


# Hardware

## RemoteCOM (C20 - C25)

RemoteCOM can be installed on any device from the Redisage C20 - C25 Ethernet Converters family.

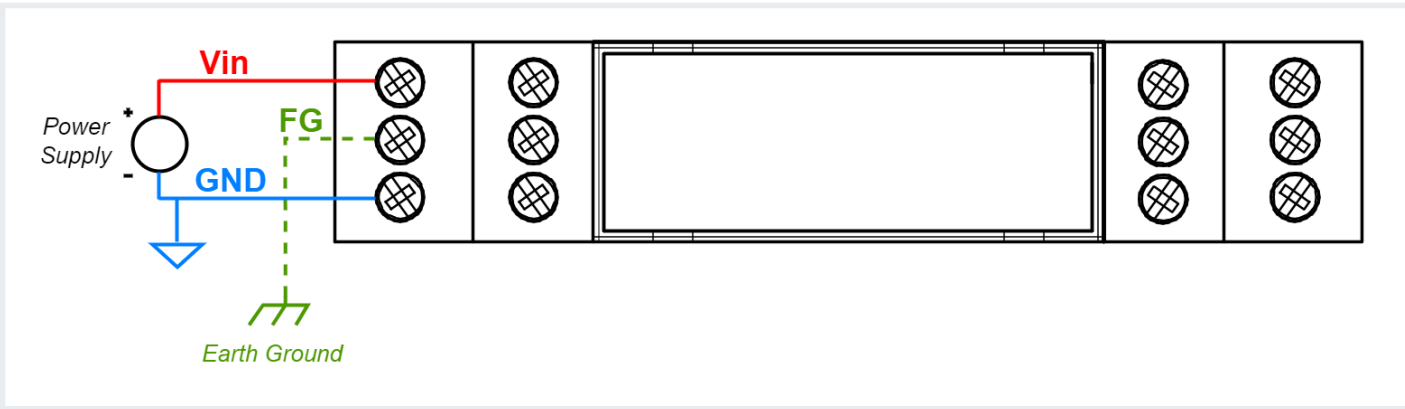
### Features

Features	
Ethernet converter to RS232/RS485	
ESD protection for the RS485 data line	
Power supply: +12 to +30 VDC	
Transmission speed up to 115200 bps	
Tx, Rx and power LED indicators	
RS485 embedded termination 120 ohm	
Operating temperatures: -40°C to +75°C	
DIN rail mounting	
Dimensions: 90x56.4x22.5 mm	
<b>3 years warranty</b>	
<b>Customization of OEM is welcomed</b>	

# Frame ground FG

Electronic circuits are constantly prone to electrostatic discharge ESD. Redisage Electronics modules feature a design for the frame ground terminal block FG. The frame ground provides a path for bypassing ESD, which provides enhanced static protection ESD abilities and ensures the module is more reliable. Connecting FG terminal block to the earth ground will bypass the ESD disturbances outside the device so will provide a better level of protection against ESD.

Frame Ground FG connection reference drawing is provided below.




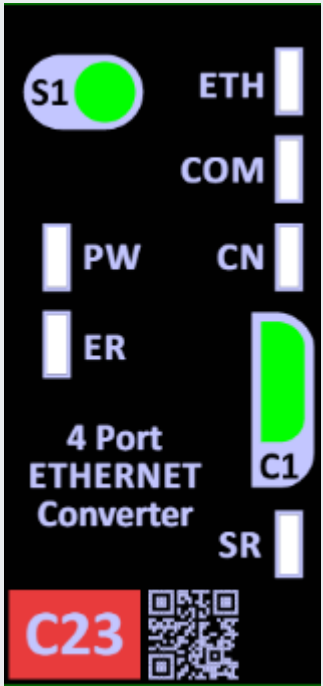
If earth ground is not available FG can be left floating or it can be connected with the power supply GND.

## Specifications

Redisage PN		C20	C21	C22	C23	C24	C25
Ports	RS232	2x	-	-	4x	-	2x
	RS485	-	1x	-	-	4x	2x
	RS232/RS485	-	-	2x	-	-	-
Microcontroller		ESP32			STM32F4		
WiFi		N/A					
Power	Voltage	12-30 VDC					
	Power	< 1 W					

Redisage PN		C20	C21	C22	C23	C24	C25
Frame ground connection		yes					
Baud rate		up to 115200 bps					
LED indicators		communication Tx, Rx and power					
RS485 termination		120 ohm manually enabled					
Connector	RS232/RS485	8-pin terminal block max. 2.5 mm <sup>2</sup> wire					
	Power	3-pin terminal block max. 2.5 mm <sup>2</sup> wire					
	Ethernet	RJ45					
Transmission distance	RS485	max. 1,200 m at 9.6 kbps; max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change)					
	RS232	max. 15 m at 115.2 kbps					
Mounting and enclosure		DIN rail, plastic PA - UL 94 V0, black/green					
Temperatures		-40°C to +75°C operating and storage					
Humidity		10 - 90% RH, non-condensing					
ESD protection		±4 kV contact discharge / ±8 kV air discharge					
Certification		CE, RoHS, EMC, LVD					
Norms		61000-6-2 - Immunity standard for industrial environments 61000-6-4 - Emission standard for industrial environments					

## LED indicators

Converters C20 - C22			Converters C23 - C25		
					
LED indicator	Color	Function	LED indicator	Color	Function
PW	Blue	Power	PW	Blue	Power
ETH	Green	Network activity	ETH	Green	Network activity
ST	Orange	Console mode	CN	Yellow	Console mode
	Red	Service mode	COM	Green	RS232/RS485 activity
			SR	Red	Service mode
			ER	Yellow	Error

Pin assignments

C20

**C20 Ethernet Converter**  
2xRS232

123456789012345

Power: --- 12-30V/DC <1W  
Temperature: -40°C +75°C  
Port: 2xRS232 ETH  
Ethernet: 10/100BaseT  
MAC: 1a2b3c4d5e6f  
REV1 MADE IN EU

4 Vin	8 Tx2	NC	Ethernet RJ45
3 Gnd	7 Rx2		
2 Din	6 Tx1		
1 FG	5 Rx1		

1a2b3c4d5e6f

**RoHS COMPLIANT**

**Redisage ELECTRONICS**

SC - Software Control

C21

**C21 Ethernet Converter**  
1xRS485

123456789012345

Power: --- 12-30V/DC <1W  
Temperature: -40°C +75°C  
Port: 1xRS485 ETHERNET  
Ethernet: 10/100BaseT  
MAC: 1a2b3c4d5e6f  
REV1 MADE IN EU

4 Vin	8 Tx2	12 NC	Ethernet RJ45
3 Gnd	7 Rx2	11 NC	
2 Din	6 Tx1	10 A1	
1 FG	5 Rx1	9 B1	

1a2b3c4d5e6f

**RoHS COMPLIANT**

**Redisage ELECTRONICS**

SC - Software Control

C22

**C22 Ethernet Converter**  
2xRS232/RS485

123456789012345

Power: --- 12-30V/DC <1W  
Temperature: -40°C +75°C  
Port: 2xRS232/RS485 ETH  
Ethernet: 10/100BaseT  
MAC: 1a2b3c4d5e6f  
REV1 MADE IN EU

4 Vin	8 Tx2	12 A2	Ethernet RJ45
3 Gnd	7 Rx2	11 B2	
2 Din	6 Tx1	10 A1	
1 FG	5 Rx1	9 B1	

1a2b3c4d5e6f

**RoHS COMPLIANT**

**Redisage ELECTRONICS**

SC - Software Control

C23

**C23 Ethernet Converter**  
4xRS232

123456789012345

Power: --- 12-30V/DC  
Temperature: -40°C +75°C  
Port: 4xRS232 ETHERNET  
Ethernet: 10/100BaseT  
MAC: 1a2b3c4d5f6g  
REV1 MADE IN EU

4 Gnd	8 Tx2	12 Rx4	Ethernet RJ45
3 FG	7 Rx2	11 Tx4	
2 Vin2	6 Tx1	10 Tx3	
1 Vin1	5 Rx1	9 Rx3	

1a2b3c4d5f6g

**RoHS COMPLIANT**

**Redisage ELECTRONICS**

C24

**C24 Ethernet Converter**  
4xRS485

123456789012345

Power: --- 12-30V/DC <1W  
Temperature: -40°C +75°C  
Port: 4xRS485 ETHERNET  
Ethernet: 10/100BaseT  
MAC: 1a2b3c4d5f6g  
REV1 MADE IN EU

4 Gnd	8 A2	12 B4	Ethernet RJ45
3 FG	7 B2	11 A4	
2 Vin2	6 A1	10 B3	
1 Vin1	5 B1	9 A3	

1a2b3c4d5f6g

**RoHS COMPLIANT**

**Redisage ELECTRONICS**

SC - Software Control

C25

**C25 Ethernet Converter**  
2xRS232 2xRS485

123456789012345

Power: --- 12-30V/DC <1W  
Temperature: -40°C +75°C  
Port: 2xRS232 2xRS485 ETH  
Ethernet: 10/100BaseT  
MAC: 1a2b3c4d5e6f  
REV1 MADE IN EU

4 Gnd	8 Tx2	12 B4	Ethernet RJ45
3 FG	7 Rx2	11 A4	
2 Vin2	6 Tx1	10 B3	
1 Vin1	5 Rx1	9 A3	

1a2b3c4d5e6f

**RoHS COMPLIANT**

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SC - Software Control

In the C22 converter user should use only RS232 or only RS485 interface of one port as they occupy the same internal bus of the device.