

DATA SHEET

VRBX01K02

ABB Ability™ Symphony® Plus Hardware Selector

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 repeater kit that includes: 2x cRBX01 modules + 1x VMU610 base.

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	2VAA009320R1	
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) benc 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	
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 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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