HR Series
Achieving greater levels of performance



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03 HR Series scalable controllers BR300, BRC400, and BRC410



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04 Modular Power System IV

Powerful, scalable control platform
HR Series controllers are the latest in a long line of field-proven multi-function rack process controllers, and include the BRC300, BRC400, and the BRC410 bridge controllers (figure 3). This scalable family of controllers, based on a 160 MHz, 32-bit Freescale Coldfire processor, can be adapted to a broad spectrum of applications and process requirements. HR Series controllers feature an extensive library of more than 150 predefined control algorithms or function codes. These functions provide the power to easily design complex control strategies to fit any control application, including continuous, sequential, batch and advanced control. In addition to standard function blocks, HR Series controllers support C programming and batch functions.

HR Series controller features include:
- Enhanced controller reliability
- More than 10x performance of previous generation controllers
- Simultaneous support for all HR Series I/O, SD Series I/O and S800 I/O subsystems
- Intelligent device integration via HART I/O and PROFIBUS DP V0, V1, V2
- Downloadable firmware
- BRC400 / BRC410 specific enhancements:
  - Extended user configuration memory (2 MB NVRAM)
  - Support for 30,000 function blocks
  - Flexible online configuration capability
  - Modbus TCP device integration via 100 MB Ethernet port (BRC410 only)

High reliability and availability
With redundant controller, communication, I/O and power options such as the recently released MPS IV (Modular Power System), HR Series controller subsystems provide the highest level of availability. Compliance with international standards assures the highest level of reliability and quality needed to meet the most rigorous global specifications and requirements. Backward compatibility through ABB's 'Evolution without obsolescence' life cycle program ensures protection of installed investments while providing the most cost-effective and seamless way of introducing new functions and technology into a running plant. Together, the HR Series provides users with fast, accurate, uninterrupted control of their process, resulting in greater production efficiency, increased availability, and lower maintenance costs.

Soft controller reduces commissioning times
For new plant, upgrade, or expansion projects, HR Series HTS-based soft controllers can dramatically reduce commissioning and start-up time and costs by permitting thorough testing and pre-tuning of control loops prior to its implementation in the field. The HR Series soft controller uses the same control logic (ie, function block configuration) as the physical HR Series controllers. Coupled with virtual communication devices, the entire HR Series control-based system can be implemented within one or more PCs which allow for testing results made in the virtual environment to be directly transferable to the operating system environment.