

Data Sheet

STM32 Open IoT and IIoT Gateways (P10 - P12)

Open IoT Gateway is also called as a PAC (Programmable Automation Controller). PAC products combine the functionality and openness of PC, the reliability of a programmable logic unit like PLC and the intelligence of I/O modules with flexible software tools for a wide range of applications from data acquisition, process control, motion control to energy and building management.

Our PAC family includes FreeRTOS PACs for different requirements in OS, CPU and development platforms.

The P10 - P12 gateways are based on **STM32 ARM Cortex-M4**.

P10 P11 P12



Features

- Open IoT gateway
- ESD protection for the RS485 data line
- Power supply: +12 to +30 VDC
- Transmission speed up to 115200 bps
- 10/100 Mb/s Fast Ethernet standard
- Tx, Rx and power LED indicators
- RS485 embedded termination 120 ohm
- Operating temperatures: -40°C to +75°C
- DIN-rail mounting
- Dimensions: 98x56.4x22.5 mm
- 3 years warranty
- Customization of OEM is welcomed

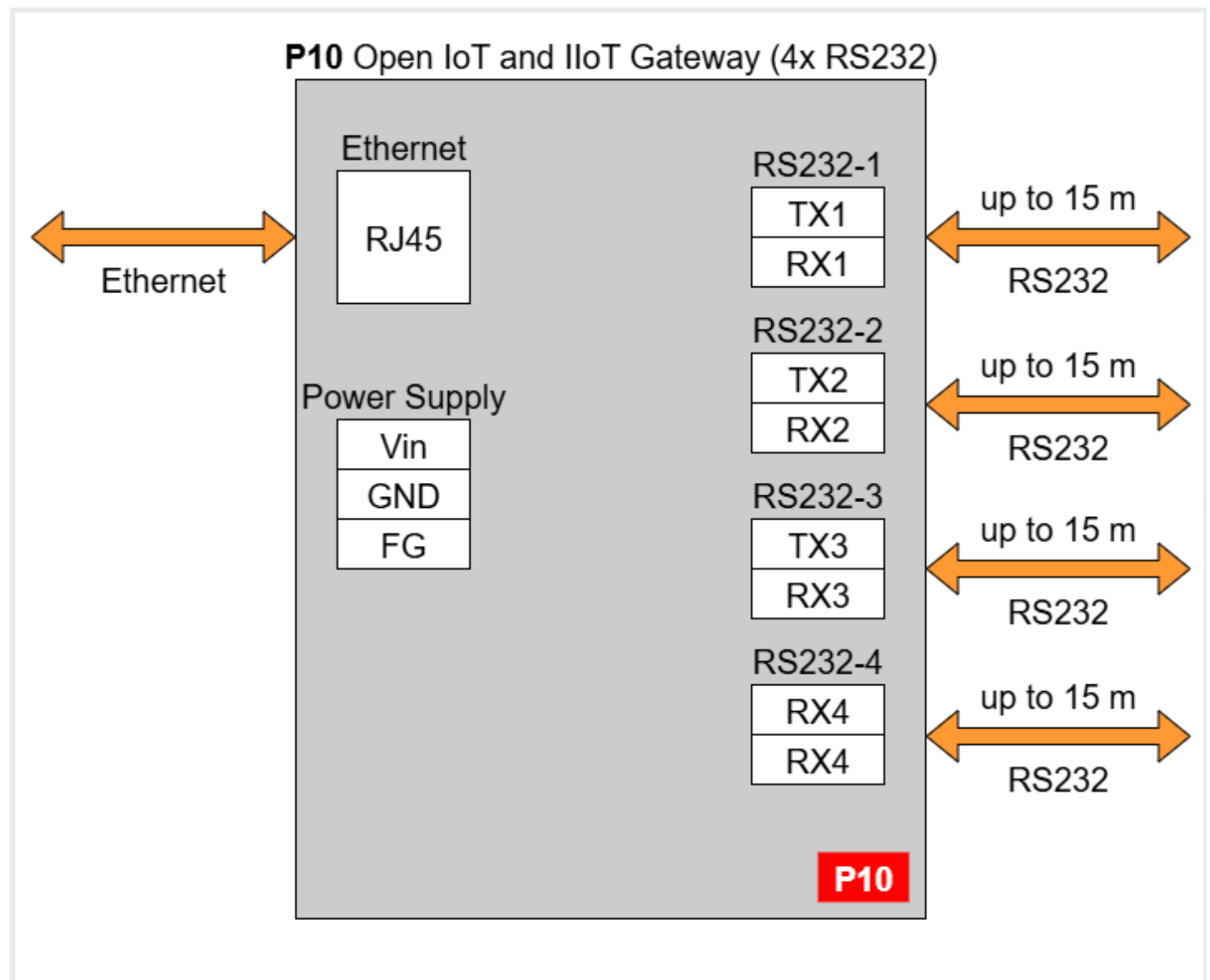
Specifications

Redisage PN		P10	P11	P12
Ports	RS232	4x	-	2x
	RS485	-	4x	2x
	RS232/RS485	-	-	-
Microcontroller		STM32		
WiFi		N/A		

Redisage PN		P10	P11	P12
Bluetooth		N/A		
SMA socket connector for WiFi/BT antenna				
Tactile switch				
Power	Voltage	12-30 VDC		
	Power	< 1 W		
Frame ground protection		yes		
Baud rate		up to 115200 bps		
LED indicators		power, link activity, programmable RGB		
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 (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		

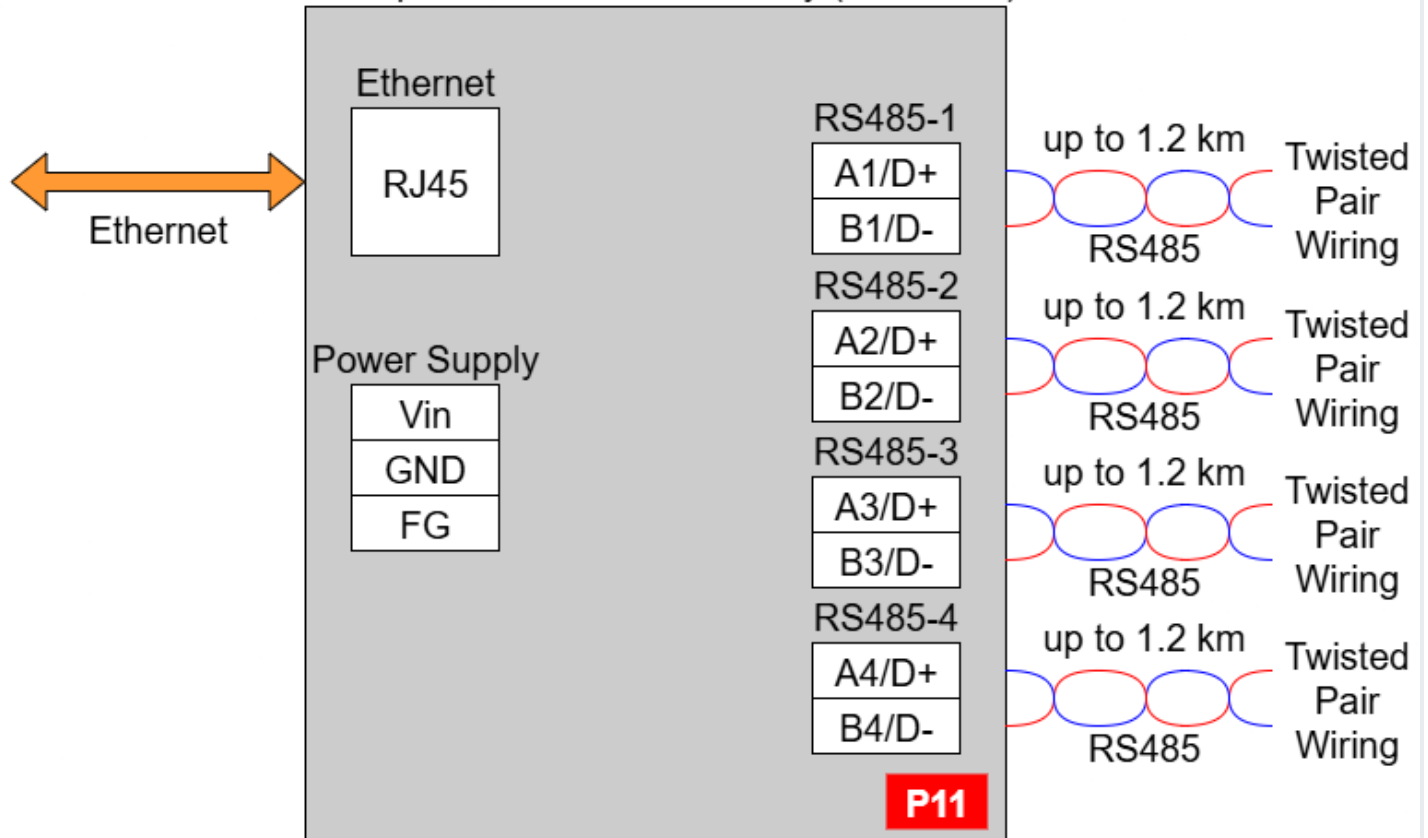
Variants

P10 - Open IoT and IIoT Gateway 4x RS232



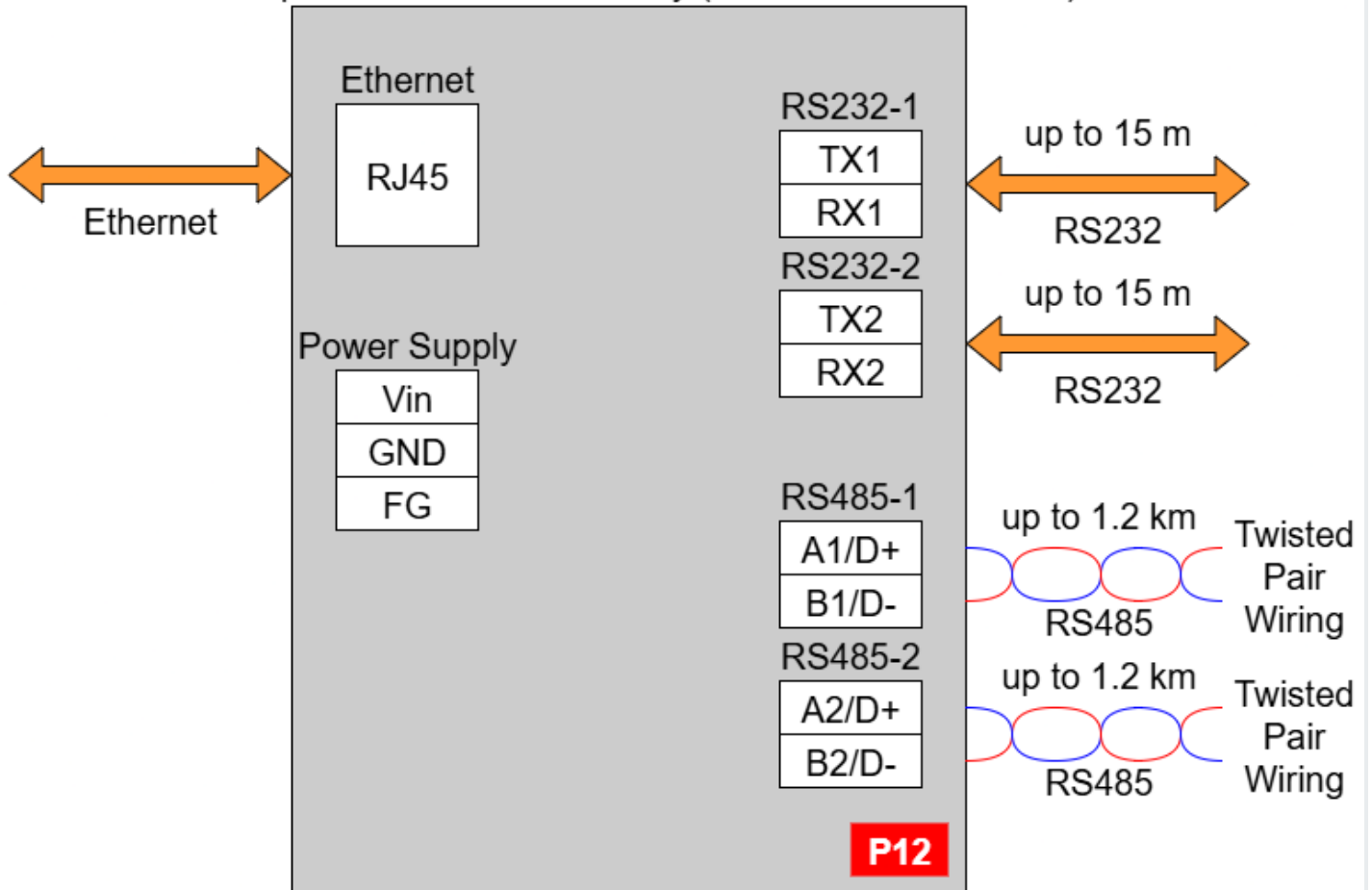
P11 - Open IoT and IIoT Gateway 4x RS485

P11 Open IoT and IIoT Gateway (4x RS485)



P12 - Open IoT and IIoT Gateway 2x RS232 & 2x RS485

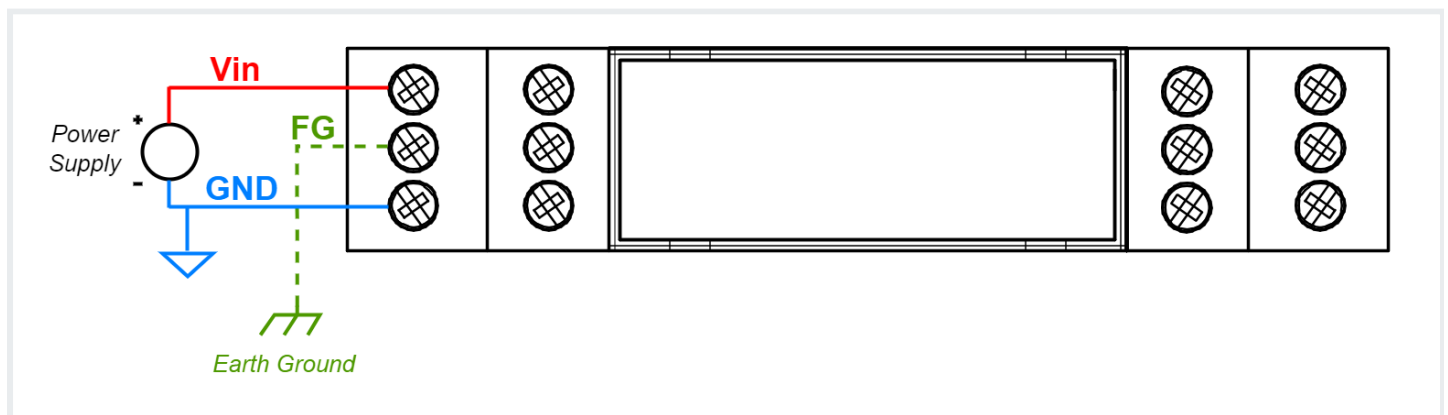
P12 Open IoT and IIoT Gateway (2x RS232 & 2x RS485)



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.

Pin assignments

P10

P10 Open IoT Ethernet Gateway

012345678901234

Power: 12-30V/DC < 1W

Temperature: -40°C + 75°C

Port: 4xRS232 ETH

Ethernet: 10/100BaseT

MAC Add: #####MAC1#####

REV1 MADE IN EU

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

Ethernet RJ45

P11

P11 Open IoT Gateway 4xRS485

012345678901234

Power: 12-30V/DC < 1W

Temperature: -40°C + 75°C

Port: 4xRS485 ETHERNET

Ethernet: 10/100BaseT

MAC Add: #####MAC1#####

REV1 MADE IN EU

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

Ethernet RJ45

A1 B1 A2 B2

SC - Software Control

P12

P12 Open IoT Gateway 2xRS232 2xRS485

012345678901234

Power: 12-30V/DC < 1W

Temperature: -40°C + 75°C

Port: 2xRS232 2xRS485 ETH

Ethernet: 10/100BaseT

MAC Add: #####MAC1#####

REV1 MADE IN EU

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

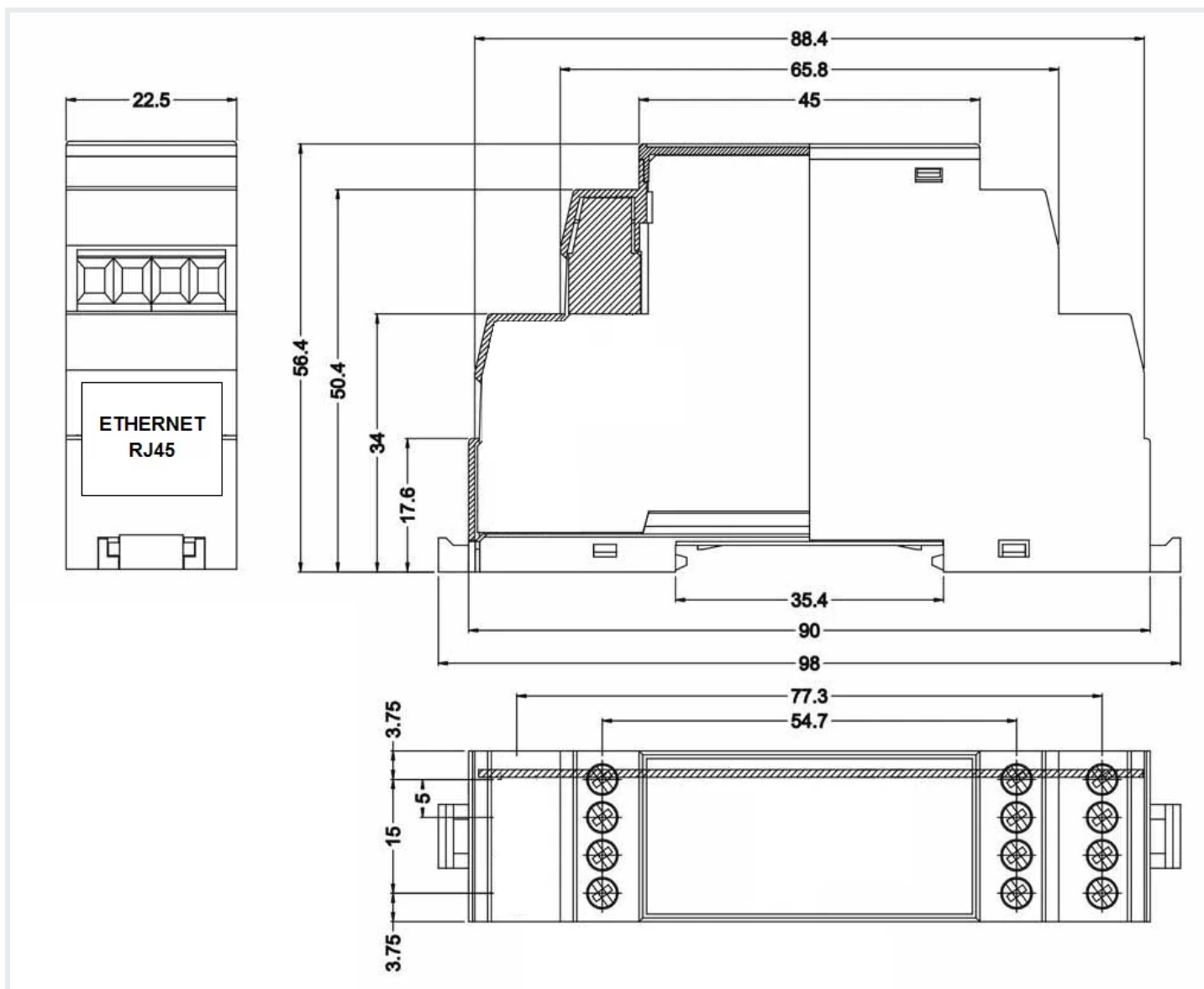
Ethernet RJ45

A1 B1 A2 B2

SC - Software Control

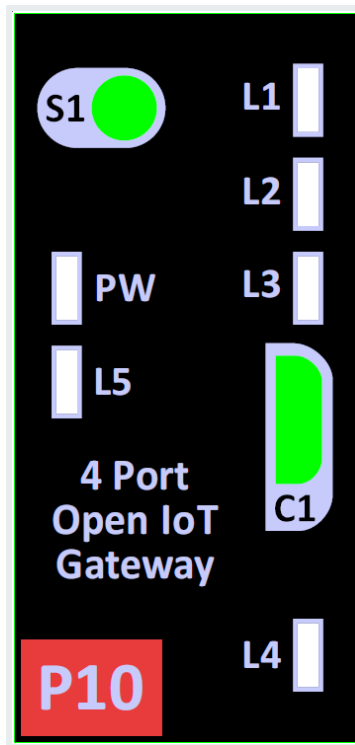
Enclosure dimensions

2U Module Enclosure
98 x 22.5 x 56.4
Units: mm



LED indicators

- PW LED Blue - Power
- L1 - LED 1
- L2 - LED 2
- L3 - LED 3
- L4 - LED 4
- L5 - LED 5



Additional notes

Related information and links		
Ordering information	Accessories	Similar products

Products family sample photo



<https://redisage.com>

DISCLAIMER NOTES

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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