



# SYNECTIC ELECTRONICS

## SD037 Mains Frequency Monitor



- Accurate frequency measurement
- Harmonic noise filtered out
- Communication Via isolated RS232 or RS485 with simple ASCII or Modbus RTU<sup>1</sup> protocols
- Enable control to meet dynamic demand, reduce load on the grid

### Description

The SD037 is a dynamic line frequency monitor that enables high speed, high accuracy, frequency monitoring even with high levels of harmonic noise. It is designed to monitor the frequency of a mains voltage signal and report the value, on demand, via an RS232, RS485 or Modbus<sup>1</sup> serial interface. Bespoke command sets can be written on request to enable specialist demand side aggregators to enhance their offering to the marketplace. It features a 3 pole low pass Bessel filter with a -3dB frequency of 75Hz. This removes unwanted harmonics from the input signal. It is housed in a DIN rail mount case and powered from a universal input mains supply. Widely used in energy management in industrial and utility applications. The units are supplied pre-calibrated and have been widely tested in the field with accuracy that can be relied upon to remain stable to 3 decimal points for a minimum of 1 year.

### Specifications

Parameter	min	typ	max
Power supply voltage	85Vrms		264Vrms
Power supply frequency	47Hz		63Hz
HV input signal	20Vrms		250Vrms
LV input signal	2Vrms		25Vrms
Low pass filter cut off (-3dB)		75Hz	
RS232/485 comms Baud rate	Switch selectable either 115K2 or 19K2 <sup>1</sup> These Baud rates can be changed on request at time of order		
RS232/RS485 isolation	2500Vrms for 1min as per UL1577		
Communications protocol	Simple ASCII as standard, specific ASCII & ModbusRTU on request		
Case	DIN rail 22.5 x 82 x 90mm. Green flame retardant PA 66 UL 94-V0		

Registered office;  
Synectic Design Ltd  
48 Brindley Close  
Farnworth  
Bolton  
BL4 0AG

Trading Address;  
Synectic Electronics  
Jackson Street Entrance, 138 Albert Rd  
Farnworth  
Bolton  
BL4 9EL