4 Electrical Specifications

Installation category, 2

Pollution degree, 2

Altitude, up to 2000 m

For indoor use only

Temperature, 5°C to 40°C

Humidity, 80% up to 31 °C decreasing linearly to 50% at 40°C

4.1 AC Power

⚠ Electrical supply, 100/240 Vac, 50/60 Hz, from a dedicated electrical outlet. Power consumption 167 VA (max)

Mains supply voltage fluctuations are not to exceed 10 percent of the nominal supply voltage.

Power cable type: 3x16 AWG, FT1,FT2, 90 °C Dry, 60 °C Water resistant, Shielded, or of superior specification.

4.2 Fuse

⚠ The inspection system is protected by a 5 A fuse.

4.3 Inputs

The input connectors allow the transmission of external signals to the controller. The external signals are isolated from the system by optocouplers. The input circuits electrical specifications are: R_{IN}=3kΩ, 12-30 VDC.

There is a 24 VDC source available to power input devices if necessary. Depending on the type of device and its requirements, the configuration switches associated with the inputs may need to be set a certain way.

An active PNP device applies the 24V signal to the i+ pin on the connector; to complete the circuit we link the i- pin to the 0V pin with the source rocker. An NPN device applies a 0V signal to the i- pin; to complete the circuit we link the 24V to the i+ pin with the sink rocker. The open setting is for input devices that supply their own power to the i+ and i- pins.

When the input is activated, the LED on the status bar lights up. Setting both rockers on the configuration switch to closed activates the input and lights up the associated LED.

4.4 Outputs

The output connectors allow the transmission of system signals to external devices. The system signals are isolated from the external devices by optocouplers. Their electrical specifications are, for outputs 0-5 I_{MAX}=125 mA, 240 VDC, 200 VAC, and for output 6 and 7 I_{MAX}=2.5 A, 100 VDC.

There is a 24 VDC source available to power output devices if necessary. Depending on the type of device and its requirements, the configuration switches associated with the outputs, left of the connector, may need to be set a certain way.

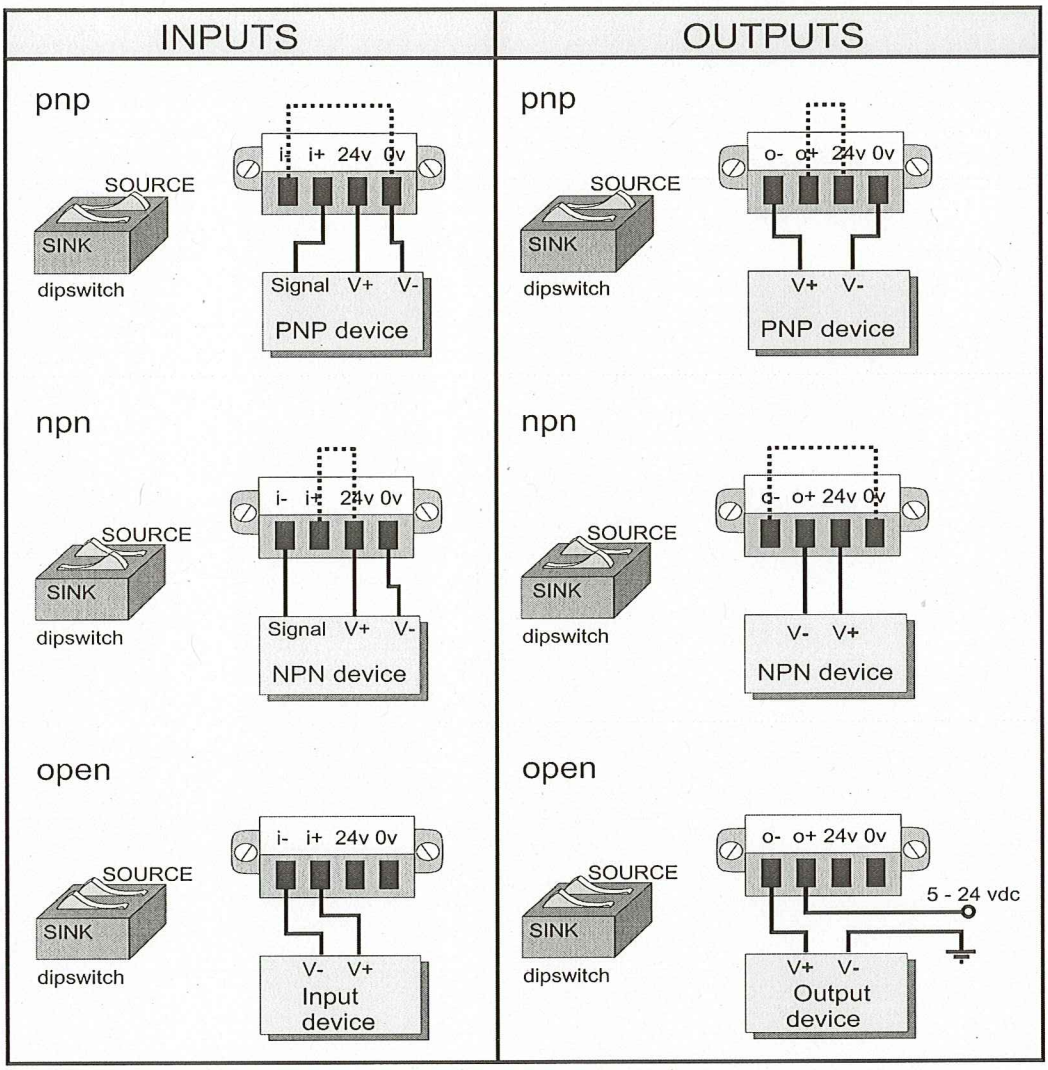
A PNP device connects to the o- and the 0V pins, the 24V and o+ pins are linked by the source rocker; the circuit is completed when the output is activated. An NPN device connects to the o+ and the 24V pins, the 0V and the o- pins are linked by the sink rocker; the circuit is completed when the output is activated. The open setting is for output devices that supply their own power to the o+ and o- pins.

When the output is activated, the corresponding LED on the status bar lights up. **WARNING** Never set both rockers to closed on the output configuration switches. It will short-circuit the 24 VDC source when the output is activated.

4.5 Configuration Switches

The configuration switches are used to create connections between the power and signal pins of the input and output connectors. Shown by dotted lines in Figure 4.1, these connections are used when the devices need to be powered from the I/O Card.

Figure 4.1 Configuration Switches



WARNING Never set both rockers to closed on the output configuration switches. It will short-circuit the 24 VDC source when the output is activated.