1.1 Module Descriptions

Discrete Input/Output Modules

The 505 Discrete Input and Discrete Output modules (see Figure 1-1) contain 8-, 16- or 32- input or output circuits and can accept AC or DC voltage, depending on the model. (See Appendix A for model numbers and number of input or output points.)

Both the input and output circuits are grouped into four commons for each module. (Isolation is provided between each of the four commons. See Appendix A for isolation specifications.)

The Discrete Input modules are particularly valuable in areas where applications such as limit switches or pushbuttons are needed.

The Discrete AC Output modules are equipped with heavy-duty triacs, without zero cross circuits, to give a faster turn-on response.

Relay Output Modules

The 505 Relay Output Modules (see Figure 1-1) may contain 8-, 16- or 32-output points. (See Appendix A for number of points contained in each model.) These modules are particularly valuable for applications where:

- A “no leakage” output is mandatory in the off-state condition.
- Load currents must be isolated.
- A mixture of voltages must be connected to the same module (for example, 24 VDC and 24 VAC).

The 16- and 32- point relay modules are equipped with four isolated commons, and can switch either AC or DC power at each common. The 8-point module is equipped with 8 isolated commons (one for each point), and can switch either AC or DC power at each point. These modules are less susceptible than other DC-type modules to inductive load transients when the outputs are turned on or off.

The 32- and 16- point modules (PPX:505–4932 and PPX:505–4916) provide normally open (Form-A) contacts, while the 8-point module (PPX:505–4908) provides both normally open and normally closed contacts (Form-C). The PPX:505–5417 and PPX:505–5518 provide both normally open and normally closed contacts (Form-C).

The PPX:505–5518 module provides snubbers on the normally open contacts. This snubber should be used with inductive loads to extend the contact life. The snubber is composed of a series 330 Ω resistor and a 0.1 μf capacitor. If the load requires a “dry contact” relay then the snubber can be disconnected. To connect the snubber, move the shorting plug associated with the output point, to on. For example, for a normally open output 5 the snubber is controlled by E5. See Figure 3-14 for a typical connection.

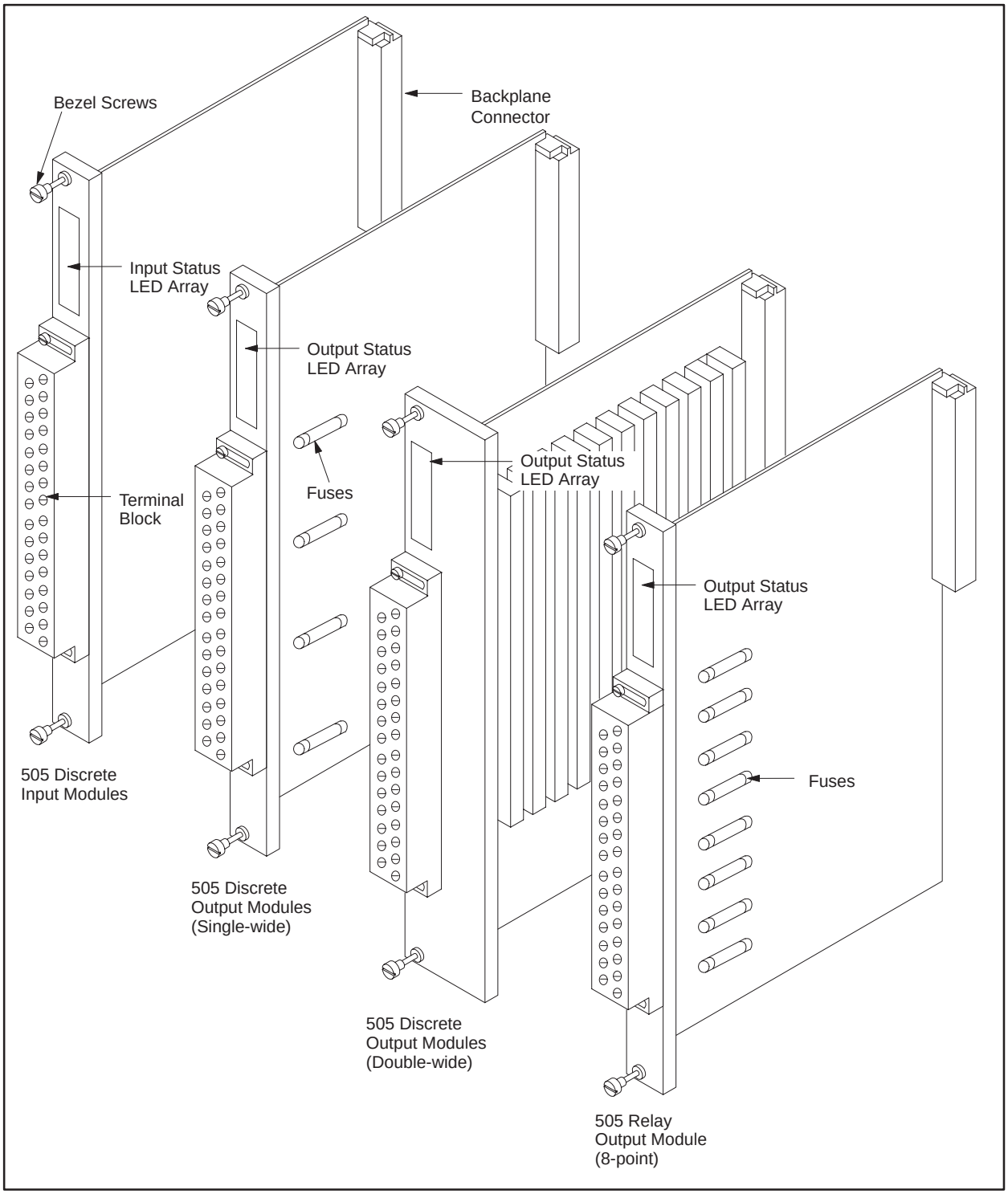

Figure 1-1 505 Discrete Input, Discrete Output, and Relay Output Modules

I/O Simulators

The PPX:505–6010 Input Simulator Module simulates discrete inputs to the Series 505 PLC; PPX:505–6011 Output Simulator Module simulates discrete outputs from the Series 505 PLC. The modules are designed for use in debugging and troubleshooting.

The modules fit any I/O slot of your Series 505 base. No wiring is necessary and the modules operate without user-side power.

Each I/O Simulator Module has 32 LEDs on the front bezel. Each LED represents an input or output point. The Input Simulator points are configured as X and the Output Simulator points are configured as Y. The Input Simulator Module also has 17 switches on its front bezel. See page 1-5 for details on switch functions.