

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 accomodate 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/symphonyplus
solutions.abb/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© 2025 ABB All rights reserved