

Application Case

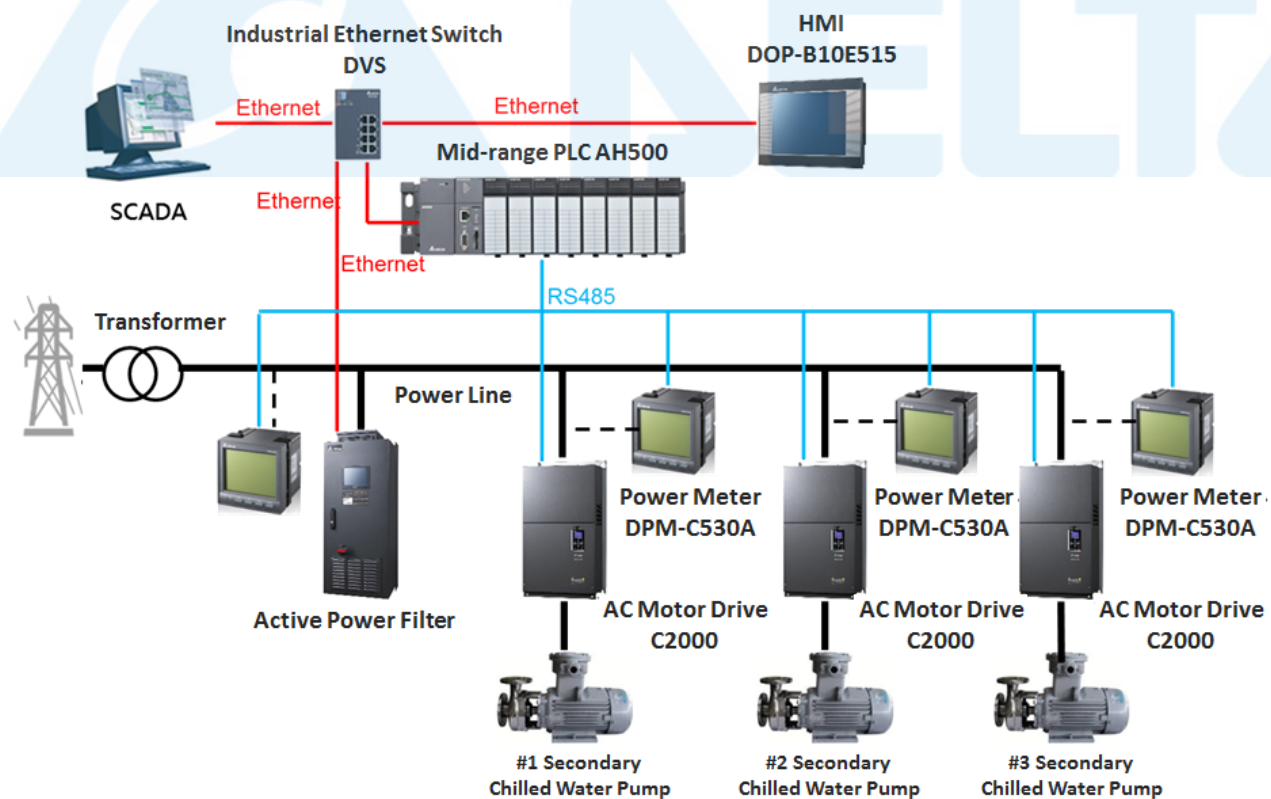
Case	Delta Industrial Automation Products for Central Air Conditioning Systems				
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Applicable to	AC Motor Drive C2000 Series, Human Machine Interface DOP-B Series, Power Meter DPM Series, Mid-range PLC AH500 Series, Industrial Ethernet Switches DVS Series				
Key words	HVAC, Central Air Conditioning System, Secondary Water Pump System, AC Motor Drive, HMI, PLC, Power Meter, Ethernet Switches				

Delta Industrial Automation provides a complete solution for central air conditioning systems. Products applied to the systems include the Human Machine Interface DOP-B Series, Power Meter DPM Series, Mid-range PLC AH500 Series and Industrial Ethernet Switches DVS Series. A customer adopted the Delta AC Motor Drive C2000 Series to replace the traditional constant speed drives in their central air conditioning system and achieved better energy-saving results.

[Application Introduction]

Central air conditioning systems are widely used in different kinds of commercial and office buildings. To meet the dynamic requirements of end uses and maintain a stable and efficient air conditioning system, it is common to adopt a primary-secondary chilled water pumping system to adjust the chilled water flow. Between the primary and secondary piping loops, there is common piping to balance the two systems' flow.

[System Structure with Delta Solutions]



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Application Case

Industrial Automation BG, Delta Electronics, Inc.

[Delta Products Functions and Features]

- **AC Motor Drive C2000 Series:** A customer had three secondary chilled water pumps in their system. To achieve higher energy efficiency, the customer replaced the transitional constant speed drives with three 380V 110kW Delta AC Motor Drive C2000 Series to achieve variable frequency control.
- **Power Meter DPM Series** offers real-time power consumption monitoring and data collection. The power meters also monitor the energy-saving results of the new secondary pump system with Delta's C2000 Series.
- **High Performance Mid-range PLC AH500 Series** performs as the HVAC system controller. It receives data, executes logistic calculation and delivers commands to the motor drives. Delta's AH500 Series utilizes 32-bit dual-core multitasking processor and supports up to 4,352 local I/O extensions and more than 100,000 remote I/O extensions. It also provides a hot-swapping function for enhanced maintainability. The AH500 Series is widely applied in HVAC systems.
- **Human Machine Interface DOP-B Series** displays real-time system status such as temperatures and energy consumption. The DOP-B Series equips a 10.4" high color high resolution panel, supports SDHC cards and provides direct connection to USB disk, printer, mouse, and keypad. It provides a use-friendly interface for daily operations.
- **Industrial Ethernet Switches DVS Series** provides fast communication and data exchange via Ethernet.

[Conclusion]

A central air conditioning system that adopts Delta's integrated solutions can successfully achieve system stability and high efficiency. Delta's solutions also provide higher energy-saving results, extend facility lifetime and deliver operation cost savings.

For more information on Delta industrial automation products, please visit our website at: www.deltaww.com/ia

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