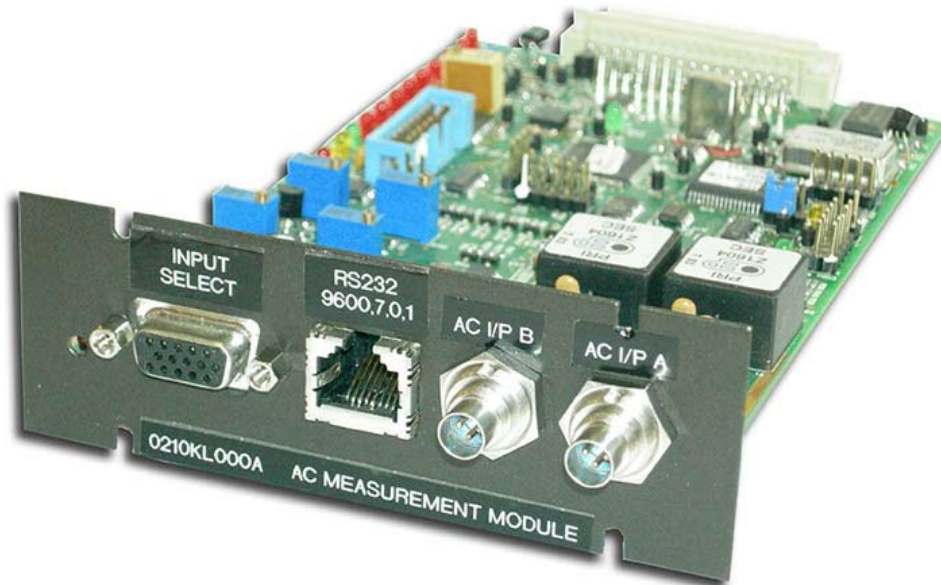


AC Measurement Module

For use with our M210 and M211 Modular Timing Systems. The AC Measurement Module continuously computes the line frequency to a high degree of accuracy.



Features

- AC Line monitor
- Also computes:
 - Rate of Change (ROC) of line frequency
 - Line Frequency Time
 - Time Deviation (Time receiver module required)
- Can be used in dual redundant configurations

Key Benefits

This module is designed for location within a Timing System chassis, allowing it to become an AC line monitor.

Using this module, other AC line parameters such as Rate of Change (ROC) of line frequency and Line Frequency Time are also computed.

By including a Time Receiver Module with the equipment, Time Deviation can also be computed by the module from the Line Frequency Time.

Suitable modules are readily available from within TFS' product options and include the GPS Receiver Module and the LF Receiver Module.

Time Deviation is then directly calculated from the difference between the Real Time and the Line Frequency Time.

All AC Line information can be communicated to the external systems via either the interfaces provided on the module itself or using other interface module(s) that are fitted within the Timing System chassis.

AC Measurement Module Specifications

General

- The module synchronises to UTC and Local Time transmitted to it by the host M210 / M211 in which it operates.
- Time and frequency accuracy and holdover accuracy are the same as host timing system (M210 or M211) performance.
- Due to the flexibility of the configuration, this module can be used in dual redundant configurations.

Inputs

- The module has 2 inputs selectable by software command (for example from a network management system).
- The inputs do not connect directly to the line supply, but are connected via external isolating transformers.
- The nominal input level to the module is 4vpp to 10vpp with a nominal system frequency of 50Hz or 60Hz, again user programmable.

Frequency Measurement

Frequency measurements are made at the rate of 10 per second allowing for a frequency deviation of $\pm 9.999\text{Hz}$ with an accuracy of $\pm 0.001\text{Hz}$ averaged over 0.1 to 1.0s intervals

Environment

(Operation & Storage)

Temperature : 0°C to $+40^{\circ}\text{C}$.

Humidity: Up to 95% RH (non condensing)

EMC: CE compliant

Ordering Information

Please quote part number when ordering: 0210KL000X

Time Measurement

Deviation $\pm 99.999\text{s}$ with an accuracy of $\pm 1\text{ms}$ is possible.

System Time Preset

- System Time Deviation is synchronised to UTC by user command, with an offset specified by the user in the range $\pm 9.999\text{s}$.
- The system time preset accuracy is $\pm 1\text{ms}$.

Outputs

- The module provides a number of outputs via the RJ45 & multipole sockets.
- These include system time output, frequency deviation output & time deviation output with the last two parameters represented by proportional DC voltages.
- There is also a user serial output port that provides a fixed format serial message containing time deviation, frequency deviation and status information.
- There is also an output alarm for any on-board fault detected or lack of module synchronisation or loss of selected AC source.

As we are always seeking to improve our products, the information in this document only provides general indications of product capability, suitability and performance, none of which shall form any part of any contract.