



Quick Installation Guide

ISC Series

Industrial Serial Media Converter

Introduction

ISC Series are industrial media converters provide media conversion for RS-232 and RS-422/485 interfaces. ISC Series are ABS housing design and supporting an operating temperature of -10°C to 70°C. ISC Series (-I Model) Opto-isolations provide 3000 VDC of isolation to protect the host computer loops and destructive voltage spikes. Internal high-speed transient suppressors on each data line protect the modules from dangerous voltages levels or spikes. Therefore, the ISC Series is reliable media converter and can satisfy most demand of operating environment.

The ISC-1212-I RS-422/485 repeater boosts the RS-422/485 signals to extend the reach distance up to 4000 ft (1200m) and increase the maximum number of connected nodes up to 128. With a special circuitry, ISC-1212-I is able to automatically detect the data flow and switch the direction of the data lines accordingly. "Auto baud rate detector" enables ISC-1212-I to automatically configure RS-422/485 signals to any baud rate without external switch setting.

The ISC-1210U-I/ISC-1310U-I converter is an intelligent, stackable expansion module that connects to PC USB port or USB Hub via the Universal Serial Bus(USB) port, providing one High-Speed RS-232/RS-422 or RS-485 serial port(jumperless). The ISC-1210U-I/ISC-1310U-I feature easy connectivity for serial devices. The RS-232 standard supports full-duplex communication and handshaking signals (such as RTS, CTS) and The RS-485 control is completely transparent to the user and software written for half-duplex COM works without any modification. The ISC-1210U-I/ISC-1310U-I module derives the power from USB port and doesn't need any aid of external power adapter.

Features

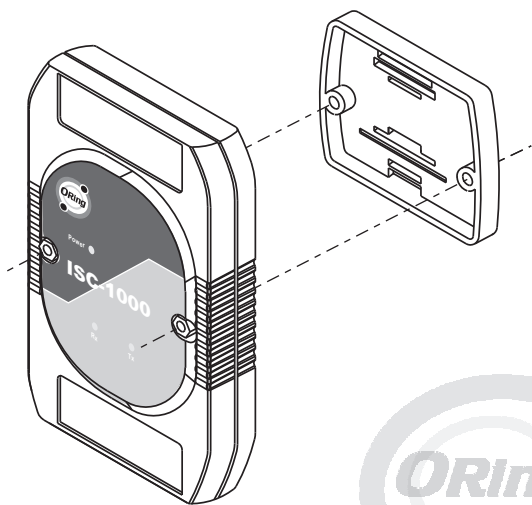
- > Auto switching baud rate from 300 ~ 115200 bps
- > Wide operating temperature range from -10°C to 70°C
- > Provide 3000 VDC isolation protection by -I model
- > Automatic internal RS-422/485 bus supervision
- > Reach distance up to 4000 feet (1200 m) for RS-422/485 interface
- > RS-232/RS-422 support RTS/CTS handshake signals (-U Model only)
- > Auto detect and switching for USB to RS-232/422/485 (ISC-1310U-I)
- > Power requirement: +9 to +30 VDC
- > ABS with captive mounting hardware design
- > Mounts easily on DIN-rail or panel

Specifications

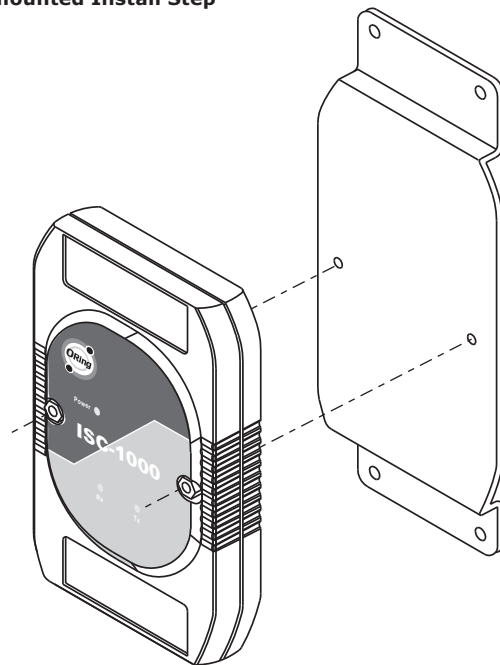
ORing Media Converter Model	ISC-1112	ISC-1112-I	ISC-1212-I	ISC-1210U-I	ISC-1310U-I
Physical Ports					
USB V1.1 port (B-Type)	-	-	-	1	1
DB9 Connector (Female)	1	1	-	-	-
10-pin Terminal Block	1	1	2	1	1
Baud Rate	300 ~ 115.2 Kbps				
Data bit	5, 6, 7, 8				
Stop bit	1, 1.5, 2				
Parity	None, Even, Odd, Space, Mark				
Flow Control	XON / XOFF (software) Auto Hardware Director Contro for RS-485 Interface			XON / XOFF (software) RTS / CTS (Hardware) Auto Hardware Director Contro for RS-485 Interface	
Signal	RS-232: TxD, RxD, GND		RS-232: -	RS-232: -	RS-232: TX, RX, RTS, CTS, GND
	RS-422: TxD+, TxD-, RxD+, RxD-		RS-422: TX+, TX-, RX+, RX- RTS+, RTS-, CTS+, CTS-, GND		RS-422: TX+, TX-, RX+, RX-, GND
	RS-485: Data+, Data-, GND				
LED Indicator					
Power Indicator	Green: Power LED x1				
TxD Indicator	Green LED x1				
RxD Indicator	Red LED x1				
Power					
Input power	+9~30 VDC power inputs in 10-pin terminal block			USB bus power (self power)	
Power consumption(Typ.)	2.2 Watts		0.7 Watts	0.65 Watts	
Protection					
Isolation	-	3000 VDC			
Drive Support					
O.S.	Windows 95/98/ME/2000/XP, Linux				
Physical Characteristic					
Enclosure	ABS				
Dimension (W x D x H)	71.2 (W)mm x 25.3 (D)mm x 100.6 (H)mm (2.8x1x3.96 inch)				
Weight (g)	110 g	112 g	128 g	114 g	110 g
Environmental					
Storage Temperature	-25 to 85°C (-13 to 185°F)				
Operating Temperature	-10 to 70°C (14 to 158°F)				
Operating Humidity	5% to 95% Non-condensing				
Regulatory approvals					
EMI	FCC Part 15, CISPR (EN55022) class A				
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11				
Shock	IEC60068-2-27				
Free Fall	IEC60068-2-32				
Vibration	IEC60068-2-6				
Warranty	2 years				

Installation

DIN-Rail Install Step



Wall-mounted Install Step



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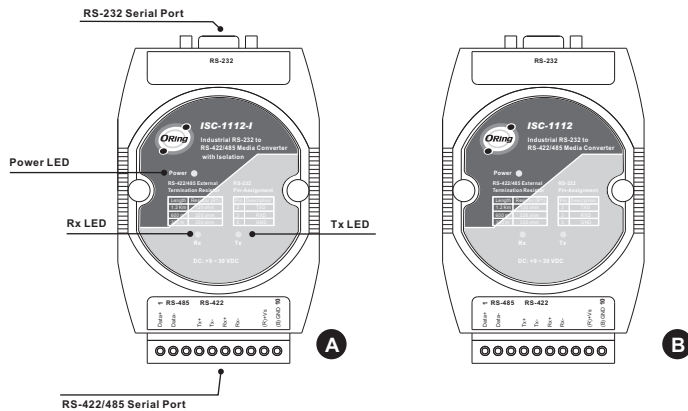
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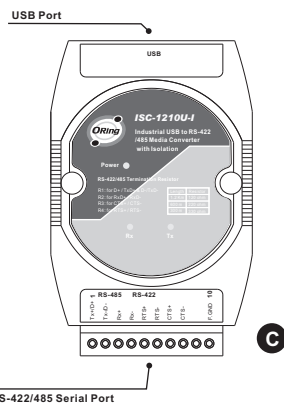
Industrial Serial Media Converter

Front Panel

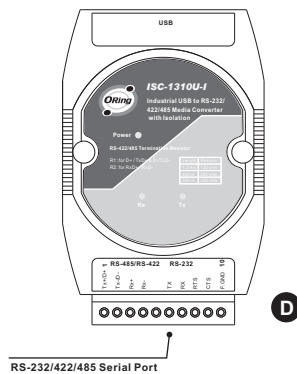
ISC-1112-I / ISC-1112



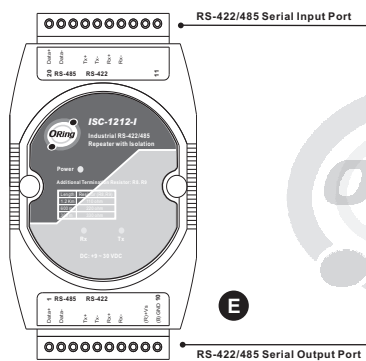
ISC-1210U-I



ISC-1310U-I



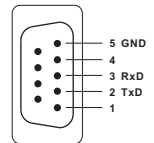
ISC-1212-I



Pin Assignment

ISC-1112-I / ISC-1112 Pin Assignment

Serial Port DB9 Female



10-pin Terminal Block Pin Assignment

RS-422/485 Terminal Block Pin Assignment										
Interface	RS-485		Reserved		RS-422		Reserved		Power Input	
Pin No.	1	2	3	4	5	6	7	8	9	10
Info	Data+	Data-	N.C.	TX+	TX-	RX+	RX-	N.C.	V+	GND

ISC-1210U-I Pin Assignment

RS-422/485 Terminal Block Pin Assignment										
Interface	RS-422/485		RS-422				Reserved			
Pin No.	1	2	3	4	5	6	7	8	9	10
Info	TX+/D+	TX-/D-	RX+	RX-	RTS+	RTS-	CTS+	CTS-	N.C.	GND

ISC-1310U-I Pin Assignment

RS-232/422/485 Terminal Block Pin Assignment										
Interface	RS-422/485		RS-422		Reserved		RS-232			
Pin No.	1	2	3	4	5	6	7	8	9	10
Info	TX+/D+	TX-/D-	RX+	RX-	N.C.	TX	RX	RTS	CTS	GND

ISC-1212-I Pin Assignment

Output RS-422/485 Terminal Block Pin Assignment										
Interface	RS-485		Reserved		RS-422		Reserved			
Pin No.	1	2	3	4	5	6	7	8	9	10
Info	Data+	Data-	N.C.	TX+	TX-	RX+	RX-	N.C.	V+	GND

Input RS-422/485 Terminal Block Pin Assignment										
Interface	RS-485		Reserved		RS-422		Reserved			
Pin No.	20	19	18	17	16	15	14	13	12	11
Info	Data+	Data-	N.C.	TX+	TX-	RX+	RX-	N.C.		

Accessory

- ① Wall-mounted kit
 - ② DIN-Rail kit (ABS)
 - ③ 10-Pin Terminal block
 - ④ QIG
 - ⑤ CD
 - ⑥ USB Cable
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Packing list

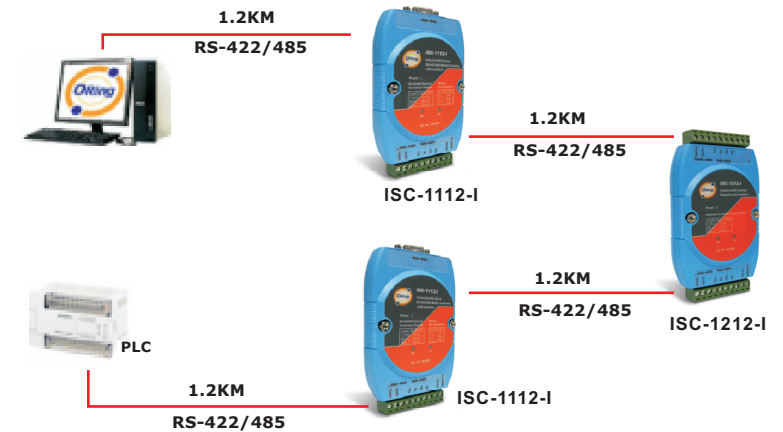
Model name	Front Panel	Model Description	Accessory
ISC-1112-I	A	Industrial 1-port RS-232 to 1-port RS-422/485 serial media converter with 3KV isolation	⊗ X 1, ⊗ X 1, ⊗ X 1, ⊗ X 1
ISC-1112	B	Industrial 1-port RS-232 to 1-port RS-422/485 serial media converter	⊗ X 1, ⊗ X 1, ⊗ X 1, ⊗ X 1
ISC-1210U-I	C	Industrial 1-port USB to 1-port RS-422/485 serial media converter with 3KV isolation	⊗ X 1, ⊗ X 1, ⊗ X 1, ⊗ X 1, ⊗ X 1
ISC-1310U-I	D	Industrial 1-port USB to 1-port RS-232/422/485 serial media converter with 3KV isolation	⊗ X 1, ⊗ X 1, ⊗ X 1, ⊗ X 1
ISC-1212-I	E	Industrial RS-422/485 repeater with 3KV isolation	⊗ X 1, ⊗ X 1, ⊗ X 2, ⊗ X 1

Connections of Media Converter

ISC-1112-I / ISC-1112 Port Connection



ISC-1212-I Port Connection



ISC-1210U-I / ISC-1310U-I Port Connection

