DATA SHEET

VRBX01K04

ABB Ability™ Symphony® Plus Hardware Selector



Product image not available

The cRBX01 Compact Remote Bus eXtender is the fiber optic repeater module for the redundant HN800 IO bus of Symphony Plus.

cRBX01 fiber optic repeaters transparently extend the HN800 IO bus of SPCxxx controllers. cRBX01 repeaters need no configuration and remote IO or communication module have the same function, performance and capacity as local modules.

VRBX01K02 is a redundant remote IO kit that includes: 4x cRBX01 modules + 2x VMU610 bases.

Features and benefits

- cRBX01 fiber optic repeater module supports up to 60 HN800 devices per remote link.
- Fiber optic HN800 bus is a star topolgy (point-to-point) with up to 8 remote links per controller.
- Each remote link supports up to 60 HN800 devices (SD Series IO or communication modules.
- Using 62.5/125 µm Multi-Mode fiber optic cable with cRBX01 each link can be up to 3.0 km long.

General info	
Article number	2VAA009362R1 (VRBX01K04)
Life cycle status	ACTIVE
Protocol	HN800
Communication type	F. O. Repeater
Capacity	60 HN800 devices (SD Series IO or Communications modules)
Transmission speed	4 MBps
Communication connection(s)	2x ST style connectors with right angle strain relief, 40 mm (1.5 inches) bend radius
Communication physical layer	62.5/125 µm Multi-mode, -3.5 dB/km, graded index, 840 nm wavelength, 160 MHz/km Fiber Optic cable
Diagnostics port	1x mini USB form factor on module front plate
Line redundancy	Yes
Module redundancy	No
Hot Swap	Yes
Form factor	Compact (127mm)
Mounting	Vertical Column
HN800 bus length	225 mm (on each electrical bus)
MTBF (per MIL-HDBK-217-FN2)	cRBX01 PR: A = 73,170 hours, VMU610 PR: A = 10,808,478 hours
MTTR (Hours)	cRBX01 MTTR = 1 hour, VMU610 MTTR = 8 hours

Detailed data	
Processor type	None
Module power requirements	90 mA (typical) 100 mA (max) @ 24 VDC (+16%/-10%) per module
Module power connection(s)	POWER TB on VBX01T
Overvoltage category	Category 1 for power. Tested according to IEC/EN 61010-1
Mounting details	VMU610 mounting base for 2 cRBX01 modules

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 (104°F) non-condensing. Tested according to IEC/EN 60068-2-78, IEC/EN 61298-3
Protection class	IP20 according to EN 60529, IEC 529
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
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 (Standard), cRBX01A (Enhanced) ISA S71.04 G3 compliant version modules 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 2014/30/EU & Low voltage directive 2014/35/EU
RoHS compliance	RoHS Directive 2015/863
WEEE compliance	DIRECTIVE/2012/19/EU

Dimensions	
Width	103 mm
Height	145 mm
Depth	147 mm
Weight (include base)	650 g

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