

SESPM-4P-DIG Digital Input/Output Module

Option Install Guide

Installing SESPm-4P-DIG Option Kit in SESPm1040-541-LT-xx Switch

The SESPm-4P-DIG is a Digital Input/Output Module with 4 optical isolators. The SESPm-4P-DIG provides connection for alarms, event notifications, or other customer-designated items. The kit consists of four optical isolators independently configurable as either inputs or outputs, and a 12 VDC power source.

The kit includes the Module, a Terminal Block Label, and a plastic standoff (PCB Spacer) to hold the Module in place.



Electrical Specifications

Specifications typical at 25°C

Digital I/O Power Supply Characteristics

Power supply voltage (VCC):

12V at 56mA load

13.2V no load

11.1V at 80mA full load

Maximum load current 80mA or 1W

Isolation voltage 1500V DC

Digital Input characteristics

Maximum low level voltage 5.4V

Minimum high level voltage 7.2V

Input current if using integral supply (VCC-5.4V)/100K (66µA typical)

Input current if using an external supply (supply voltage-5.4V)/100K

Isolation voltage 2250V DC

Maximum input voltage = 36V

Digital Output characteristics

Switch on voltage drop at 60mA =1.6V (~1V no load)

Switch off leakage current if using integral supply = (VCC-5.4V)/100K

Switch off leakage current if using an external supply (supply voltage-5.4V)/100K

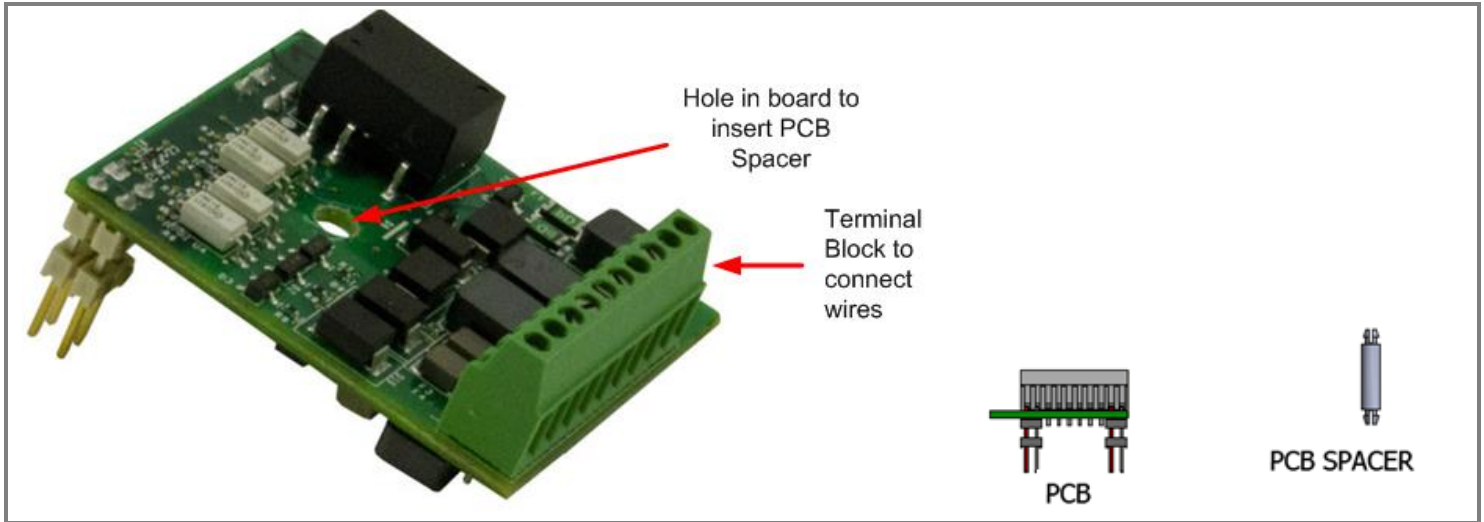
Isolation voltage 2250V DC

Maximum voltage across switch 36V

Switch maximum drive current 60mA

Input and output diode protected for up to 36V reverse polarity.

Input and output clamped to 36V. **Note:** this feature requires external power source to be less than 36V or user must provide adequate resistance to limit diode clamp power dissipation to ≤5 Watts max. (5W/36V= 138mA)



SESPM-4P-DIG Parts List

<u>QTY</u>	<u>DESCRIPTION</u>
1	TN Product Support Postcard, 3x5, 65lb
1	Manual, SESP-4P-DIG, Option Install Guide
1	Label, Digital I/O, Terminal Block (in 2x5" Bag)
1	Nylon PCB Spacer (Standoff), 0.625", Snap-in (in 2x5" Bag)
1	Packaging, 2 x 3, 2MIL Reclosable Poly Bag
1	PCB Assy, PoE++ Family, Digital I/O (in 3x5" Pouch)
1	Packaging, Anti- Static Pouch, 3x5

SESPM-4P-DIG Install Procedure

See pages 5 and 6 for some possible input/output configurations.

1. Ensure the switch is powered off before installing Digital Input/Output Module.
2. See the *SESPM1040-541-LT-xx Install Guide* for important Cautions and Warnings.
3. Unpack the kit and verify the contents before sending to install site. Save the packaging for possible future use.
4. If also using optional Additional Combo Port Module or Wireless Extension Module, install it before installing the Digital Input/Output Module. See the related Option Install Guide.
5. Insert standoff into switch board (squeeze both ends of the Standoff with a pliers to ease insertion).
6. For ease of handling, we recommend attaching wires to Terminal Block before inserting the Digital Input/Output Module into the switch board. Maximum wire size is 18 AWG stranded wire.
7. Carefully insert the Digital Input/Output Module into the switch board (see Figure 1 and Figure 2 below). Do not push too hard or you may damage the switch board. If necessary squeeze the end of the Standoff with a pliers again.
8. Identify connections on included label and apply label to inside cover (see Digital I/O Terminal Block Label on page 4 below).
9. Configure the Digital I/O Module via the CLI or via the Web UI. See the SESP-4P-DIG Option Operation Guide for more information.

Dimensions

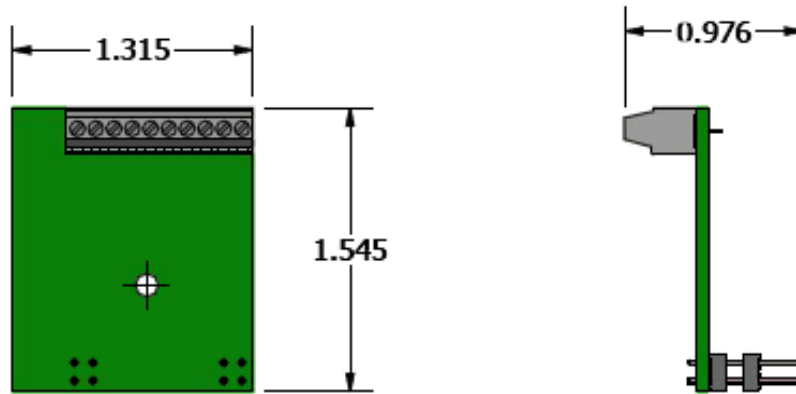


Figure 1. SESP1040-541-LT-AC with Digital I/O Module

Digital I/O Terminal Block Label

1. Remove the included Terminal Block Label from the Anti-Static Pouch.
2. Identify each port by writing a brief description of its input or output in the provided space on the label.
3. Apply the label to the inside of the switch front cover as shown below.

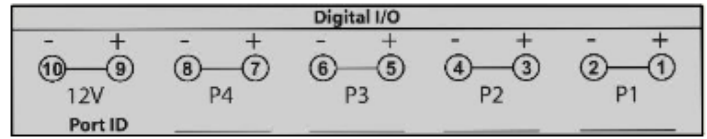
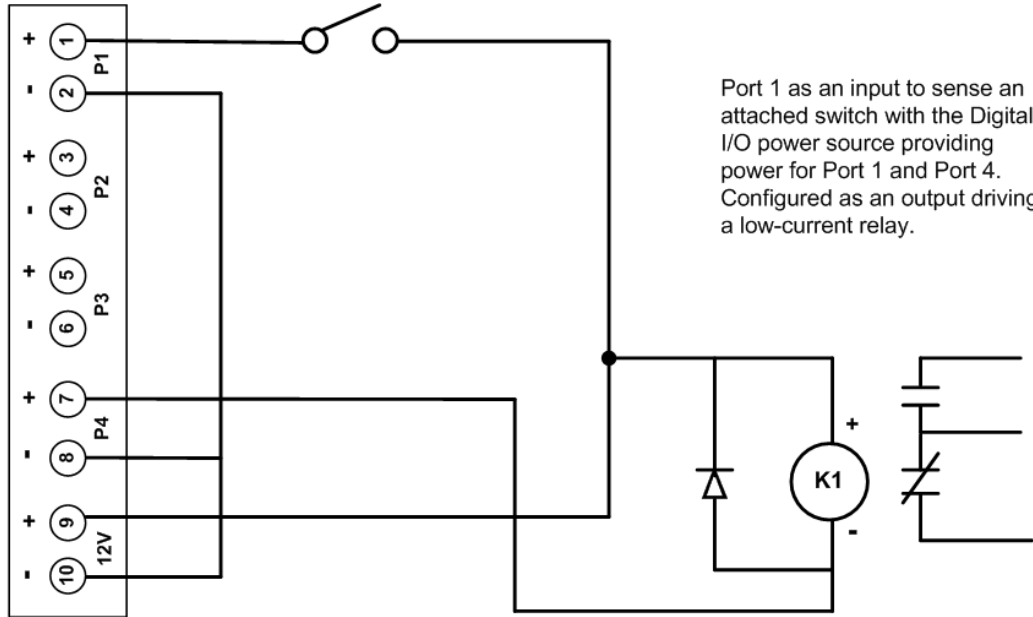


Figure 2. SESP1040-541-LT-AC with Digital I/O Module and SESP1040-3P-BGN-WE Module

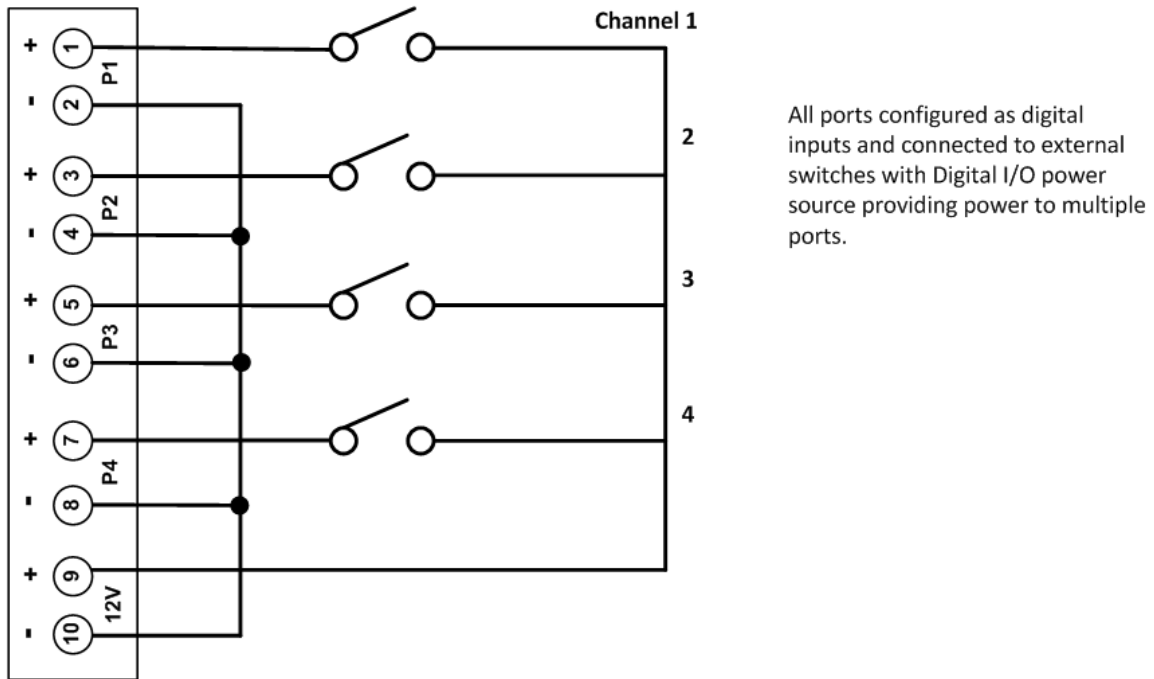
Example 1

This example has Port 1 as an input to sense an attached switch with the Digital I/O power source providing power for Port 1 and Port 4. Configured as an output driving a low-current relay.



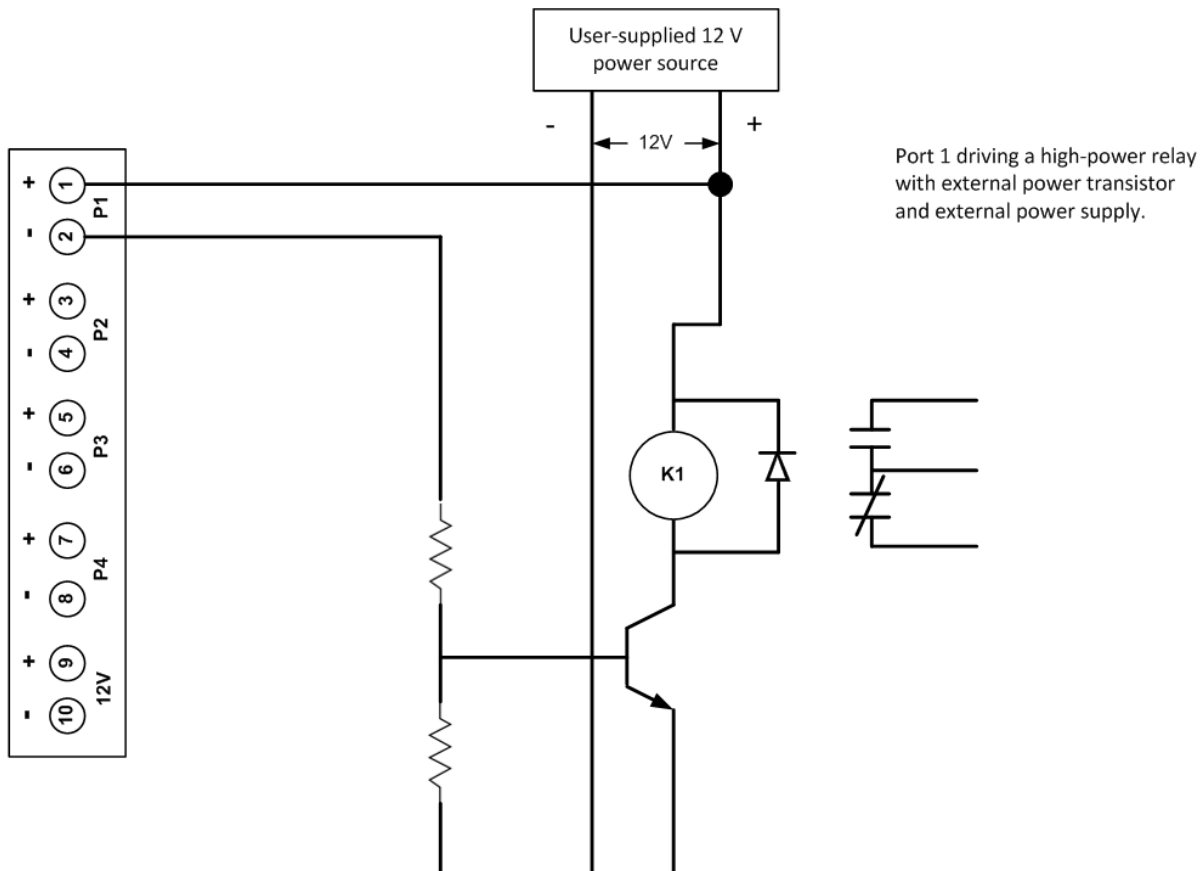
Example 2

This example has all ports configured as digital inputs and connected to external switches with Digital I/O power source providing power to multiple ports.



Example 3

This example has Port 1 driving a high-power relay with external power transistor and external power supply.



Troubleshooting

1. Ensure external power source is less than 36V; otherwise provide adequate resistance to limit diode clamp power dissipation
2. Make sure the switch is operating properly.
3. Verify the Electrical Specifications above.
4. Make sure that the wiring is good.
5. Make sure the connected devices are operating properly.
6. Verify the application; see the examples above.
7. Record any operating details (LEDs flashing, etc.).
8. Set the Digital I/O Module configuration via the CLI or via the Web UI. See the *SESPM-4P-DIG Option Install Guide* for more information.
9. Contact Transition Networks Technical Support.