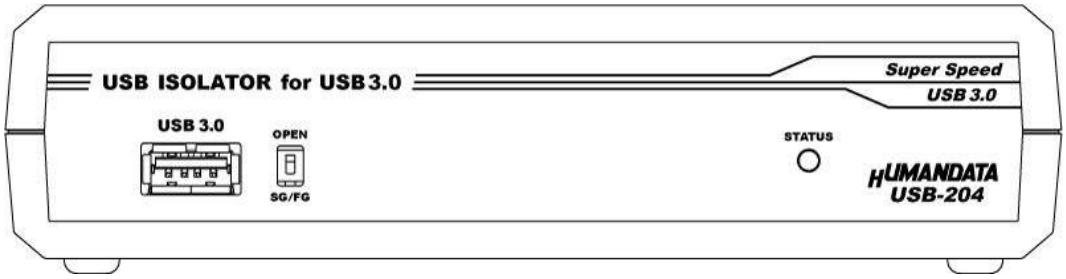
USB 3.0 Isolator

USB-204

User's Manual

Ver. 1.0



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● Precautions

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.

● Revision History

Date	Revision	Description
Sep. 16, 2016	v1.0	Initial release

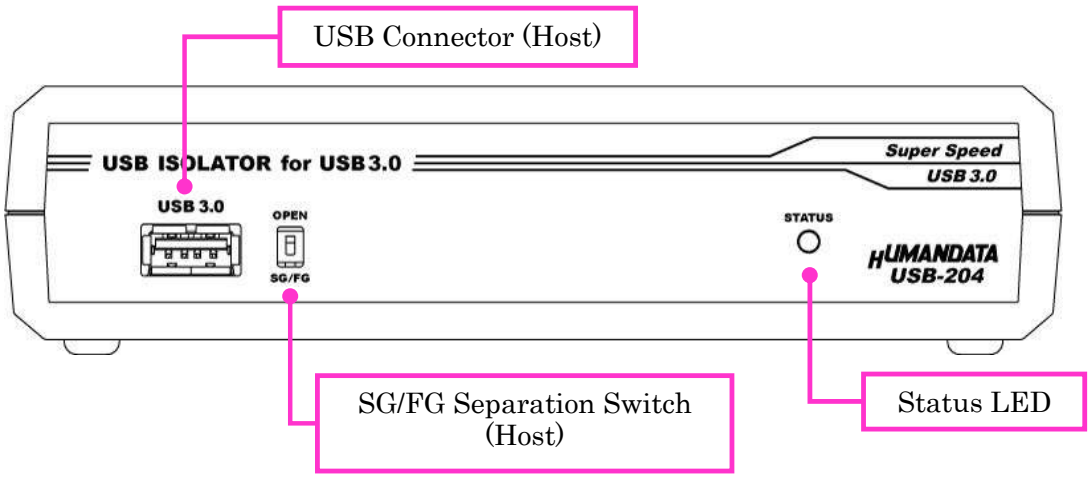
● Introduction

Thank you very much for purchasing our product.

USB-204 is a USB 3.0 Super Speed(5Gbps) isolator that isolates between a USB host and a USB peripheral device. High, Full and Low Speed are not supported.

1. Overview

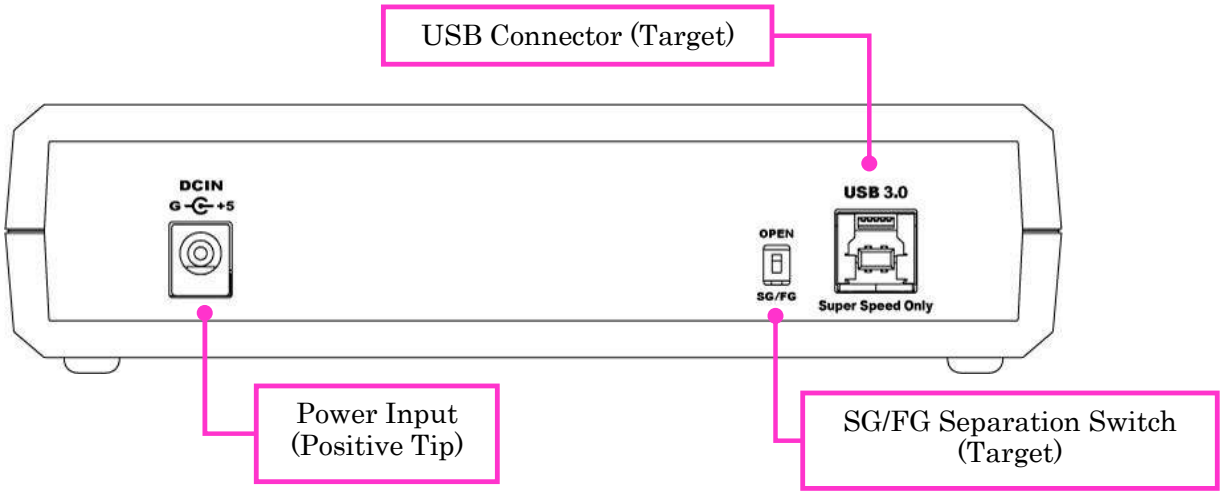
USB Host side



Status LED　Green : Power

Red : Over current

USB Target side



2. Feature

USB-204 is a USB 3.0 SuperSpeed(5Gbps) isolator that between a USB host and a USB peripheral device are isolated with 3000VDC. High, Full and Low Speed are not supported.
With USB-204, 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 of Windows, Linux, Mac OS X, and others.

3. Connection

You can use an included USB cable to the host side connector to the host (such as a personal computer), and connect a USB peripheral device to the target side connector.

4. Power Supply

USB-204 is powered through a USB port(Bus-powered) or an AC adapter (Self-powered). An AC adapter has priority when both supplies are applied.

5. SG/FG Separation switch

You can separate between SG(signal ground) and FG(frame ground) by the dip-switch of each USB host and USB target.

Position	SG - FG
OPEN	Open
SG/FG	Connection

* Host and target is same function.

6. Specifications

6.1. Product Specification

Item	Description	Remarks
Model	USB-204	
Input Power	5VDC Supplied through a USB port(Bus-powered) or AC adapter(Self-powered)	Recommend the use of an AC adapter for stably supply. An AC adapter supply to the host side.
Current Consumption	Less than 100mA + current of the target device	500mA max.
HOST interface	Dedicated　USB 3.0	High, Full and Low Speed are not supported.
Isolation Method	Bus isolation	
Isolation Protection	3000VDC	Designed value
Support OS	OS-Independent (No drivers required)	
LED	Power / Over current LED　×1	Bi-color LED
Operating Ambient Temperature	5 to 60 °C	No condensation permitted
Operating Ambient Humidity	30 to 85%RH	
Storage Ambient Temperature	5 to 60 °C	
Storage Ambient Humidity	30 to 85%RH	
Dimensions	165 x 80.5 x 39 [mm] (6.496" x 3.169" x 1.535")	Without projections
Weight	Approx. 250 [g]	Only main body

6.2. Optional Accessories

Model Name	Image	Description
ACC-027		Metal bracket type A for vertical mounting USB series JAN : 4937920801096
ACC-028		Metal bracket type A for horizontal mounting USB series JAN : 4937920801102
ACC-031		Din rail attachment type B for USB series JAN : 4937920801256

7. Additional Documentation and User Support

The following documents and other supports are available at
http://www.hdl.co.jp/en/faspc/USB/usb-204

- User's Manual

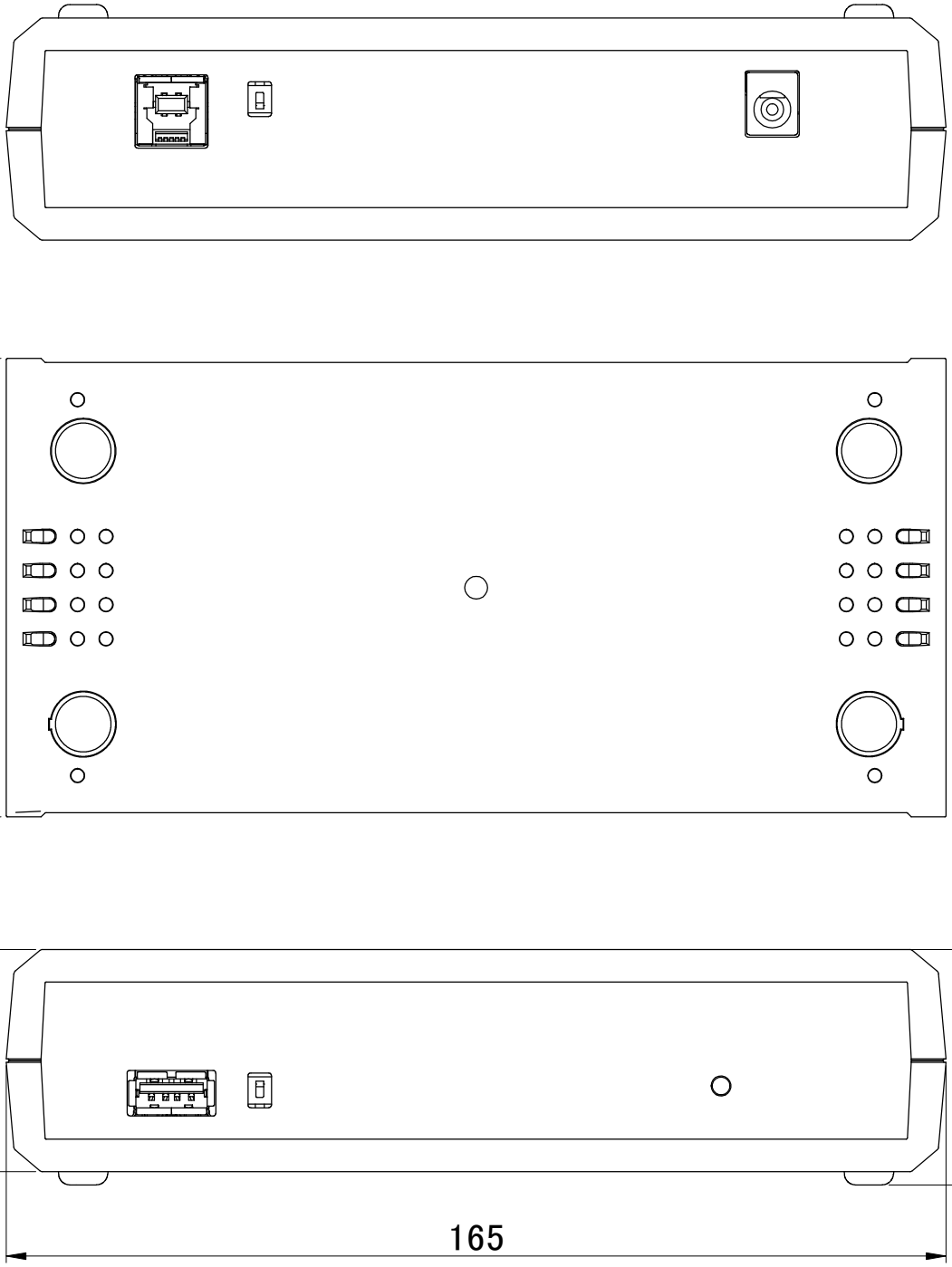
  … and more.

8. Attachment Documentations

- Outline drawing of the USB-204
- Outline drawing of the AC Adapter

9. Warranty and Compensation

Please refer to the following URL for the warranty.
http://www.fa.hdl.co.jp/en/fa-warranty.html



HUMANDATA®	SCALE –	UNIT mm	MATERIAL
CHK	DWG HDL 15. Jan. 15 ISSUED	TITLE USB-204 Outline Drawing	
		DRAWING NO USB204R1-DWG-A	REV A

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