

**Instruction Sheet
for the PASCO
Models CI-6718
and CI-6719**

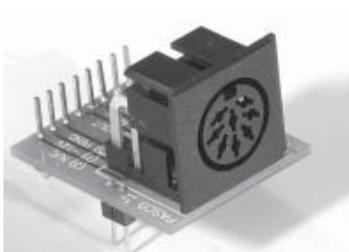
ELVIS Adapters

Introduction

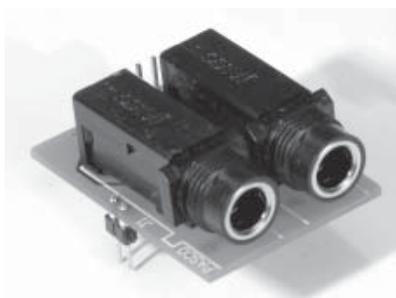
The PASCO ELVIS Adapters are designed to allow the use of PASCO sensors with National Instruments™ Educational Laboratory Virtual Instrument Suite (NI ELVIS). LabVIEW™ software can be used with NI ELVIS to collect and analyze data with the sensors. The adapters are also compatible with most electronics prototyping boards.

Two different adapters are available:

Analog Adapter (CI-6718) - enables the use of a single ScienceWorkshop analog sensor with ELVIS.



Digital Adapter (CI-6719) - enables the use of one or two ScienceWorkshop digital sensors with ELVIS.



Connection of Analog ScienceWorkshop Sensors

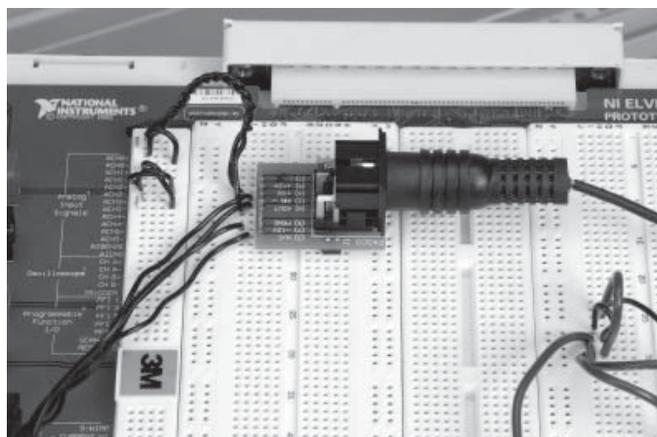
Analog ScienceWorkshop sensors have 8-pin DIN connections. Not all sensors require all connections, but connecting all pins as specified will not damage any of the ScienceWorkshop sensors.

Please see the specific connection charts on the following pages.

Using Analog Sensors

1. Plug the analog adapter into a prototyping board.
2. Connect wires from the inputs/outputs of the adapter to the desired inputs and outputs as specified in the connection chart.

Please note that the two sets of pins nearest the DIN connector are not electrically connected. They simply provide additional mechanical support for the adapter.



3. Steady the DIN connector with one hand and plug the desired analog sensor into the adapter.
4. Create a Virtual Instrument (VI) using LabVIEW software to collect and analyze data with the sensor.

Using Digital Sensors

1. Plug the digital adapter into a prototyping board.
2. Connect wires from the inputs/outputs of the adapter to the desired inputs and outputs. (Reference the appropriate connection chart.)

Please note that the two sets of pins nearest the stereo jacks are not electrically connected. They simply provide additional mechanical support for the adapter.

3. Steady the adapter with one hand and plug the desired digital sensor into the adapter.

The adapter will accommodate:

- One Motion Sensor or Rotary Motion Sensor
- Two Photogates, Smart Pulleys, Time of Flight Pads, or Nuclear Sensors

4. Create a Virtual Instrument (VI) using LabVIEW software to collect and analyze data with the sensor.

Note: If you are plotting the input from an unused channel, its output will tend to follow that of the last input in the multiplex scan order unless its inputs are shorted.

Chart: Connection of Analog ScienceWorkshop Sensors

ELVIS I/O		Analog Adapter I/O	
ACH0+	Analog channel #0 Positive Sense	AIN+	Positive Sensor Analog Input
ACH0-	Analog channel #0 Negative Sense	AIN-	Negative Sensor Analog Input Port
DC Power Supplies +5 V	+ 5 V Power Supply Output	+5 V	+ 5 V Sensor Power Input
DC Power Supplies GND	Power Ground	PGND	Sensor Power Ground
Variable Power Supplies SUPPLY +	+ 12 V Power Output.*	+12V	+12V Sensor Power Input
Variable Power Supplies SUPPLY -	- 12 V Power Output.*	-12V	-12V Sensor Power Input
		N/C	No Connection
		AOUT	Analog Output **

* Set the dials for the variable power supplies to "manual" and change the values to +/- 12 V.

**Usually not connected.

Chart: Connection of ScienceWorkshop Motion Sensors

ELVIS I/O		Digital Adapter I/O	
DC Power Supplies	Power Ground	GND	Digital Port #1 Power Ground
GROUND			
CNTR0_OUT	Counter #0 Output	SIG1	TTL Signal for Digital Port #1
DC Power Supplies	+ 5 V Power Supply Output	+5	+ 5 V Sensor Power Input
+5 V			
DC Power Supplies	+ 5 V Power Supply Output	+ 5	+ 5 V Sensor Power Input
+5 V			
CNTR1_GATE	Counter #1 Gate Input	SIG2	TTL Signal for Digital Port #2
DC Power Supplies	Power Ground	GND	Digital Port #2 Power GND
GROUND			

Chart: Connection of ScienceWorkshop Photogates

ELVIS I/O		Digital Adapter I/O	
DC Power Supplies	Power Ground	GND	Digital Port #1 Power Ground
GROUND			
CNTR0_SOURCE	Counter #0 Source	SIG1	TTL Signal for Digital Port #1
DC Power Supplies	+ 5 V Power Supply Output	+5	+ 5 V Sensor Power Input
+5 V			

Warranty

For a description of the product warranty, see the warranty description in the PASCO catalog.