OPTION MANUAL

Part No : ODA Technologies OPE Series Dual & & Multiful Channel
(OPE Q Series and OPE D Series)
November, 2007.

For Safety information, Warranties, and Regulatory information,
see the pages behind the Index.

Following contents can be changed without notice.

ODA TECHNOLOGIES

ODA Technologies OPE-□□□□□S Series
Economical Type DC Power Supply

OPTION


RS485 Module


Converter for RS485 to RS232C


RS232C Cable (9P-Female)


USB Cable for RS232C


Rack Mount Shelf (19" Full Rack)


Rack Mount Front Cover(19" Half)


Remote Voltage Sensing (Rear Attache)


Rear Output Terminal


Output ON/OFF Signal Control


Analog Signal Input Control


Analog Signal Output


3Digit ▶ 4Digit


AC Input Changing


Last Setup Memory Recall

Windows Application

For more adaption to various field, you can choose the one or more of above options.
Before you purchase the instrument, please check the option.

OPTION

1. RS485 Module

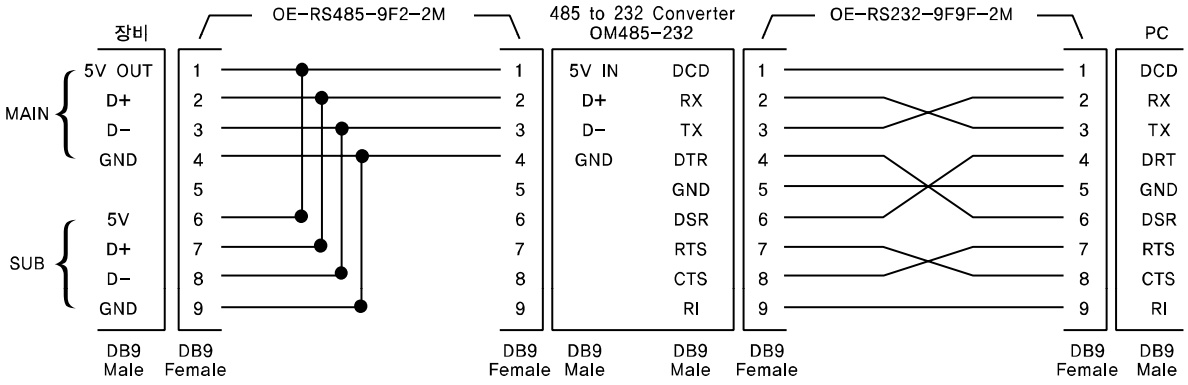
1.1 Application

If you want to control other instruments(oscilloscope, digital multimeter, Arbiturary function generator and etc, included a lot of power supplies) with power supply, attach this module in the power supply and then you can control the instruments.

** You need to connect between each instrumet, and each instrument must be supported the 485 module.

1.2 Method.

In other to connect the power supply of RS485 type, it is necessary standard cross cable of female type. Below is connection drawing of female type cross cable. proceed as follows.



1.3 RS485 PC Interface installation map.

RS485 module outputs DC 5V/0.3A from RS485 cable pin in case of OPE-Series4, so you don't need another power supply to supply the 485-232C communication operating.
The length of between power supply and OM485-232(RS485 to RS232 Converter) must be short in other to avoil voltage loss.
Purchase another OE-RS485-9F2-XX interface cable additionally. You can connect the device to pc easily and save the time.

2. Converter for RS485 to RS232C

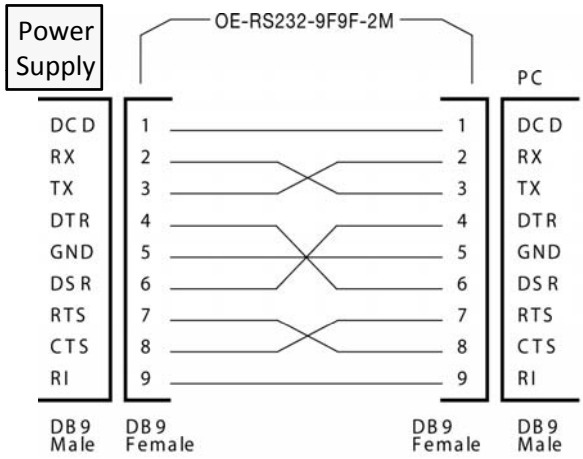
1.1 Application

This is for converting from RS485 to RS232C. It is necessary to use the RS485 mdule.
When you purchase it, you can receive it as built in type or module.

OPTION

3. RS232C Cable

In other to connect the power supply of RS232C or RS485 converter module, it is necessary standard cross cable of female type. Below is connection drawing of female type cross cable. Proceed as follows.



4. USB Cable for RS232C

This is for USB port. If you just have the usb port in the personal computer and not included 9pin serial port, you use this cable.

5. Rack mount shelf

Your power supply can be installed in a rack system or specilized system area. At that time, you can easily install the instrument ther by using rack mount shelf.

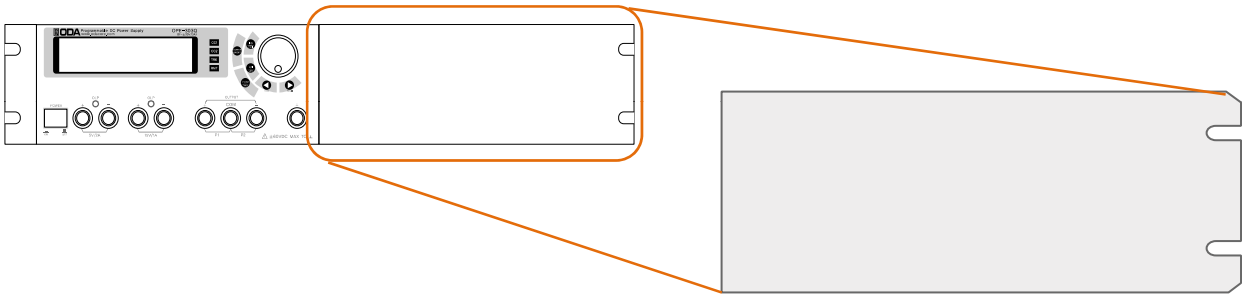
** Caution

Your power supply must be installed in a location that allows sufficient space at the sides and rear of the power supply for adequate air circulation.

OPTION

6. Rack mount front cover

When you use just one power supply and install in the rack system by rack mount shelf, you must cover the hollow side excepted power supply unt side. At that time you can cover easilly by using this cover. Refer to following drawing.



7. Remote Voltage Sensing

Remote voltage sensing is used to maintain regulation at the load and reduce the degradation of regulation that would occur due to the voltage drop in the leads between the power supply and the load. By connecting the power supply for remote voltage sensing, voltage is sensed at the load rather than at the power supply's output terminals. This will allowthe power supply to automatically compensate for the voltage drop in applications with long lead lengths as well as to accurately read back the voltage directly across the load.

CV Regulation

The voltage load regulation specification in chapter 8 applies at the output terminals of the power supply. When remote sensing, add 5 mV to this specification for each 1 V drop between the positive sensing point and (+) output terminal due to the change in load current. Because the sense leads are part of the power supply's feedback path, keep the resistance of the sense leads at or below 0.5 per lead to maintain the above specified performance.

Output Rating

The rated output voltage and current specifications in chapter 8 apply at the output terminals of the power supply. With remote sensing, any voltage dropped in the load leads must be added to the load voltage to calculate maximum output voltage. The performance specifications are not guaranteed when the maximum output voltage is exceeded. If the excessive demand on the power supply forces the power supply to lose regulation, the Unreg annunciator will turn on to indicate that the output is unregulated.

OPTION

Output Noise

Any noise picked up on the sense leads also appears at the output of the power supply and may adversely affect the voltage load regulation. Twist the sense leads to minimize external noise pickup and run them parallel and close to the load leads. In noisy environments it may be necessary to shield the sense leads. Ground the shield at the power supply end only. Do not use the shield as one of the sense conductors.

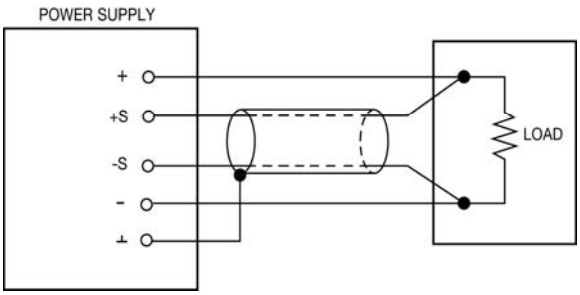
Stablilty

Using remote sensing under certain combinations of load lead lengths and large load capacitances may cause your application to form a filter, which becomes part of the voltage feedback loop. The extra phase shift created by this filter can degrade the power supply's stability, resulting in poor transient response or loop instability. In severe cases, it may cause oscillations. To minimize this possibility, keep the load leads as short as possible and twist them together. As the sense leads are part of the power supply's programming feedback loop, accidental open-connections of sense or load leads during remote sensing operation have various unwanted effects. Provide secure and permanent connections.

Remote voltage sensing requires connecting the load leads from output terminals to the load and connecting the sense leads from sense terminals to the load as shown below. Observe polarity when connecting the sensing leads to the load. Notice that the metal shorting bars

Notice that the metal shorting bars should be removed from the output and sense terminals for remote voltage sensing connections.

N o t e For local voltage sensing connections, the sense leads must be connected to the output terminals.



OPTION

8. Rear Output Terminals

This option is for changing main dc output from front panel to rear panel.
This is very useful to attach to the system .

9. Output ON/OFF Signal Control

This option is that you want to control the power supply's output ON/OFF by external singal control. External signal is following.

- Relay ON/OFF.
- Tack Switch ON/OFF.
- Toggle Switch ON/OFF.
- ETC.

** If you choose this option, signal input terminal is located in rear panel.

10. Analog Signal Input Control

You can remote control the output voltage or current with external analog voltage and current. If you choose this option, signal input terminal is located in rear panel. The functions served by this terminal are as following

- Output voltage control with a voltage signal.(0~10V or 0~5V)
- Output voltage control with a current signal.(4~20mA)
- Output voltage control with a arbituarary function generator
- Output current control with a voltage signal.(0~10V or 0~5V)
- Output current control with a current signal.(4~20mA)

** Caution Before connecting/disconnecting the connectors or cables, be certain that the power switch has been turned off.

OPTION

11. Analog Signal Output

You can make the analog signal from the power supply relative to output voltage or current. If you choose this option, signal input terminal is located in rear panel. The functions served by this terminal are as following

- Voltage signal(0~10V or 0~5V) relative to output voltage.
- Voltage signal(0~10V or 0~5V) relative to output current.
- Current signal(4~20mA) relative to output voltage.
- Current signal(4~20mA) relative to output current.

** Caution Before connecting/disconnecting the connectors or cables, be certain that the power switch has been turned off.

12. Display Resolution

You can choose the 4 digit display resolution power supply. You can see the more precise Voltage and current. Veryfy when you order. Standard goods is 3 digit display resolution.

** ex, 30V dc output instrument displays 00.0V~31.5V but 4 digit display instrument displays 00.00V~31.50V.

13. AC Input Changing

You can change the AC input rating. Option is following.

Standard AC 198V~242V / 50~60Hz, 1 Phase.

Option AC 110V, 380V, 440V,480V
3 Phase.

OPTION

14.Last Setup Memory Recall

You can memory the power supply's last state and after turned off and on, you can recall the last state of power supply and adopt this state immidiately. This option is for unexpected situation. For examples, Main AC Power turning off and frequent power on/off.

** When EX-WORK, default value is "**OUTPUT OFF" when you turn on the power supply. but if you choose this option, last state always store in power supply memory.

Procedure.

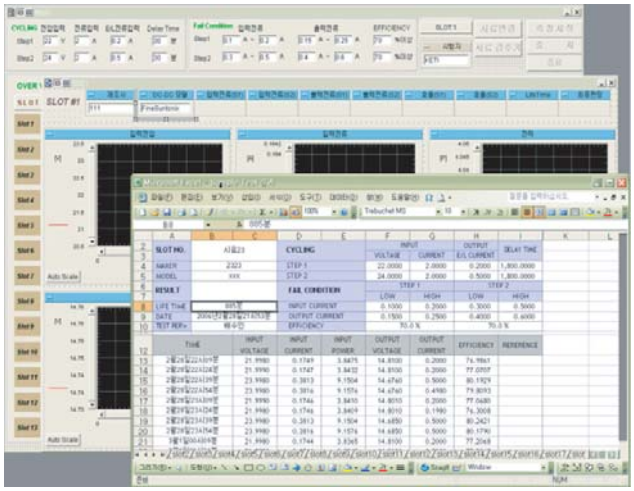
1) Turn on the power supply
2) Press the "Output ON/OFF" key.
3) Set the voltage and current you want
4) Wait to hear the beep sound during 10sec
5) Turn off the power supply
6) Turn on the power supply and you can see the last state are recalled and displayed

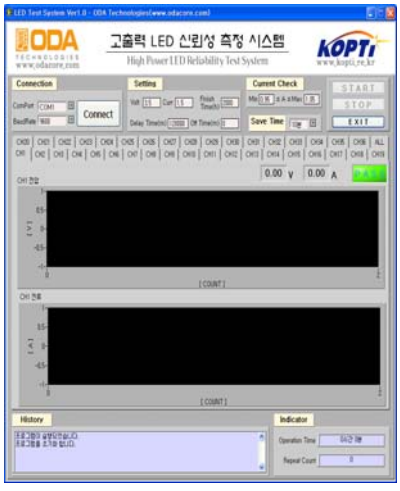
OUTPUT OFF
oo.oV oo.oA
24.oV oo.oA
24.oV oo.oA
24.oV oo.oA

15. Windows Application

This is for system power control based on PC. Major characteristics is as following.

- Excellent Data Acquire System.(Voltage, current, watt, dynamic graphic and etc.)
- Abuntant instruments control(DMM, Oscilloscope, Electronic Load, Function generator spctrum analyser and etc)
- Adequate system for testing the reliability test.
- No need couple of people or more, just need one operator.





15V/80A, 25V/80A, 20% 플러스계전 픽스 5V/2A, 5V/1A