4 Port USB Isolator (Independent Type)

USB-202 ⓇoHS

User's Manual

Ver.1.2

August 6, 2024

Precautions (Please be sure to read before use.)

⊘ Do Not

1. This product uses ordinary off-the-shelf electronic components, and is therefore inappropriate for use in applications that require special quality or reliability and are expected to protect human lives or prevent accidents, such as safety mechanisms in fields including space, aeronautics, medicine, and nuclear power.
2. Do not be used underwater or in high-humidity environments.
3. Do not be used in the presence of corrosive gases, combustible gases, or other flammable gases.
4. Do not turn on power when circuit board surface is in contact with other metal.
5. Do not apply voltage higher than rated voltage.

⚠ Attention

6. This manual may be revised in the future without notice owing to improvements.
7. All efforts have been made to produce the best manual possible, but if users notice an error or other problem, we ask that they notify us.
8. Item 7 notwithstanding, HuMANDATA cannot be held liable for the consequences arising from use of this product.
9. HuMANDATA cannot be held liable for consequences arising from using this product in a way different from the uses described herein, or from uses not shown herein.
10. This manual, circuit diagrams, sample circuits, and other content may not be copied, reproduced, or distributed without permission.
11. If the product emits smoke, catches fire, or becomes unusually hot, cut the power immediately.
12. Do not install the control cables or communication cables together with the main circuit lines or power cables. In such an environment, it may result in malfunction due to noise.
13. Be careful of static electricity.

1. Revision History

Date	Revision	Description
Mar. 27, 2020	1.0	Initial release
Nov. 25, 2020	1.1	Change: Specifications of AC adaptor
Aug. 6, 2024	1.2	Change: Specifications of AC adaptor

2. Product packaging

Thank you very much for purchasing the USB-202. In this package, you will find the following items included. If there are any shortages or issues, please contact us.

☐ 4 Port USB Isolator (Independent Type) USB-202   1

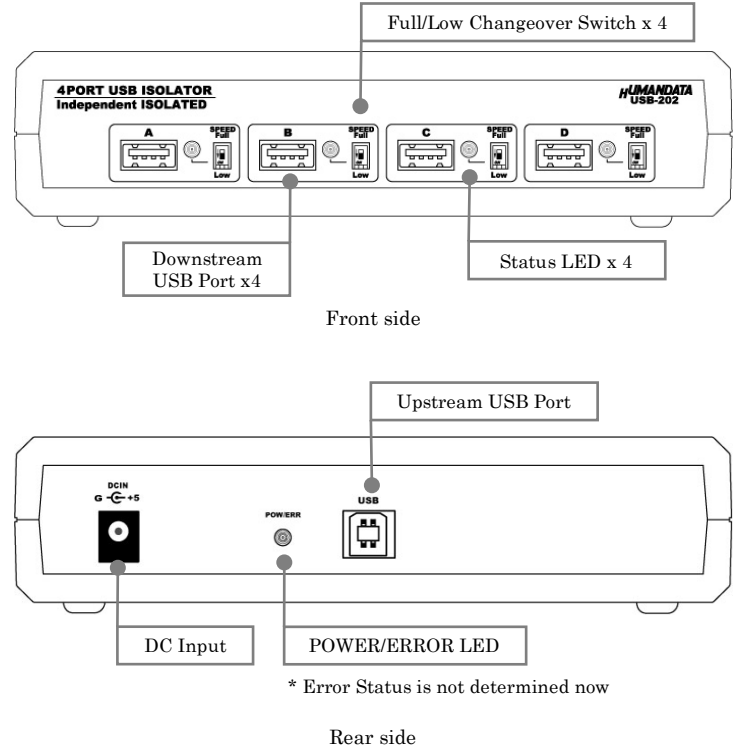☐ USB cable (1.8m)   1

☐ AC adapter   1

3. Introduction

USB-202 is a 4 port USB hub. Each 4 port is isolated independently. USB-202 is a USB 2.0 Full Speed (12Mbps) and Low Speed (1.5Mbps) compliant USB hub which isolates between a USB host and four downstream ports with 600VDC.

Each of the four downstream ports are also isolated independently. With USB-202, it can be expected to eliminate ground loops that can cause measurement errors and equipment from surges, common-mode voltage, static discharge, magnetic fields, and radio frequency interference.

There is no need to install any drivers. It works with every operating system such as Windows, Linux, Mac OS X.

4. Overview

Front side

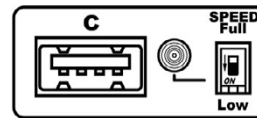* Error Status is not determined now

Rear side

5. Power Supply

USB-202 is powered by AC adapter. When detecting the power from common USB port, whole USB-202 power become active. The product will operate in linkage with the host computer.

6. Switch Speed

The speed can be set to Full speed (12Mbps) or Low speed (1.5Mbps) by each port.

The speed is set to be Full speed with a switch up, and the status LED displays green. With a switch down, the speed is set to be Low speed and the LED displays orange.

Be careful not to change when the port is communicating.

7. Product Specification

Item	Description	Remarks
Model	USB-202	
Input Power	DC6V 2.8A	Supplied by an AC adapter
Correspondence Equipment	PC/AT compatible machine (windows) Mac or Linux compatible with USB	No drivers required
Host Interface	USB 2.0 Compliant (Supports Full and Low Speed) Hi Speed is not supported.	ESD protection
Port Number	4 Port Each port is isolated independently	ESD protection
USB Connector	Host (upstream): Type B Female Target (downstream): Type A Female x 4	
Isolation Method	Bus isolation (Independent isolated)	
Isolation Protection	600VDC	Designed value
Support OS	OS compatible with USB	
Status LED	Power/Error (bi-color) x 1 Status (bi-color) x 4	
Operating Ambient temp.	-20 to 60 [°C] (-4 to 140 [°F])	No condensation permitted
Operating Ambient Humidity	30 to 85%RH	
Storage Ambient temp.	-20 to 60 [°C] (-4 to 140 [°F])	
Storage Ambient Humidity	30 to 85%RH	
Noise Tolerance	Not defined	
Safety Standard	Not defined	
Weight	Approx. 300 [g]	Only main body
Dimensions	165 x 80.5 x 39 [mm] (6.496" x 3.169" x 1.535")	Without projections

* There is a case to be changed to the parts of the compatibility
* Power saving function (suspend, standby, sleep and others) is not supported

8. AC adapter (Japan's specifications)

Item	Description	Remarks
Input	AC100 to 240V 50/60Hz 0.42A	
Output	DC6V 2.8A	Positive Tip
Plug	2.1mm inner diameter	
Compatible DC Jack	2.1mm inner diameter	
Operating Ambient temp.	0 to 40 [°C] (32 to 104 [°F])	No condensation permitted
Operating Ambient Humidity	5 to 95 % RH	
Storage Ambient temp.	-20 to 80[°C] (-4 to 176 [°F])	
Storage Ambient Humidity	10 to 95 % RH	
Wire Length	1.6 [m]	
Weight	approx. 103 [g]	
Dimensions	55 x 48 x 26 [mm] 2.165" x 1.890" x 1.024"	Without projections

* This AC adapter is attached for use mainly in Japan. If you use in the other countries, please check the specifications above and plug shape.

* There may be cases that this part and specifications are changed.

9. Optional Accessories

Model	Image	Description
ACC-027		Attachment for vertical direction JAN: 4937920801096
ACC-028		Attachment for horizontal direction JAN: 4937920801102
ACC-031		Attachment for DIN rail type B JAN: 4937920801256
ACC-036		Neodymium magnet set JAN: 4937920801539

10. Additional Documentation and User Support

The following documents and other supports are available at

- Product Documents: http://www.hdl.co.jp/en/faspc/USB/usb-202/
- Support Center: https://www.fa.hdl.co.jp/en/support.html

11. Warranty and Compensation

Please refer to the following URL for the warranty.

https://www.fa.hdl.co.jp/en/fa-warranty.html

12. Contact us

Please contact us using the inquiry form on our company's website or email us at SPC2@hdl.co.jp, providing the product model number and serial number.

Please note that it may be difficult to provide technical support over the phone. We kindly ask for your cooperation in using email or other means of communication whenever possible.