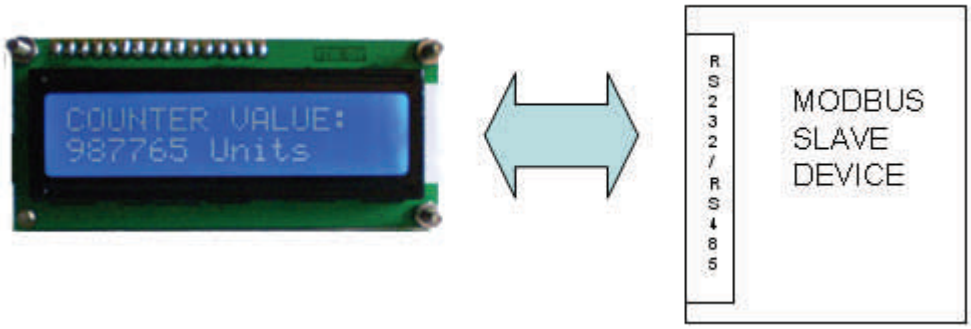
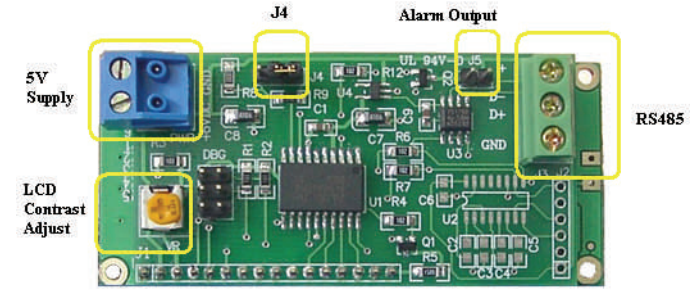
SILICON CRAFT

SC1602MBM Version 2.0
16x2 Characters Programmable MODBUS Master LCD Display

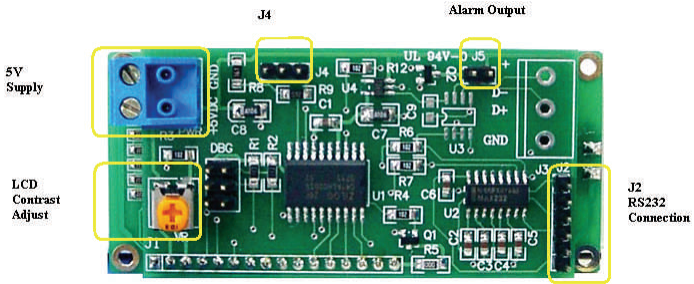


SC1602MBM is a MODBUS RTU Master device that is programmable to read and display data from any MODBUS slave device.

- Communication : RS232 or RS485
- Baud Rate : 9600,19200 or 38400
- Data : 8N1,8N2 or 8E1
- Decimal Points: Up to five (d.ddddd ,dd.dddd , ddd.ddd , dddd.dd, ddddd.d)
- Supported Data Type : Signed & Unsigned Integer, BCD, Long BCD, Long Integer
- Display Data Width : Up to 6 Digits (Max display value : 999,999)
- Supported Function Code : 03 and 04
- Poll Time : 0.1 to 25.5 seconds
- Slave response timeout: 50ms
- Configuration Method : SC1602MBMApp Software.
  Download from : www.siliconcraft.net/download.htm

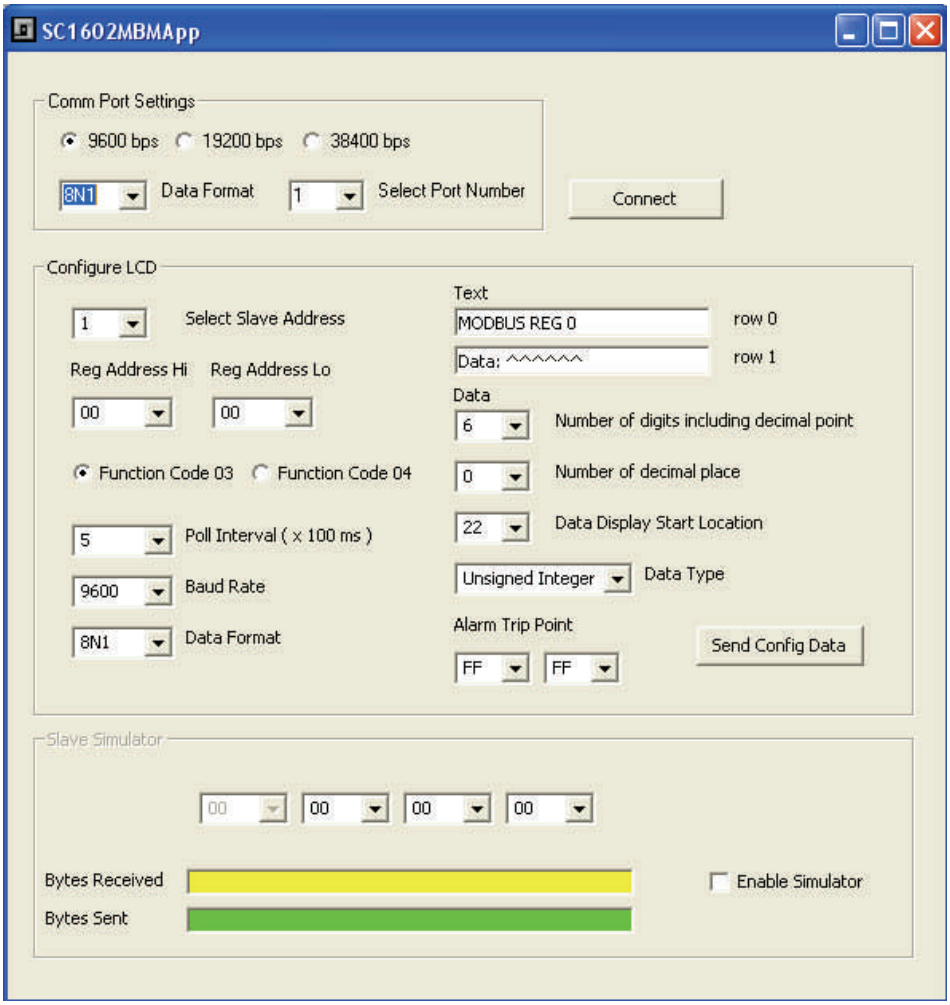


Back view : RS485 Version



Back view : RS232 Version

Configure the LCD



J4 Jumper must be installed before power up to get the LCD into setting mode.
LCD will display "**SETTING MODE**) indicating that the LCD is ready to receive the configuration data.

At the text input area , key in the text to be displayed. ^^^^^^ is be the data display area.

Example :

^^^^^^ will be 6 digits wide display area
^^^^.^ will be 5 digits wide with one decimal place

Data display start location is the location where the most significant digits will be place.
0 = top left corner.
16 = bottom left corner

It can be any location between 0 to 30

After you key in all the parameter, click "Send Config Data" . Make sure the correct port is selected.
If the data is received correctly by the LCD, it will display "**SETTING DONE**".
If there is error during transmission, it will display "**SETTING ERROR**".

When the configuration is done properly, power down the LCD and remove jumper J4.
Now, you can test the LCD by enabling the slave simulator

Display Data Value

BCD is 4 digits wide range from 0 to 9999.

Message structure: Master to Slave

Slave Address |Function Code | Start Address High | Start Address Low | 0x00 | no. of points | CRC16 High | CRC16 Low

Message structure: Slave to Master

Slave Address |Function Code | Byte Count | 2/4 Bytes Data | CRC16 High | CRC16 Low

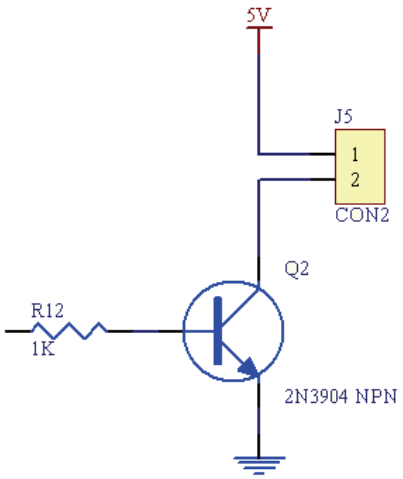
Supported Function code : 0x03 and 0x04

Supported Data Type:

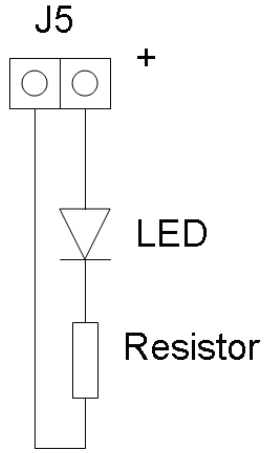
Unsigned integer: 0 to 65,535 (2 Bytes)
Signed Integer: -32,768 to 32,767 (2 Bytes)
BCD : 0 to 9999 (2 Bytes)
Long BCD : 0 to 999999 (4 Bytes)
Long Integer : 0 to 999999 (4 Bytes)

Message with mismatch CRC value will be discarded.
If the data is out of the display range, - - - - is displayed.

If the data value is more than alarm setpoint, output port is set high.
(This is valid with integer type of data)



Transistor Output at J5

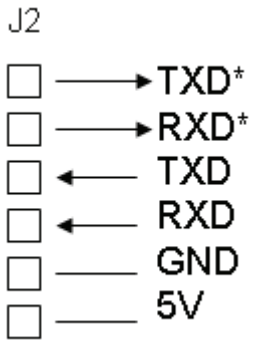


Example of connecting LED to J5

Specification

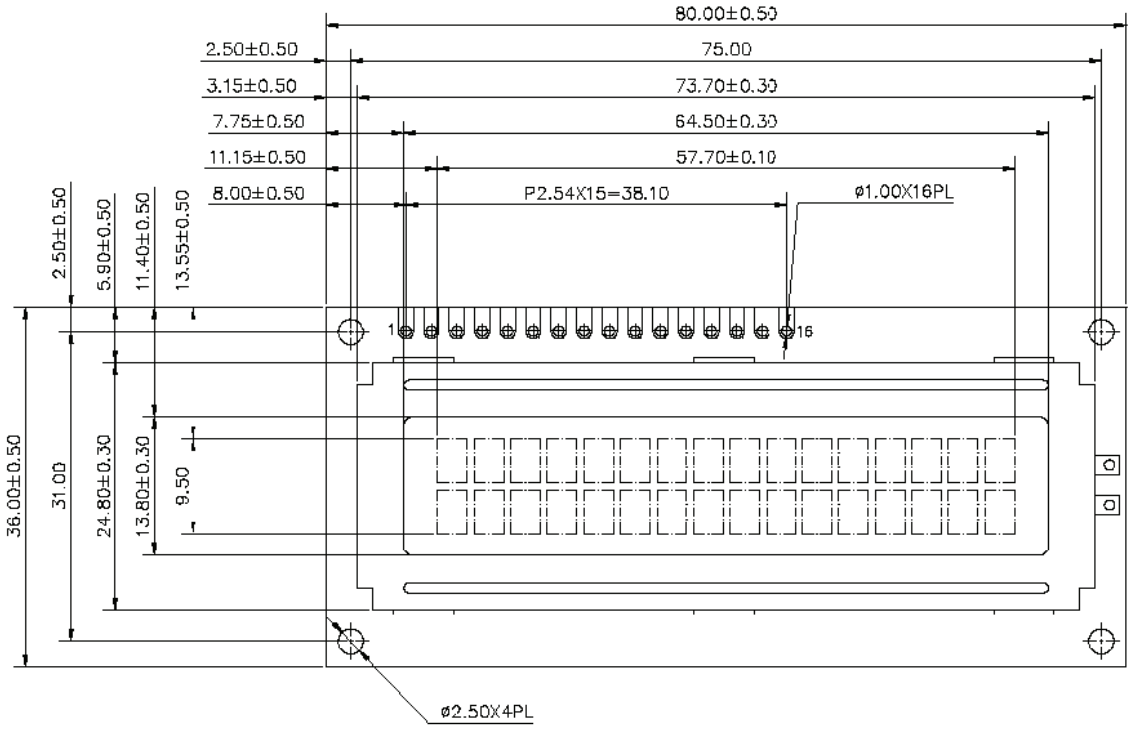
Power Supply: min 4.5VDC max 5.5VDC (5.0VDC nominal)
Current Consumption: 100mA typical
Operating Temperature: 0ºC to 50ºC
Connection: Screw terminals accept 12 to 26 AWG
Non Volatile Memory Write Cycle: Min 100,000
Non Volatile Memory Data Retention: Min 100 years
Output Maximum sink current: 200mA

LCD
View Angle: 6 o'clock
Characters: 16 x 2
View Area: 64.5mm x 13.8mm
Backlight: Yellow Green or Blue LED



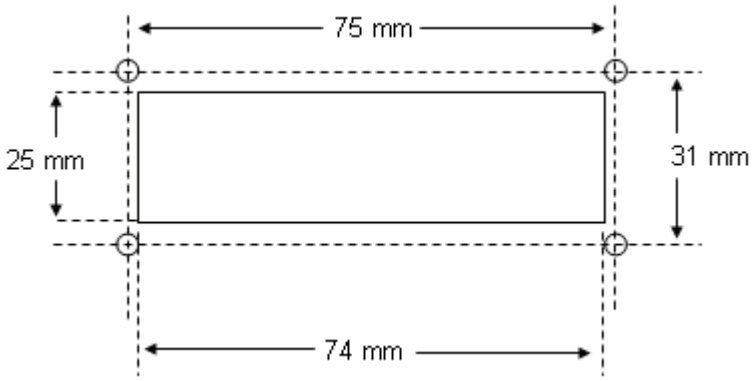
RS232 Connection at J2.

TXD* and RXD* are TTL level Port



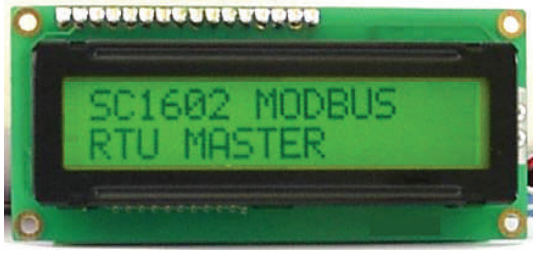
Mechanical Dimension (mm) - Front

Mechanical Dimension (mm) - Side



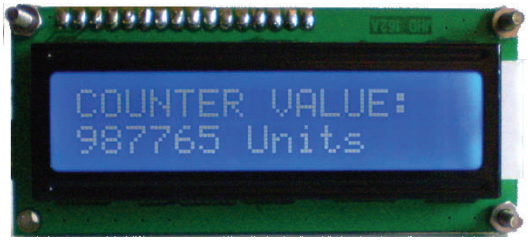
Panel Cutout Guide

Ordering Information



SC1602MBM—Yellow Green Backlight
RS232 or RS485

Optional Accessory :
RS232 Cable for RS232 Version



SC1602MBM—Yellow Green Backlight
RS232 or RS485