

# VBR01-FPN

## ABB Ability™ Symphony® Plus Hardware Selector



Product image  
not available

The VBR01-FPN mounting base is for the Redundant Digital I/O (RDI01, RDI02, RDO01) modules. The base is designed to accommodate field signals that are system powered and the (-) Neutral side of power is switched

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) 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              | 2VAA008433R1 (VBR01-FPN)              |
| Line redundancy             | Redundant HN800 I/O Bus               |
| Channels                    | 16                                    |
| Hot swap                    | No                                    |
| Supported IO modules        | RAI02, RDI01, RDI02, RDO01            |
| Singular or redundant       | Redundant                             |
| Form factor                 | Full-size (218 mm Tall x 103 mm Wide) |
| Mounting                    | Vertical Column                       |
| HN800 bus length            | 355 mm                                |
| MTBF (per MIL-HDBK-217-FN2) | 4,049,892 Hrs                         |
| MTTR (Hours)                | 8 Hrs                                 |

| <b>Detailed data</b>               |  |
|------------------------------------|--|
| Overvoltage category               | Category 1 for power. Tested according to IEC/EN 61010-1 |
| Process signal connections         | 16-CH 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                                |

| <b>Environment and certification</b>   |  |
|--|--|
| 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 VBR01-FPNA 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   |

| <b>Dimensions</b> |          |
|-------------------|----------|
| Width             | 103 mm   |
| Depth             | 110.1 mm |
| Height            | 218 mm   |
| Weight            | 590 g    |

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