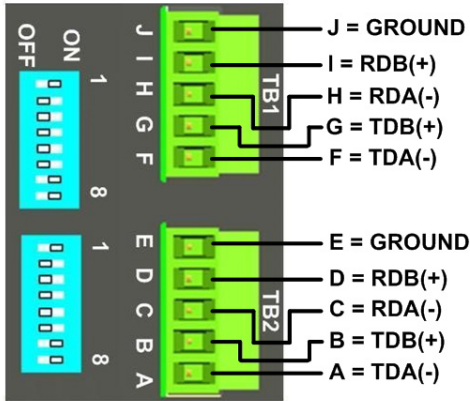


+ RS-422 / 4-Wire RS-485 Example



DIP SWITCH

1	2	3	4	5	6	7
X	OFF	OFF	OFF	x	x	x

Position 1 = ON for RS-485, OFF for RS-422.
Positions 5, 6, 7 are used for termination and biasing. (See Section #2.)
Position 8 is NOT used.

7 | Operation

1. During normal operation, the Power LED should be illuminated.
2. When data is sent or received on either port, the corresponding Data LED should flash.

8 | UL Class 1 / Division 2

SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.

CONVENANT À L'EMPLOI DANS LES SITES DANGEREUX DE CLASSE I, DIVISION 2, GROUPES A, B, C ET D, OU DANS LES SITES NON HASARDEUX SEULEMENT.

WARNING - EXPLOSION HAZARD - SUBSTITUTION OF ANY COMPONENT 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 - DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.

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

Field wiring connections must be made using 105 °C minimum copper supply wires.

Les connexions de câblage sur site doivent être réalisées en utilisant des câbles d'alimentation en cuivre de 105 °C minimum.

To be installed in accordance with control drawing 8513r001.
Pour être installé conformément au dessin de contrôle 8513r001.

+ Recommended Accessories

Power Supply
Model# MDR-20-24



DIN Rail Adapter
Model# DRAD35



B+B SMARTWORX

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+ QUICK START GUIDE



Model 485OPDRI-PH
3-Way Isolated RS-422/485 Repeater

Before you begin, be sure you have the following:

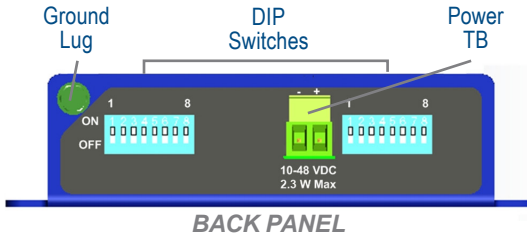
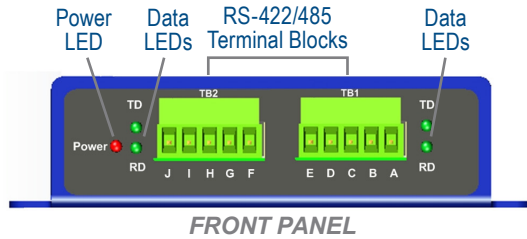
- + 485OPDRI-PH Repeater
- + 10 to 48VDC Power Supply

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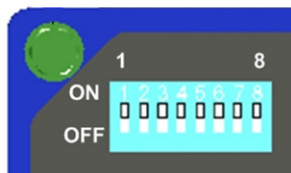
Fast and easy on the web: www.advantech-bb.com

1 Product Overview



Power LED	Red = ON when power is applied.
Data LEDs	Green = LEDs flash when data is on port.
RS-422/485 TB	5-position, removable terminal block.
Ground Lug	Chassis Ground to Earth Ground.
DIP Switches	Used to configure serial mode.
Power TB	2-position, removeable terminal block.

2 DIP Switch Configuration



+ Switch position 8 is not used.

Highlighted settings indicate factory default. Switch functions are identical for each port.

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

BUILT-IN TERMINATION RESISTOR	SWITCH
Use Built-in 120Ω Termination	ON
Use External or No Termination	OFF

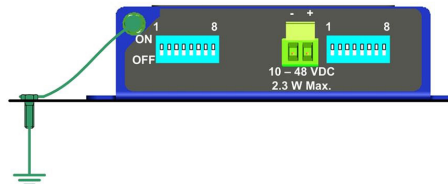
BUILT-IN TRANSMIT BIAS RESISTOR	SWITCH
Use External or No Bias Resistor	ON
Use Built-in 1.2KΩ Transmit Bias Resistor	OFF

BUILT-IN RECEIVE BIAS RESISTOR	SWITCH
Use External or No Bias Resistor	ON
Use Built-in 1.2KΩ Receive Bias Resistor	OFF

For an explanation of RS-485 termination and biasing requirements, refer to the B+B SmartWorx RS-485 Application Note. Download at: www.advantech-bb.com

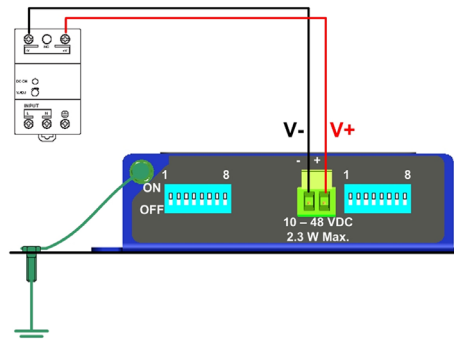
3 Ground Connection

- + 1. Grounding the unit is recommended.
- 2. Connect a grounding wire from the Ground Lug to a good Earth Ground source.

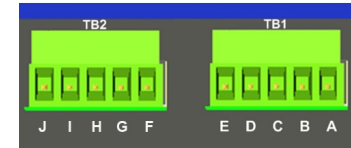


4 Power Connection

- + 1. Connect power. Power Requirements: 10 to 48 VDC, 2.3W, max.
- 2. Terminal block will accept 28 to 12 AWG wire.



5 RS-422/485 Terminal Blocks

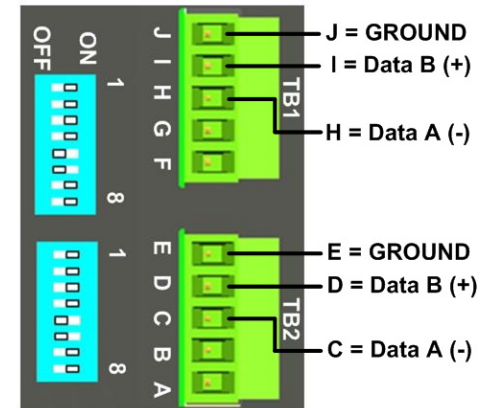


TERMINAL	RS-485 2-WIRE	RS-422/485 4-WIRE
A & F	***	TDA (-)
B & G	***	TDB (+)
C & H	Data A (-)	RDA (-)
D & I	Data B (+)	RDB (+)
E & J	GROUND	GROUND

6 Wiring Examples

2-Wire RS-485 Example

See Section #1 for wire recommendation.



DIP SWITCH						
1	2	3	4	5	6	7
ON	ON	ON	ON	x	x	x

Positions 5, 6, 7 are used for termination and biasing. (See Section #2.) Position 8 is NOT used.

(Continued)