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//_250226_A_Solax_RequestSerialNumber
// Hardware connections
// Arduino  MAX 485                    SOLAX
// 5        DE  Data Enable   (DEPin)
// 4        RE  Receive Enable(REPin)
// 4        RO  Receive Out   (SSerialRX)
// 6        DI  Data In       (SSerialTX)
// 3.3V     VCC               (5V also allowed)
// GND      GND
//          RS485 A                    RJ45 4
//          RS485 B                    RJ45 5

#include <SoftwareSerial.h>
#define SSerialRX 3    // Receive Out
#define REPin 4        // Receive Enable
#define DEPin 5        // Data Enable
#define SSerialTX 6    // Data In
#define RS485Receive LOW
#define RS485Transmit HIGH

SoftwareSerial RS485Serial(SSerialRX, SSerialTX);
byte InByte = 0;
byte byteInput[25];
byte RequestSerialNumber[]={0xAA,0x55,0x01,0x00,  0x00,0x00, 0x10, 0x00, 0x00,  0x01,0x10};
//                      Header   ,AccesPoint, Solax X1 ,Contr, Func, Length, Checksum
bool DataReceived;

void setup()
{
  Serial.begin(9600);
  Serial.println("_250226_A_Solax_RequestSerialNumber");
  Serial.println();
  pinMode(REPin, OUTPUT);
  pinMode(DEPin, OUTPUT);
  pinMode(SSerialRX, INPUT);
  pinMode(SSerialTX, OUTPUT);
  digitalWrite(REPin, RS485Receive);
  digitalWrite(DEPin, RS485Receive);
  RS485Serial.begin(9600); // set data rate
  DataReceived = false;
}

void GetSOLAXResponse1()
{ // reads the datasstream from the Solax
  int index = 0;
  while(RS485Serial.available())
  {
    InByte = (byte)RS485Serial.read();
    byteInput[index] = InByte;
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    index++;
  }
  for(int i=0; i<25; i++)
  {
    Serial.println();
    Serial.print(i);
    Serial.print("   Dec:  ");
    Serial.print(byteInput[i]);
    Serial.print("   HEX:   ");
    Serial.print(byteInput[i],HEX);
  }
}

void loop()
{
  if(DataReceived == false)
  {
    // * * * SEND A DATA REQUEST TO THE INVERTER * * *
    digitalWrite(REPin, RS485Transmit);
    digitalWrite(DEPin, RS485Transmit);
    RS485Serial.write(RequestSerialNumber,sizeof(RequestSerialNumber));

    // * * * SWITCH TO RECEIVE MODE AND UPDATE THE ACTUAL DELIVERED POWER * *
*
    digitalWrite(REPin, RS485Receive);
    digitalWrite(DEPin, RS485Receive);
    if(RS485Serial.available())
    {
      GetSOLAXResponse1();
      Serial.println();
      DataReceived = true;
    }
  }
  delay(10000); // 10 sec as trial setting
}
```