Data Sheet – Type SCU-100

Description

The IC2 type SCU-100 AC/DC Capacitive Sensor Control Unit is an integrated analog synchronous modulation/ demodulation system that provides the ability to measure mean and fluctuating quantities of interest using a capacitive sensor, e.g., wall shear stress or pressure. Capacitive sensing at dc is achieved by shifting the sensor baseband frequencies to a modulated signal and demodulating the returned signal from the sensor. The SCU provides low-noise power and carrier signals to the sensor head and conditions the returned analog voltage signal for output to a data acquisition system. A shielded 6-pin cable is used to connect the sensor package to the SCU. Integrated rechargeable lithium ion batteries minimize noise due to EMI and provide up to 20 hours of continuous operation.

Key Features and Benefits

- Mean and fluctuating capacitive sensor measurements using a variety of devices
- Selectable low-noise AC or rechargeable Lithium-ion battery power source
- System status and battery voltage LED indicators
- 6-pin shielded sensor connector provides supply voltages and carrier signals

General Specifications

Operating Temperature Range	0 – 50°C (32 – 120°F)
Power Source	120VAC, 2x 10Ah Li-ion batteries
Battery Life	Approx. 20 hours
SCU Dimensions	263 mm x 250 mm x 100 mm (L10.4 x W9.8 x H3.9 in)
SCU Weight	2.3 kg (5.1 lb)
Carrier Signals	Up to 16 Vpp @ 1 MHz – factory preset
Supply Voltages	+/-12 V
Pre-Demodulation Gain	0-40 dB – factory preset

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