

## APPLICATION STUDY: THE DTB100USD ADVANCES SYSTEMS INTEGRATION WITH CUTTING-EDGE TIMING CONTROL



### BACKGROUND:

In the critical field of HVAC (Heating, Ventilation, and Air Conditioning) systems, precise timing control is essential for ensuring operational efficiency, reliability, and comfort. From managing heating and cooling cycles to controlling ventilation and air quality, HVAC systems require advanced solutions to meet the diverse demands of modern buildings. The DTB100USD Multifunction Time Relay, with its versatile features and robust design, offers a comprehensive solution for optimizing HVAC systems and improving performance. Recognizing the vital importance of precise timing in HVAC systems, the challenge is to enhance efficiency, ensure reliability, and provide flexibility in managing complex processes. Traditional timing solutions often fall short in terms of adaptability and ease of use, prompting the need for a more versatile and user-friendly alternative.

### THE CHALLENGE:

HVAC systems face unique challenges, such as integrating various subsystems into a cohesive whole, managing diverse time requirements, and ensuring seamless operation across different subsystems for short cycle protection, cooling, and load alternation. The DTB100USD Multifunction Time Relay addresses these challenges by offering multiple functions, a wide voltage range, multiple high amperage relay contacts, and intuitive control inputs. Its advanced features minimize downtime, enhance safety, and provide precise control, making it an ideal choice for HVAC systems.

### THE SOLUTION:

The **DTB100USD Multifunction Time Relay** emerges as a versatile and robust solution for systems integrators. Its key features include:

- **Inhibit Delay:** An intuitive control input that can pause timing delays, providing flexibility and preventing process disruptions.
- **Multiple Functions:** Supports 10 different timing functions, providing flexibility to meet diverse application needs.
- **Precise Timing Ranges:** Offers timing ranges from 50ms to 30 days for both short-term and long-term control needs.
- **Versatile Output Relay Configurations:** Auxiliary DPDT Relay can be set to Timed or Instantaneous. Main and Auxiliary relays can also be set to On or Off for troubleshooting purposes.
- **Compact Design:** Saves space in control panels, facilitating easier maintenance and upgrades.
- **LED Indicators:** Provides immediate visual feedback for operational status, simplifying troubleshooting.

### THE FUTURE:

Looking ahead, the DTB100USD Multifunction Time Relay will continue to play a crucial role in HVAC systems, providing reliable and versatile timing solutions across various applications. Its adaptability, ease of use, and robust performance make it a valuable component for enhancing operational efficiency and ensuring seamless integration of HVAC systems in modern buildings.



Division of the Marsh Bellofram  
Group of Companies  
8019 Ohio River Blvd.  
Newell, WV 26050 USA  
Phone: 800-727-5646  
Fax: 304-387-1212  
[www.atcdiversified.com](http://www.atcdiversified.com)