

## 4.3. RS-485 Star Wiring Hub



### I-7513

Three Way Isolated RS-485 Active Star Wiring Hub

### 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.

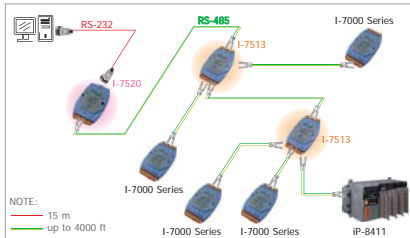
The isolation site of the I-7513 is located in the input and output interface circuit. In other words, the I-7513 is a three-way isolation module.

### Features

- RS-485 Active Star Wiring Applications
- Auto Switching Baud Rate, 300 ~ 115200 bps
- 3000 V<sub>DC</sub> Three Way Isolation Protection
- ESD Protection for the RS-485 Data Line
- Power Input, +10 ~ +30 V<sub>DC</sub>
- Operating Temperatures, -25 °C ~ +75 °C
- DIN-Rail



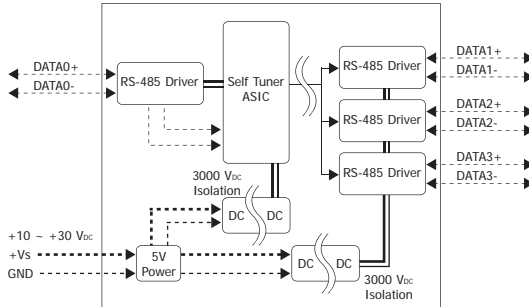
### Applications



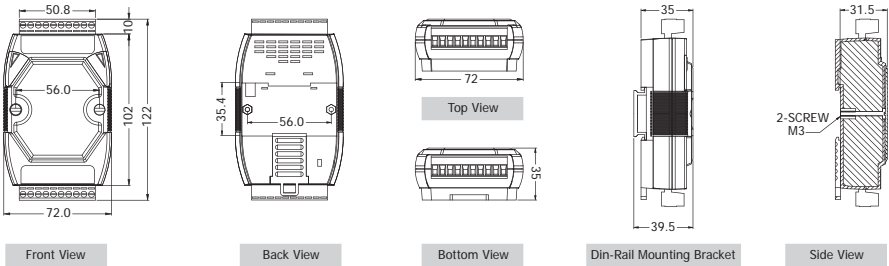
### Specifications

<b>Interface</b>	
Input	1 RS-485 Channel: Data+, Data-
Output	3 RS-485 Channels: Data+, Data-
2-wire Cabling	Belden 8941 (2P twisted-pair cable), if different cables are used, the transmission distance may change
Transfer Distance	Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps
Max. Devices Supported	256 (Each channel)
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

## Internal I/O Structure



## Dimensions (Unit: mm)



## Pin Assignments

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

## 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 V <sub>dc</sub> /0.25 A, 6 W Power Supply
DIN-KA52F	24 V <sub>dc</sub> /1.04 A, 25 W Power Supply with Din-Rail Mounting