

Pliant: readily yielding to influence

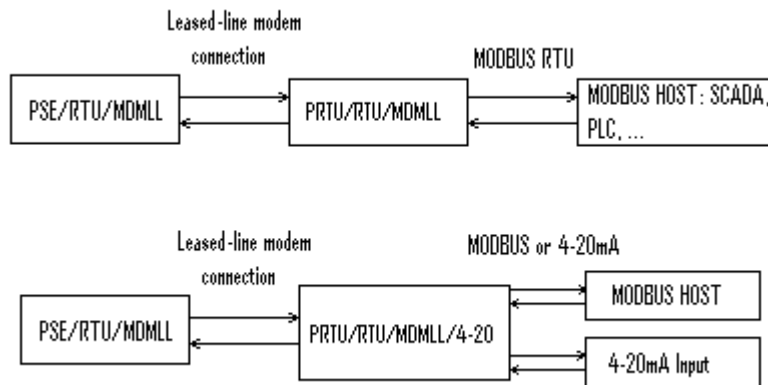
## PRTU

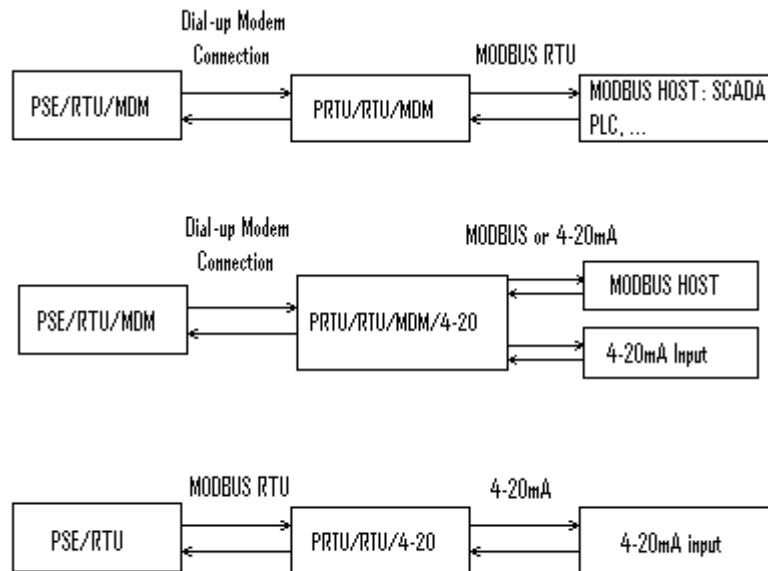


- Remote polling of “PSE” shaft encoders
- **MODBUS RTU** interface for SCADA, PLC, ...
- Custom protocols available: ECN, custom RS232...
- 8-digit LED display and interface switches
- Optional integral **modem** for remote polling of the PSE
- Optional **4-20mA** output
- Level-controlled RELAY output (flood, drought)

### PRTU: Pliant Host Communications module with Display

The ///AMASSER PRTU is a host communications module which polls a remote ///AMASSER PSE shaft encoder and provides the retrieved data to a host device such as a SCADA, PLC, ... The PRTU is designed specifically for polling the PSE. In cases where the PRTU is equipped with a built-in modem, it enables practically unlimited distances between your host machine and the remote sensor. The retrieved data is displayed on a LED digital display. Below are some example configurations that are possible between the PSE and your host machine:





The PRTU is equipped with a level-controlled relay output. The user defines the UPPER and LOWER levels for which the relay closes. These levels typically correspond to flood and drought conditions. The hysteresis for each of the trigger points is also user-configurable.

The “/4-20” option provides a 4-20mA signal proportional to the water level using by means of a 16-bit DAC. The water levels corresponding to an output of 4mA and 20mA are user-configurable from the digital display. Also, although the DAC is factory-calibrated, the unit features a calibration mode whereby 4mA and 20mA current levels are provided as a reference for fine adjustment of the device if necessary.

The digital display and operator switches allow the user to view the realtime data as well as set the following parameters (if applicable): MODBUS address, Alarm UPPER, Alarm UPPER reset, Alarm LOWER, Alarm LOWER reset, 4mA OFFSET, 4-20mA SPAN, Cal 4mA, Cal 20mA.

- Host Interface Options:
  - **MODBUS RTU** protocol: the “PRTU/RTU”
  - **4-20mA** output: the “PRTU/RTU/4-20”
- Sensor Interface Options:
  - Modem-based communications using
    - **Leased-line modems:** the “PRTU/RTU/MDMLL”
    - **Dial-up modems:** the “PRTU/RTU/MDM”
  - ECN protocol: the “PRTU/RTU/ECN”
- EEPROM for non-volatile storage of set-up parameters
- Level-controlled relay output with user-programmable alarm conditions
- Operates on 12VDC
- LED Display and operator switches

## **Specifications**

Processor: Atmel 89S8252 @ 3.6864 MHz.  
Word Size : 8 bit data - 8 bit instruction  
Memory : 89S8252, 256 bytes RAM  
EEPROM 2 kbytes

### **Host Interface**

**PRTU/RTU:** MODBUS RTU  
/4-20 option: 4-20mA output  
Custom protocols can be ordered

### **Sensor Interface**

/MDMLL & /MDM: Built-in leased-line or dial-up modem.  
**PRTU/RTU/ECN:** ECN protocol

### **Master/Slave set**

Polls the PSE shaft encoder at fixed rate (1/sec for /MDMLL) and loads MODBUS registers with realtime data for retrieval by host device  
Provides data to host via MODBUS RTU.  
4-20mA output available (option "/4-20")

### **Output**

ASCII accumulated level of remote sensor

### **Physical Characteristics**

Height : 152.0 mm. (6.0 in.)  
Width : 114.0 mm. (4.5 in.)  
Depth : 70.0 mm. (2.75 in.)  
Weight : 1.35 Kg (3.0 lb.)  
Mounting brackets: Use four #10 bolts or screws.

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AMASS Data Technologies Inc.  
812 Proctor Avenue  
Ogdensburg, New York 13669  
TEL: (819) 827-0077  
FAX (819) 827-4305  
Email: amassinf@amassdata.com

### **Connectors**

9 pin and 8 pin AMP CPC Connectors  
Current Carrying Capability - 1.5 Amp rating  
Dielectric Withstanding Voltage >1500V

### **Power Supply**

+10.5 to 15 V input for external battery, charger or power supply

### **Power Consumption**

About 120mA if LED illuminated continuously (standard). Can be ordered with 5-minutes auto-shut-off

### **Environmental Characteristics**

Operating : -40 to +55 C  
Storage : -60 to +65C  
Humidity : <= 100% non-condensing

AMASS Data Technologies Inc  
702 Route 105  
Chelsea, Québec Canada J9B 1L2