

Introduction:

The VCL-3040, Quad RS232 to RS485 Converter is a ruggedized, robust, sub-station-hardened converter which converts the Serial RS232 data in to RS485 data and vice versa. VCL-3040 is a bi-directional serial interface converter which enables the interconnectivity between serial RS232 and RS485 interfaces.

The VCL-3040 meets and complies with the IEC-61850-3, EMI, EMC, Surge and Temperature specifications making it suitable for sub-station installations to provide uninterrupted service even in the most demanding and harsh environments.

Technical Features:

Protocol:

- Quad RS232 and RS485 channels
- 2 Wire Rs485 operation (Half Duplex)
- Transparently supports a wide range of serial transmission speeds from 50bps to 115.2kbps
- Automatic RS485 transmit / receive data direction change over
- Dual, 1+1 redundant DC power supply Input
- Indication: Power supply LED indication

Connectors:

- Power: Terminal Block, 2-Pin Supply Connector
- RS232 and RS485 Interface: 2x8 PIN Double Decker Terminal Connector

Chassis:

- DIN Rail Mounting.

Power Supply:

- Power Supply: 9V DC to 55V DC, 1A

Power Supply Adapter Options:

- 110~240VAC, 50Hz / 60Hz
- 110VDC
- 250VDC

Temperature:

- Operating: -20°C to +65°C
- Humidity: 95% R.H., Non-condensing

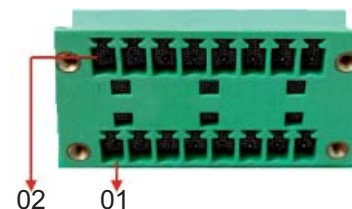


Application:

The most common application for the VCL-3040, Converter is for augmenting legacy RTUs and Energy Meters that provide serial RS485 data in sub-stations and SCADA data networks. By simply installing a VCL-3040, Converter the existing RS485 RTUs and Energy Meters can be connected to the existing serial RS232 data communication network.

Another common application for the RS232 to RS485 converter is to extend serial RS232 connectivity over the copper wires over long distances. VCL-3040 converter can be installed to extend the distance between communication equipment and RTU / Energy Meter / any other device providing serial RS232 interface.

RS232 & RS485 Pinout Detail:



PIN Number	RS232 Signal on PIN	RS485 Signal on PIN
01	Channel 1 INPUT	Chanel 1 A+
02	Channel 1 OUTPUT	
03	Channel 1 GROUND	Channel 1 B-
04	Channel 1 GROUND	
05	Channel 2 INPUT	
06	Channel 2 OUTPUT	Chanel 2 A+
07	Channel 2 GROUND	
08	Channel 2 GROUND	Channel 2 B-
09	Channel 3 INPUT	Chanel 3 A+
10	Channel 3 OUTPUT	
11	Channel 3 GROUND	Channel 3 B-
12	Channel 3 GROUND	
13	Channel 4 INPUT	
14	Channel 4 OUTPUT	Chanel 4 A+
15	Channel 4 GROUND	
16	Channel 4 GROUND	Channel 4 B-

EMI, EMC, Surge Withstand and other Compliances

EN 50081-2	EN 50082-2	IEC 60068-2-29
IEC 61000-4-6 (Conducted Immunity)	IEC 60068-2-6	IEC 60068-2-2
IEC 60068-2-78	IEC 60068-2-1	IEC 60068-2-14
CISPR 22 / EN55022 Class B (Conducted Emission and Radiated Emission)		
IS 9000 (Part II Sec. 1-4, Part III Sec. 1-5, Part IV, Part 14 Sec. 1-3)		
IEC 60870-2-1	IEC 61000-4-5	IEC 61000-4-12
IEC 61000-4-3 (Radiated Immunity)	IEC 61000-4-8	IEC 61000-4-16
IEC 61000-4-2	IEC 61000-4-10	Telcordia
IEC 61000-4-4	IEC 61000-4-11	GR-1089 Surge and Power Contact

- ESD, Voltage and Surge Withstand: Meets and exceeds IEC 61000-4-2, IEC 61000-4-4, IEC 61000-4-5, Level 4 specifications
- Immunity to Voltage Dips, Short Power Supply Interruptions and Voltage Variations meets and exceeds IEC 61000-4-11, Level 1 specifications.

Environmental:

Operating Temperature	-20C to +60C
Maximum Operating Humidity	95% R.H., Non-Condensing
Maximum Operating Altitude	Up to 3,000 meters above sea Level
Operation	Complies with ETS 300 019 Class 3.2
Storage Temperature	-40C to +70C
Storage	Complies with ETS 300 019 Class 1.2
Maximum Storage Humidity	98% R.H., Non-Condensing
Maximum Storage Altitude	Up to 3,000 meters above sea Level
Transportation	Complies with ETS 300 019 Class 2.3

Electromagnetic Standards Compliance:

- EN 50081-2
- EN 50082-2
- IEC 61000-6-2 (immunity)
- IEC 61000-6-4 (emission)

Compliance/Regulatory:

- Meets CE requirements
- Complies to IEEE and IEC standards
- Complies with FCC Part 68 and EMC FCC Part 15 and CISPR 22 Class A
- Operation ETS 300 019 Class 3.2
- Operation ETS 300 019 Class 3.2
- Transportation ETS 300 019 Class 2.3

Technical specifications are subjects to changes without notice.

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U.K.

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