

### I-7513

#### Three Way Isolated RS-485 Active Star Wiring Hub



## 4-3

RS-485 Repeater/Hub/Splitter

### Features ▶▶▶▶

- RS-485 Active Star Wiring Applications
- 3000 V<sub>DC</sub> Three Way Isolation Protection
- Power Input, +10 ~ +30 V<sub>DC</sub>
- DIN-Rail
- Automatic RS-485 Direction Control
- ESD Protection for the RS-485 Data Line
- Operating Temperatures, -25 °C ~ +75 °C

### Introduction

The I-7513 is a 3-ch RS-485 Active Star Wiring Hub. The unit has three independent RS-485 output channels, each with their own driver, which can transmit signals across 4,000 ft (1200 m) of cable on each channel.

The I-7513 includes both Hub and Repeater functions, so each output channel can be connected to another hub.

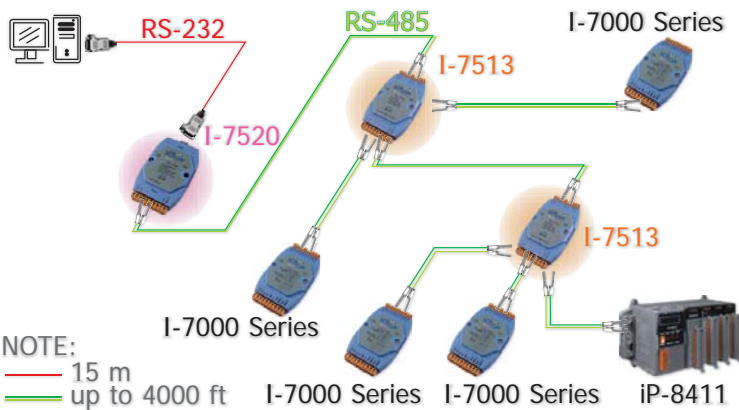
The isolation site of the I-7513 is located in the input and output interface circuit. In other words, the I-7513 is a three-way isolation module.

### System Specifications

<b>Interface</b>	
Input	1 RS-485 Channel: Data+, Data-
Output	3 RS-485 Channels: Data+, Data-
Transfer Distance	Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change)
Self-Tuner Asic Inside	Yes
Speed	300 ~ 115200 bps
ESD Protection	Yes
3000 V <sub>DC</sub> Three Way Isolated Protection	Yes
Connection	Removable 10-Pin Terminal Block x 2
<b>LED Indicators</b>	
Power/Communication	Yes
<b>Power</b>	
Input Voltage Range	+10 V <sub>DC</sub> ~ +30 V <sub>DC</sub> (Non-isolated)
Power Consumption	2.16 W
<b>Mechanical</b>	
Casing	Plastic
Flammability	Fire-Retardant Materials (UL94-V0 Level)
Dimensions (W x H x D)	72 mm x 122 mm x 35 mm
Installation	DIN-Rail
<b>Environment</b>	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +75 °C
Humidity	10 ~ 90% RH, non-condensing

I-7513

### Applications



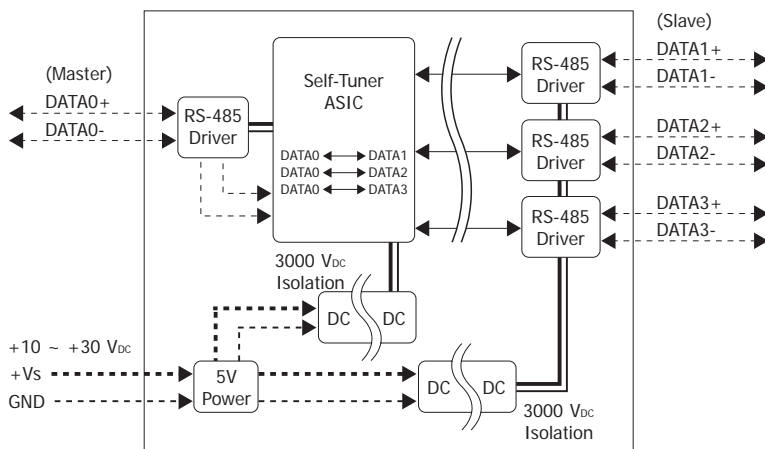
### Pin Assignments



LED	Color	Description
PWR	Red	Power is On
TxD	Green	Data transmission

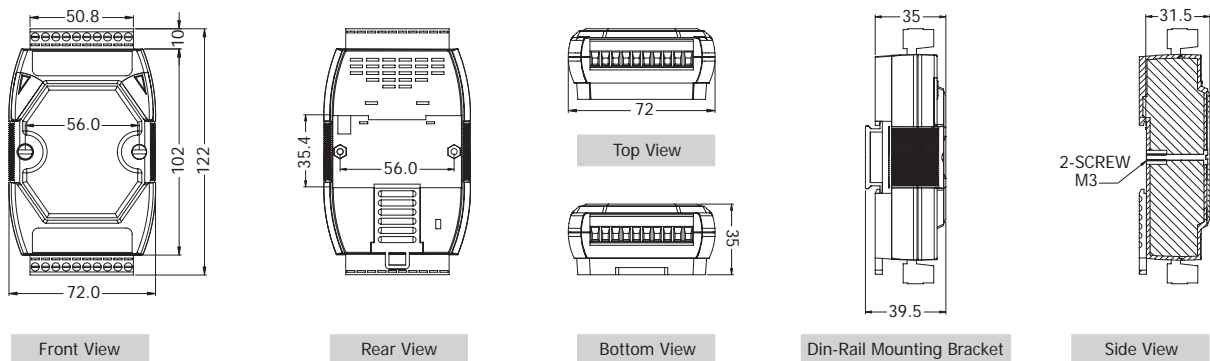
Terminal No.	Pin Assignment
01	DATA+
02	DATA-
03	--
04	--
05	--
06	--
07	--
08	--
09	(R)+Vs
10	(B)GND
11	DATA3-
12	DATA3+
13	--
14	DATA2-
15	DATA2+
16	--
17	--
18	--
19	DATA1-
20	DATA1+

### Internal I/O Structure



The following block diagram shows how I-7513 was designed as independent channel. Data coming from the master input will be transmitted to all four RS-485 slave channels. But data coming from the slave channels will be returned to the master input only. Thus reduces the possibility of interference between each RS-485 slave loop and makes the RS-485 networks more robust and reliable.

### Dimensions (Unit: mm)



I-7513

### Ordering Information

I-7513 CR	Three Way Isolated RS-485 Active Star Wiring Hub (RoHS)
I-7513-G CR	Three Way Isolated RS-485 Active Star Wiring Hub (Gray Cover) (RoHS)

### Accessories

GPSU06U-6	24 Vdc/0.25 A, 6 W Power Supply
DIN-KA52F	24 Vdc/1.04 A, 25 W Power Supply with Din-Rail Mounting