

5 | UL Class1/Division 2 Warning Information

POWER, INPUT AND OUTPUT (I/O) WIRING MUST BE IN ACCORDANCE WITH CLASS I, DIVISION 2 WIRING METHODS [ARTICLE 501.10(B) OF THE NATIONAL ELECTRICAL CODE, NFPA 70] AND IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

WARNING – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

ATTENTION - DANGER D'EXPLOSION - LA SUBSTITUTION DE COMPOSANTS PEUT ENTRAÎNER UNE ADÉQUATION À LA CLASSE I, DIVISION 2.

WARNING – EXPLOSION HAZARD – WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES.

ATTENTION - DANGER D'EXPLOSION - LORSQU'IL EST DANS DES ENDROITS DANGEREUX, COUPER L'ALIMENTATION AVANT DE REMPLACER OU DE RACCORDER LES MODULES.

WARNING – EXPLOSION HAZARD – DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NONHAZARDOUS.

ATTENTION - DANGER D'EXPLOSION - NE PAS DÉCONNECTER L'ÉQUIPEMENT PENDANT QUE LE CIRCUIT EST VIVANT OU À MOINS QUE LA ZONE NE SAIT ÊTRE EXEMPTÉ DE CONCENTRATIONS IGNIFIABLES.

Recommended Accessories

DIN Rail Power Supply
Model# MDR-20-24



Dateline Surge Suppressor
Model# HESP4DR



B+B SMARTWORX

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+ QUICK START GUIDE



Model 485OPDRI

3-way Isolated
RS-422/485 Repeater

Before you begin, be sure you have the following:

- + Model 485OPDRI
- + Required but not included:
 - Power Supply, 10 to 48VDC
 - RS-422/485 Cable

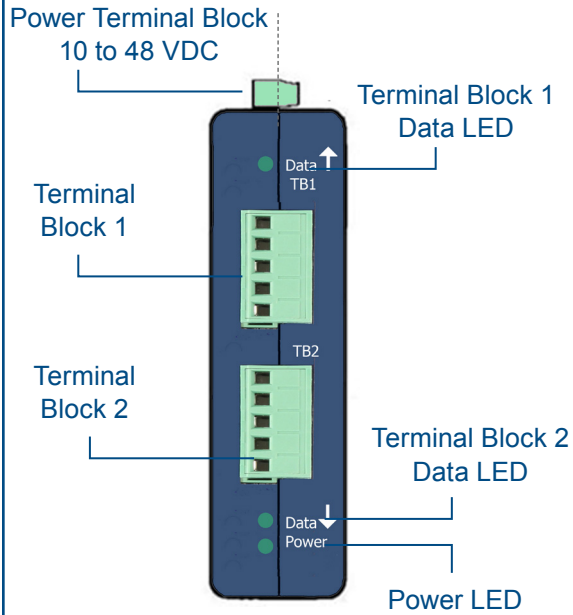
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Product Overview



Built-In Termination Resistor	
Switch	5
Use the 120 Ω Built-in Termination	ON
Use External or No Termination	OFF

Built-In Transmit Bias Resistor	
Switch	6
Use the 1.2K Ω Built-in Bias Resistor	OFF
Use External or No Bias Resistor	ON

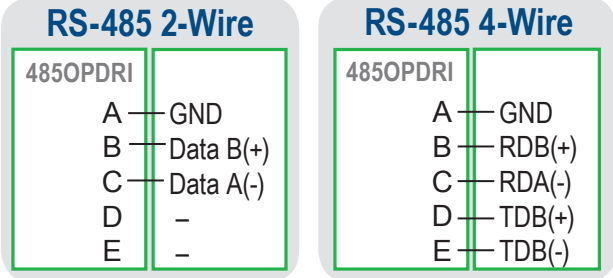
Built-In Receive Bias Resistor	
Switch	7
Use the 1.2K Ω Built-in Bias Resistor	OFF
Use External or No Bias Resistor	ON

3 RS-422/485 Timeout

Switch Selectable						
Baud (kbps)	8	9	10	11	12	Timeout (ms)
2.4	ON	OFF	OFF	OFF	OFF	4.37
4.8	OFF	ON	OFF	OFF	OFF	2.03
9.6	OFF	OFF	ON	OFF	OFF	1.02
19.2	OFF	OFF	OFF	ON	OFF	0.57
38.4	OFF	OFF	OFF	OFF	ON	0.27

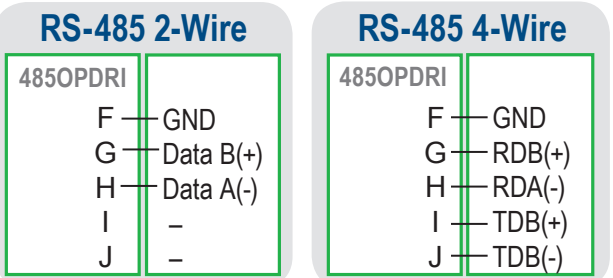
Resistor Selectable			
Baud (kbps)	8-12	R-11 Value	Timeout (ms)
1.2	OFF	820 KΩ	8.32
57.6	OFF	16 KΩ	0.16
115.2	OFF	8.2 KΩ	0.08
230.4	OFF	4.3 KΩ	0.04
460.8	OFF	2.2 KΩ	0.02

2 Wire the Repeater



DIP Switch				RS-485 2-Wire		
1	2	3	4	5	6	7
ON	ON	ON	ON	**	**	**

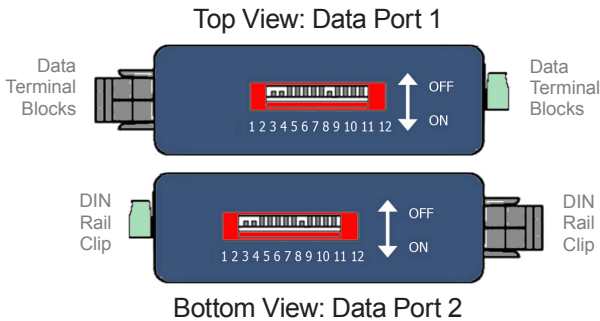
Positions 5-7 are used for termination and biasing
Positions 8-12 are used to set the baud rate



DIP Switch				RS-422/485 4-Wire		
1	2	3	4	5	6	7
**	OFF	OFF	OFF	**	**	**

Position 1 = ON for RS-485
Position 1 = OFF for RS-422
Positions 5-7 are used for termination and biasing
Positions 8-12 are used to set the baud rate

1 Set DIP Switches



Communications Mode	Switch			
	1	2	3	4
RS-485 2-Wire Half-Duplex	ON	ON	ON	ON
RS-485 4-Wire Full-Duplex	ON	OFF	OFF	OFF
RS-422 Full-Duplex	OFF	OFF	OFF	OFF

Pre-defined timeouts are set using switches 8 through 12. Resistor selectable baud rates are set by inserting a through-hole resistor (R-11) on the circuit board.

Timeout selections are equal to one character time at the indicated baud rate. Setting the converter to 9600 will generally work at 9600 and higher baud rates. In RS-422 mode, timeouts are not required.

4 Check LEDs

LEDs	
TB1 LED	Flashes RED when RS-422/485 data is transmitted on TB1.
TB2 LED	Flashes RED when RS-422/485 data is transmitted on TB2.
Power LED	RED when power is applied.