APTER POWER
INDUSTRIAL AUTOMATION

MANUFACTURER-SOURCE TECHNICAL REFERENCE

# ABB SPBRC400 (BRC400)

## Product Reference

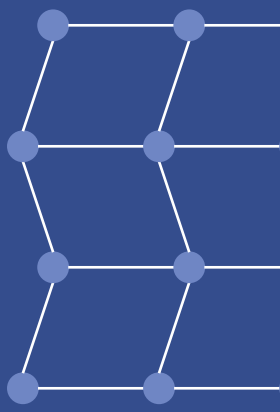

ABB SPBRC400 (BRC400) High-Capacity Harmony Rack Bridge Controller

**DOCUMENT SCOPE**

Independent Apter Power manual compiled only from the cited ABB manufacturer sources. No product photograph is included.

| | |
|---|---|
| **Product / lookup identity** | ABB SPBRC400 (BRC400) |
| **Reference number** | SPBRC400 |
| **Document basis** | Published ABB product records, PDFs, and manuals listed on page 3 |

**Product page**

https://www.apterpower.com/ABB/spbrc400-brc400

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## Product role and published parameters

**WHAT IT IS, WHAT IT DOES, AND WHERE IT FITS**

ABB SPBRC400, also identified by ABB as BRC400, is a high-capacity Harmony Rack bridge controller. BRC400 uses the BRC family's 160 MHz 32-bit Freescale ColdFire architecture and supports more than 150 predefined control algorithms. System context: ABB SPBRC400 (BRC400) High-Capacity Harmony Rack Bridge Controller.

| Published field | Manufacturer-published value or verified identity note |
|---|---|
| **Existing legacy-variant gate** | Indexed identity: P-HC-BRC-40000000 gray legacy variant. Preserve the existing record, ID, slug, canonical, revision, and lifecycle history; create or map the SPBRC400/BRC400 canonical only after authenticated review. |
| **Processor family** | 160 MHz, 32-bit Freescale ColdFire |
| **NVRAM** | 2 MB |
| **Control capacity** | Up to 30,000 function blocks |
| **Online configuration** | Flexible online configuration documented for BRC400/BRC410 |
| **Control types** | Continuous, sequential, batch, and advanced control |
| **I/O architecture** | Harmony Rack, SD Series, and S800 integration |

## System function and signal path

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|---|---|
| 01 | Inputs: Controller configuration, process I/O, and peer/system data through the installed ABB architecture. |
| 02 | Processing: Executes up to 30,000 function blocks for continuous, sequential, batch, and advanced control. |
| 03 | Outputs: Control commands to compatible I/O and shared controller data to peer/system nodes. |
| 04 | Communications: Harmony Rack controller buses and project-defined network/I/O interfaces, including documented PDP800 integration. |

## Applications, answers, and official sources

1. Large continuous-control strategies: Uses the documented high function-block capacity for process regulation and coordination.
2. Sequential and batch automation: Supports complex sequence, batch, and user-defined control applications.
3. Multi-family I/O integration: Coordinates Harmony Rack, SD Series, S800, and project-defined PROFIBUS I/O.
4. Legacy controller evolution: Supports engineered modernization of selected MFP/BRC installed-base applications.

## Frequently asked questions

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|---|---|
| **Are SPBRC400 and BRC400 separate products?** | No separate hardware identity is supported; ABB uses the two names for the same controller. |
| **How many canonical pages should be published for ABB SPBRC400 (BRC400)?** | One page containing both official names. |
| **What is BRC400?** | It is a high-capacity ABB Harmony Rack bridge controller. |
| **How much NVRAM is documented?** | 2 MB. |
| **What is the maximum documented control capacity?** | Up to 30,000 function blocks. |
| **Does it support online configuration?** | Yes. ABB documents flexible online configuration for BRC400/BRC410. |

## Official ABB sources

| | |
|---|---|
| **ABB Symphony Plus HR Series Control and I/O brochure** | https://library.e.abb.com/public/18f414cba5434d4591603ac425cbd7ea/2VAA005093_E_en_HR_Series_control_and_IO_Print.pdf |
| **ABB Harmony lifecycle and evolution presentation** | https://library.e.abb.com/public/68e694fd1f5743ba949fbae1859ee3ac/02%20ABB%20Users%20Group%20Anchorage%20Harmony.pdf |
| **ABB PDP800 PROFIBUS interface document** | https://library.e.abb.com/public/9b194c0972e64a55b482230d9cf61631/2VAA001982_F_en_Symphony%20Plus%20SD%20Series%20PROFIBUS%20Interface%20PDP800.pdf |
| **ABB Harmony Overview** | https://library.e.abb.com/public/02624f56a7220a5ec1257647007117ee/3BUS094398_L_H_en_System_800xA_5.0_Harmony_Overview_lores.pdf |