Application Note

Title: Frequency measurement with an APM-FREQ meter
Date: 23rd July 2019
Revision: 2nd

1. Introduction:

The APM-FREQ meter can measure Frequencies between 2Hz and 400Hz.

The APM-FREQ meter can detects frequency in two ways:

1) Zero Crossing Points
2) Upper and lower Threshold levels

The following sections discuss each configuration in more detail.

2. Setup

Using the free APM configurator software the APM-FREQ can be set to measure the period between zero crossing points as in the case of an AC waveform.

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Or to measure the period between an upper and lower offset threshold as in the case of a DC waveform.

The Threshold upper and lower voltages can be set in the software.
The Frequency of the applied waveform is calculated as

\[
\text{Frequency} = \frac{1}{\text{Period}}
\]

This calculation is carried out over a 30mS sample period and an average is calculated. Therefore any noise or runt pulses will lead to inaccurate display.

The input impedance of the APM-FREQ is approximately 1.5M\(\Omega\)

3. **Wiring**

![Wiring Diagram]

- 0.5A Fuse
- 12 to 24V AC or DC PSU
- 12-24V AC/DC PSU
- Input | NC | NC
- Measured Frequency

**NOTE:** For backlight and messages, Output 2 has priority over Output 1.