Woodward Woodward Series Service Manual

5464-545

1. Description

Operating Parameters

3. Product Information

Operating Parameters

Input Voltage: The Woodward 5464-545 has an input voltage range between 85V and 265V AC. This flexibility allows it to be installed at other sites regardless of local grid conditions. No complex and expensive voltage regulators are required - it can withstand low and high voltages.

Transmission Frequency: Operating in the 45Hz to 65Hz frequency range, its tolerance is suitable for general industrial frequency variations. This is important because it allows the device to operate without frequency issues that would affect connected equipment.

Power Output Capability: This power unit is capable of producing up to 15kW of peak power output, enough to power a wide range of heavy industrial machinery; from high-speed manufacturing motors to pumps in water management systems and industrial gas applications, it provides the power needed for reliable operation.

Control Accuracy: The Woodward 5464-545 is equipped with 14-bit resolution for ultra-precise control of parameters. This level of precision allows operators to fine-tune variables within microchip processors, just as variables such as torque, speed, and voltage need to be precisely adjusted in precision manufacturing processes and scientific research equipment, where such precision is critical.

Operating Temperature: -15°C to +70°C; it works well in any weather, from the cool of a refrigerated warehouse to the heat of an industrial plant.

Product Features

Motor Control Optimization: Uses advanced concepts such as field-oriented control and predictive torque control to ensure optimal performance. It continuously studies and modifies the magnetic field and torque produced by the motor, so this approach not only improves work efficiency but also reduces energy consumption, thereby significantly reducing costs in the long run.

Equipped with ports: RS-485, 1 x Ethernet 10/100 Mbps, 1 x USB 2.0 AB type port, as industrial communication networks are increasingly integrated, it can seamlessly connect to them to provide unparalleled performance. This allows operators to remotely control equipment, receive real-time status updates, and conduct remote diagnostic work. It simplifies the flow of data so decisions can be made quickly.

Protection and Diagnostics: Whether it is integrated overvoltage and overcurrent protection or diagnostic motor runtime framework, built-in protection provides a safety net. The diagnostic capabilities of Woodward 5464-545 are so sharp that they can detect early signs of failure. By enabling timely maintenance notifications, it minimizes costly downtime and keeps operations seamless.

End-User: Due to its highly programmable nature, end users can customize the device to meet their specific needs. Whether it is by customizing the control algorithm, specifying the communication protocol, or adjusting the power output curve, users can adjust it to precisely meet the needs of their operations.

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Applications

Factory and Manufacturing Automation: Woodward 5464-545 dominates in factories and manufacturing plants. They coordinate the precise movements of robotic arms used in assembly, control the movement of materials on conveyor systems, and maintain the operation of automated machinery. It improves productivity and product quality by providing precise control and stable power.

Power Sector: Woodward 5464-545 is used to control critical electrical equipment such as transformers and capacitor banks in substations. It is used to control voltage, reactive power, and other parameters, thereby helping to stabilize the power grid. In an era when stable power supply is increasingly important, these contributions are invaluable.

Renewable Energy Systems: In solar and wind farms, it manages inverters and grid-connected controllers. It optimizes the delivery of clean energy to the grid by maximizing power conversion and synchronization. It is key to moving toward a sustainable energy future.