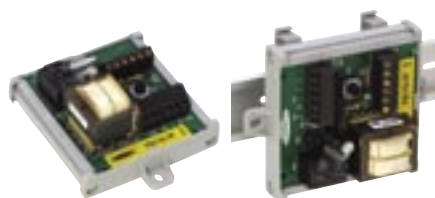


Module



Optional mounts; plastic housing and brackets included (DIN rail not included)

### Features

- Low-cost interface between ac power supply and dc-operated sensors
- Power supply can source up to 100 milliamps
- Integral TEACH push button and remote TEACH function available on all models
- Integral SPDT relay isolates dc sensor output for ac applications
- LED indicators for Power ON and Output Active
- Easy-to-adjust 45° screw terminals for all electrical wiring
- Multiple mounting configurations using supplied hardware
- BENC-L enclosure available for NEMA 4X / IP55 applications (see page 4)
- Use a sinking (NPN) interface module model with an NPN-output sensor, and a sourcing (PNP) interface module model with a PNP-output sensor.

### Models

Models	Input	Output	Relay Input*
PS24-1N	21 to 27V ac, 50/60 Hz	100 mA	Sinking (NPN)
PS24-1P			Sourcing (PNP)
PS115-1N	105 to 130V ac, 50/60 Hz		Sinking (NPN)
PS115-1P			Sourcing (PNP)

\* NOTE: A sinking (NPN) interface module model must be used with an NPN-output sensor, and a sourcing (PNP) interface module model must be used with a PNP-output sensor.

### Overview

This interface module combines the functions of a power supply, a TEACH button, and an SPDT relay to economically interface dc-operated sensors for ac applications. The interface accepts either a 24V ac or 115V ac power supply, depending on model. It uses a transformer to isolate the input power supply from the dc sensor. The transformer output voltage is rectified and filtered to supply up to 100 milliamps to run dc sensors.

An integral TEACH push button can be used to activate the TEACH functions of a Banner *Expert*<sup>™</sup> sensor. Remote TEACH capability also is available on all models (refer to hookups and sensor literature).

The SPDT relay is controlled via the relay coil input. A dc sensor output (either sinking or sourcing, depending on interface module model) can be tied to the relay coil input.

The module Yellow LED is ON when the sensor output is active. The module Green LED is used as a Power indicator (see Figure 2).

NOTE: For sensor supply voltage and current requirements, refer to Figure 1.

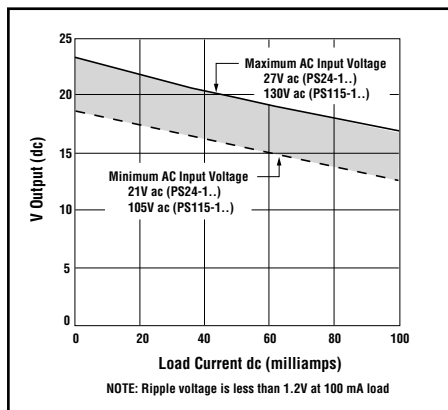


Figure 1. Voltage regulation vs. load

# Models PS24-1.. and PS115-1.. Sensor Interface Modules

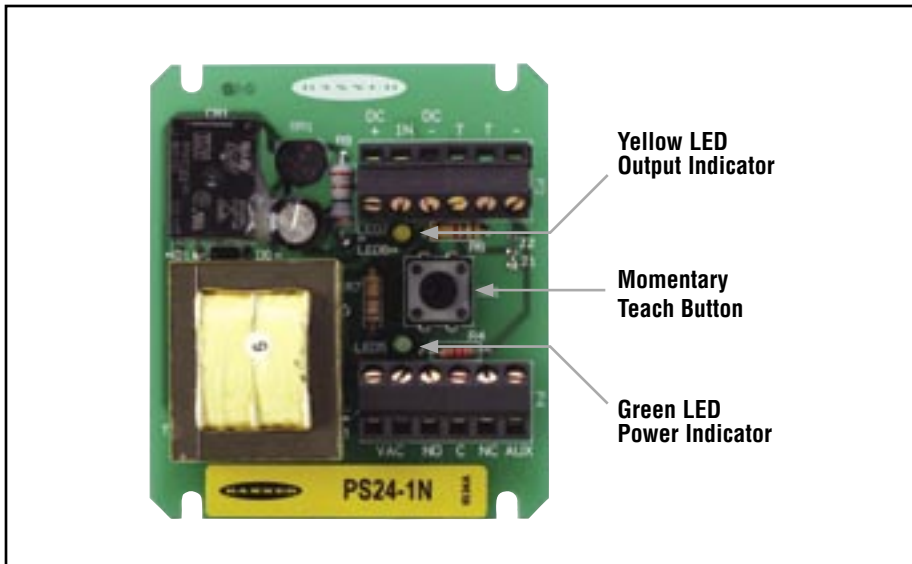


Figure 2. Features

## Installation

The module must be isolated from conductive surfaces. It may be installed in a user-supplied housing using the four slots in the board's corners, or it may be inserted into the supplied plastic housing.

If the supplied housing is used, either insert the two DIN clips into the grooves on the housing's underside and add the two end caps (as shown in Figure 3), or install only the end caps and use the screw-holes in the end caps for mounting to a flat surface. Screws are provided for attaching the end caps to the housing.

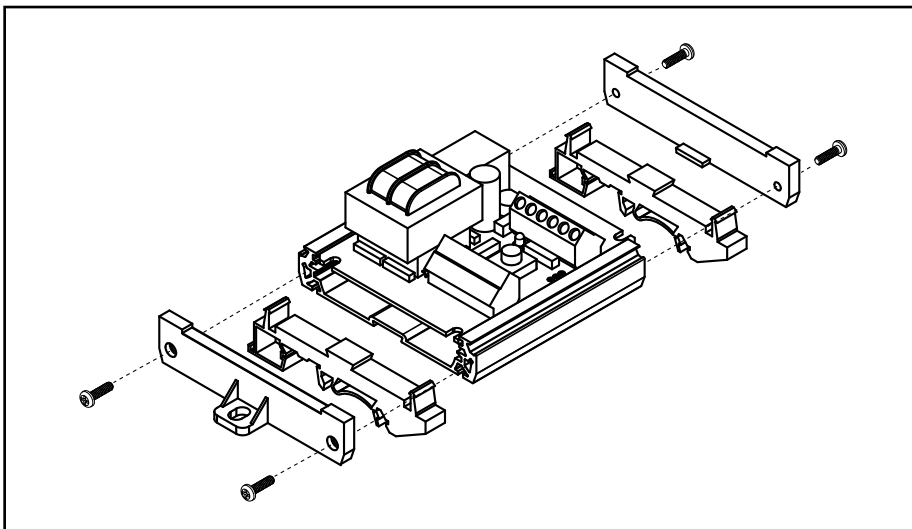


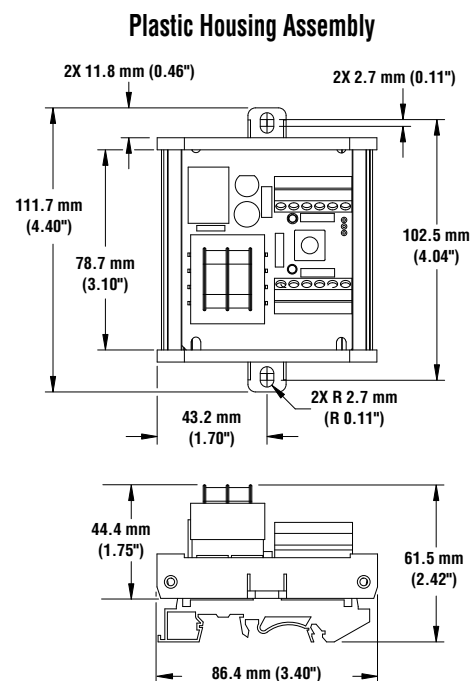
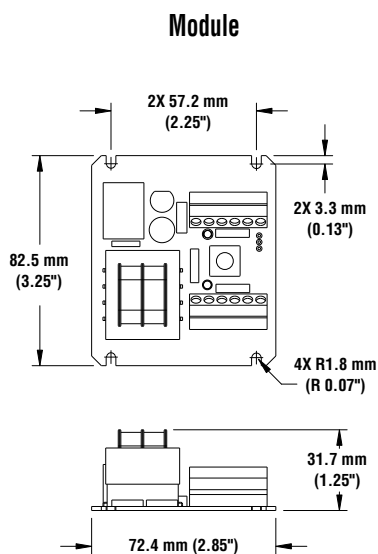
Figure 3. PCB and housing assembly

# Models PS24-1.. and PS115-1.. Sensor Interface Modules

## Specifications

	PS24-1..	PS115-1..
<b>Input Supply Voltage</b>	21 to 27V ac, 47/63 Hz	105 to 130V ac, 47/63 Hz
<b>Voltage and Current Output Rating</b>	100 mA, exclusive of relay coil input; see Figure 1 for load curves	
<b>Relay Input Voltage Range</b>	12 to 30V dc	
<b>Relay Input Resistance</b>	470 ohms $\pm$ 10%	
<b>Relay Output Rating</b>	SPDT Relay <b>Maximum Switched Power:</b> 150W, 1200VA <b>Maximum Switched Current:</b> 5A (resistive load) <b>Maximum Switched Voltage:</b> 30V dc, 250V ac <b>Minimum Current and Voltage:</b> 10 mA at 5V dc <b>Mechanical Life:</b> 10,000,000 operations <b>Electrical Life:</b> 100,000 operations at full load	
<b>Relay Response Time</b>	10 milliseconds	
<b>Adjustments</b>	TEACH push button	
<b>Indicators</b>	<b>Green LED:</b> Power applied <b>Yellow LED:</b> Relay coil energized (output active)	
<b>Construction</b>	Circuit board is shipped separate from housing. Plastic housing, end caps and DIN rail mounting hardware are supplied for user assembly.	
<b>Environmental Rating</b>	IP00; use BENC-L enclosure for NEMA 4X / IP55 rating (see page 4).	
<b>Connections</b>	Screw-clamp terminal block accepts 12 to 24 gauge wire	
<b>Operating Conditions</b>	<b>Temperature:</b> -40° to +70° C (-40° to +158° F) <b>Max. Relative Humidity:</b> 90% at 50° C (+122° F) (non-condensing)	
<b>Certifications</b>	CSA and UL approvals pending	

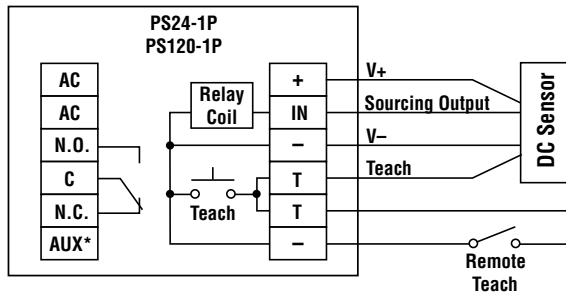
## Dimensions



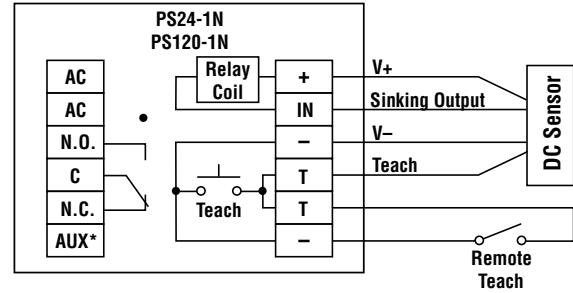
# Models PS24-1.. and PS115-1.. Sensor Interface Modules

## Hookups

### PNP (Sourcing) Input



### NPN (Sinking) Input



\* AUX is an electrically isolated terminal.

## Accessories

Model	Description	
BENC-L	<ul style="list-style-type: none"> <li>Corrosion-resistant plastic enclosure with clear polycarbonate cover to protect module</li> <li>Rated NEMA 4X, IP55</li> <li>Includes o-ring and 4 each: 1/4" - 20x30 and #8 self-tapping screws</li> <li>Temperature rating -40° C to +70° C (-40° F to +158° F)</li> </ul>	



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