

DATA SHEET

VBS01-EPD

ABB Ability™ Symphony® Plus Hardware Selector



The VBS01-EPD mounting base is for the Singular Analog I/O (Al01, Al02, Al05, AD11, AO01, AO02, AO05) and Digital I/O (Dl01, Dl02,Dl03, Dl04, DO01, DO02, Dl05) 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	VBS01-EPD	
Line redundancy	Redundant HN800 I/O Bus	
Channels	16	
Hot swap	No	
Supported IO modules	AI01, AI02, AI05, AI06, AO01, AO02, AO05, AD11, 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 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 VBS01-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	66 mm	
Depth	110.7 mm	
Height	218 mm	
Weight	327 g	



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