

Universal Signal Converter RS232 / CMOS to RS422 / RS485



Universal RS232 / CMOS to RS422 / RS485 Converter

- DIN rail or panel mounted compact Converter
- Port powered or external powered design
- Isolation of power and communication ports
- Automatic detection of communication baud rate
- Automatic control of transceiver direction
- Easy to use plug and play device
(no configuration software required)
- CE / CSA with UL certification

Specifications :

Power Supply	: + 24 VDC \pm 10 %, 2.0 watts max (for externally powered model)	Immunity to ESD	: Level 3 as per IEC1000-4-2
Communication	: Two ports as follows:	Immunity to Transients	: Level 3 as per IEC1000-4-4
COM1	: RS232 / CMOS	Immunity to Radiated RF	: Level 3 as per IEC1000-4-3
COM2	: RS422 / RS485	Immunity to Conducted RF	: Level 3 as per IEC1000-4-6
Data Rates	: Up-to 115.2 kbps.	Emissions	: EN55011 CISPR A
Distance	: Externally powered units transmit data up-to 4000 ft (1200 m). Less with port powered model.	Certifications	: CE, CSA and UL
Temperature	: Operating: 0° to 60° C	Dimensions	: 51mm (W) X 101mm (H) X 40mm (D)
Storage	: - 40° to 90° C	Mounting	: DIN rail mounting or Back Panel
Humidity	: 10% to 90% (Non condensing)	Weight	: 125 gms approximately

Models:

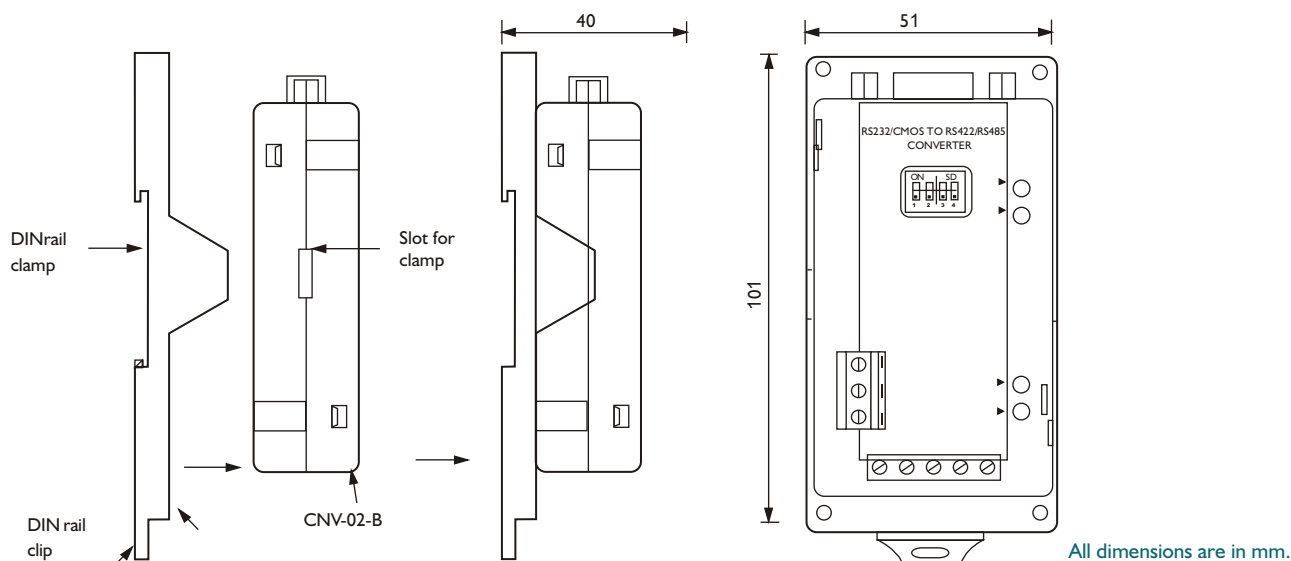
Model	Power Supply	Isolation		Part Number
		Between COM Ports	Between COM Ports & Power	
CNV-01	+ 24 VDC or port powered	No	Yes	CNV-01
CNV-02-B	+ 24 VDC external only	Yes	Yes	CNV-02-B

CNV-01: CNV-01 is a port-powered (line-powered: RXD+RTS+CTS) or externally powered. In case of point to point communication and if the cable length is less than or equal to 2 mtrs on RS232 side, then external power supply is not needed. This unit takes less than 4mA to operate plus load current. Applications which require a large load current, external + 24V DC power supply on the terminal strip is required. CMOS signals are not supported for CNV-01. Communication ports are not isolated from each other.

CNV-02-B: + 24 V DC power is isolated from communication ports in CNV-02-B model. Both the communication ports are also isolated from each other. The unit has DB9 female connector on RS232 / CMOS side and PBT on RS422 / RS485 side. RS485 port has 4-wire with signal ground system. Both the models also support 2-wire RS485 communication with signal ground system. This models is replacement for the CNV-02 (old version model) with following advantages.

1. LEDs for Power and Communication.
2. Shorting of "TX+ & RX+" and "TX- & RX-" not required for 2 wire RS485 configuration.
3. 1.5 KV Surge suppression for RS422 / RS485.
4. User friendly switch settings.

Dimensions :



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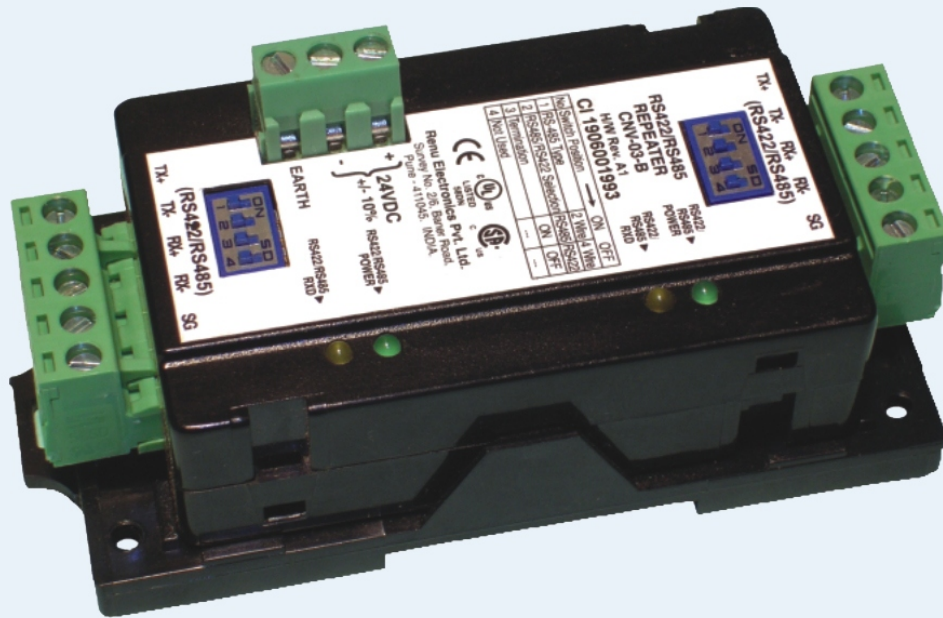
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Universal Repeater RS422/RS485



CNV-03-B

Universal RS422 / RS485 Repeater:

- DIN rail or panel mounted compact Repeater
- External powered design
- Isolation of power and communication ports
- Automatic detection of communication baud rate
- Automatic control of transceiver direction
- CE / CSA with UL certification
- Easy to use plug and play device (no configuration software required)

Specifications

Power Supply	: 24 VDC +/- 10 %, 2 Watt max	Immunity to ESD	: Level 3 as per IEC1000-4-2
Communication	: Two ports as follows: COM1: RS422 / RS485 COM2: RS422 / RS485	Immunity to Transients	: Level 3 as per IEC1000-4-4
Data Rates	: Up to 115.2 kbps.	Radiated Susceptibility	: Level 3 as per IEC1000-4-3
Distance (1200m)	: Unit transmits data up-to 4000 ft	Immunity to Conducted RF	: Level 3 as per IEC1000-4-6
Temperature	: Operating: 0° to 60 °C	Emissions	: EN55011 CISPR A
Storage	: - 40° to 90 °C	Certifications	: CE and CSA
Power port Isolation	: 1 KV Isolation between communication ports and Power supply, through DC-DC coupler	Dimensions	: 101mm (L) X 40mm (D) X 51mm (W) (DIN RAIL mounting)
COM port Isolation	: 1KV Isolation between COM1 & COM2 through opto-isolation	Mounting	: Back Panel DIN Rail
Humidity	: 10% to 90% (Non condensing)	Weight	: 125 gms approximately

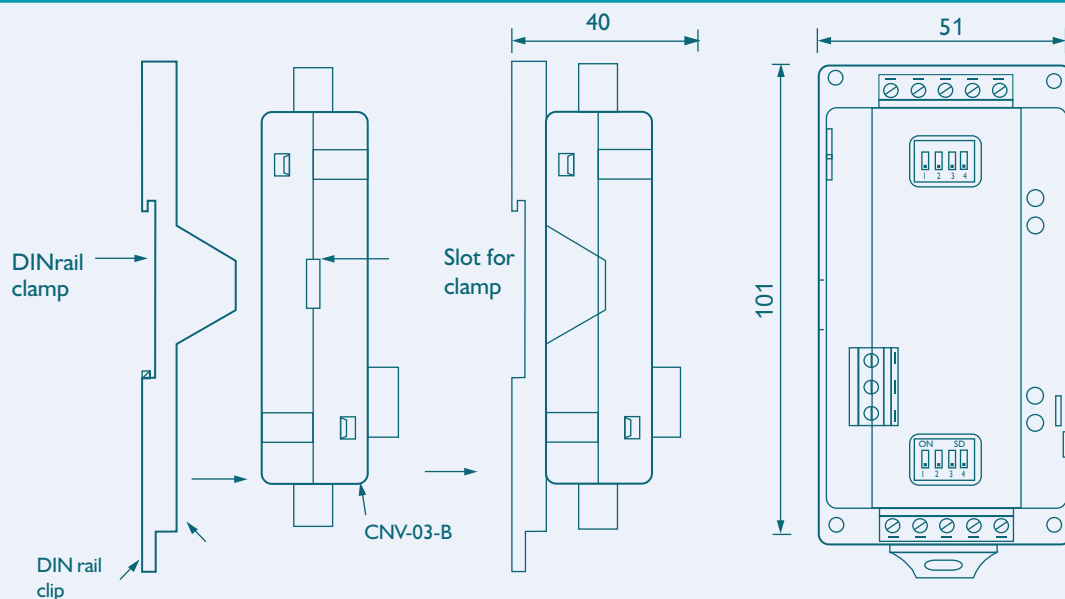
Functionality

RS485 communication levels can physically support 32 nodes up-to a maximum distance of 1200 mtrs. CNV-03-B is a RS422 / RS485 repeater. It is used where more than 32 nodes are to be connected in the RS485 network or the distance between two nodes is more than 1200 mtrs. Multiple CNV-03-B units can be used to support the maximum of 255 nodes in one network.

CNV-03-B has 2 communication ports. Both the communication ports have screw type connectors. Communication ports as well as power port are isolated. CNV-03-B supports both 2 wire / 4 wire RS485 and RS422 configuration. Switch settings select 2 wire / 4 wire communication on each COM port.

CNV-03-B operates with a 24 VDC external supply.

Dimensions



All dimensions are in mm.



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Port Multiplexer



PMX-00-B

Device to connect Two Masters to One Slave features :

- DIN Rail or Panel Mounted compact Port Multiplexer
- Hardware with three communication ports
- RS232 support for Master Ports. PLC port with RS232 / RS422 / 2 or 4 wire RS485 / CMOS
- Connect Two Master devices to any serial device (e.g. PLC, Drive) on same protocol
- Ideal for PLCs / Drives which have only one communication port
- Same model can be configured for different supported protocols
- Free Programming software for Port Multiplexer !!
- CE marked with optional UL/ CSA certification

Possible Applications :

Port Multiplexer allows the connection of two field devices to a single controller (PLC) over a serial link on time sharing basis with same protocols. Some of possible Port Multiplexer applications include :

1. HMI and SCADA Communication / PLC Programming to PLC.

Operator interface (Master 2)



X Protocol

Port Multiplexer



X Protocol



PLC

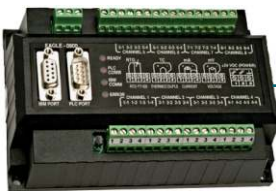


X Protocol

ASTRA (Master 1)

2. PLC communication with Analog I/O module and Operator Interface

Analog I/O Module (Master 2)



Y Protocol

Port Multiplexer



Y Protocol



PLC



Y Protocol

Operator interface (Master 1)

3. PLC communication with Different Operator Interfaces

Operator interface (Master 2)



Z Protocol

Port Multiplexer



Z Protocol



PLC



Z Protocol

Operator interface (Master 1)

Basic Port Multiplexer Operation :

Port Multiplexer is a Port Switch for devices like PLCs, Inverters, Controllers etc. Port Multiplexer has three serial ports that connect with three different devices that support same protocol. Port Multiplexer communicates with the PLC to get the information required by two master devices.

Windows® based Port Multiplexer Setup software helps the user to configure unit.

Once the Application is defined in Setup Software the configuration is downloaded in the Port Multiplexer.

The Unit can now communicate with the connected devices and transfer data between them.

System requirements for Port Multiplexer Setup Software are:

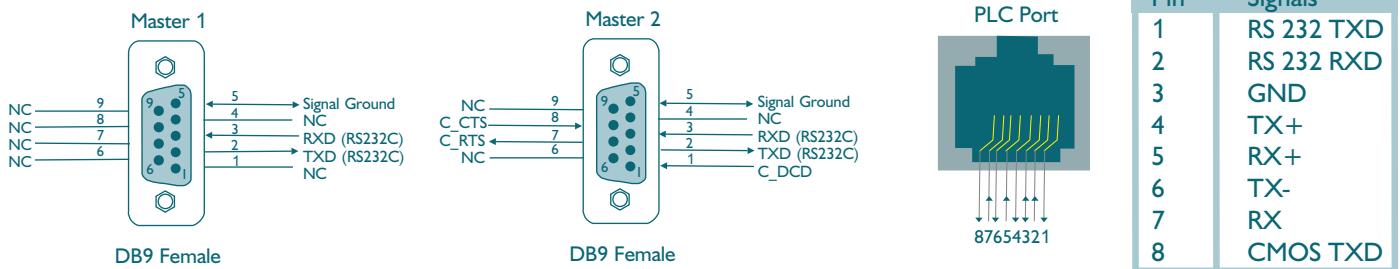
Windows Version	:	Microsoft Windows 9x / NT / 2000 / XP
Processor	:	PENTIUM or higher
Hard disk Space	:	5 MB or more
Mouse	:	Required
RAM	:	16 MB or more
Display resolution	:	800 X 600 (VGA) or better
Display colors	:	16 bit color

Other Items required for Port Multiplexer configuration:

1. Port Multiplexer unit
2. Port Multiplexer Configuration Cable
3. Port Multiplexer Setup Software
4. Devices with communication cables

Communication Ports :

Port Multiplexer has two identical communication ports Master1 and Master2 and third port to connect a PLC. Master ports are compatible to RS232 signal levels and PLC port supports RS232 / RS422 / 2 or 4 wire RS485 / CMOS signal levels. Pin details are given below:



*Do not use pin no. 6 of either of the Master ports.

**Refer Portmultiplexer user manual for specific cable details

PLCs Supported :

Port Multiplexer currently supports following PLC / Protocols:

- AB Df1 Full Duplex (Micrologix / SLC5/0x / PLC5/30)
- IDEC Micro3
- Modbus RTU
- Aromat FP Series (Mewtocol)
- Modbus ASCII
- Omron Host Link

Following PLCs / Protocols can also be supported in Port Multiplexer on request:

- ABB
- Cegelec Alspa series
- Delta DVP Series
- Honeywell
- J-BUS
- LG MasterK 80S-300S
- Mitsubishi FX
- Siemens Step-7 Micro
- Taian TP02 Series
- Toshiba T series (Prog Port)
- USS Protocol
- AB DH485 (SLC5/0x series)
- CEGELEC
- Entertron
- IDEC MicroSmart, IDEC Open Net
- Keyence KV Series
- Messung XMP-8 / NEXGEN 4000 / NEXGEN 5000
- Modbus Slave
- Siemens-S7-200 Series
- Telemecanique TSX07/37/57
- Toshiba T1, T2, T3, V series (Link Port)
- Yaskawa
- Baldor Drives
- Crouzet
- GE Fanuc Series 90-30, VersaMax
- Idec Micro 1 / FA2Jr PLCs
- Koyo
- Omron NT Link
- Siemens S7-300 Series
- Telemecanique 17, 47 & 67 Series
- Twido

We welcome an opportunity to develop new, custom drivers and customization of Port Multiplexer products.

Specifications :

Power	:	+ 24 V DC \pm 10%, 100mA max	Mounting	:	DIN rail or back panel mounting
LED's	:	4 LED's for status indication	Dimensions (DIN rail)	:	105mm(L) X 40mm(D) X 51mm(W)
Communication Ports	:	3 Communication ports	Weight	:	125 gm approx.
(Isolation between communication ports and Power supply, through DC-DC coupler is 1 KV)			Approvals	:	CE, CSA
PLC Port	:	Connects to PLC	Immunity to ESD	:	Level 3 as per IEC1000-4-2
Master 1	:	Connects to Master Device 1	Immunity to Transients	:	Level 3 as per IEC1000-4-4
Master 2	:	Connects to Master Device 2	Immunity to Radiated RF	:	Level 3 as per IEC1000-4-3
Temperature	:	Operating : 0° to 50°C	Immunity to Conducted RF	:	Level 3 as per IEC1000-4-6
		Storage : -20° to 80°C	Emissions	:	En55011 CISPR A
Humidity	:	10% to 90% (Non condensing)			

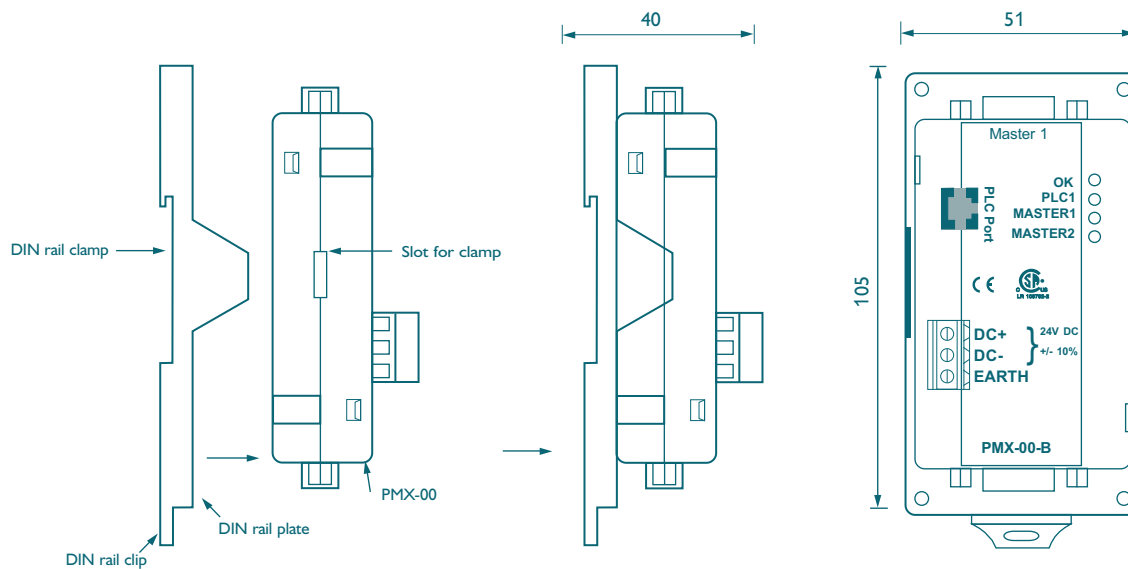
Ordering Options :

Example: **PMX-00-B**

Model _____
 + 24 V DC External Supply _____
 Black Case _____

* Units are also available with Gray case. Replace suffix 'B' by 'G' in unit part number for Gray case.

Dimensions :



All dimensions are in mm.



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