Power Meter Monitor

Model: PMM0912i
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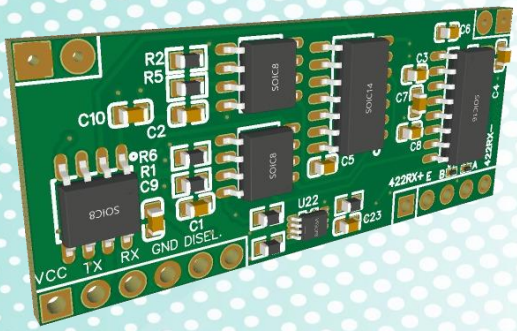
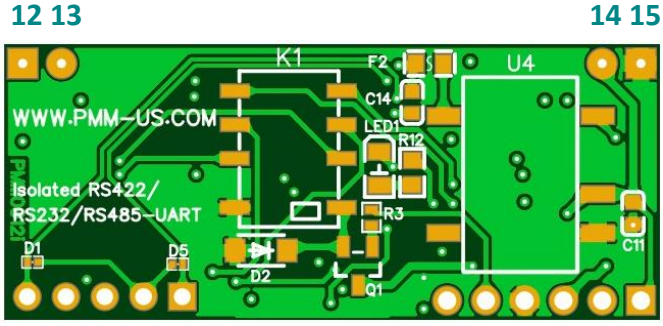


Isolated TTL-RS422/RS232/RS485 Module

KEY FEATURES AND SPECIFICATIONS

- **Multi serial to UART:** RS485/RS422/RS232 enabled by digital selector from the CPU
- **Supports baud rate: 110-256000 bps**
- **Electrical interference and noise is greatly reduced by the presence of a large copper area**
- **Compatible with 3.3V and 5V power source**
- **Isolated power supply**
- **Data isolation:** up to 5000 VRMS isolation rating with up to 12.8 kV surge capability
- **Protected from Overvoltage Line Faults up to ±60V**
- **±25kV ESD protection**
- **120 & 390 Ohm terminal resistors**
- **Operating temperature: -40 to 80°C**
- **Module size: 43mm X 18mm X 5mm**
- **Vertical and horizontal mounting options, compatible with standard DIP/SIP pinout**
- **RoHS Compliant**
- **Proven PCB Layout**
- **Fully Assembled and Tested**

BOARD PINOUT



DESCRIPTION

PMM0912i is an isolated multi serial to UART converter module, it can be considered as the 3 in 1 media board. It can convert the three different serial communication types; RS485, RS422 and RS232 to UART.
All the serial communication types can't work all together so PMM0912i has a digital input selector that allows the user to choose which media is currently in use so that only one media to UART conversion is running at a time.
The module contains power and data isolator which protects the circuitry and CPU from overvoltage. It can operate normally with a voltage range of (3V to 3.6V) or (4.5V to 5.5V) and needs an external power supply.

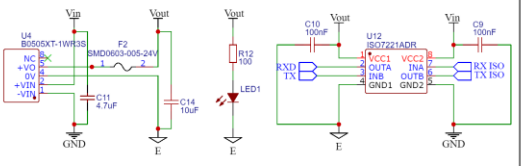
WIRING PMM0912i MODULE

The two differential data lines (labeled as A & B) on the output side of the module that are connected to the communication network are what control which serial communication type is going to be in use. After the digital input selector gives the command the connections are as follows:
RS485; 2 wire connection where A connects to D+ and B to D-.
RS232; 2 wire connection where A connects to TX and B to RX.
RS422; 4 wire connection where A connects to TX+ and B to TX-
the two remaining pins RX+ & RX- and also should be connected to their respective pins.
The last pin to be connected is the isolated ground.
The wires should ideally be twisted and shielded within one cable, this method is important as it runs for longer where there is a lot of electrical noise.

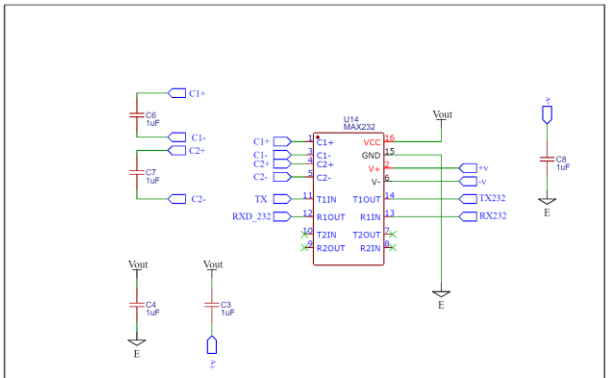
BOARD PINOUT DESCRPTION

PINs	DESCRIPTION
6,14,15	NOT CONNECTED
1	RS422 RX-
2	485D+/232TX/422TX+
3	485D-/232RX/422TX-
4	ISOLATED GND
5	RS422 RX+
7	DIGITAL INPUT SELECTOR
8	TTL/GND
9	TTL/RX
10	TTL/TX

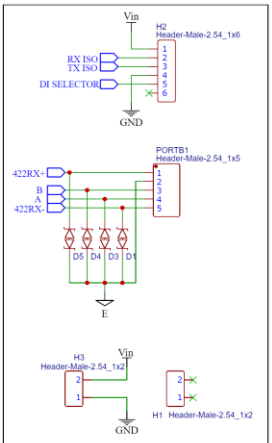
SCHEMATIC DIAGRAM



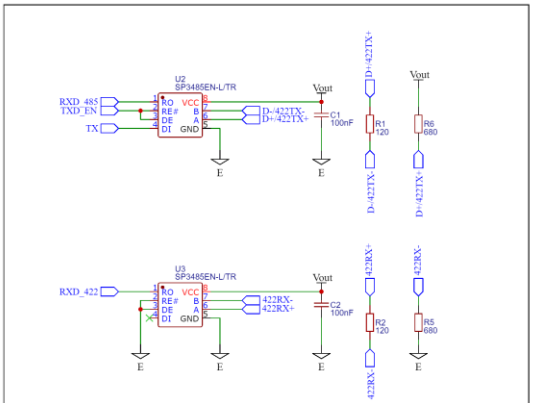
POWER AND DATA ISOLATION



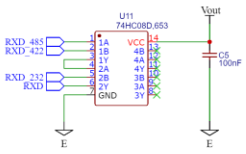
RS232 TRANSIVER CIRCUT



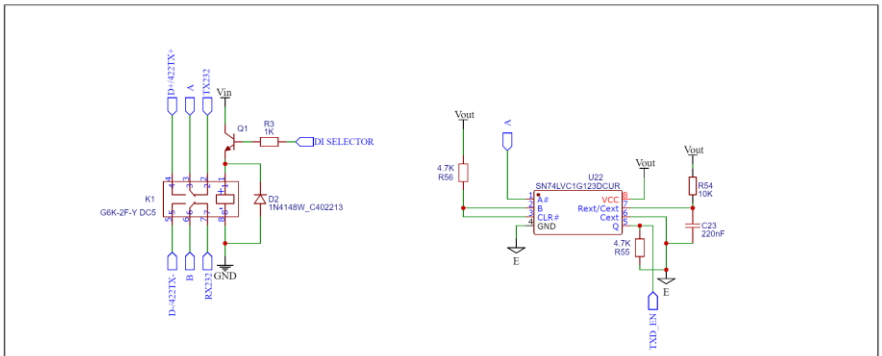
I/0 CONNECTOR



RS485/RS422 AUTO SENSING

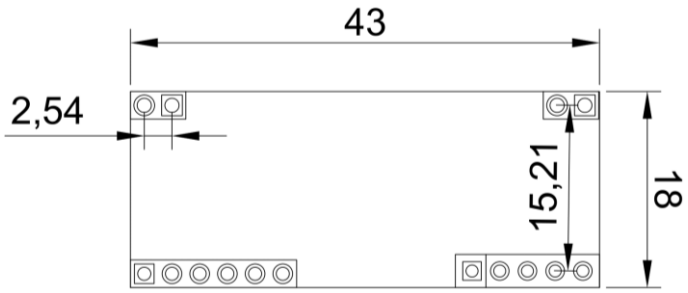


AND GATE FOR RX



DIGITAL INPUT SELECTOR AND ENABLE CONTROL

DIMENSIONS (mm)



ORDERING INFORMATION

Part Number	Description
PMM0912	TTL-RS422/RS232/RS485 Converter Module (Isolated Type)

CUSTOMIZED REQUIREMENT

For any customized inquiries and orders, contact us on **info@Pmm-usa.us**