





## General Specifications

Power Input	24~VDC / 125VDC / 12VDC	
	Redundant power inputs	
Power Consumption	150mA @ 24VDC or 3.6 Watt	
DC Input Isolation (In/Out)	1.5KV	
Voltage Reversal Protection	Will operate with V+ or V- in either power terminal	
Over Current Protection	1.0A (Automatic Recovery)	
LED	POWER	DC Power OK
	FIBER	Fiber Connection OK
	232	RS-232 Copper Receive
	485	RS-485/422 Copper Receive
Temperature	Storage	-40°C to +85°C (-40°F to +185°F)
	Operating	-40°C to +70°C (-40°F to +158°F)
Dimensions/ Mounting	H 4.93" x W 1.20" x D 3.93" (not including DIN clip, wall mount brackets)	
Warranty	Limited Lifetime	

Transmission Method	Frequency modulated light via two optical fibers									
	Multimod	1310nm								
	Single-Mode	1310/1550nm								
Maximum Fiber Attenuation / Distance*	Single Fiber	Single-mode (8~9/125µm)								
	Dual Fiber	Multimode (50/62.5/125µm)								
		Single-mode (8~9/125µm)								
	<i>*Note: Distances equated using industry standard fiber and connector attenuation. Fiber condition, splices and connectors may affect actual range.</i>									
Connector Type	ST or SC Multimode or Single-mode									
Power Margin	11dB(2Km, M/M), 12dB ~ 35dB (20 ~ 120Km, S/M)									
Protocols	RS-232 and RS-485/422									
Latency	100ns									
Serial Signaling	RS-232	TX, RX, Ground								
	RS-485/422	TX-, TX+, RX-, RX+, Ground [DIP Switch - 4 Wire Function]								
	RS-485	TX+ (Data +), TX- (Data -), Ground [DIP Switch - 2 Wire Function]								
Connectors	Terminal Block									
Dip Switches	(1) Specifies 2 Wire or 4 Wire RS-485/422 operation (2) Provides 120 ohm termination resistance									
RS-485/422 Biasing	Use rotary dials for impedance adjustment. *Default position is 9									
Pull Low	0	1	2	3	4*	5	6	7	8	9
Rotary Dial Ω	0.250M (OL)	9.67K	4.9K	3.29K	0.993K	0.903K	0.828K	0.769K	0.496K	0.473K
Pull High	0	1	2	3	4*	5	6	7	8	9
Rotary Dial Ω	0.256M (OL)	10.56K	5.83K	4.22K	1.949K	1.861K	1.786K	1.723K	1.458K	1.435K
Signal Isolation	Optical Isolation 3.75 KV									
Baud Rates	50bps- 921.6kbps Automatic Detection									
Supports	DNP / DFI / Modbus / Profibus									

## Ordering Information

Optics	Side	Distance	Wavelength	Fiber	Part Number
Dual Fiber Multimode SC	-	2 km/1.2 mi	1310nm	50/62.5 $\mu$ m	SDD-03-3
Dual Fiber Multimode ST	-	2 km/1.2 mi	1310nm	50/62.5 $\mu$ m	SDD-04-3
Single Fiber Single-mode SC	A	20km/12.4mi.	Tx 1310nm / Rx 1550nm	8~9 $\mu$ m	SDD-10-3
	B	20km/12.4mi.	Tx 1550nm / Rx 1310nm	8~9 $\mu$ m	SDD-11-3
	A	60km / 37mi.	Tx 1310nm / Rx 1550nm	8~9 $\mu$ m	SDD-14-3
	B	60km / 37mi.	Tx 1550nm / Rx 1310nm	8~9 $\mu$ m	SDD-15-3
Dual Fiber Single-mode SC	-	20km/12.4mi.	1310nm	8~9 $\mu$ m	SDD-40-3
	-	60km / 37mi.	1310nm	8~9 $\mu$ m	SDD-41-3
	-	120km / 74 mi.	1550nm	8~9 $\mu$ m	SDD-45-3
Dual Fiber Single-mode ST	-	20km/12.4mi.	1310nm	8~9 $\mu$ m	SDD-50-3
	-	60km / 37mi.	1310nm	8~9 $\mu$ m	SDD-51-3
	-	120km / 74 mi.	1550nm	8~9 $\mu$ m	SDD-55-3

- ▶ For the 125VDC input power option, please note the part number by adding **-A** to the end.
- ▶ For the 12VDC input power option, please note the part number by adding **-B** to the end.
- ▶ Bidirectional single fiber models require an **A** Side and **B** Side unit for a complete system.
- ▶ RLH SDD-XX-3 models are not backwards compatible with SDD-XX-2 models.
- ▶ Please contact your RLH sales representative for pricing and delivery information.