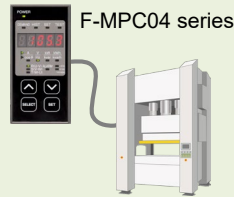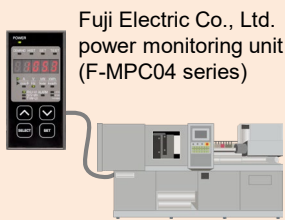## \<Application Example\>
Benefits of Connecting MONITOUCH and Power Monitoring Units
- Visualize Power Consumption and Operation Statuses -

Combining MONITOUCH with power monitoring units provides the following benefits.

- The values (power, voltage, current, power factor, etc.) measured by multiple power monitoring units can be monitored.
- The setting values of power monitoring units can be set or changed.
- The power consumption and operation status of equipment can be visualized simultaneously.

Before
The power consumption of each equipment can be grasped, but the method for improving equipment cannot be seen...
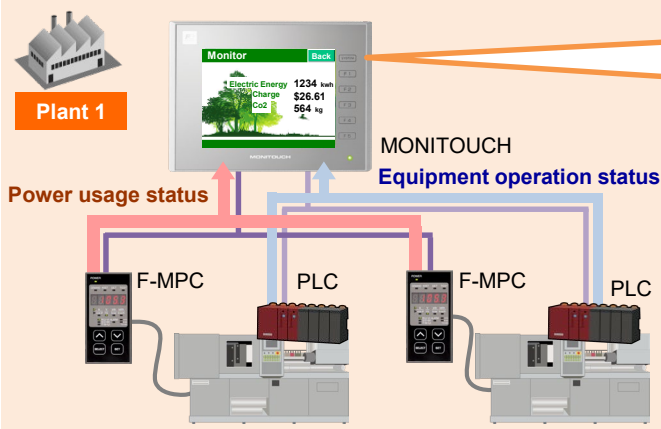
Plant 1 — Fuji Electric Co., Ltd. power monitoring unit (F-MPC04 series)

Plant 2 — F-MPC04 series

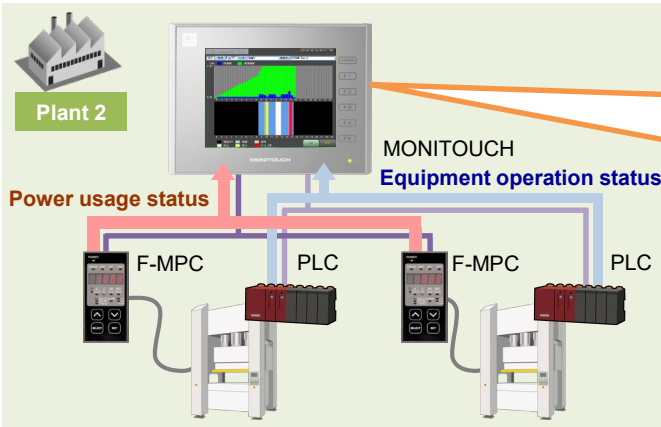*I wonder if we can improve the equipment based on the measured values...*

After
Connect PLCs and power monitoring units to MONITOUCH.
"Visualize" power consumption and operation status simultaneously! Problems with the equipment can be identified!

Plant 1

Monitor   Back

Electric Energy 1234 kwh
Charge $26.61
Co2 564 kg

MONITOUCH
Equipment operation status

Power usage status

F-MPC   PLC   F-MPC   PLC

Conversion of parameters is easy!
CO_2 emissions and usage charges can also be automatically converted from the power consumption!

Cumulative power display

Operation graph display

Separately display the power consumption and operation status, which change over time, on the top and bottom of the screen.
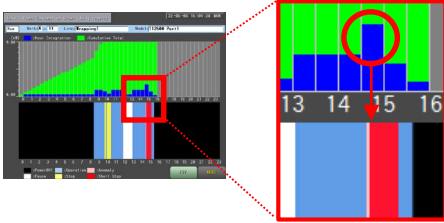
The graph changes according to the operation status.

Power off	Inactive	Running	Stop	Error	Stoppage

Plant 2

MONITOUCH
Equipment operation status

Power usage status

F-MPC   PLC   F-MPC   PLC

Monitor both power and operation using one MONITOUCH!
The operation status can be known at a glance!

What is "visualization"?

1. Check the operation status of when the power consumption is large.

Power and operation monitor

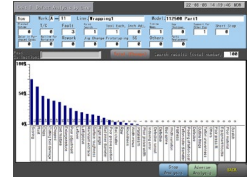The power consumption and operation status by time can be known at a glance.

* The shown screenshots are for illustrative purposes and do not indicate actual screens.

2. If the equipment is in error or stopped, the details can be checked from alarm history records, etc.

Alarm history

Check the alarm history to see the details.

Failure/stop analysis

Check the frequency of the occurrence of alarms from failure/stop analysis.

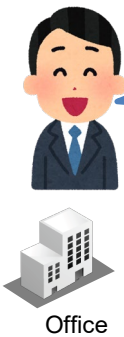> I can see how much power is being consumed for each kind of error and stop!
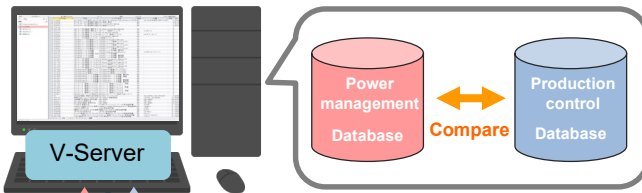
In addition!

By using in conjunction with the MES function, operation status and power usage status data can be stored in the database of a host PC.

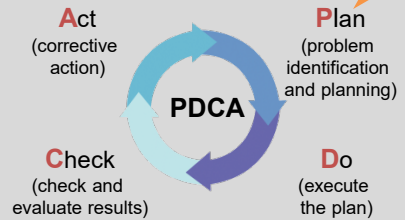Since data can be checked in parallel, analysis for improving equipment can be done easily.

* The separate "V-Server" remote monitoring software and databases are required on the PC.

> Analysis of when, where, and under what conditions power usage increases is possible!

Office

V-Server

Power management Database **Compare** Production control Database

Promote energy saving activities according to the PDCA cycle!

Visualization supports this step

Act (corrective action)

Plan (problem identification and planning)

PDCA

Check (check and evaluate results)

Do (execute the plan)

Power usage status

Ethernet

Equipment operation status

Plant 1

Monitor Back
Electric Energy 1234 kwh
Charge $26.61
Co2 564 kg

MES function

MONITOUCH Ethernet/RS-485

RS-485

F-MPC   PLC   F-MPC   PLC

Plant 2

MES function

MONITOUCH Ethernet/RS-485

RS-485

F-MPC   PLC   F-MPC   PLC