

Product note

Measure, monitor and save energy with pumps and fans using ABB drives



Low voltage AC drives save energy compared to other flow control methods such as throttling.

ABB industrial drives and ABB standard drives now have built-in energy efficiency parameters that work out energy savings of the application in kWh and MWh; the cost of the energy saved in a local currency; and the carbon dioxide (CO₂) emissions equivalent of the energy saved.

All these energy related measurements are displayed through the control panel's alphanumeric display and can be accessed by pressing a combination of the soft keys.

Determining the energy measurements

A baseline for energy savings is determined from the energy consumed when the fan or pump is used directly on line. Once the drive is installed, it then calculates energy savings in kWh or MWh with reference to this baseline.

From the moment the drive is commissioned it starts to measure the energy saved. This can be viewed through the display to show the accumulated energy savings.

Saved money is displayed in local currency after the user has set the local energy cost as a reference.

For the carbon dioxide emissions reduction, a CO₂ conversion factor (tn/MWh) is used to convert energy into CO₂ emissions.

Benefits of energy measurements

Measuring the energy saved; the monetary value; and the CO₂ emissions can help ensure that a plant or process is working to its optimum performance. It avoids the extra cost of external energy measuring equipment.

The information is of value to plant engineers and energy managers to ensure that the application is attaining its optimum level. The results can also benefit financial controllers and board level directors interested in keeping a closer control on the operational expenditure of a plant or process.

Other energy related tools

In addition to the in-built energy efficiency parameters, users of ABB drives can also benefit from energy efficiency support through energy saving calculators – on-line tools that help select the correct drive for a pump or fan application; and an energy appraisal – a simple study of end-user applications by an ABB engineer can rapidly determine the areas which could benefit from the use of a low voltage AC drive.

Energy saving principles

A low voltage AC drive, such as the ABB industrial drive or ABB standard drive, saves energy by controlling the speed of an electric motor, ensuring it runs no faster than the load demands. This is in contrast to mechanical flow control methods, such as throttling, whereby the electric motor runs continuously at full speed while the flow is throttled, thereby wasting surplus energy through friction.

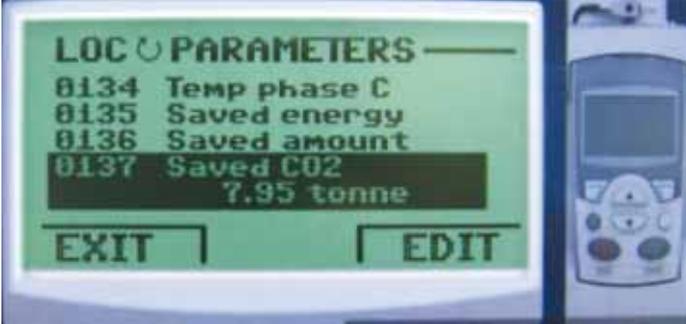


ABB drive displays saved energy, the amount of saved money in local currency and the CO₂ emissions equivalent of the energy saved.

Benefits

- Easy to determine return on investment
- Verification of theoretical energy savings
- Optimizing the energy consumption

For more information please contact:

www.abb.com/drives

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