SIMPLWINDOWS NAME:	APC Smart UPS Power Controller
CATEGORY:	Power Controller
VERSION:	1.0
SUMMARY:	Controls power on/off and provides status of battery/power mode/voltage/time remaining
GENERAL NOTES:	This module will control an American Power Conversion (APC) Smart-UPS. It was tested on a Smart-UPS 700, however, it should work for all APC Smart-UPS models. Some models may not support all of the features of the 700. Before communicating with the unit, you must put it into "Smart" mode. This is done by pulsing the ENABLE-RS232 input. If it is ever desired to exit "Smart" mode and return to "Simple" mode, you could pulse the DISABLE-RS232 input. Once you have entered "Smart" mode, you will be able to turn the unit on and off with the POWER-ON and POWER-OFF inputs. It will take 2-3 seconds after activating one of these inputs for the command to be executed. The unit provides an assortment of status information pertaining to the current power mode, battery condition, voltage, etc. You can enable the polling of these levels by asserting the ENABLE-POLLING input. As long as this input is high, the unit will be polled for status as often as specified in the TIME-BETWEEN-POLLS input. The time between polls must be no less than 3 seconds. It was tested with a value of 10S. It should not be set to a value larger than 580S. The unit will be automatically polled once, whenever power is turned on/off, or when an event such as a power failure/power restore occurs. So if it was desired to only enable polling during a power failure, you could attach the STATUS-BATTERY-MODE output to the ENABLE-POLLING input. In this scenario, the unit would be polled for as long as the UPS was operating on battery power. Once the power was restored, the constant polling would stop.
CRESTRON HARDWARE REQUIRED:	CNXCOM, ST-COM
SETUP OF CRESTRON HARDWARE:	Baud Rate - 2400 Parity - None Data Bits - 8 Stop Bits - 1
VENDOR FIRMWARE:	None
VENDOR SETUP:	None
CABLE NUMBER:	CNSP-637

CONTROL:

ENABLE/DISABLE-RS232	D	Pulse to enter/exit "Smart" mode. The unit must be in "Smart" mode before sending any other commands
POWER-ON/OFF	D	Pulse to turn power on or off. It will take 2-3 seconds for the command to be executed
		While high, the unit will be polled as often as

ENABLE-POLLING	D	specified in the TIME-BETWEEN-POLLS parameter
APC-RX$	S	Serial signal to be routed from a 2-way RS232 port

FEEDBACK:

STATUS-LINE-MODE	D	Indicates that the unit is running on line (AC) power
STATUS-BATTERY-MODE	D	Indicates that the unit is running on battery power
STATUS-REPLACE-BATTERY	D	Indicates that the battery should be replaced
STATUS-LOW-BATTERY	D	Indicates that the battery charge is low
STATUS-OVERLOADED-OUTPUT	D	Indicates that the output circuits are overloaded
STATUS-SMART-BOOST-MODE	D	Indicates that the unit is in smart boost mode
STATUS-SMARTTRIM-MODE	D	Indicates that the unit is in smart trim mode
STATUS-CALIBRATION	D	Indicates that the unit is in calibration mode
BATTERY-BAR	A	Indicates the relative level of the battery charge. Could be routed to a bargraph or a percentage display on a touchpanel
TIME-REMAINING$	S	Indicates the estimated number of minutes that the unit can operate on battery power
BATTERY-VOLTAGE$	S	Indicates the battery voltage
INTERNAL-TEMPERATURE$	S	Indicates the temperature of the unit
FREQUENCY$	S	Indicates the units internal operating frequency
LINE-VOLTAGE$	S	Indicates the current line voltage
MAX-LINE-VOLTAGE$	S	Indicates the maximum line voltage to occur since the last poll
MIN-LINE-VOLTAGE$	S	Indicates the minimum line voltage to occur since the last poll
OUTPUT-VOLTAGE$	S	Indicates the current output voltage
LOAD-POWER$	S	Indicates the power currently being supplied to the outputs
APC-TX$	S	Serial signal to be routed to a 2-way RS232 port

.UPZ FILE USED FOR TESTING:	5.12.26x.upz
COMPILER USED FOR TESTING:	SimplWindows Version 1.52.01
SAMPLE PROGRAM:	APC Smart UPS Demo Program
REVISION HISTORY:	None