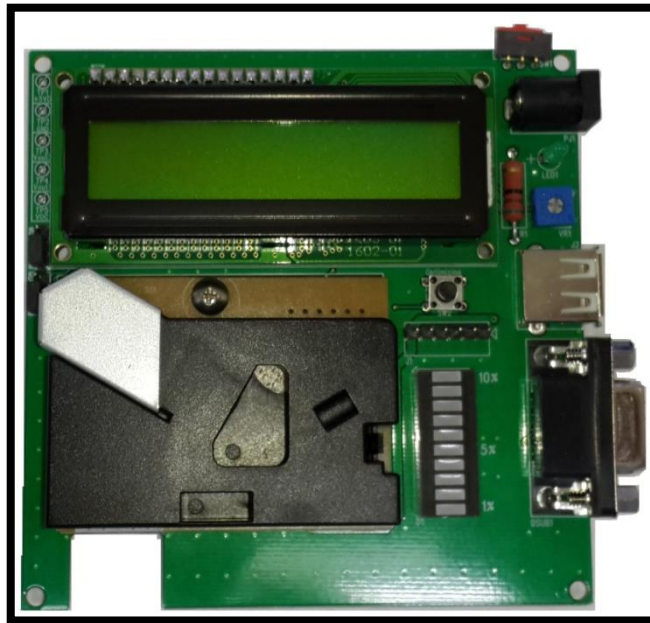


Dust Sensor Demo Kit Manual (SY-DS-DK3)

Concentration(PM2.5) Display



Product Standards

Model.	SY-DS-DK3
Supply Voltage	9~15V / 1000mA
Power consumption	1.28W
Current consumption	142mA
Size	100mm(diameter) * 90mm(height)
Weight	87.8g
Communication	RS232C
Monitoring	2 sec

Main Functions of Dust Sensor Demo kit

■ Dust / Particle's Low ratio(%) and Concentration Display function.

☞ Calculated value by Sensor's PWM signal

☞ Concentration value (ug/m3) is displayed after calculating PWM signal and applying concentration (PM 2.5) conversion formula

计算Pwm信号之后就应用浓度转换公式

■ LED for Easy Dust Checking

☞ Easy checking of dust amount through LED Bar(1 Level per 20ug/m3 - up to level 10)

■ Dust monitoring function

☞ Real-time monitoring available by using RS232(Serial or USB communication Port)

通过RS232(串口或者USB通信口)可以实时监控

■ Gas Sensor Display Function

☞ Gas voltage output available by MMDG Series

MMDG系列可以带气体的电压输出

■ Both MDSM & MMDG compatible with use of Jumper

☞ Jumper on the left side of board is available to switch sensor type

MMDG和MDSM都是兼容的,只是评估板左边的跳线设置而已

CAUTION

☞ Only for 9~15V.

上电的时候,不要插拔传感器

☞ Do not connect MDSM/MMDG with power switch turned on

☞ Do not give too much pressure/shock to the product. It may cause injury or defective product.

产品上面不要施加压力或者冲击,可以导致产品失效

☞ Do not use it in such environment where contains water & vapor. It may cause electric shock, fire hazard, product's degradation and malfunction.

☞ Do not disassemble/remodel

背景光的流明不要改变,否则产生传感器的噪声

☞ Please avoid environment with changeable luminance. It causes sensor's noise.

☞ Please make sure cleaning window is sealed. Otherwise, it causes sensor's noise.

玻璃窗需要密封,否则产生噪声

☞ Please fasten MDSM/MMDG to Sensor fixing hole.

☞ Please avoid places where have fast airflow. It may affect accuracy

噪声检查需要在干净的地方比如低于1万的无尘等级

气流不要太快,否则精度受影响

☞ Noise Check-up must be done in a clean environment (under 10,000 Class)

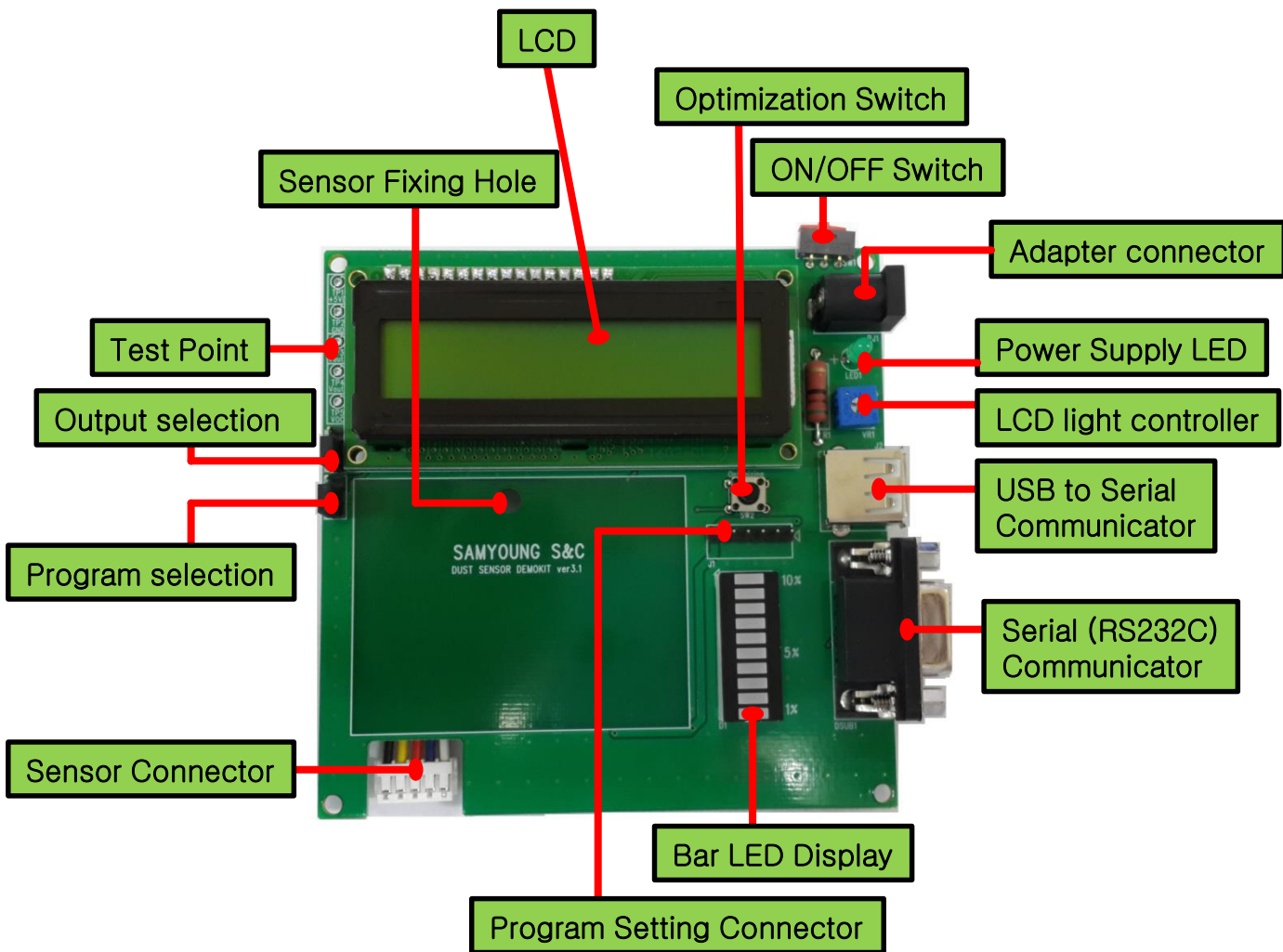
☞ Please choose same product when setting the output jumper and programming. Choosing different product may cause falling-off output or malfunction.

(If gas output value is changed on level 0, please check the output jumper setting)

☞ Please stand the demo kit by 90degrees from the ground, reclining the demo kit may cause malfunction.

产品90度放置,倾斜评估板可能不工作.

Descriptions of Board

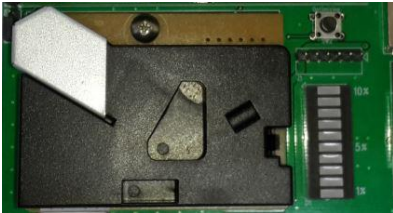


- ⊙ Serial / USB Communication : RS232
- ⊙ Program Selection : MDSM/MMDG Program selection available by using Jumper
- ⊙ Output Selection : MDSM or MMDG Output selection available by using Jumper
- ⊙ Bar LED : Changes 1 level per 20ug/m³
- ⊙ Optimization Switch : Switch for optimization

Description

1. MDSM series operating FLOW

- 1) Fix the sensor on the Board



- 2) Select output & program



- 3) Wait for 60 seconds after switch on as stabilization



- 4) After collecting data, dust concentration and Low ratio value are displayed every 2 seconds.



Optimization function

**** Please proceed it under clean room environment (No scattering lights)**

1) Press the optimization switch.



2) Optimization starts



3) After optimization, the screen comes back to regular display



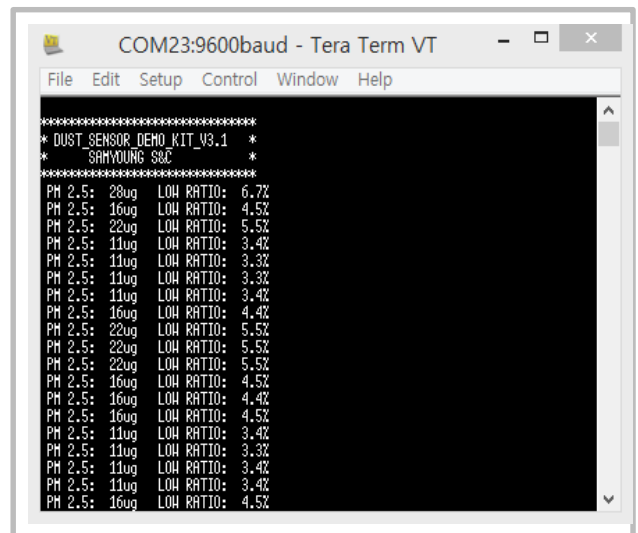
4) After optimization, Please restart the demo kit

Monitoring by PC

1. Connect RS232 communication cable to Demo Kit.
2. Connect RS232 communication cable to PC.
3. Operate monitoring program.
4. Serial port setup
 - Baud rate : 9600
 - Data : 8 bit
 - Stop : 1 bit
5. Open the communication port.
6. Receive data (Concentration & Low ratio) will be displayed every 2 sec.



Connect RS232 communication to Demo Kit



Monitoring Screen
(Left : PM2.5(ug/m3), Right : Low Ratio(%))

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