

Quick Start Guide

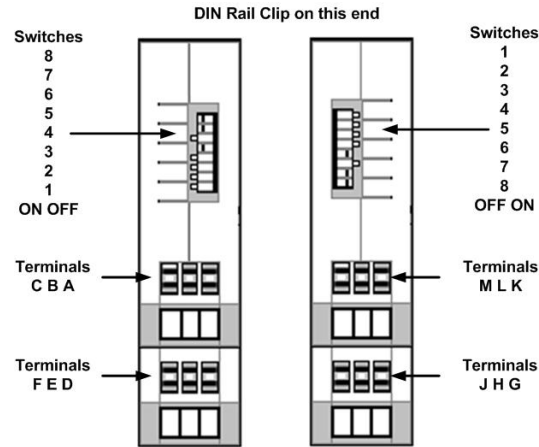
485OPDR

Optically Isolated RS-422/485 Repeater



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Information – Connectors



Terminal Block	Signal	
A	OUT (+)	Isolated
B	IN (+)	
C	PROTECTED GROUND	
D	OUT (-)	
E	IN (-)	
F	SIGNAL GROUND	
G	IN (-)	Non-Isolated
H	OUT (-)	
J	+10 TO 30 VDC	
K	IN (+)	
L	OUT (+)	
M	GROUND	

Bias is provided by 4.7kΩ pull-up/down resistors on the data in lines. This value is adequate for most application without termination. If another value is required, space is provided on the PCP for through hole resistor placement (R12, R21, R14, and R23)

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Information - DIP Switch

Communications Mode

	SW-7 TX Enable	SW-8 RX Enable
RS-485 2-Wire Half Duplex	ON	ON
RS-485 4-Wire Full Duplex	ON	OFF
RS-422 Full Duplex	OFF	OFF

Timeout Selection

K baud	Switch						Timeout (ms)	#
	1	2	3	4	5	6		
1.2 #	OFF	OFF	OFF	OFF	OFF	OFF	9.02	#
2.4	ON	OFF	OFF	OFF	OFF	OFF	4.73	#
4.8	OFF	ON	OFF	OFF	OFF	OFF	2.20	#
9.6	OFF	OFF	ON	OFF	OFF	OFF	1.10	#
19.2	OFF	OFF	OFF	ON	OFF	OFF	0.62	#
38.4	OFF	OFF	OFF	OFF	ON	OFF	0.29	#
57.6	OFF	OFF	OFF	OFF	OFF	ON	0.17	#
76.8	OFF	OFF	OFF	ON	OFF	ON	0.15	#
115.2	OFF	OFF	OFF	ON	ON	ON	0.11	#
153.6 #	OFF	OFF	OFF	OFF	OFF	OFF	0.07	#
230.4 #	OFF	OFF	OFF	OFF	OFF	OFF	0.05	#
460.8 #	OFF	OFF	OFF	OFF	OFF	OFF	0.02	#

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

To achieve these timeouts you must place a through-hole resistor on the circuit board. See Step 5 for more information.

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Check for All Required Hardware

- ❑ 485OPDR Optically Isolated Repeater
- ❑ This Quick Start Guide
- ❑ Additional Items Required but not included
 - Power Supply (10 to 30 VDC, 0.7 W)
 - RS-422/485 Cable.

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UL Installation Information

Underwriters Laboratories Conditions of Acceptability – When installed in the end-use equipment, consideration should be given to the following:

1. The wiring terminals are suitable for factory wiring only.
2. This device is to be mounted in a suitable enclosure in the end-product.
3. This device is suitable for operation at a maximum surrounding air temperature as described in the documentation.
4. These devices are intended for use in a pollution degree 2 environment.

- Input Voltage: 10 – 30 VDC
- Input Power: 0.7 Watts
- Wire Range: 12 – 24 AWG
- Tightening Torque: 4 kgf-cm
- Temperature rating of field installed conductors is 105 C minimum, sized for 60 C ampacity.
- Use copper wire only
- Maximum surrounding ambient air temperature 80 C.

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Through-hole resistor placement (Optional)

If you need to support timeouts indicated with a # in Step 4, you must place through-hole resistors on the PCB. Place the resistor in the R-7 and R-28 spot designated on the board. Switches 1 through 6 must be turned OFF.

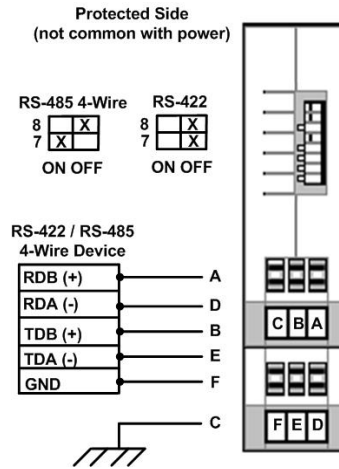
Through-hole Resistor Values

K Baud	Timeout (MS)	R-7 / R-28 Value
1.2	9.02	820 k Ω
153.6	0.07	6.2 k Ω
230.4	0.05	4.3 k Ω
460.8	0.02	2 k Ω

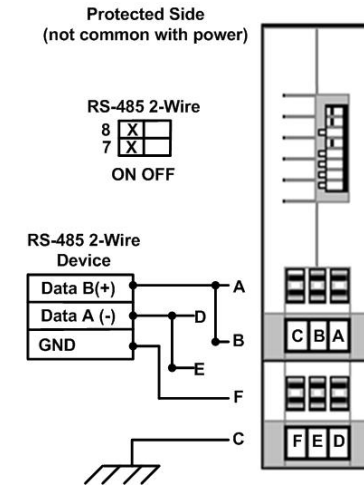
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Wiring Examples

RS-422 / 4-Wire RS-485

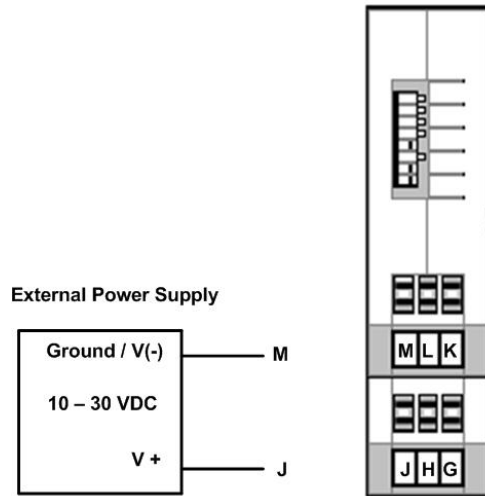


2-Wire RS-485



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Power Connection



Isolated Repeater uses 0.7 W

