

HBR01-EPD

ABB Ability™ Symphony® Plus Hardware Selector



The HBR01-EPD mounting base is for the Redundant Analog I/O (RAI02, RAO02) and Digital I/O (RDI01, RDI02, RDO01) modules. The base is designed to accommodate field signals that are externally powered or are differential inputs

The base includes two (2) 16-point headers that provide connections to either (2) pluggable 16-point terminal blocks for direct connection of field signal wires or to SPK0x_yy marshaling cables when field signal wires are landed on 3rd party termination hardware.

Features and benefits

- Termination for up to sixteen (16) Analog or Digital I/O process signals within a horizontal row.
- All SD I/O modules & bases of all types (Singular or Redundant) AND (Compact or Full-size), are 100% fully compatible with each other. Thus, Singular & Redundant, Compact or Full-size I/O modules can be mounted within a single, common HN800 I/O bus.
- Optional mechanical keying can be implemented to prevent insertion of the wrong I/O module type.
- Latching device on the base locks the base into position on DIN-Rail.
- Industry standard 35-mm DIN rail, Horizontal row mounting.

General info

| | |
|-----------------------------|--------------------------------------|
| Article number | 2VAA008959R1 (HBR01-EPD) |
| Line redundancy | Redundant HN800 I/O Bus |
| Channels | 16 |
| Hot swap | No |
| Supported IO modules | RAI02, RAO02, RDI01, RDI02, RDO01 |
| Singular or redundant | Redundant |
| Form factor | Full-size (190 mm Tall x 90 mm Wide) |
| Mounting | Horizontal Row |
| HN800 bus length | 200 mm |
| MTBF (per MIL-HDBK-217-FN2) | 1,648,008 Hrs |
| MTTR (Hours) | 8 Hrs |

| Detailed data | |
|------------------------------------|--|
| Overvoltage category | Category 1 for power. Tested according to IEC/EN 61010-1 |
| Process signal connections | 16-CH AIO or DIO |
| Field power connection | Compact |
| Field power fusing | 5.0 A, entire base |
| Signal connection | 2x pluggable 16-pt Terminal Blocks |
| Max current | 250mA |
| Acceptable field signal wire sizes | #22 -14 AWG stranded or solid, #12 AWG stranded |
| Galvanic isolation test voltage | 1500 V for up to 1 minute |

| Environment and certification | |
|--|--|
| Temperature, Operating | -40 to +70 °C Tested according to IEC/EN 60068-2-1, IEC/EN 60068-2-2 |
| Temperature, Storage | -40 to +85 °C Tested according to MIL-STD-810G |
| Relative humidity | 20% to 95% @ 40°C non-condensing. Tested according to IEC/EN 60068-2-78, IEC/EN 61298-3 |
| Vibration (operational sinusoidal) | 5 to 60 Hz 0.137 mm (0.0054 in.), 60 to 150 Hz 1.0 G. Tested according to IEC/EN 60068-2-6 |
| Vibration (transportation) | 10 to 500 Hz. Tested according to MIL-STD-810G |
| Shock (storage) | 15 G, 11 msec. Tested according to IEC/EN 60068-2-27 |
| Drop | 100 mm. Tested according to IEC/EN 60068-2-31 |
| Protection class | IP20 according to EN 60529 |
| Altitude (operational) | Sea level to 3,048 meters (10,000 ft.) Tested according to MIL-STD-810G |
| Altitude (storage) | Sea level to 12,192 meters (40,000 ft.) Tested according to MIL-STD-810G |
| Air quality | ISA S71.04 G1, ISA S71.04 G3 compliant versions HBR01-EPDA are also available |
| ESD immunity | Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-2, Severity level 3 |
| Surge immunity | Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-5, Severity level 3 |
| Electrical fast transient immunity | Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-4, Severity level 3 |
| Radiated RFI immunity | Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-3, Severity level 3 |
| Conducted Immunity | Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-6, Severity level 3 |
| Magnetic field immunity | Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-8, Severity level 4 |
| Radiated emission | Tested according to IEC/EN 61000-6-4, CISPR 11 + A1, CISPR 16-1-1, Group 1, Class A, ISM equipment |
| Conducted emission | Tested according to IEC/EN 61000-6-4, CISPR 11 + A1, CISPR 16-1-1, Group 1, Class A, ISM equipment |
| Voltage dips and interruption immunity | Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-11 |
| CSA non-hazardous locations | Certified for use as process control equipment in an ordinary (non-hazardous) location |
| CSA hazardous, nonincendive locations | Class I, Division 2, Groups A, B, C, D |
| CE Mark | CE Mark EMC directive 2004/108/EC & Low Voltage Directive 2006/95/EC |
| RoHS compliance | RoHS Directive 2015/863 |
| WEEE compliance | DIRECTIVE/2012/19/EU |

| Dimensions | |
|-------------------|----------|
| Width | 90 mm |
| Depth | 86.5 mm |
| Height | 202.5 mm |
| Weight | 460 g |

solutions.abb.com/symphonyplus
solutions.abb.com/controlsystems

800xA and Symphony Plus is a registered trademark of ABB. All rights to other trademarks reside with their respective owners.

We reserve the right to make technical changes to the products or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not assume any responsibility for any errors or incomplete information in this document.

We reserve all rights to this document and the items and images it contains. The reproduction, disclosure to third parties or the use of the content of this document – including parts thereof – are prohibited without ABB's prior written permission.

Copyright© 2024 ABB All rights reserved