



Octopus3000

Industrial Isolation

RS-485/422 Bus Division Switch

Introduction:

Octopus3000 is a type of RS-485/422 bus division concentrator of high performance. Octopus3000 adopts the unique equipotential differential isolation and bus division concentration technology to effectively such problems as ground potential difference, impedance matching and lightning strike frequently seen in engineering wiring process. Users can easily optimize the RS-485/RS-422 bus structure, divide the network section and improve the communication reliability.

The fault network section shall be isolated in case of lightning strike or equipment faults to ensure the high communication reliability of other network sections. Such performance of Octopus3000 can significantly improve the reliability of existing RS-485/RS-422 network, and effectively shorten the network maintenance time. Reasonable utilization of Octopus3000 can enable you to design unique RS-485/RS-422 system.

Packing List:

Octopus3000 is shipped with following items.

1. Octopus3000 × 1
2. 220V power line × 1
3. User manual × 1

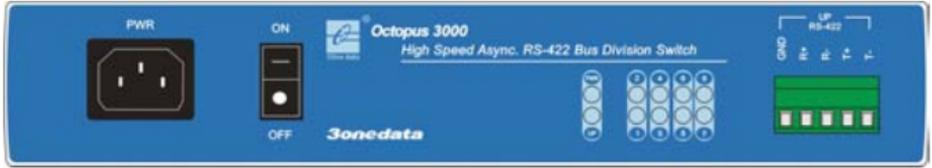
Features:

1. 8 ports cards insert optical isolation RS485/422 HUB
2. Star structure, bi-directional Converter RS232 to RS485/422 or RS485/422 repeater
3. Reach up to 3000m at the rate of 9600bps
4. 600W surge protection, 15KV ESD protection, built-in short circuit protection
5. Each port 3000V optical isolation separately

6. Support stage connection, each port support 256 nodes loopback
7. Data direction auto-turnaround, no flow control is necessary

Pinout Configuration:

1.The product front panel sketch map:



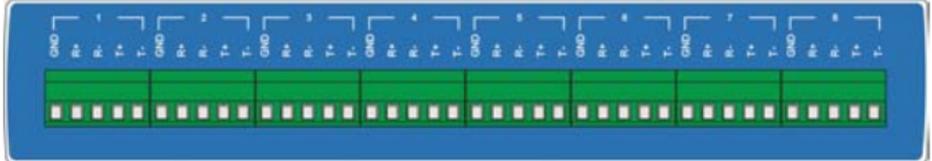
Octopus3000 panel have 10 LED indicator, Used for indicate power state(Pwr), Up stream port working state(up), Down stream port working state(1 to 8)

Pwr lamp light when powered(220VAC power supply).

When RS-485communication, Up lamp flash when Up stream port TXD, opposite state lamp flash when Down port TXD.

When RS-422 communication, Up stream port and Down stream port TXD at the same time, up state lamp and opposite Down stream port lamp flash.

2.The product back panel sketch map:



Octopus3000 is make up of 1 Up stream port and 8 Down stream port. You can require the port quantity according to your needs.

RS-485 mode

- | | |
|----|-------------------------|
| D+ | Signal Positive(485+/A) |
| D- | Signal Negative(485-/B) |

RS-422 mode

- | | |
|----|--------------------------|
| T+ | Transmit Output Positive |
| T- | Transmit Output negative |
| R+ | Receive Input positive |
| R- | Receive Input negative |

Specifications:

Standards: EIA RS-232C, RS-485, RS422 standard

RS-232 signal: TX, RX, GND

RS-422 signal: T+, T-, R+, R-, GND

RS-485 signal: D+, D-, GND

Working mode: Asynchronism, point to point, 2 wire half-duplex, 4 wire full duplex

Baud rate: 300~115200bps, auto test serial signal rate detect signal speed automatically, zero delay time

Flow control: Data direction auto-turnaround, no flow control is required

Transfer distance: RS-485/422 side: 1.8Km(9600bps)

RS-232 side: no less than 15m

Loading: Support 256 nodes loopback

Optical isolation: 3000V

Port protection: 600W surge protection, 15KV ESD protection

Connector: 5 bit terminal block

Power

Power input: 220VAC

Consumption: 5W

Environment

Operating temperature: -10°C to 60°C

Storage temperature: -40°C to 85°C

Humidity: 5% to 95%(no condensation)

Appearance

Dimensions: 227.0mm×146.0mm×43.0mm

Material: Plastic

Color: Black

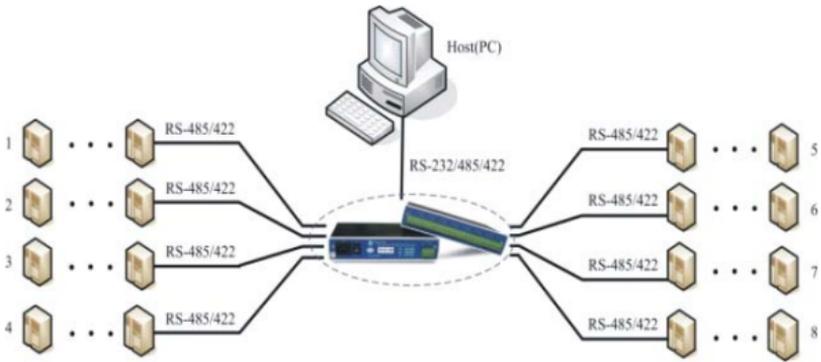
Weight: 1000g

Warranty: 5 years

Approvals: FCC, CE, RoHS approvals

Applications:

Octopus3000 representative exert as follows:



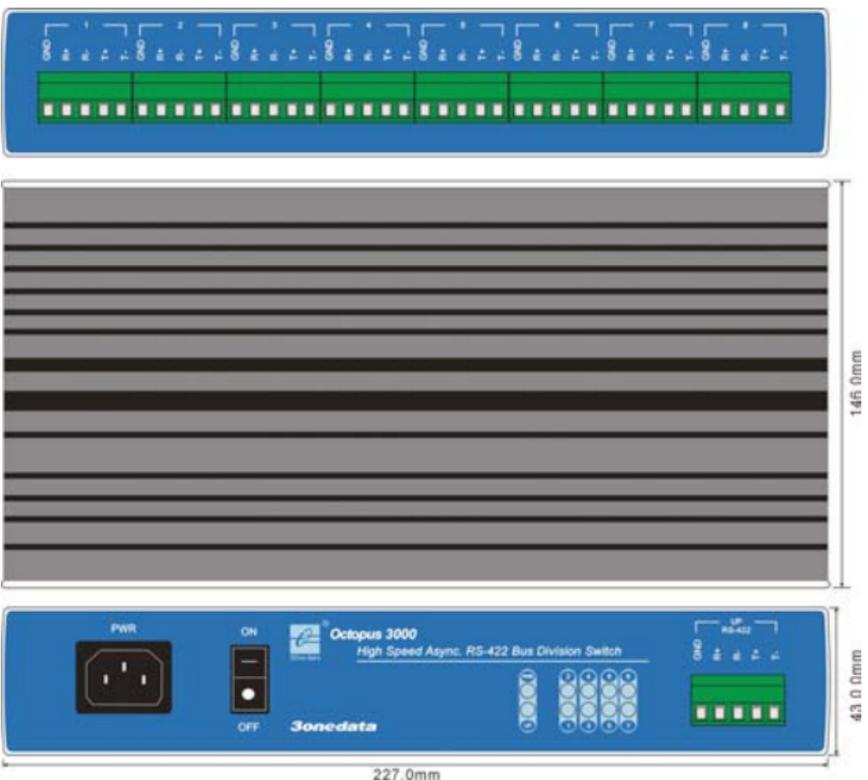
1. Up stream port

Octopus3000 has one UP stream port, adopt 5 bit terminal block, be used to connect UP stream equipment like as Host PC. According to users different require, You can choice RS-232, RS-485 or RS-422 mold to connect main equipment,the pin is defined in the products.

2. Down stream port

Octopus3000 has eight Down stream port, adopt 5 bit terminal block, be used to connect Down stream equipment like as Pos data collection equipment. According to users different require, You can choice RS-485 or RS-422 mode to connect Down stream main equipment. the pin is defined in the products.

Dimension:



Octopus3000 FAQ:

1. LED indicator instruction

1. **PWR** Power supply indicator, Red
2. **UP** Up stream port transfer data, LED Flash
3. **1-8** Down stream port receive data, LED Flash

2. LED indicator OFF

1. Power supply cable turnoff
2. Insert power supply failed
3. Choice incorrect Power supply

3. Equipment examine automatic

1. When interface connectionless, insert the power supply, PWR, UP indicator light, and Down stream port state indicator(1-8) light, the quantity of the lighting LED is up to the availability of the down stream quantity.

2. If the up stream port is RS-232, down stream port is RS-422, connect the up stream port to PC RS-232 port correctly, Using “Start”→“accessory”→“communication”, open the typical terminal, choice the correct COM port and 9600bps speed, shorting the down RS-422 port, input the character in the typical terminal window, you will see the data indicate.

3. Meanwhile, the Up stream TXD indicator correspond to down steam RXD flash, then the interface communicate normally.

Using this method, you can test all the Up stream port correspond to down steam port working normally or not.

Note: The Loop-back testing just used for full-duplex communication, is not suitable for the RS-485 communication.

4. Communication failure

1. Use incorrect power supply
2. Insert power supply failure
3. The connection sequence incorrect
4. Opposite use up stream port and down stream
5. Down stream port connection incorrect
6. Exceed the loading and transmit distance
7. Using incorrect transfer media
8. RS485/422 connection incorrect

Certifications:



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