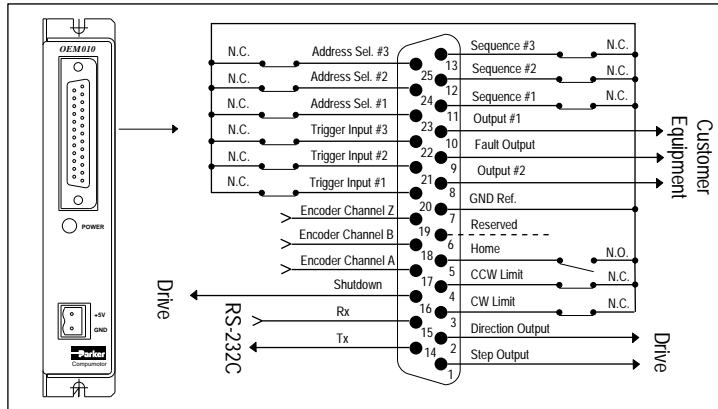


OEM010 Inputs and Outputs



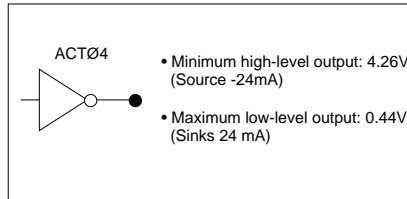
OEM010 Inputs & Output Schematic

CAUTION

I/O is not OPTO isolated, I/O GND is common to GND.

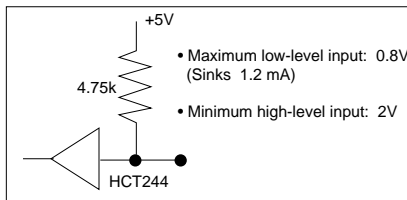
Step (Signal 1) & Direction (Signal 2) Outputs

The OEM010 produces a step and direction output that is that is compatible with all step and dir input drives. The Direction output's default state is logic high. The Step output's default state is a high, pulsing low output. The figure represents a typical configuration of this output.



CW (Signal 3) & CCW (Signal 4) Limit Inputs

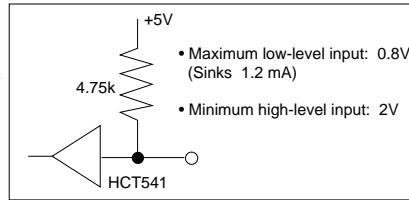
The OEM010 has two dedicated hardware end-of-travel limits (CCW and CW). When you power up the OEM010, these inputs are enabled (high). To test the OEM010 without connecting the CCW and CW limits, you must disable the limits with the **LD3** command. You can use the Limit Switch Status Report (**RA**) and Input Status (**IS**) commands to monitor the limits' status. The figure represents a typical configuration of these inputs. Minimum pulse width 1 ms.



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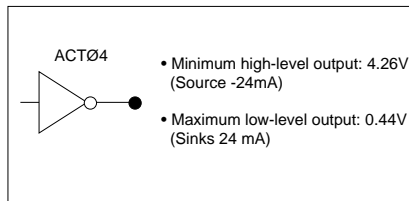
Home Position Input (Signal 5)

The OEM010 has one dedicated home input. The Home Limit input allows you to establish a home reference input. This input is not active during power-up. Refer to the Go Home (**GH**) command for more information on setting up and using this function. Minimum pulse width is 1 ms. The figure represents a typical configuration.



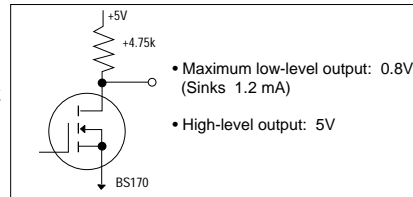
Output #1 (Signal 10) and Output #2 (Signal 8)

The OEM010 has two dedicated programmable outputs. They may be used to signal peripheral devices upon the start or completion of a move. The default state for Outputs #1 and #2 is logic low. Refer to the Output (**O**) command for information on using these outputs.



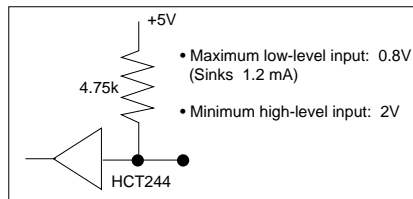
Dedicated Fault Output (Signal 9)

The OEM010 has one dedicated fault output. This output may be used to signal peripheral devices if a unit failure occurs. The Fault output's default state is logic high. The figure represents a typical configuration of this output.



Sequence Inputs #1 - #3 (Signals 11 - 13)

The OEM010 has three dedicated sequence inputs that allow you to control seven different sequences. During power-up, the inputs are pulled up internally, which activates **power-up sequence #7**. Sequence #0 is not a valid sequence. Sequences are executed remotely by using one of the following logic patterns in conjunction with the **XP** command.

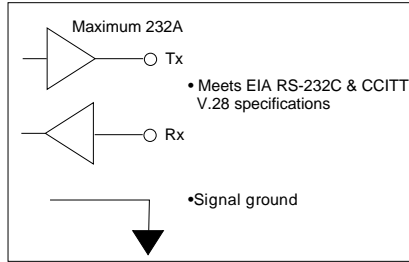


| Sequence # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------|---|---|---|---|---|---|---|---|
| SEQ Input #1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| SEQ Input #2 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| SEQ Input #3 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |

0 = low, pulled to ground
1 = high, 5VDC

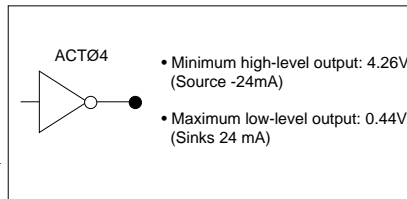
RS-232C—Tx (Signal 14), Rx (Signal 15), and Ground (Signal 7)

The OEM010 uses RS-232C as its communication medium. This indexer does not support handshaking. A typical three-wire (Rx, Tx, and Signal Ground) configuration is used. The figure represents a typical RS-232C configuration.



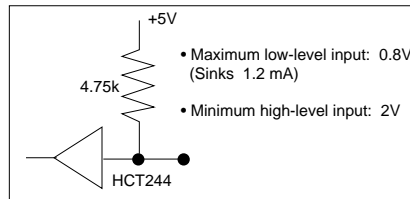
Shutdown Output (Signal 16)

The OEM produces a Shutdown output that is used to remotely disable a drive. This function is controlled by the **ST** command. The Shutdown output's default state is logic high: output is high when the motor is not shutdown (STØ).



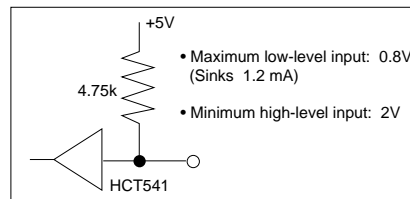
Encoder Inputs A,B,Z (Signals 17 - 19)

The OEM650X has three dedicated inputs for use with a single ended incremental encoder. With differential encoders, leave A-, B-, and Z- isolated and tie the encoder GND to pin 7 (GND). These inputs in conjunction with the **FS** commands will determine the encoder functionality.



Trigger Inputs #1 - #3 (Signals 20 - 22)

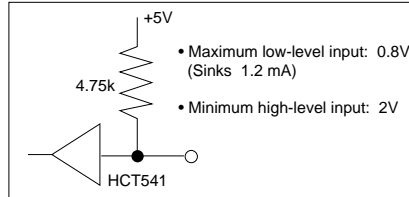
The OEM010 has three dedicated Trigger inputs. These inputs are pulled up internally. These inputs are used with the Trigger (**TR**) command to control the OEM010's trigger function. The figure represents a typical configuration of these inputs. Minimum pulse width is 1 ms.



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Address Signals #1 - #3 (Signals 23 - 25)

The OEM010 has three dedicated address inputs that allow you to specify a unique address for each OEM010 in your configuration. Units may be assigned a valid address from 1 to 8. Each unit in the configuration must have a unique address. The default address is 8 (all three



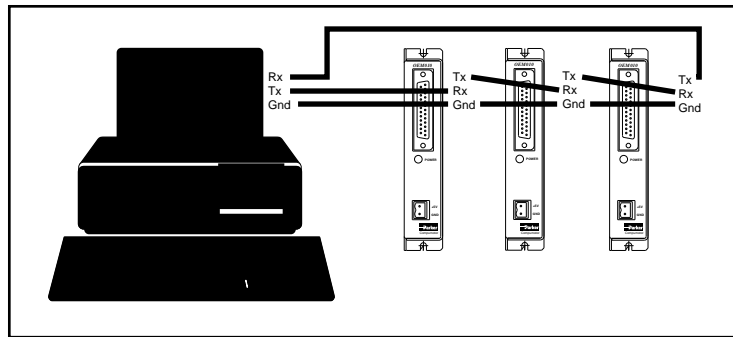
inputs are internally pulled up. The address inputs are read only during power-up and when Restart (Z) commands are issued. Use the matrix below to assign unique address values.

| Address # | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------|---|---|---|---|---|---|---|---|
| Address #1 | Ø | 1 | Ø | 1 | Ø | 1 | Ø | 1 |
| Address #2 | Ø | Ø | 1 | 1 | Ø | Ø | 1 | 1 |
| Address #3 | Ø | Ø | Ø | Ø | 1 | 1 | 1 | 1 |

Ø = low, pulled to ground
1 = high, 5VDC

Daisy Chaining

You may daisy chain up to 8 OEM010s. Individual drive addresses are set with signals 23, 24, and 25 on the 25-pin D connector. When daisy chained, the units may be addressed individually or simultaneously. You should establish a unique device address for each OEM010. Refer to the figure below for OEM010 daisy chain wiring.



Daisy Chain wiring

Commands prefixed with a device address control only the unit specified. Commands without a device address control all units on the daisy chain. The general rule is: *Any command that causes the drive to transmit information from the RS-232C port (such as a status or report command), must be prefixed with a device address.* This prevents daisy chained units from all transmitting at the same time.

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Attach device identifiers to the front of the command. The Go (**G**) command instructs all units on the daisy chain to go, while **1G** tells only unit #1 to go.

When you use a single communications port to control more than one OEM010, all units in a daisy chain receive and echo the same commands. Each device executes these commands, unless this command is preceded with an address that differs from the units on the daisy chain. This becomes critical if you instruct any indexer to transmit information. To prevent all of the units on the line from responding to a command, you must precede the command with the device address of the designated unit.