

1100A DC / 770A AC

0.1% ACCURACY

5KV GALVANIC ISOLATION

IP65

[View DC Energy Metering Solutions on satec-global.com.au ↗](#)

FCS-1000

(EL0193)

Solid-Core Flux Gate Current Sensor 1100A DC / 770A AC Primary

The UHACS (Flux Gate Sensor) series delivers revenue-grade measurement accuracy for most applications when paired with our PRO Series meters, and is a core building block of SATEC's **flux gate current sensing** range for DC energy metering.

The FCS-1000 delivers high gain and exceptional measurement accuracy across its full bandwidth, achieved through a multi-point zero-flux system combined with high-frequency ripple sensing – an advanced channel that enhances existing DC sensor technology for the largest bus-bar and cable applications.



Main Features

- $\pm 1100\text{A}$ DC nominal primary current, with a $1.1 \times I_n$ linear measuring range
- $\pm 770\text{A}$ AC nominal primary current (effective value)
- 0.1% ($I_n - 0.05 I_n$) accuracy with 0.02% FS linearity
- Fast $20 \mu\text{s}$ response time (di/dt of $100\text{A}/\mu\text{s}$ rise to $90\% I_n$)
- DC to 20kHz measurement bandwidth
- $5\text{kV RMS}/50\text{Hz}$ galvanic isolation between primary and output
- $\pm 40\text{mA}$ nominal output signal on a simple $1000:40$ conversion ratio
- Solid-core toroidal clamp body rated IP65, for panel or bus-bar mounting

Technical Specifications

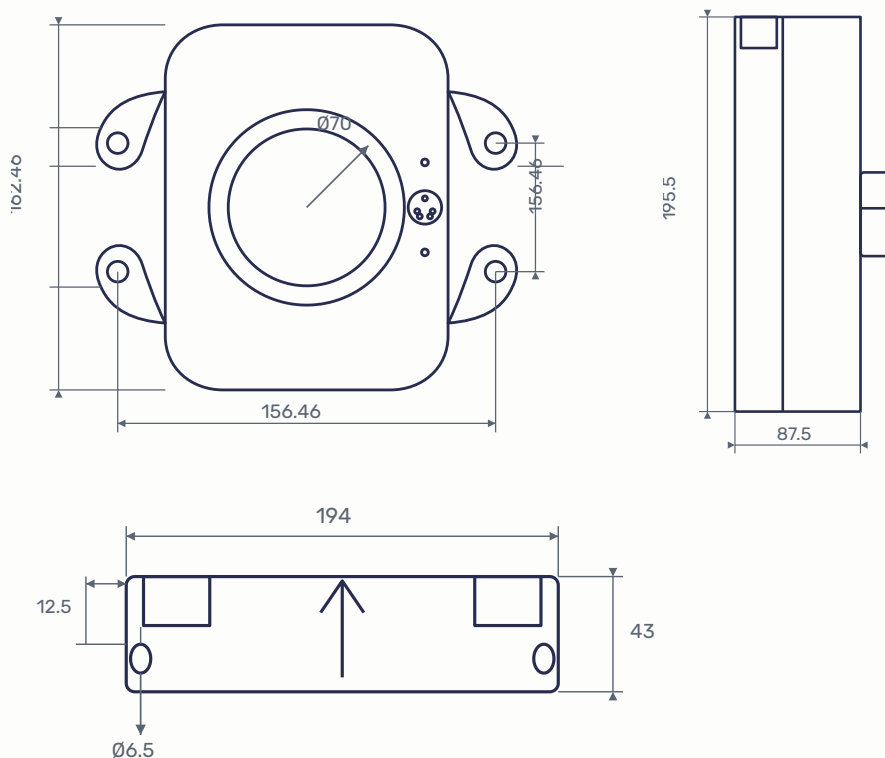
GENERAL CHARACTERISTICS		ACCURACY	
Primary nominal current DC	$\pm 1100A$ DC	Zero offset current	$\pm 1 \mu A$ (@25 °C)
Linear measuring range (1 min)	$1.1 \times I_{PN_DC}$	Offset temperature coefficient	25 ppm / K
Primary nominal current AC	$\pm 770A$ AC (effective value)	Measuring resistance	250 Ω
Nominal output signal	$\pm 40mA$	Response time	20 μs (di/dt of 100A/ μs rise to 90% I_n)
Supply voltage	$\pm 15V$ DC ($\pm 5\%$)	Accuracy	0.1% ($I_n - 0.05 I_n$)
Current consumption (max)	$\pm 670mA$	Linearity	0.02% FS
Galvanic isolation	5KV RMS/50Hz/min	Bandwidth (–3dB)	DC – 20kHz
Conversion ratio (A/mA)	1000 : 40	ENVIRONMENTAL	
Weight	4.0kg ($\pm 0.2kg$)	Operating temperature	–40°C ~ +85°C
Protection of case	IP65	Storage temperature	–55°C ~ +95°C

Definition of Part Number

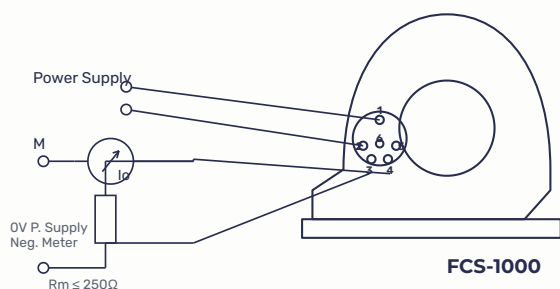
FCS – 1000

Rated input current M = 1000A

Dimensions (mm)



Wiring Sensors



PINS	
PIN	SIGNAL
1	+15V (+)
2	-15V (-)
3	0V / Neg. output (G)
4	Pos. output (M)
5	N/A
6	N/A

Important Notes



- **Incorrect connection may lead to damage of the sensor.** Connect the terminals of the power source and output respectively and correctly. Please pay special attention to the 0V / negative current output connection.
- The best accuracy is achieved when the window is fully filled with bus-bar (current-carrying conductor).
- The current sensor must not be used with the secondary output open-circuited, that is, while the primary has current or the sensor is powered on, the secondary output terminal must not be disconnected; the current output terminal can only be disconnected once the bus has no current and the sensor is not powered on. Otherwise, high voltage may be induced and there is a danger of electric shock or equipment damage.
- When you need to move the product, be sure to cut off the power first and unplug all the connecting cables from it.

DOCUMENT VERSION

VERSION	DATE
TBV1.0	17 September 2026

For related sensors in this range, see the **FCS-300 (300A)** and **FCS-600 (600A)** datasheets, or the full **SATEC manuals & datasheets library**. For technical support, contact SATEC Australia via the **contact page** or email **sales@satec-global.com.au**.