# Hardware

## Serial Port Server (C20 - C25)

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

## Features

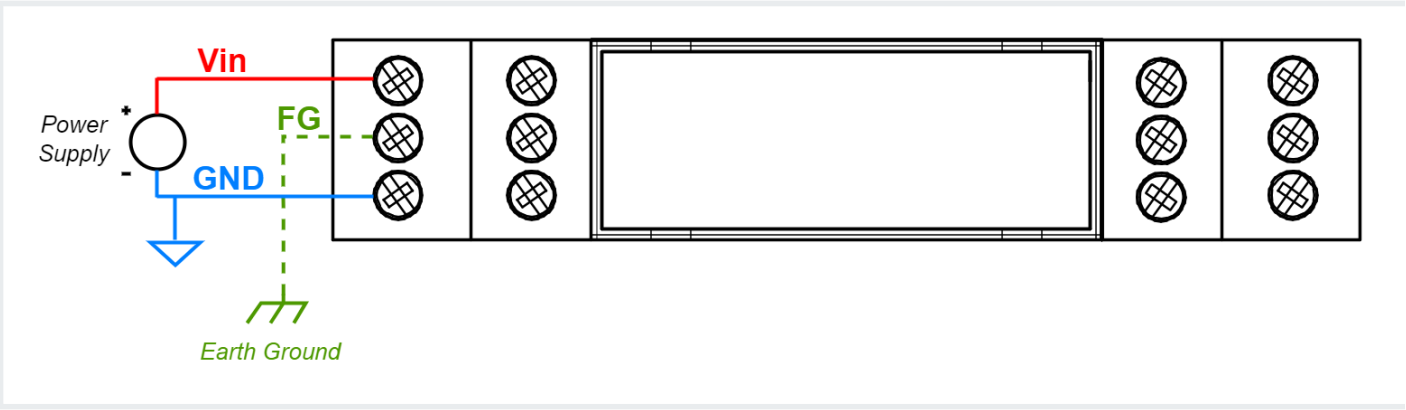
| Features |
| --- |
| Ethernet converter to RS232/RS485 |
| ESD protection for the RS485 data line |
| Power supply: +12 to +30 VDC |
| Transmission speed up to 115200 bps |
| Tx, Rx and power LED indicators |
| RS485 embedded termination 120 ohm |
| Operating temperatures: -40°C to +75°C |
| DIN rail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



# 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.



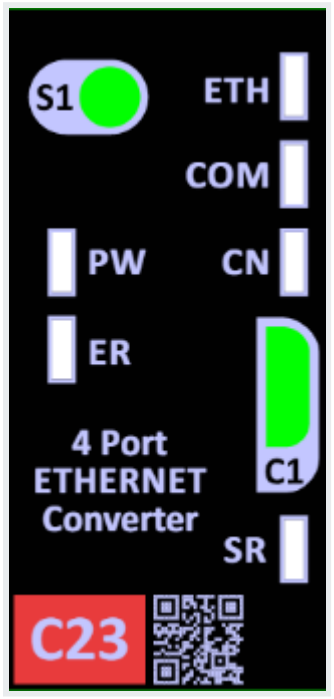

If earth ground is not available FG can be left floating or it can be connected with the power supply GND.

# 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 | | | | | |

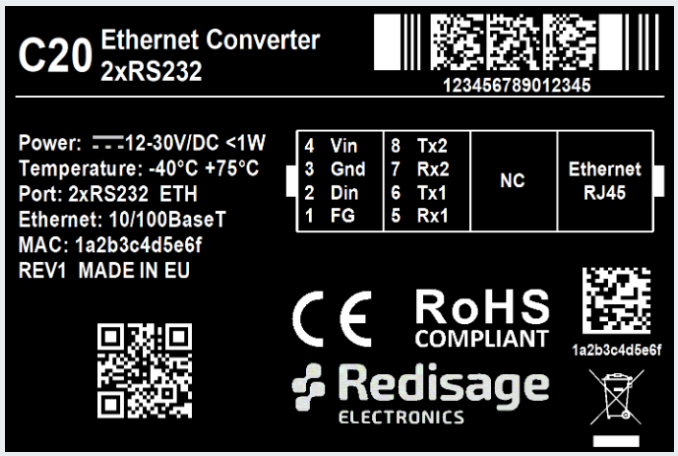
| Redisage PN | | C20 | C21 | C22 | C23 | C24 | C25 |
|---|---|---|---|---|---|---|---|
| Frame ground connection | | yes | | | | | |
| Baud rate | | up to 115200 bps | | | | | |
| LED indicators | | communication Tx, Rx and power | | | | | |
| RS485 termination | | 120 ohm manually enabled | | | | | |
| Connector | RS232/RS485 | 8-pin terminal block max. 2.5 $mm^2$ wire | | | | | |
| | Power | 3-pin terminal block max. 2.5 $mm^2$ wire | | | | | |
| | Ethernet | RJ45 | | | | | |
| Transmission distance | RS485 | max. 1,200 m at 9.6 kbps; max. 400 m at 115.2 kbps<br>(Belden 9841 2P twisted-pair cable, if different cables are used,<br>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<br>61000-6-4 - Emission standard for industrial environments | | | | | |

# LED indicators

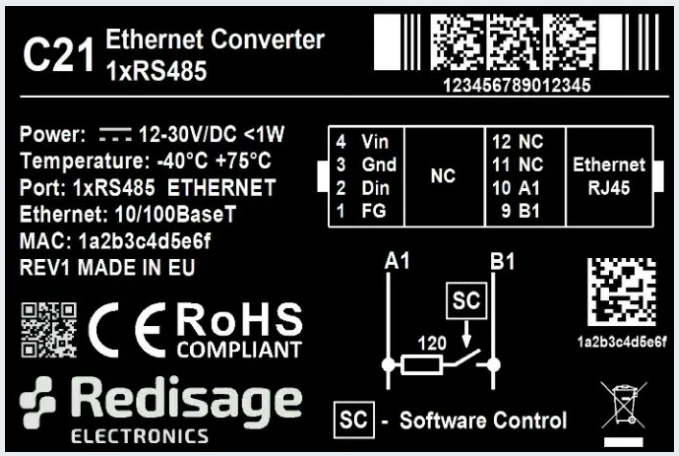
| Converters C20 - C22 | | | Converters C23 - C25 | | |
|---|---|---|---|---|---|
|  | | |  | | |
| **LED indicator** | **Color** | **Function** | **LED indicator** | **Color** | **Function** |
| PW | Blue | Power | PW | Blue | Power |
| ETH | Green | Network activity | ETH | Green | Network activity |
| 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

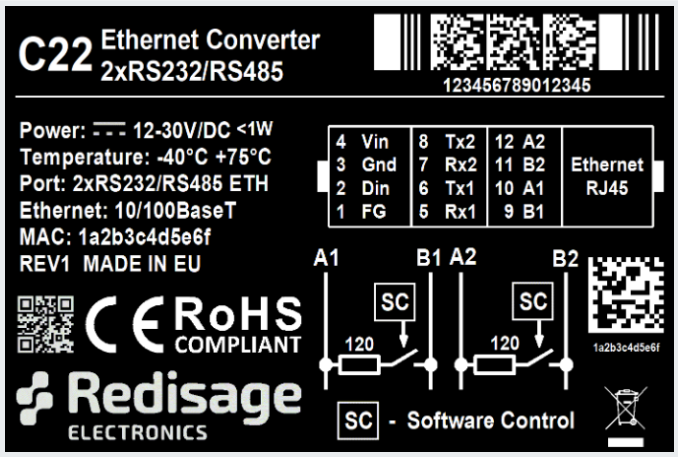
C20



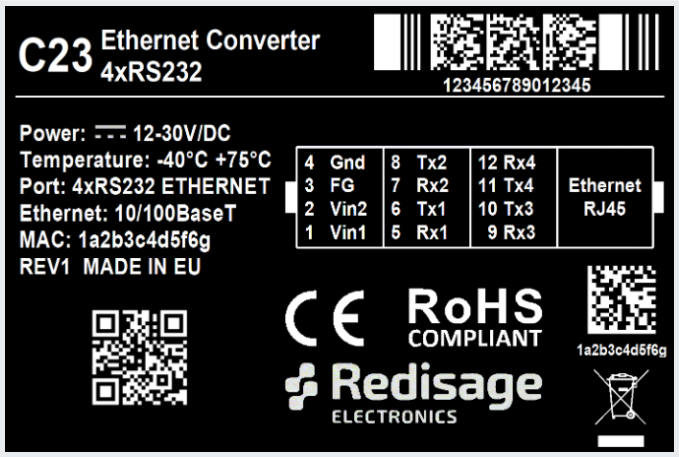

C21



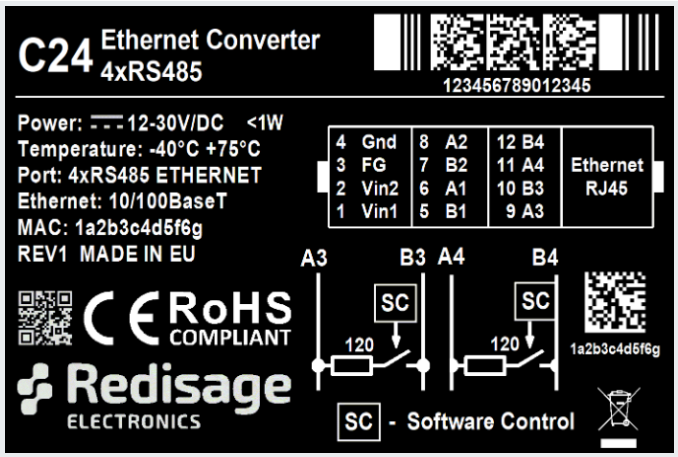

C22



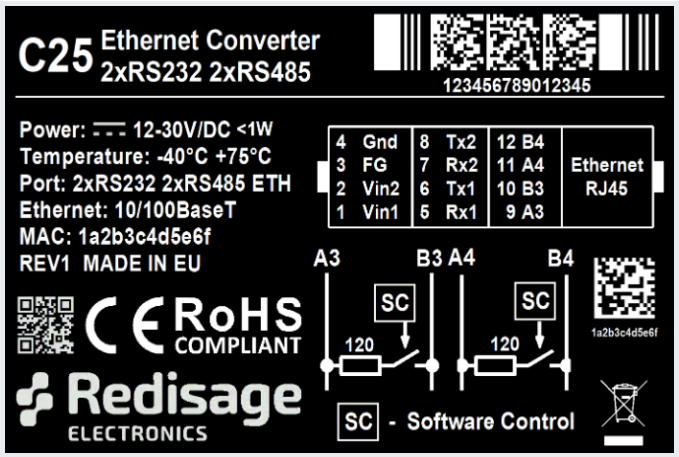

C23




C24




C25




> 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.

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