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## Communication Protocol

### 1. Communication Interface and Definition

USB Interface Type: USB

### 2. 9600bps Baud Rate: 9600bps

3. Serial port control command (ASCII code, "X" in the table stands for figure), valid character is lowercase letters, figures, and line break 0x0a.

4. End mark is the line break 0x0a

| Send Command Word   | Perform Operation  | Read-back Command Word | Read-back Command Analysis |
|---|--|------------------------|----------------------------|
| a + line break<br>(Hereafter, every command must take 0x0a as the line break to over, ignore the following) | Back to device model   | Like "3203"            | Device model               |
|   |  | N                      | Communication fail         |
| suXXXX  | CH1 preset output voltage, units V; e.g. 1200 stands for 12.00V                | OK                     | Preset success             |
|   |  | N                      | Communication fail         |
| siXXXX  | CH1 preset output current, units A; e.g. 2500 stands for 2.500A                | OK                     | Preset success             |
|   |  | N                      | Communication fail         |
| saXXXX  | CH2 preset output voltage, units V; e.g. 1200 stands for 12.00V                | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| sdXXXX  | CH2 preset output current, units A; e.g. 2500 stands for 2.500A                | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| O0  | Output indicator light switch-off  | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| O1  | Output indicator light switch-on   | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| O2  | Parallel, series, trace, output indicator light switch-off                     | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| O3  | Series, trace, output indicator switch-off; Parallel indicator light switch-on | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| O4  | Parallel, trace, output indicator switch-off; Series indicator light switch-on | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| O5  | Parallel, series, output indicator switch-off; Trace indicator light switch-on | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| O6  | CH1 indicator light switch-on  | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |
| O7  | CH2 indicator light switch-on  | OK                     | Command Accepted           |
|   |  | N                      | Communication fail         |

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|    |                                    |      |                             |
|----|------------------------------------|------|-----------------------------|
| O8 | CH3 3.3V indicator light switch-on | OK   | Command Accepted            |
|    |                                    | N    | Communication fail          |
| O9 | CH3 5V indicator light switch-on   | OK   | Command Accepted            |
|    |                                    | N    | Communication fail          |
| Oa | CH3 2.5V indicator light switch-on | OK   | Command Accepted            |
|    |                                    | N    | Communication fail          |
| rv | Read the measured voltage of CH1   | XXXX | e.g. 0200 stands for 2.00V  |
| ra | Read the measured current of CH1   | XXXX | e.g. 0020 stands for 0.020A |
| ru | Read the preset voltage of CH1     | XXXX | Stand for XX. XX V          |
| ri | Read the preset current of CH1     | XXXX | Stand for X. XXX A          |
| rh | Read the measured voltage of CH2   | XXXX | e.g. 0200 stands for 2.00V  |
| rj | Read the measured current of CH2   | XXXX | e.g. 0020 stands for 0.020A |
| rk | Read the preset voltage of CH2     | XXXX | Stand for XX. XX V          |
| rq | Read the preset current of CH2     | XXXX | Stand for X. XXX A          |
| rm | Read the device working mode       | 00   | No working mode             |
|    |                                    | 01   | Parallel mode               |
|    |                                    | 10   | In series mode              |
|    |                                    | 11   | Trace mode                  |
| rl | Read lock state                    | 00   | No lock                     |
|    |                                    | 01   | Lock                        |
| rp | Read CH2 state                     | 00   | No output from CH2          |
|    |                                    | 01   | CH2 is in CV state          |
|    |                                    | 10   | CH2 is in CC state          |
| rs | Read CH1 state                     | 00   | No output from CH1          |
|    |                                    | 01   | CH1 is in CV state          |
|    |                                    | 10   | CH1 is in CC state          |
| rb | Read CH3 state                     | 00   |                             |
|    |                                    | 01   | CH1 is in CV state          |