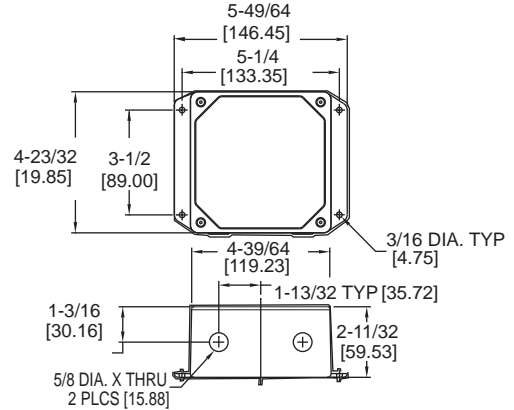




Specifications - Installation and Operating Instructions



The Series PCP Power Converter Pak is designed to be used with the Series OLS Optical Level Switch, the Series PS Proximity Sensors, the Series F7 Level Switch and will power all Dwyer transmitters with a current consumption of less than 200mA. The PCP may also work with other devices that have NPN open collector output. It can also be used as a stand alone power supply to convert high voltage inputs to a regulated 5 or 24 VDC output. It contains a set of 1, 5, or 10 amp relay contacts to increase the power switching capability of instrument outputs. The PCP has an optional latching circuit to hold the output relay in an actuated state until manually reset.

MECHANICAL INSTALLATION

The power pak should be mounted in a vertical position with the cable openings facing down, but it can be mounted in a horizontal position when necessary.

ELECTRICAL INSTALLATION

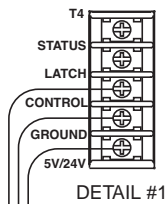
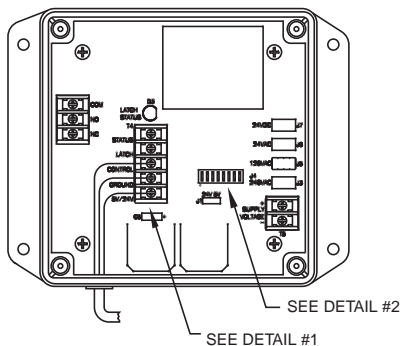
The sensor's wires should be routed through the lower left bushing on the case and wired per their wiring instructions to the following T4 terminals on the PCP board.

SPECIFICATIONS

- Inputs:** One or two normally open switches.
- Output Type:** SPDT switch.
- Output Rating:** See model chart.
- Control Type:** On/off with manual reset capability.
- Power Requirements:** 24 VDC, 24 VAC, 120 VAC, or 240 VAC.
- Power Consumption:** DC power: 15 mA maximum, AC power: 55 mA maximum.
- Ambient Operating Temperature:** 0 to 140°F (-18 to 60°C).
- Weight:** 1.06 lb (0.48 kg).
- Enclosure Rating:** General purpose.
- Loop Power Supply:** 5 or 24 VDC regulated. 200 mA maximum.
- Mounting Orientation:** Horizontal or vertical.

Series PCP Models & Relay Specifications

Model	PCP-10	PCP-5	PCP-1
Relay Contact Rating	10Amp	5Amp	1Amp
Rated Load at 120VAC	10A	5A	.5A
Rated Load at 30VDC	5A	5A	1A
Max. Switching Capacity	1250VA, 150W	600VA, 150W	62.5VA, 33W



J4 Switch	1	2	3	4	5	6	7	8
Series OLS	on	on	on	off	off	off	off	on
Series PS	on	off	on	off	off	on	off	on

F. Connect the device to be controlled by the relay output to the appropriate NO, NC, and COM terminals.

G. Install the input supply voltage shorting block on the 24VDC, 24VAC, 120VAC, or 240VAC terminals depending on your input voltage (120VAC is set as default).

H. Connect your supply voltage to the T5 terminals. If you are supplying a DC voltage observe the T5 polarity markings.

I. Refer to Latch circuit wiring above if required.

The unit will operate in the following way. When the control device switches the control terminal signal will be grounded, the red (latch status) LED on the Power Converter Pak will turn on, and the relay contacts will switch. The unit will remain in this way until the control device switches back. If the latching circuit is being utilized the LED will remain on and the relay will stay energized until the control device switches back and the latch circuit is reset.

For relay output control any NPN open collector device should work with the above OLS settings. Other low power or switch contact devices can be used in either the OLS or PS settings to ground the control line signal and activate the larger Power Converter Pak relay. Consult factory for use of the control and latching features of the Power Converter Pak with third party controls.

### 3. For use with Dwyer F7 or open contact switches in a High/Low Limit Application.

A. Wire the low level switch leads to the T4 terminals marked Latch and 5V/24V.

B. Wire the high level switch leads to the T4 terminals Control and Ground.

C. Make sure jumper J1 is on the left 2 pins for 24V output (default).

D. Connect the device to be controlled by the relay output to the appropriate NO, NC, COM terminals.

E. Install the input supply voltage shorting block on the 24VDC, 24VAC, 120VAC, or 240VAC terminals depending on your input voltage (120VAC is set as default).

F. Connect your supply voltage to the T5 terminals. If you are supplying a DC voltage observe the T5 polarity markings.

The unit will operate in the following way. When the storage medium increases to the level of the low level switch the latch circuit will be enabled. When the medium increases to the level of the high level switch the control circuit will be activated and the output relay will energize. The output relay will stay on until the medium level drops below the low level switch.

### CALIBRATION

No calibration of the Power Converter Pak is required.

### MAINTENANCE

The Series PCP Power Converter Pak requires no routine maintenance. If repair is required, the unit may be returned to Dwyer Instruments by sending the packaged instrument, freight prepaid, to the following address. Be sure to include a clear description of the problem plus any application information available.

Dwyer Instruments, Inc.  
Attn: Repair Department  
102 Indiana Highway 212  
Michigan City, IN 46360

### LATCH CIRCUIT WIRING

To enable and use the latching capabilities of the unit, any variety of switch with normally closed contacts can be used. A momentary SPST switch with normally closed contacts is recommended (Dwyer Instruments, Inc. part number A-601). The switch should be wired to T4 terminals 5V/24V and LATCH. Momentarily opening the switch contacts will reset the circuit to a pre-triggered condition. To disable the latching feature no wiring of the circuit is required.

### RELAY WIRING

The T3 terminal labeled COM, NO, and NC is where the relay contacts are wired. They are used to switch the customer equipment as required. The relay contacts are rated as outlined in the specifications.

### LINE VOLTAGE WIRING

The T5 (supply voltage) terminals are for supplying the input voltage to the unit. The unit will run on any of the input voltages outlined in the specifications.

### OPERATION

**The input supply voltage shorting block should be installed on the correct set of jumper pins that correspond to the input voltage. Failure to correctly set this jumper will cause unit damage. Default setting is 120VAC.**

#### 1. For use as stand alone 5 or 24 VDC power supply or Dwyer transmitter power supply.

A. Connect the positive lead of device to the T4 terminal marked 5V/24V.

B. Connect the negative lead of device to the T4 terminal marked Ground.

C. Install jumper J1 on the left 2 pins for 24V output (default) or on the right 2 pins for 5VDC output.

D. Install the input supply voltage shorting block on the 24VDC, 24VAC, 120VAC, or 240VAC terminals, depending on your input voltage (120VAC is set as default).

E. Connect your supply voltage to the T5 terminals. If you are supplying 24VDC observe the T5 polarity markings.

#### 2. For use as a relay output device controlled by a Dwyer OLS, PSI, PSC control.

A. Connect the positive lead of device to the T4 terminal marked 5V/24V.

B. Connect the negative lead of device to the T4 terminal marked Ground.

C. Connect the control lead of device to the T4 terminal marked Control

D. Make sure jumper J1 on the left 2 pins for 24V output (default).

E. Set J4 switches as follows: