

DATA SHEET

## cVBS01-EPD

## ABB Ability™ Symphony® Plus Hardware Selector

The cVBS01-EPD mounting base is for Compact Analog I/O modules cAl01 and cAO01. The base is designed to accommodate field signals that are externally powered or are differential inputs

The base includes a single 16-point header that provides a connection to either a pluggable 16-point terminal block for direct connection of field signal wires or to an SPKOx\_-yy marshaling cable when field signal wires are landed on 3rd party termination hardware.

## Features and benefits

- Termination for up to eight (8) analog 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 the 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              | 2VAA008420R1                       |  |
| Line redundancy             | Redundant HN800 I/O Bus            |  |
| Channels                    | 8                                  |  |
| Hot swap                    | No                                 |  |
| Supported IO modules        | cAI01, cAO01                       |  |
| Singular or redundant       | Singular                           |  |
| Form factor                 | Compact (145 mm Tall x 66 mm Wide) |  |
| Mounting                    | Vertical Column                    |  |
| HN800 bus length            | 200 mm                             |  |
| MTBF (per MIL-HDBK-217-FN2) | PR A: 9,169,236 Hrs                |  |
| MTTR (Hours)                | 8 Hrs                              |  |

| Detailed data                      |  |  |
|------------------------------------|--|--|
| Overvoltage category               | Category 1 for power. Tested according to IEC/EN 61010-1 |  |
| Process signal connections         | 8-CH AI or AO  |  |
| Field power connection             | Compact  |  |
| Field power fusing                 | 5.0 A, entire base                                       |  |
| Signal connection                  | 1x 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 cVHBS01-CJCA 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      | 114.3 mm |  |
| Height     | 145 mm   |  |
| Weight     | 224 g    |  |



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