DATA SHEET

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

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