Troubleshooting

Q. What are the factory presets?
A. "2-Wire" RS-485 half duplex operation; echo off, bias in, termination out.
Switches 1, 2, 3, 4, 5 = ON
Switch 6 = OFF.
Switches 7, 8 = Not used.

Q. I want to use "4-Wire" RS-485, but the "4-Wire" RS-485 devices do not respond with data.
A. When this unit is used to talk to a "4-Wire" device that does not have biasing across the RS-485 receiver lines, it may be necessary to set the Transmitter to RS-422 Transmit mode: Switch 1 = OFF.

This setting can be used providing that the master is on the opposite side of the repeater. No other 4-Wire device can be connected to the transmit lines on the side set for RS-422 transmit. The #485OPDRI has switches to enable separate Transmit bias & Receive bias.

Biasing
Bias is provided by 4.7kΩ pull-up/down resistors on the Data In lines. This value is adequate for most applications without termination.

LED Indicators

LED	STATUS	DESCRIPTION
Data 1, 2	Both ON	Power present. No data is being sent.
	Both Flashing	Power present. Data is being sent.
	Both OFF	No power.

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Recommended Accessories

Model MDR-20-24
Power Supply

Model HESP4DR
Data Line Surge Suppressor

B+B SmartWorx
Powered by ADVANTECH

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QUICK START GUIDE

485OPDR-HS

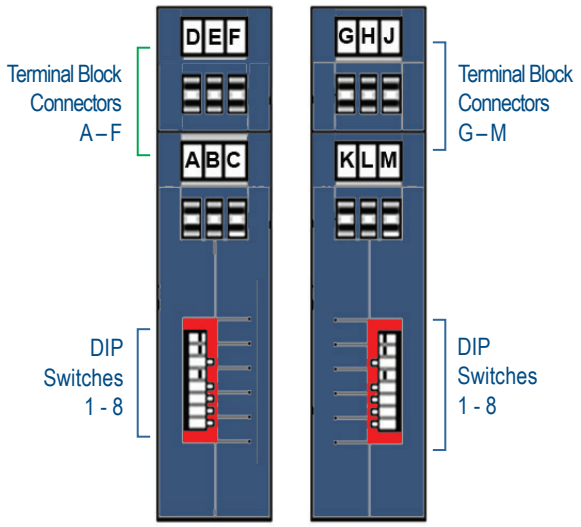
High-Speed, Isolated
RS-422/485 Repeater

Before you begin, be sure you have the following:

+ 485OPDR-HS Repeater
+ 10-30VDC, 0.7W Power Supply
+ RS-422/RS-485 Cable

B+B SmartWorx
Powered by ADVANTECH

Product Overview



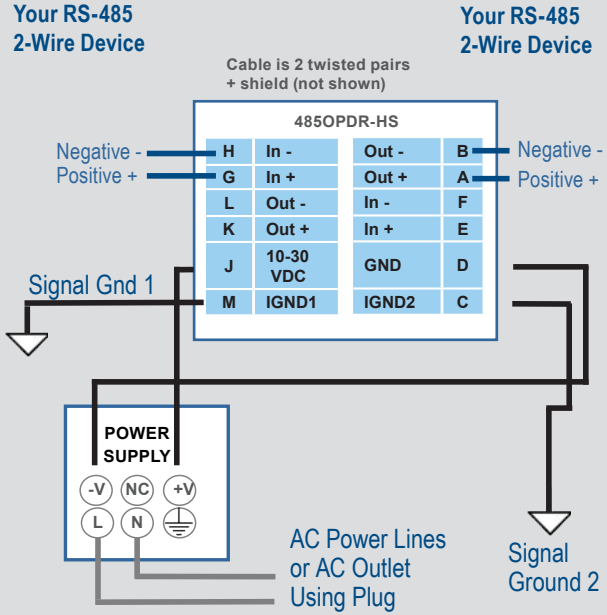
Power Requirement
10 - 30 VDC, steady state
In-Rush Current at 24 VDC = 750 mA for 500 µS

1 Connections

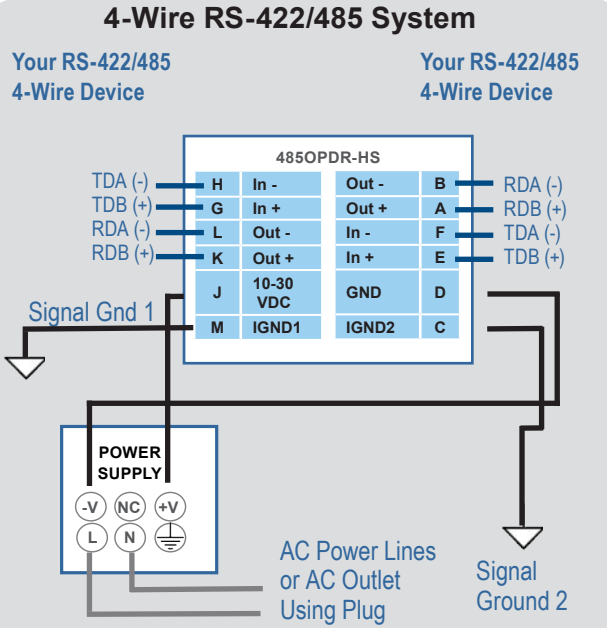
TERMINAL BLOCK	SIGNAL	
A	OUT (+)	A-F Side
B	OUT (-)	
C	Signal Ground	
D	Power Ground	
E	IN (+)	
F	IN (-)	
G	IN (+)	G-M Side
H	IN (-)	
J	+10 to 30 VDC	
K	OUT (+)	
L	OUT (-)	
M	Signal Ground	

2 Wiring Examples

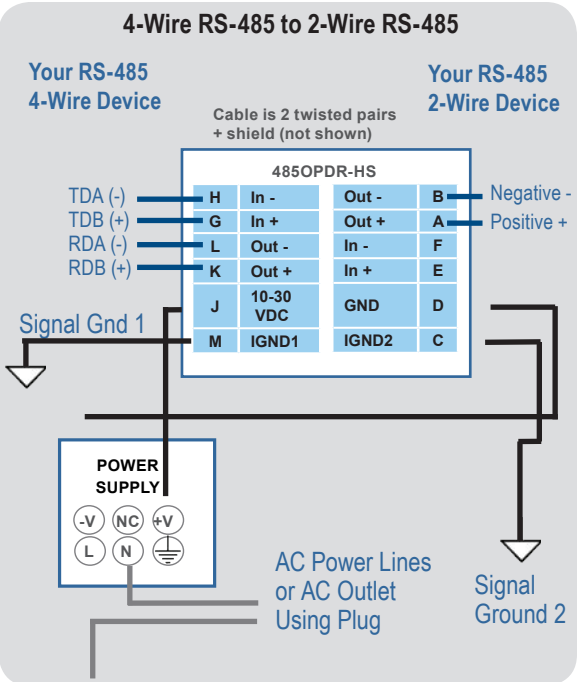
2-Wire RS-485 System



4-Wire RS-422/485 System



4-Wire RS-485 to 2-Wire RS-485



NOTE: 2-Wire masters are not able to support 4-Wire slaves without data loss due to timing issues.

3 DIP Switches

RS-422, 2-Wire RS-485, or 4-Wire RS-485

Sample Settings

2-Wire RS-485 Half-Duplex Operation
Switches 1, 2, 3, 4, 5 = ON
Switch 6 = OFF
Switches 7, 8 = Not Used

4-Wire RS-485 Operation
Switch 1 = ON
Switches 2, 3, 4 = OFF
Switch 5 = ON
Switch 6 = OFF
Switches 7,8 = Not Used

4-Wire RS-422 Operation
All Switches = OFF

	RS-485	Echo Off	2W	2W	Bias IN	Term IN	Not Used	Not Used
Switch	1	2	3	4	5	6	7	8
Position	ON	ON	ON	ON	ON	ON	***	***
	OFF	OFF	OFF	OFF	OFF	OFF	***	***
	RS-422	Echo On	4W	4W	Bias OUT	Term OUT	Not Used	Not Used