

Using the Contact Closures on Zephyr Xport

7, July, 2008

The Zephyr Xport supports three contact closures in each direction. These correspond to contact closures 4 through 6 of the Zephyr Xstream. The Interface control port has 3 inputs and 3 outputs.

These contact closures can communicate between an Xport and a Zephyr Xstream. By grounding an input on the Xstream, you would therefore cause current to flow into the corresponding output, at the far end Xport (or vice versa).

Inputs

There are two ways to trigger the Xport's first two inputs

1. Press <F1> or <F2>. These buttons directly trigger Input 4 and 5 of the Xport, respectively. The input remains asserted as long as the F-key remains pressed.
2. Assert the appropriate Input pin on the Xport's Interface connector. This will work for all 3 inputs (on inputs 4 and 5 the button position and input state are combined with a logical "OR" function).

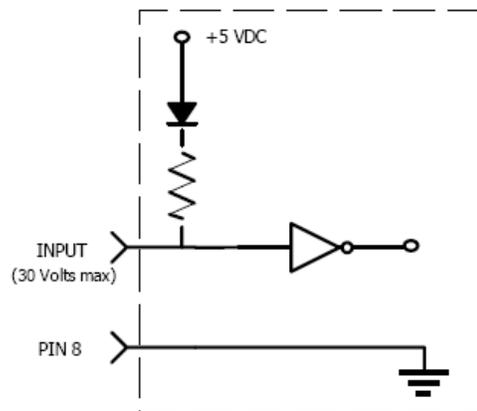


These inputs have the following characteristics:

Integral 10 k Ω pull up resistor to 5 volts

With external pull up resistor may be used with voltages up to 30 volts

Ground (or zero volts) equals "true"



Parallel logic input circuit

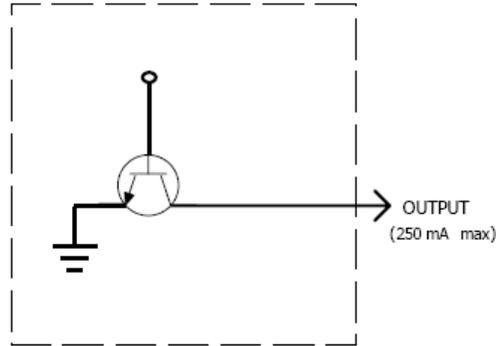
Outputs

There are three outputs with the following characteristics:

When inactive (false) the output is high impedance to ground.

When active (true) true the output will provide a path to ground. It can sink up to 250 mA.

If used with logic inputs, the external logic will require a pull-up resistor to its required 'on' voltage (this may be built into the input of the other device). 10 k ohm is a typical value. 5 Volts DC is provided on pin 1 for this purpose.



Parallel logic output circuit

When wired between an external voltage source and a load (such as an LED or relay), the output can drive small loads directly. A resistor should be placed in series to limit the current draw to less than 250 mA.

The INTERFACE connector

The following table shows the function of the pins on the Interface connector. It is a 9-Pin D-subminiature connector.



<i>PIN</i>	<i>FUNCTION</i>
1	5 Volts DC (15 ma max)
2	Output 4
3	Reserved
4	Output 6
5	Output 5
6	Input 4
7	Input 5
8	Input 6
9	Ground

NOTE: When shipped from the factory, the ribbon cable for the interface connector will be connected to JP-9 (GPIO) on the motherboard of the Xstream. This cable can be moved to JP-8 (RS232) to allow a serial connection to the Xstream. This would only be necessary if requested by Telos Support for diagnostic reasons. When connected to JP-8 the interface connector emulates a DCE (data communications equipment such as a modem). The pinout in this case is the same as for the Zephyr Xstream.