

## RS-485 Option

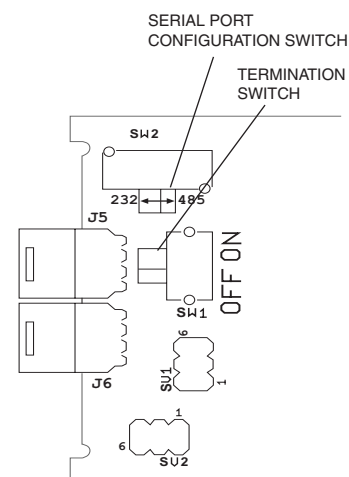
When the serial port configuration switch is set to the “485” position, the serial port output is changed to the RS-485 mode. If the actuator has had an ID set previously, that ID will be recalled and retained. Otherwise, the ID will be set to the factory default value of “Z”.

Note: All RS-485 communications use an ID and must be preceded with a ‘/’:  
i.e, /ZVR<enter>

### Setting the Serial Port Configuration Switch

1. Remove the 4 screws from the front (valve side) of the actuator.
2. Carefully slide the assembly out of the enclosure. We recommend that the enclosure be opened in a static-free environment following all proper ESD protection techniques.
3. Locate the slide switch marked “232 <– –> 485”, and set it to 485.

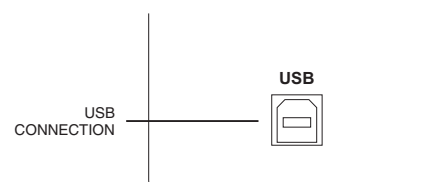
Note: The switch labeled “Termination On <– –> Off” is typically left in the Off position. Unless the wiring from the host control to the device is very long and it is the last device at the end of a signal chain of devices, it is recommended that this switch is left in the Off position.



**Figure 9:** Serial port configuration switch

## USB Option

The USB interface installs as a virtual COM port (VCP). The VCP driver causes the universal actuator to appear as an additional COM port available to the PC, so application software can access the actuator in the same way it accesses a standard COM port. Refer to “Appendix A: Installing USB Drivers”, on page 21.



**Figure 10:** USB connector on rear panel

## Serial Communication Protocol

Serial communication is based on an ASCII string protocol. Carriage Return (OD hex) and Line Feed (OA hex) characters parse the communications by defining the end of each command. A three-pin connector is used for the serial interface: pin assignments are indicated below. Software flow control (Xon/Xoff) and hardware handshaking are not supported. The table on the next page describes and explains all the commands available. A fuller explanation follows.

Pin #	RS-232	RS-485	DB9*
1	Ground	Ground	5
2	Transmit to host	B (+)	2
3	Receive from host	A (-)	3

\*For VICI cable I-22697