Application Note

Save Energy by Eliminating Waste from Lighting

Use the CLAMP-ON POWER LOGGER to capture fluctuations in lighting power and reduce waste from lighting to save energy.

Target

Electrical equipment maintenance

Highlights

Measuring power consumption trends enables you to capture the wasted energy from lighting. Energy-saving effectiveness can then be verified from power trend data collected after taking energy-saving measures.



Energy-Saving Measurement Flow

Investigate the Present State

Measure the power consumption of present lighting equipment as it relates to the work schedule at daily, weekly and monthly intervals.

Determine the relationship between lighting power consumption and work schedule.

Select Features of Lighting Equipment and Operation

Determine which lights can be switched on/off individually. The lighting equipment is arranged in an orderly layout. All lights are lit at about the same time at the start of work. Almost all lights are lit during work hours.

After work hours, departments working overtime are lit separately.

Ascertain Problems

Lights are lit during breaks.

Lights are lit in areas where no work is being done. Departmental responsibility for turning off lights is undetermined.

Lighting layout is unsuitable for the work areas.

Measure and Ascertain Effectiveness

All lights are turned off during lunch breaks.

Only turn on lights for departments needing them. Lights not required all the time are only turned on when needed.

Illuminometer measurements were taken to determine which lights could be turned off.

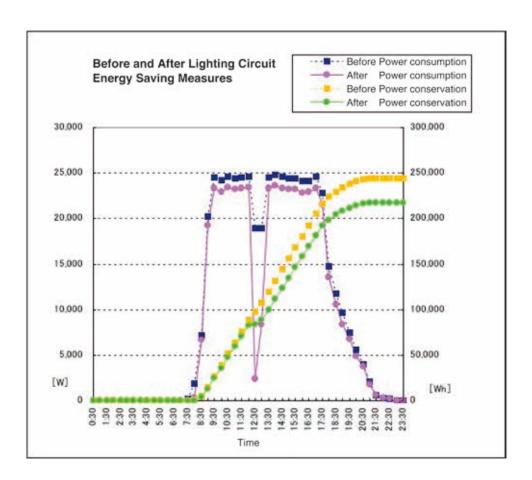


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Measurement data

After measurement and remedial measures, peak power was reduced by about 1 kW, and we can observe that power during lunch break dropped significantly.

The effectiveness of power conservation efforts is evident.



Equipment used

CLAMP ON POWER LOGGER	PW3360-20	HIOKI
CLAMP ON POWER LOGGER	PW3365-20	HIOKI

The photo shows three optional 9661 clamp current sensors in a row. The graph shows the acquired data displayed in a PC spreadsheet program.



CLAMP-ON POWER LOGGER PW3360-20



CLAMP-ON POWER LOGGER PW3365-20

