

REDUCE DATA CENTER POWER CONSUMPTION



- **Optimized Motor Control**
- **Reliable Operation**
- **Maximum Motor Efficiency**

FR-800 Series Inverters

The pumps and fans in critical IT cooling systems can consume a considerable amount of power. Using the FR-800 Series Inverter to operate pumps and fans can eliminate wasteful power consumption.

The inverter automatically streamlines motor control without the need for detailed parameter settings. A built-in auto-tuning function measures the circuit constant of the motor, ensuring stable motor drive even if wiring length is long or differences exist between individual motors.

Using an energy-saving inverter to run pumps and fans can also help you detect abnormalities such as clogged filters or broken belts. This extends equipment life and makes maintenance easier. Design life diagnosis checks ensure reliable operation. These regular checks can extend the design life of cooling fans and capacitors to 10 years depending on the surrounding air temperature.

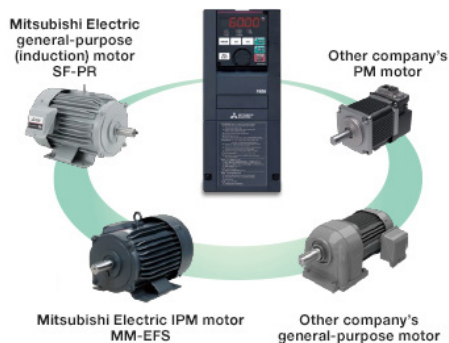
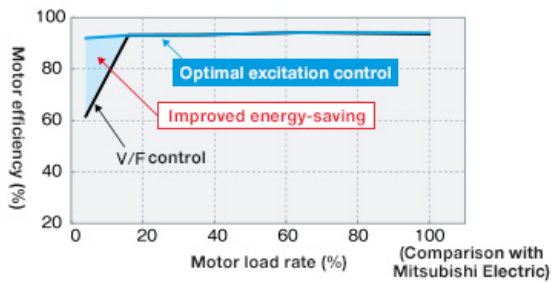
KEY BENEFITS

- **Optimized motor control** – All inverter-controlled motors are automatically adjusted to run optimally for the application and load characteristics.
- **Maximum motor efficiency** – The use of an optimal excitation control mode reduces wasteful motor loss, minimizes power consumption, and achieves cost-effective operation.
- **Rapid machine failure detection** – Users can compare the current load condition to stored failure characteristics and output fault warnings for rapid response when problems occur.
- **Reliable operation** – Enhanced design life diagnosis checks ensure reliable operation of the system and can extend the design life of cooling fans and capacitors.
- **Support for all types of motors** – The inverter can control induction motors (IM), permanent magnet (PM) motors, and interior permanent magnet (iPM) motors from virtually any manufacturer.

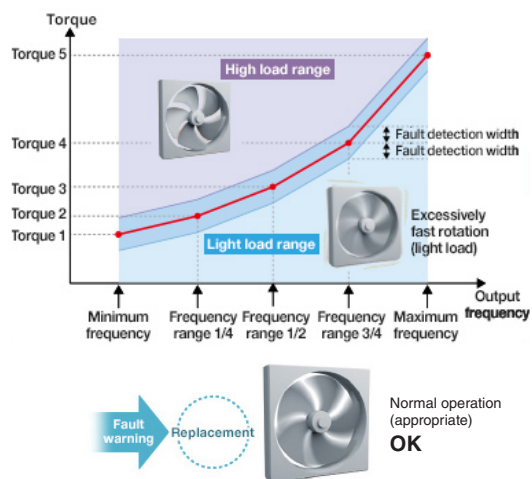
How It Works

The inverter controls motor speed using V/F characteristics suited to the load and the application. Auto-tuning and an optimal excitation control mode enables maximum motor efficiency, which reduces wasteful power consumption, protects the motor, and lowers cost.

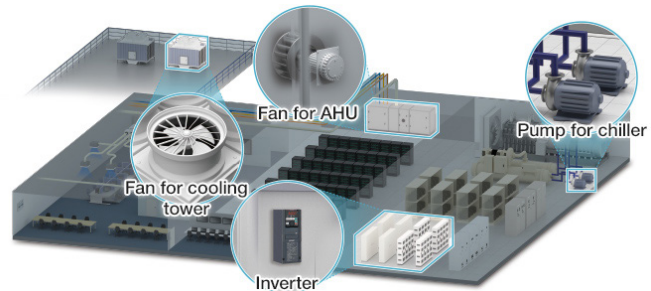
Inverter Operates Pumps/Fans to Maximize Motor Efficiency



Inverter Detects Machine Failure & Enables Rapid Response



Data Center Power and Cooling Infrastructure



More information

Check out our website:

https://www.mitsubishielectric.com/fa/sols/industry/datacenter/equipment/air_conditioning.html#sec_3

Specifications

FR-800 DATA CENTER

Voltage	200 to 600 VAC
Max Frequency	590 Hz
Power Range	1-1000 HP
Supported Networks	MODBUS(R)RTU, Modbus TCP, BACnet(R) MS/TP, BACnet/IP, LONWORKS(R), CC-Link, CC-Link IE Field, CC-Link IE Field Basic, CC-Link IE TSN, DeviceNet, PROFIBUS-DP, EtherCAT, EtherNet/IP, PROFINET
Functions	Advanced Optimum Excitation Control, Standby Power Reduction, Stall Prevention, Regeneration Avoidance, Auto Restart after Instantaneous Power Failure, Electronic Bypass Sequence, Auto Tuning, Multiple PID Loops, Multi-Pump Function, PID Input Pressure Control, PID Pre-Charge, Mechanical Fault Detection, Onboard PLC, Pump or Fan Cleaning Function, Flying Restart, Safe Torque Off, 10 Year Design Life, GOT Drive

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