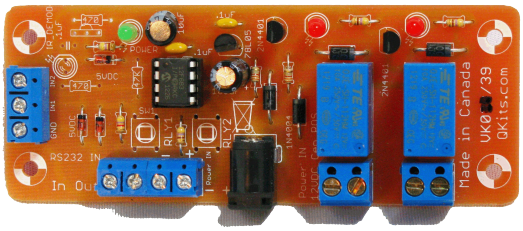
VK039



2 Channel Serial Relay Card
With Two High/Low Inputs

Small and efficiently designed, VK039 is a two channel relay card controlled through a serial port. A serial connector is not included to keep costs down, but can be ordered, wired to the necessary 3 pins that are used by the device. Using a TTY program you can easily send text commands to control and read the state of the two SPST relays (10A – only Normally Open provided for switching), as well as check the status of two push button sensors (high/low). The module requires 60mA@12VDC, and you can use either the on-board screw terminals or the 2.1mm barrel connector; polarity is protected.

Serial Connection

Connect pin 3 of serial port to IN, pin 2 to OUT, and pin 5 to -.

Operation

Connect serial port to PC.

Connect 12vDC 60mA min power supply to connector or screw terminal, polarity doesn't matter.

Open a TTY program such as hyperterminal or putty portable. Open a connection to the serial port (we sell usb to serial modules as well) at 9600 or 19,200 baud 8,N,1.

Commands

1 is relay 1, 2 is relay 2, and 0 is both relays

n1 turns on relay 1
n0 turns on all relays
f1 turns off relay 1
f0 turns off all relays
t1 toggles relay 1
t0 toggles both relays

m1 will pulse relay 1 for 2 seconds
R reads both inputs and returns their state.
S reads both relays and returns their state.
V sends back version information.
? enters setup mode.
C followed by w to send configuration flags.

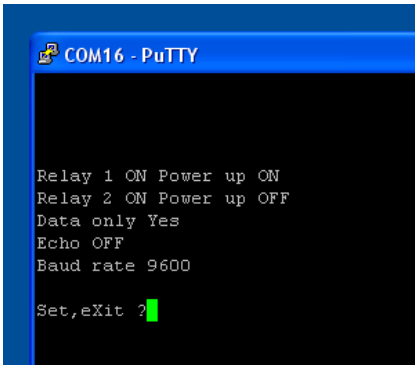
Responses

! an unknown command has been received.

> is returned once the current command has been received and processed, wait until this character returns before sending another command.

Setup Mode

Setup gives you a few useful additional options such as default state of each relay upon power up, echo mode to read back what you've sent, and data mode for reading the inputs. Caps indicate which key press is expected. In this case, S for set, or X for eXit.



Data only

This option can help reduce the number of bytes that are transmitted when a read is requested, the extended data is nice if you are using a terminal program to interact with the module. If your using an Arduino or other device then it would not be needed and the extra data would be a time waster.

Relay ON power up

You can specify if the relay will be ON or OFF when the relay card has power applied or reset occurs. Each relay can have its own power up state so one could be ON and number 2 could be OFF or the other war around, or both ON at the same time.

ECHO

This is useful for debugging, sometimes serial communications can be difficult to debug, is it cabling or settings, is the data getting there? With Echo ON the module will send back what ever is sent to it, then it will attempt to process the data.

Configuration word

In order to be able to set the various options without going through the menu, we have provided a way to upload a new configuration word, first send an Upper case 'C' followed be a lower case 'w' then the configuration word in an bit format.

The bits are as follows: D0 = Extra data, 0 = OFF 1 = ON D1 = ECHO On or OFF, 0 = OFF 1 = ON D2 = Relay 1 power ON state, 0 is OFF and 1 is ON D3 = Relay 2 power ON state, 0 is OFF and 1 is ON D4= Baud rate, 0 = 9600, 1 = 19200	Once the new word has been received its saved to the eerom, the device is reset and the new data loaded when the processor restarts.

The relays are SPST contacts rated at 10 amps 125VAC however, in any case 5 to 6 amps is the practical limit for this configuration.

If there is a command you want added or one that we have forgot, email us, tech@qkits.com