

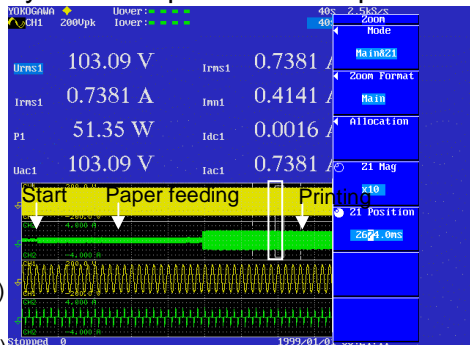
## Short-term Integration of Load-changeable Units

### [Application]

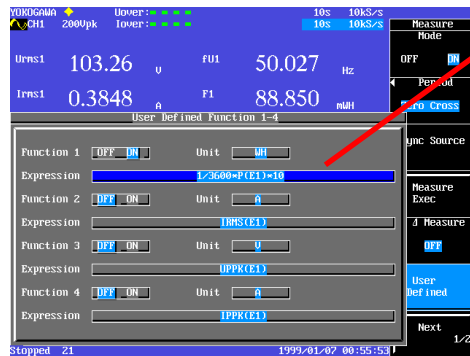
Calculating the power consumption of multi-function office machines is a complex process. The power consumption fluctuates dramatically depending on the function that is active: telephone, facsimile, printing, copying, or standby.

This process is simplified by using the PZ4000 Power Analyzer. During normal operations, as the functions are cycled, the waveform data is captured and it is easy to calculate the average power consumption during periods defined by user-set cursors. Even higher precision can be achieved by using the optional MATH functions (TINTG) and the user-defined definition which enables integration to the second for very accurate power consumption determination.

Commercial input voltage  
Commercial input current  
ZOOM  
(commercial input voltage)  
ZOOM  
(Commercial input current)



Commercial input voltage  
Commercial input current  
Trend of power  
(MATH function)  
Integrating power  
(MATH function)



Integration of electric power using the user-defined function (averaging electric power x measured period)



Calculation of electric power and its display using the optional MATH function (TINTG) and cursor function

### [Solution Features]

#### #Performance required from the power meter

- Calculate electric power during a specific period of acquired waveform data
- Short-term integration (timed to the second) of a single operation or combination of individual operations.

#### #Benefits for the user

- The acquired data is reliable because the measurements are synchronized to waveform data that clearly defines the operating conditions of the sampled period.
- Calculations (power parameters, etc.) are directly synchronized with waveform data.
- Short-term integration is available with load-changeable units (Calculation of energy using the user-defined function or standard included the MATH function (TINTG). Integrating time is uniquely defined by memory capacity and the selected sampling rate).