

Multiprotocol Communication Module

D-GATEWAY5Pro

Description

Multiprotocol communication module. It allows visualization and control through the mobile application of your home, locally or remotely..

Funcionalities

- Scheduled Events
- Manage Climatization Schedules on APP5
- Indicative Energy consumption
- Push Notifications for alarms and Events
- Event Logging
- Remote Updates for new features
- Free DDNS address
- User profiles and permissions
- Matter Integration
- Fast SSL Encrypted communication
- Webpage for technical management
- UPNP port opening
- Backup of Gateway5Plus to your laptop
- Allows you to write device names in any alphabet and without character limits
- Modbus RTU (RS-485) support for reading and controlling compatible devices

Application

Housing, Hotels, Offices, Factories.

Accessories

12VDC 4.5A Power Supply (included)
 2X Resistance 120Ω

Certifications

- EN 61000
- EN 50491-5-1:2010
- Low voltage directive 2014/35/EU
- EMC directive 2014/30/EU

Notes

D-GATEWAY5Plus comes with the followings settings:

IP Address	192.168.1.188
Login	Admin
Password	12345

Mounting

DIN rail mounting. Consider 8 space units: 5 space units for D-GATEWAY5Plus and 3 space units for Power Supply.



Connections

- LAN RJ45 10/100/1000 BaseT (x1)
- IG Isolated GND (x2) for 0.8mm wire Ø
- IB Isolated Bus (x2) for 0.8mm wire Ø
- 0 (x2) for 0.8mm wire Ø
- 12VDC (x2) for 0.8mm wire Ø
- Dedicated terminal block for Modbus RTU network (A, B, GND):
 - Cable type: Belden 9841 or equivalent
 - 0.5mm to 0.8mm
 - Impedance: 120Ω

Electrical Characteristics

Power:	12VDC
Maximum Consumption:	5 W

Frequency

Frequency	1.8GHz
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Warranty

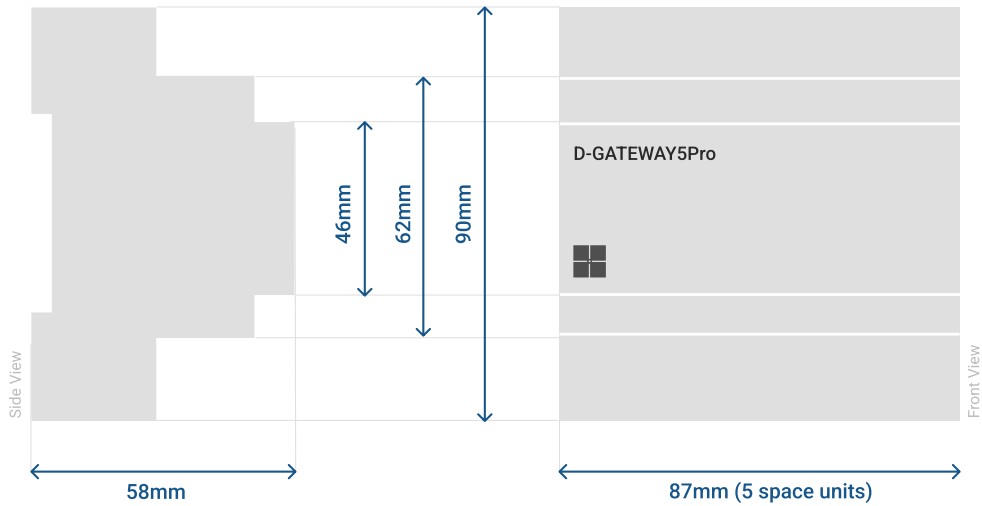
The warranty period is 5 years. Keep the invoice preserved for this purpose. Warranty is void if the product shows:

- changes to the labels surrounding the product;
- electrical damage caused by misuse;
- surface damage such as scratches, cuts and tears;
- others damages that can invalidate the Warranty.

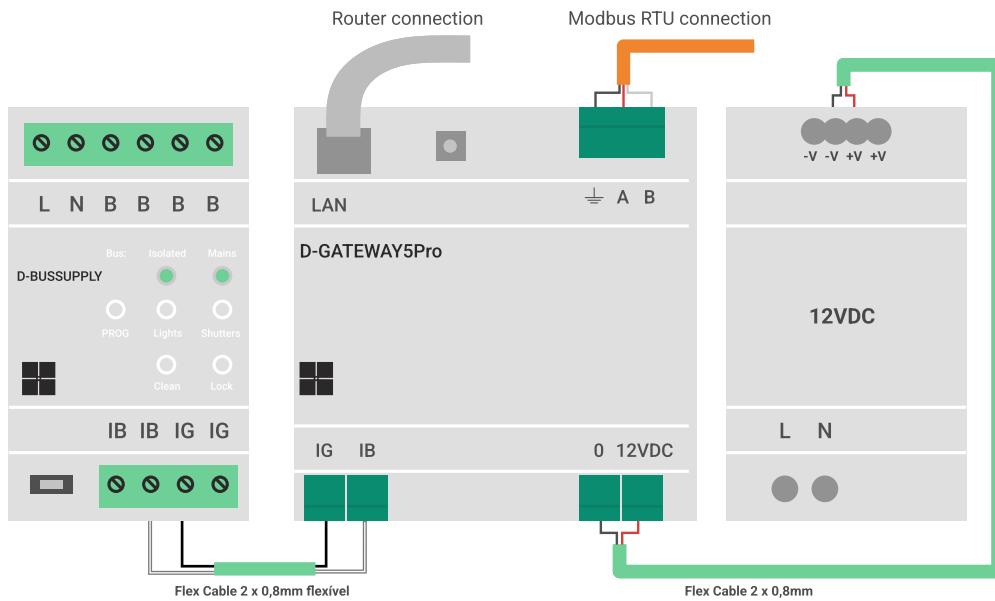
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Dimensions



Wiring diagram



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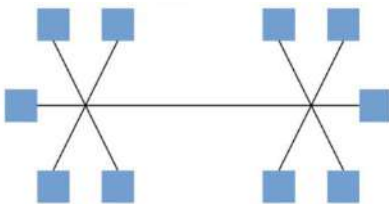
Modbus RTU - Installation Topology

The Modbus protocol is based on the RS-485 communication interface. Topology refers to how devices can be connected on the network. RS-485 supports a point-to-point topology (Client-Server), where two devices are linked through a twisted-pair cable.

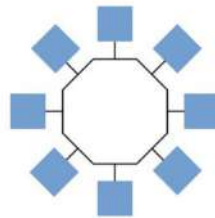
When multiple devices are present (Client - multiple Servers), they must share the same twisted-pair cable with distinct addresses. The most appropriate way to wire this is using a Daisy Chain topology: devices are connected linearly, each one to the next.

Not Recommended

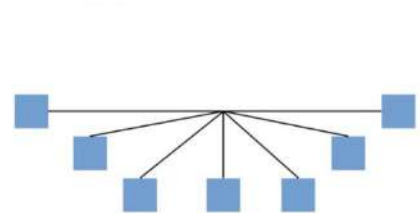
Backbone with Stars or Clusters (Avoid)



Ring (Avoid)

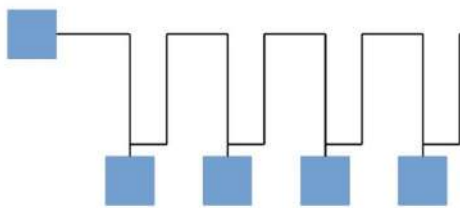


Stars Network (Avoid)

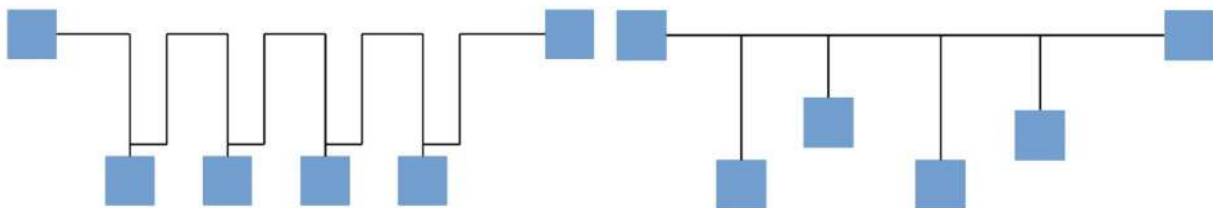


Recommended

Daisy Chain (Recommended)



Backbone with Stubs (Recommended)



Modbus RTU - System Limitations

- Maximum number of devices: 32
- Maximum cable length: 1200 m
- Recommended data rate: 9600 bps a)
- Cable type: Belden 9841 or equivalent
 - Cross-section: 0.5 mm to 0.8 mm
 - Impedance: 120 Ω

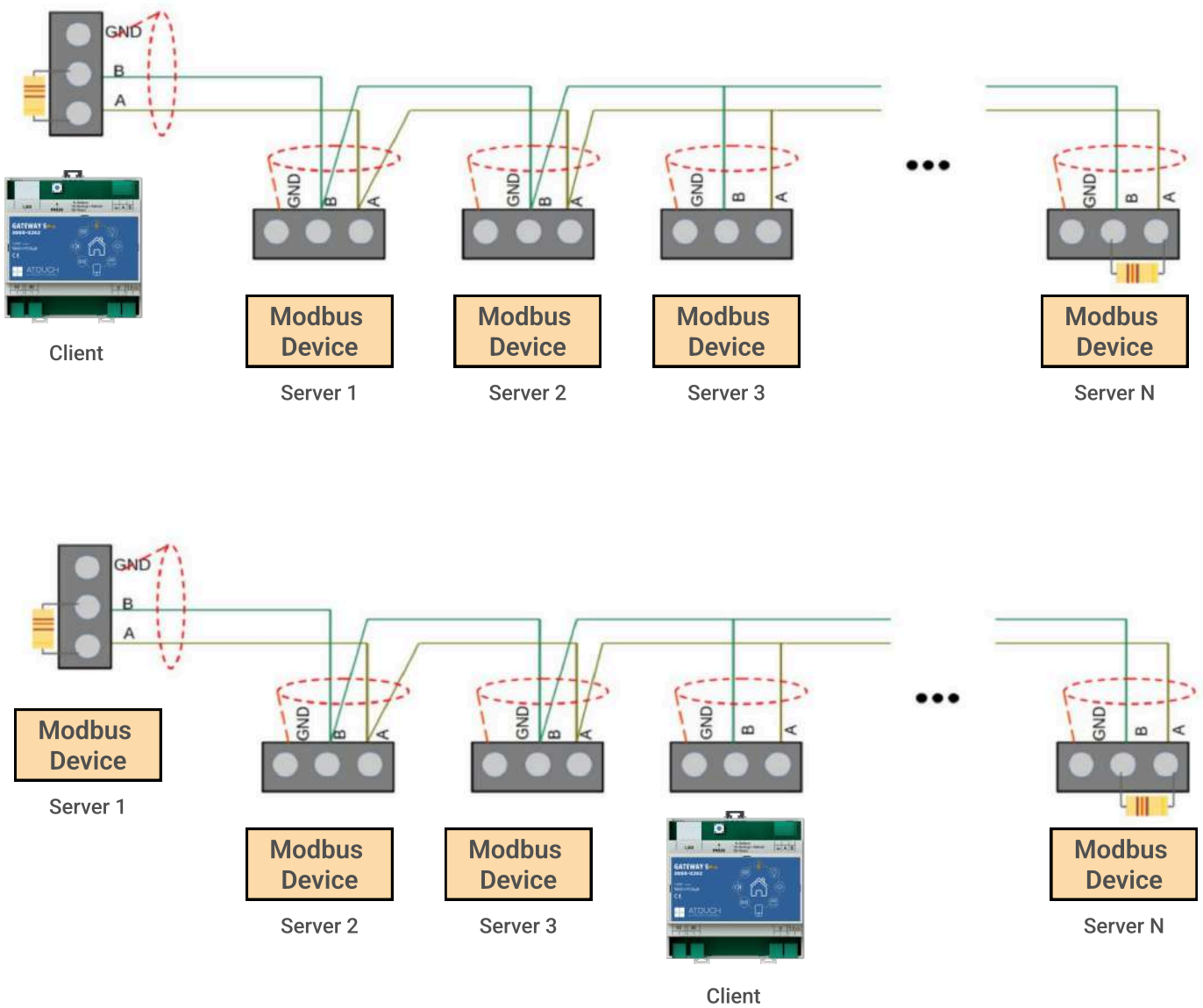
a) The data rate varies with cable length; check the device manual for more information.

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Modbus RTU - Termination

Termination resistors must match the characteristic impedance of the cable. They minimise reflections and thus reduce communication errors. A twisted-pair cable with 0.8 mm conductors typically has an impedance of ~120 Ω. Place 120 Ω terminations at the ends of the communication line. Below are examples indicating where to place the termination resistors.



Note:

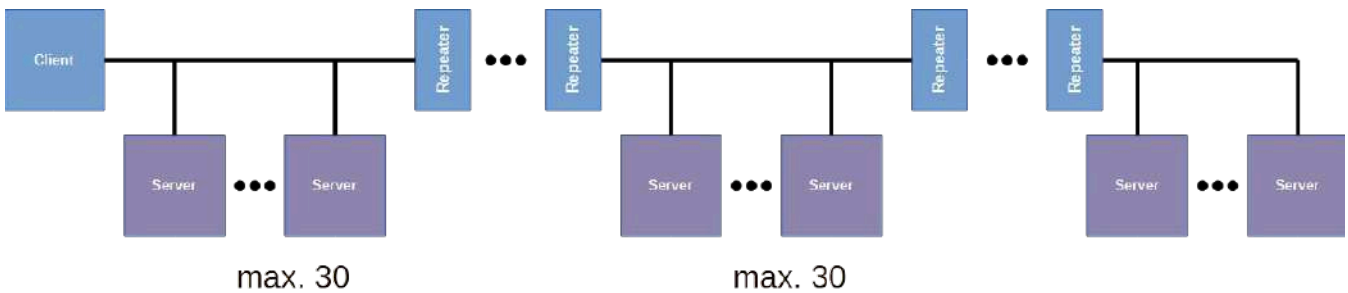
All Server devices must be configured with unique addresses.

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Modbus RTU - Repeater

You can use a repeater to increase the number of devices on a Modbus RTU line. If you use a repeater, count only 31 devices on the downstream segment, because the repeater itself counts as one device. Upstream of the repeater, the same rule applies: maximum 32 devices and 1200 m total cable distance between the end devices of that segment.



Device	Number of Devices		
Client	1		
Server	30	32	
Repeater	1		
Server	30	32	32
Repeater	1		
Server	30	32	
Repeater	1		
Server	30	32	32
Repeater	1		
Server	30	32	
Repeater	1		
Server	30	32	32
Repeater	1		
Server	30	32	
Repeater	1		
Server	6	7	32
Total Devices	255		
Total Available Addresses	247		
Total Repeaters	8		