

**RS232/RS422 INTERFACE SETUP MANUAL FOR
PHV Series High Voltage
POWER SUPPLY
Document: 83550140 Rev A**

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1. Overview

1.1. Scope

This manual applies to PHV series power supplies equipped with the RS232 or RS422 digital interface option.

The digital interface is divided into two separate modules inside the power supply.

The user has direct access to the interface converter which is located on the rear panel of the unit (see item 1 in Figure 1). The interface converter sends and receives commands from the user, and converts them to serial fiber optic data.

The fiber optic signals are connected to inside the supply to the ADDA module which contains all of the conversion and control electronics for the interface. The same ADDA module can be used with multiple interface converter types using the same fiber optic cable link.

Interface baud rate settings and other functions can be set with DIP switches located on the ADDA module.

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2. Interface setup information

A common feature of the RS232 and RS422 interface is that the unit can be controlled from a PC via a COM port.

From the view of the application programmer, there is no difference between the versions.

2.1. RS232, interface converter

The RS232 interface is located on the rear panel of the PHV power supply (see item 1 in Figure 1).

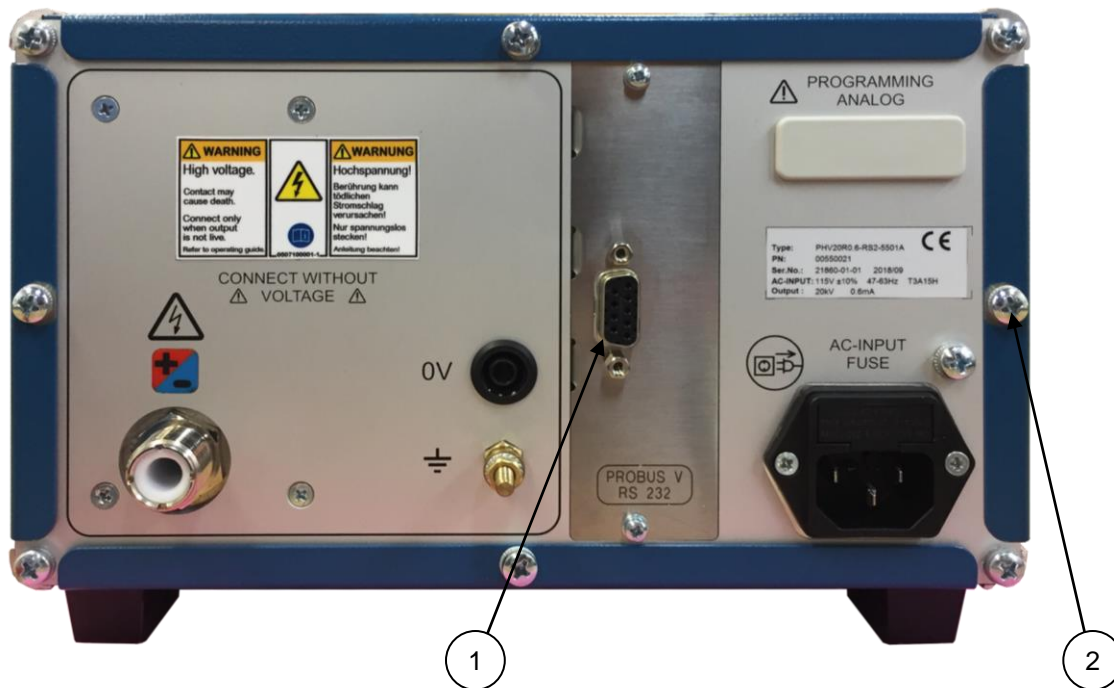


Figure 1. PHV Rear Panel.

A sketch of the interface showing the D-sub connector pin numbering is shown in Figure 2 with the function of each pin is outlined in Table 1.

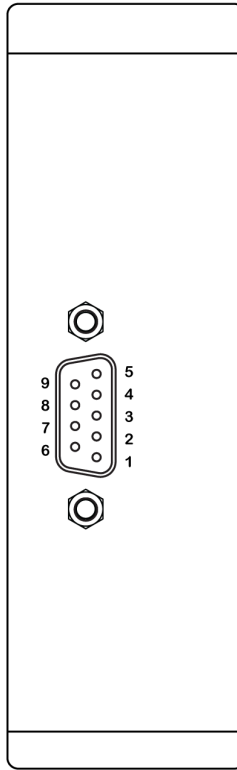


Figure 2. RS232 and RS422 Connector Pin Numbers.

Pin	Function
2	Tx - Data Output
3	Rx - Data Input
5	Ground
4 - 6	Internally shorted
7 - 8	Internally shorted
1, 9	Not connected

Table 1. RS232 Connector Pin Functions.

To establish a connection with a standard PC, the user needs to connect pins 2, 3 and 5 with the same pin numbers on the PC com port.

It is also possible to use standard RS-232 cables with 1:1 pin connection.

Note: Do not use a NULL-modem cables with Pins 2 and 3 crossed, this type of cable will not work.

2.2. RS422, interface converter

The RS422 interface is located on the rear panel of the PHV power supply (see item 1 in Figure 1).

The function of each pin is outlined in Table 2.

Pin	Function
1	Tx - Data Output
2	Tx + Data Output
3	Rx + Data Input
4	Rx - Data Input
5	Ground
6	Not connected
7 - 8	Internally shorted
9	Not connected

Table 2. RS422 Pin Functions.

The pin assignments follow a quasi-standard, and therefore it cannot be guaranteed that the pin assignment is compatible to your PC RS-422 output. In case of doubt, the pin assignment of PC and interface converter needs to be verified.

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3. Baudrate setting

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Baudrate is set by DIP switches on the ADDA module, which can be at high voltage during normal operation!

Disconnect all external connections from the power supply and wait until the internal components have discharged before making any changes.

If the power supply was shipped with the RS232 interface, the baud rate is factory set to 9600Bd. The Baud rate can be changed in the field by removing the left side panel securing screw (see item 2 in Figure 1), locating the ADDA module (see Figure 3) and adjusting DIP switches 1 and 2 as shown in Figure 4 through Figure 6).

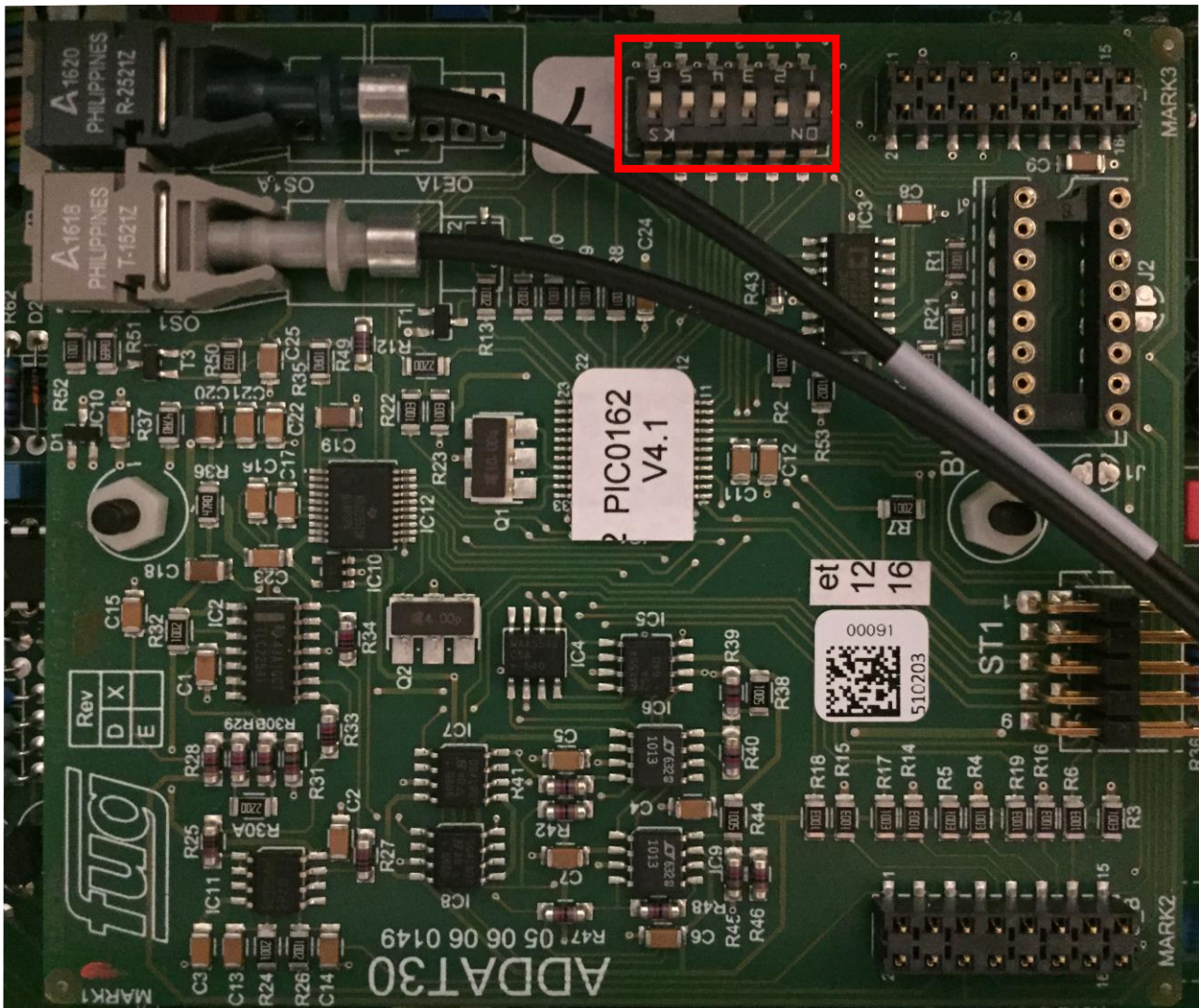


Figure 3. ADDA Module with DIP switches highlighted.

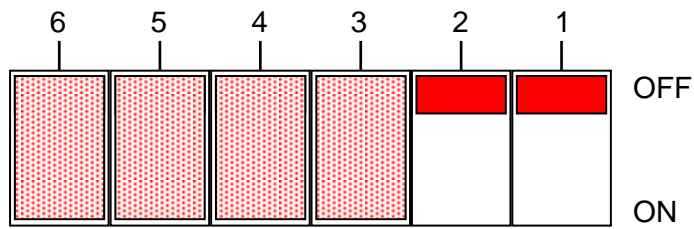


Figure 4. DIP Switch settings for 9600Baud.

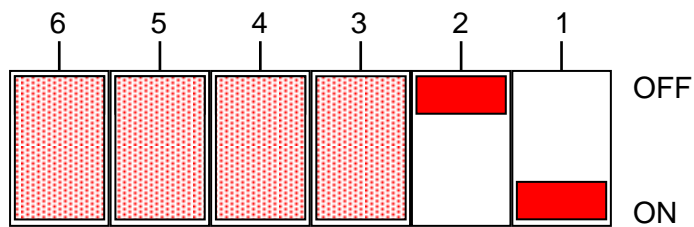


Figure 5. DIP Switch settings for 38400Baud.

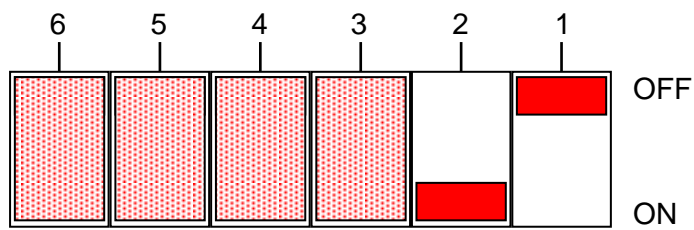


Figure 6. DIP Switch settings for 625kBaud.

Replace and secure the side panel.

Now the unit is ready to be operated. Refer to the Digital Interface Command Ref manual for details of commands and operation via the digital interface.