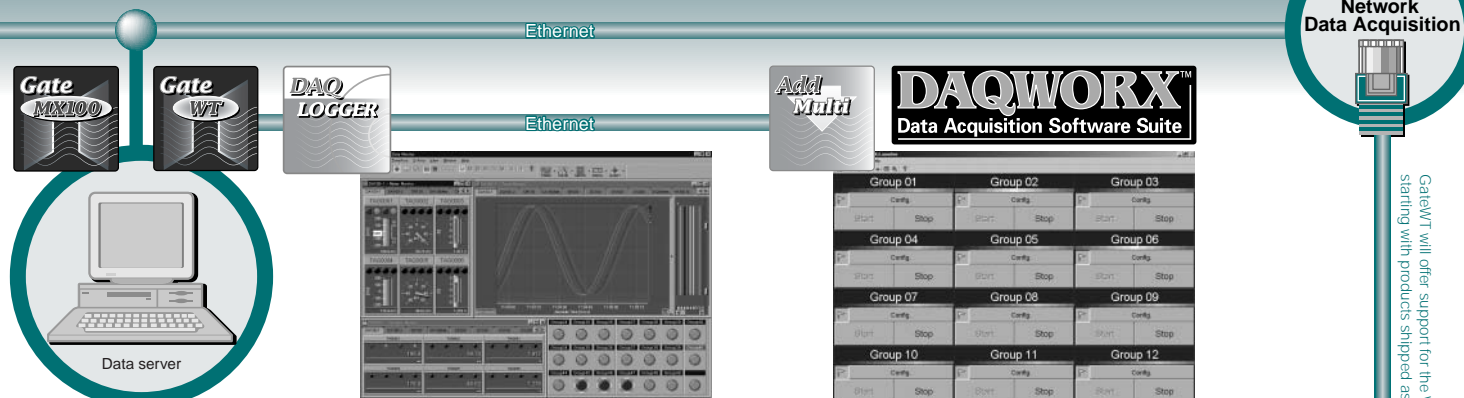


# Measurement Systems for Energy-Saving Designs Networked Measurement — Simple Network Connection —

LF 04L00L00-81E

Engineers around the world are talking about energy-savings and ISO14001. Among developers of electronic instruments and industrial equipment, the ability to put together measurement systems that provide high precision power measurement, temperature measurement, and high voltage measurement that is resistant to noise is an important factor in their continued success. To assist developers who are involved in evaluation and test with these requirements, Yokogawa offers measurement systems for energy saving designs that can be quickly and easily set up on a network.

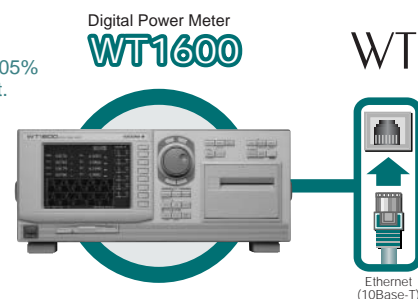


- **DAQLOGGER:** Merges measured data from the WT1600 Digital Power Meter and the MX100 Data Logger via Ethernet.
- **AddMulti:** Data acquisition and saving on a group-by-group basis. Connects to DAQLOGGER as an add-on.
- **GateWT:** A software interface for connecting WT series Digital Power Meter with DAQLOGGER data acquisition software.
- **GateMX100:** A software interface for connecting the MX100 Data Acquisition Unit with DAQLOGGER.

## Acquisition of Data Such as Power Consumption and Efficiency of Electronic Instruments and Industrial Equipment

The WT1600 offers high precision power measurement with basic accuracy of  $\pm(0.1\% \text{ of reading} + 0.05\% \text{ of range})$ , measurement bandwidth of DC and 0.5 Hz-1 MHz, and up to six channels of measurement.

- **LCD:** You can see measured voltage, current and power values not only numerically but also as trends, showing the moment-by-moment changes. In addition, the WT1600 can display voltage and current waveforms.
- **Energy Savings:** The WT measures in the 1.5 V to 1000 V (max) voltage range, offering broad support for measurement applications related to fuel cells and other energy saving devices that are expected to be made practical in the near future. The WT can also be configured for current ranges of 10 A-5 A or 1 A-50 A for measurement of standby power, and large capacity motors.
- **Network:** With DAQLOGGER (connected to GateWT), a PC can be used via network to perform acquisition of voltage, current, active power, reactive power, apparent power, and phase angle.

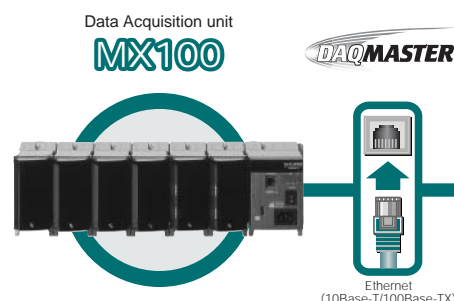


## Multi-channel Measurement with High Speed, High Voltage, High Reliability, and Advanced Network Functions

The MX100 is a modular data acquisition unit that offers high speed, multichannel measurement of high voltages.

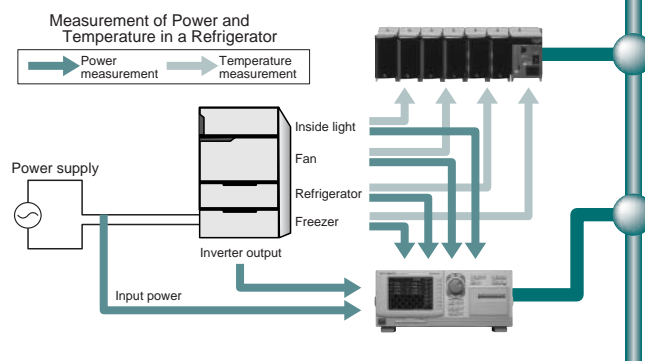
From the laboratory to the field, the MX100 lets you build the optimal measuring system for any environment.

- **High Speed, Multi-channel System:** 10 msec/4-ch module, 100 msec/10-ch module, up to 1200 ch 3700 Vrms (1 min.), 600 Vrms/VDC (continuous)
- **High Common Mode Voltage:** Data acquisition at arbitrary intervals on individual measurement groups (up to three).
- **Multi-Interval:** (Ex.) Pressure signals: 10 ms / voltage signals: 100 ms / temperature signals: 1 sec, and so on.
- **Measured Data Protection Function:** When communications are interrupted, data is backed up internally on the main unit.



## An Energy Saving Measurement System Using the WT1600 (Power Measurement) and the MX100 (Temperature and Voltage Measurement)

- **Application Needs**  
Growing concerns about saving energy has resulted in the need for precise temperature and power consumption measurements in refrigerators, air conditioners, and other home appliance. Consequently, the industry is seeing frequent applications that require simultaneous measurement of changes in power and temperature, and evaluation of the relationship between the two.
- **Building Measurement Systems for Energy Saving Designs**  
In response to the demand for measurement systems capable of helping engineers create energy-saving designs, Yokogawa offers DAQLOGGER Data Acquisition Software for temperature and voltage measurement, and the WT series of instruments for power measurement. DAQLOGGER, the WT1600, and the MX100 can be linked through a network providing a wide variety of solutions including battery charge measurement, measurement of power consumption in air conditioners, refrigerators, and other home appliance, measurement of temperature changes and distribution across multiple points on a device, centralized control of data acquisition, and even efficient testing and evaluation for finding ways to improve the energy-saving characteristics of various instruments.



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