

VBS01-FPN

ABB Ability™ Symphony® Plus Hardware Selector



The VBS01-FPN mounting base is for the Singular Digital I/O (DI01, DI02, DI03, DI04, DO01, DO02, DO05) 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

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|-----------------------------|--|
| Article number | VBS01-FPN |
| Line redundancy | Redundant HN800 I/O Bus |
| Channels | 16 |
| Hot swap | No |
| Supported IO modules | DI01, DI02, DI03, DI04, DO01, DO02, DO05, PI01 |
| Singular or redundant | Singular |
| Form factor | Full-size (218 mm Tall x 66 mm Wide) |
| Mounting | Vertical Column |
| HN800 bus length | 305 mm |
| MTBF (per MIL-HDBK-217-FN2) | 8,757,234 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 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 VBS01-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 |

| Dimensions | |
|------------|----------|
| Width | 66 mm |
| Depth | 110.7 mm |
| Height | 218 mm |
| Weight | 327 g |

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