\pm 15 \pm 0,5\%$					

ACCURACY DYNAMIC PERFORMANCE

GENERAL CHARACTERISTICS

Accuracy X_G @ I_{PN} , $T=25^\circ C$	± 1	%	Operating temperature	-40 to +85	$^\circ C$
Zero offset voltage V_{OE} @ $I_P=0$, $T=25^\circ C$	± 15	mV	Storage temperature	-40 to +125	$^\circ C$
Offset voltage drift V_{OE} @ $-40^\circ C$ to $+85^\circ C$	$\leq \pm 0,5$	mV/ $^\circ C$	Insulation voltage (50 Hz, 1min)	5	KV
Hysteresis offset voltage V_{OH} @ $-40^\circ C$ to $+85^\circ C$	$\leq \pm 30$	mV			
Linearity error ϵ_L	≤ 1	% FS			
Response time t_r	≤ 5	μs			
Bandwidth (-1db)	DC to 30	Khz			

DIMENSIONS



MECHANICAL CHARACTERISTICS

General tolerance	± 0,2 mm
Primary square through hole size	41 x 12 mm
Terminal connection	Molex 5045-04A
Transducer fastening	2 holes Ø4,5 mm

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.