HUMANDATA®

2 Port USB Isolator

USB-303

User's Manual

Ver. 1.1

HuMANDATA LTD.

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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

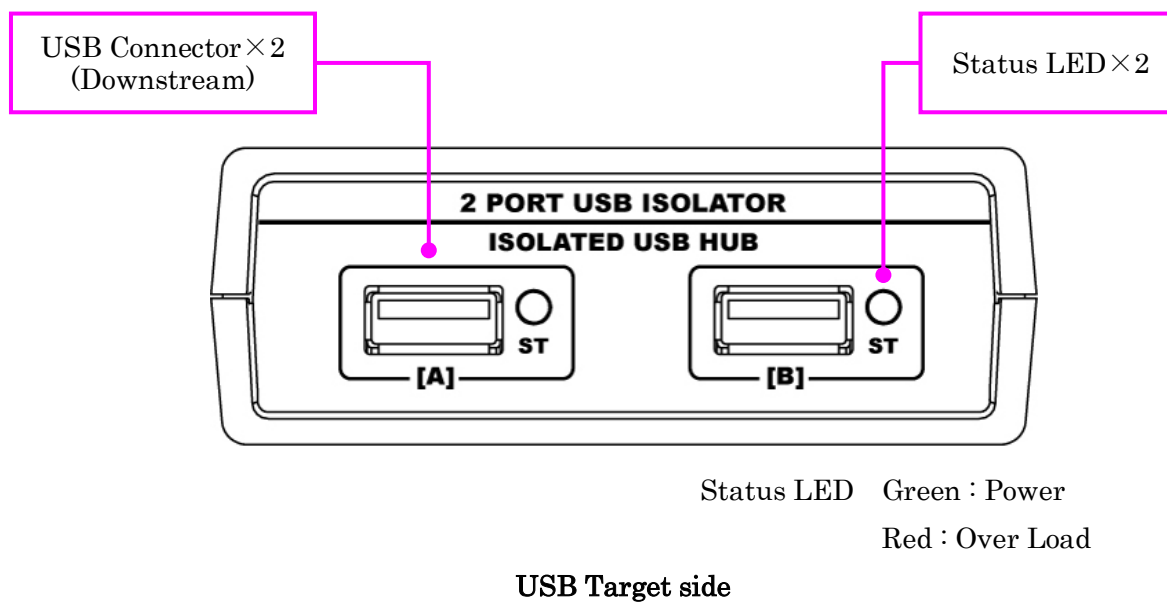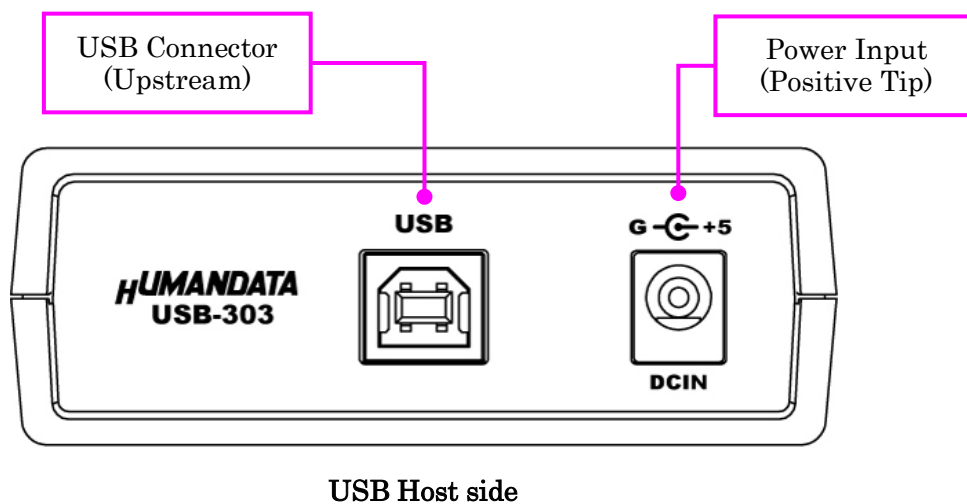| Date	Revision	Description
Oct. 5, 2016	v1.0	Initial release
Sep. 30, 2024	v1.1	Correct: typo

● Introduction

Thank you very much for purchasing our product.

USB-303 is a USB 2.0 Full Speed(12Mbps) and Low Speed(1.5Mbps) compliant isolator that isolates between a USB host and a USB peripheral device.

1. Overview

USB Connector
(Upstream)

Power Input
(Positive Tip)

USB Host side

USB Connector×2
(Downstream)

Status LED×2

Status LED   Green：Power

Red：Over Load

USB Target side

USB-303

RoHS

2 PORT USB ISOLATOR
ISOLDATED USB HUB

HOST — ISOLATION — HUB — USB[B] / USB[A]

G ⊖ DC 5V ⊕

ST (LED)

Green	Power
Off	Over Load

Serial : 16STA001

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TOP side (Block diagram)

2. Feature

USB-303 is a USB 2.0 Full Speed(12Mbps) and Low Speed(1.5Mbps) compliant USB hub which isolates between a USB host and two downstream ports with 3000VDC. Each of the two downstream ports are also isolated independently. With USB-303, 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.

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.
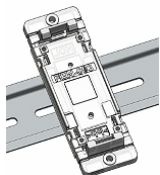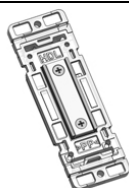
4. Power Supply

USB-303 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. Specifications

5.1. Product Specification

Item	Description	Remarks
Model	USB-303	
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.
Supplied Current to Target device	500mA/port max.	
Support OS	OS-Independent (No drivers required)	
HOST interface	USB 2.0 Compliant (Supports Full and Low Speed)	USB 1.1 compatible High Speed is not supported. ESD protection
Port number	2 ports	
USB Connector	Host: Standard Type B Female Target: Standard Type A Female ×2	
Isolation Method	Bus Isolation (Independent isolated)	
Isolation Protection	3000VDC	Designed value
LED	ST: Status LED×2	
Operating Ambient Temperature	-20 to 60 °C	No condensation permitted
Operating Ambient Humidity	30 to 85%RH	
Storage Ambient Temperature	-20 to 60 °C	
Storage Ambient Humidity	30 to 85%RH	
Dimensions	69 x 82.5 x 30 [mm] (2.717" x 3.248" x 1.181")	Without projections
Weight	Approx. 120 [g]	Only main body

5.2. Optional Accessories

Model	Image	Description
PEN-003		Attachment with clamping screw JAN：4937920800709
PEN-003-DIN		Attachment for 35mm DIN rail JAN：4937920800716
PEN-003-MG		Attachment with neodymium magnet JAN：4937920801201

6. Additional Documentation and User Support

The following documents and other supports are available at
https://www.hdl.co.jp/en/faspc/USB/usb-303

- User's Manual
  … and more.

7. Attachment Documentations

- Outline drawing

8. Warranty and Compensation

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

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