3.2.7 Standard IO

The Standard IO provides inputs for several types of external devices. The various connections are shown in Figure 3-25.

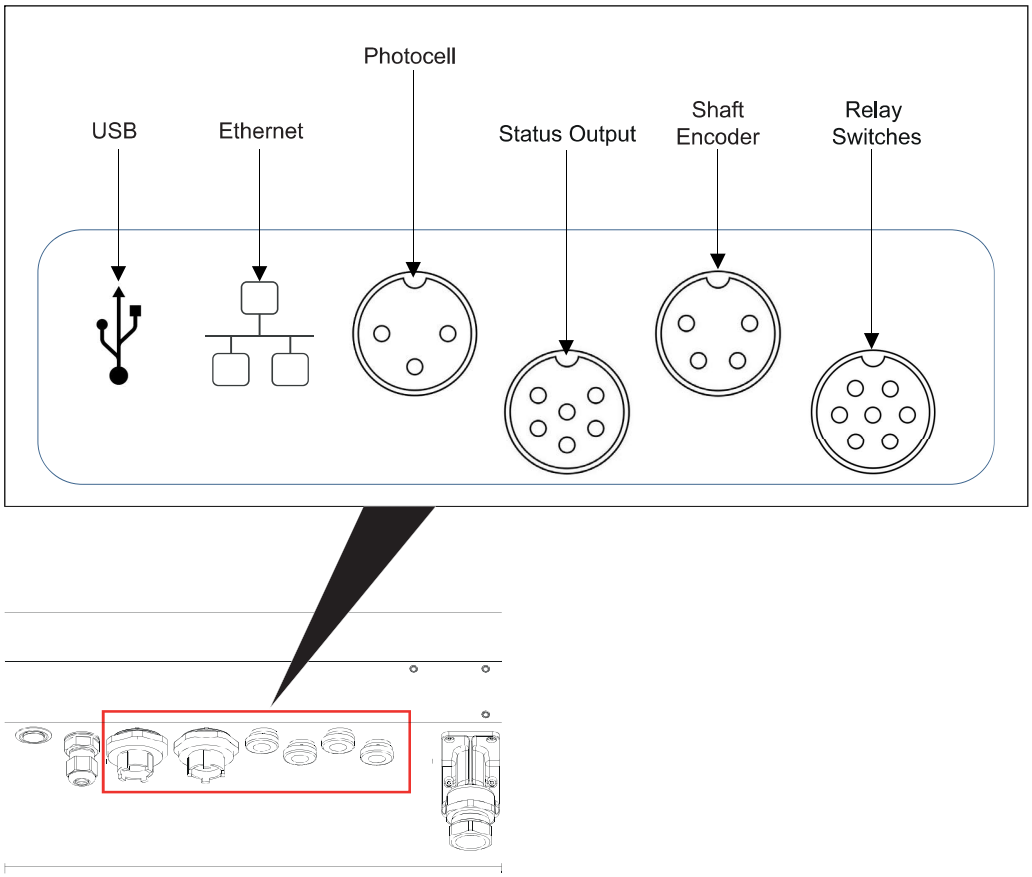

Figure 3-25: Standard IO

3.2.7.1 USB Connector

The USB Connector is used to connect a USB device to the printer to do the following:

- Message importing and exporting
- Data logging
- To update printers software
- To provide RS232 connection

.

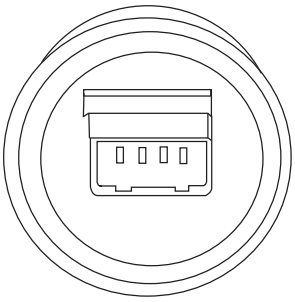

Figure 3-26: USB Connector

Note: *Figure 3-26 represents the view of the connector from the back of the printer*

3.2.7.2 Ethernet Connector

The Ethernet connector is used to connect the printer to a remote computer or network to import data or control the printer remotely.

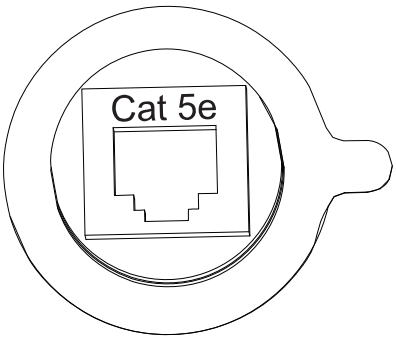

Figure 3-27: Ethernet Connector

Note: *Figure 3-26 represents the view of the connector from the back of the printer.*

3.2.7.3 Product Detector (Print Trigger) 1 Connector

The product detector connector, detects the product and informs the printer when to print on the product. The printer provides a +15 VDC, 200 mA output for use by a photoelectric cell (PEC), inductive proximity detector. The print trigger connector is a 3 way DIN connector. The pin functions are shown in Table 3-1.

Note: *Photoelectric cell (PEC) is also called as inductive proximity detector or product detector.*

The default configuration is NPN (current sinking input). This input can be changed to PNP (sourcing input) with the movement of a jumper located on the back of the touch screen display. If the input is configured for PNP the maximum input voltage will be +24 VDC and the maximum current is 60 mA.

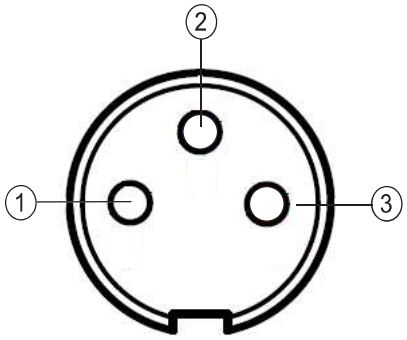

Figure 3-28: Print Trigger 1 Connector Pin Diagram

Note: *Figure 3-28 represents the view of the connector from the back of the printer.*

Pin	Function
DIN Pin 1	+15 VDC supply to sensor
DIN Pin 2	Sensor output
DIN Pin 3	0 VDC common

Table 3-1: Print Trigger 1 Connector Pinouts

Note: *The mating cable (male, 3 pin DIN connector -P/N: 500-0036-578) is used to interface other product detectors to the printer.*

3.2.7.4 Shaft Encoder Connector

The printer provides a nominal +15 VDC, 200 mA output for use by a shaft encoder with a maximum frequency of 100 kHz. The printer looks for NPN open collector input for the encoder signals. The printer uses pulses (leading and trailing edges) from both channels (Channel A and Channel B) of the shaft encoder. For more information, refer Line Speed. The shaft encoder connector is a 4 way DIN connector. The pin allocation is shown in Table 3-2 on page 3-20.

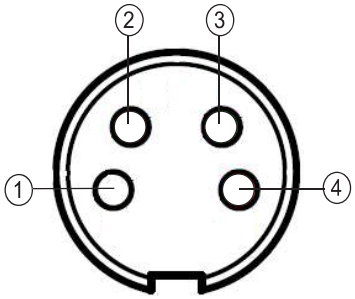

Figure 3-29: Shaft Encoder Connector Pin

Note: *Figure 3-29 represents the view of the connector from the back of the printer.*

Pin	Function
DIN Pin 1	+15 VDC supply to shaft encoder
DIN Pin 2	Shaft encoder input 'A'
DIN Pin 3	Shaft encoder input 'B'
DIN Pin 4	0 VDC common

Table 3-2: Shaft Encoder Connector Pinouts

Note: *The shaft encoder output must be of the PUSH/PULL type.*

Note: *The mating cable (male, 4 pin DIN connector - P/N: 500-0036-581) is used to interface other shaft encoders to the printer.*

3.2.7.5 Status Output Connector

The printer provides an output for a set of status lights through the status output connector. This provides +24 VDC output, the printer will switch in a ground to turn on the light. This is a 6- way DIN connector. The pin allocation is shown in Table 3-3 on page 3-21 and Figure 3-30.

Lamp color	Function
Green	Print Ready Output
Yellow	Warning Output
Red	Fault Output

Note: *For 24 VDC, the maximum current rating is 900 mA.*

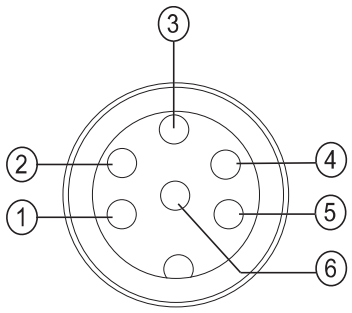

Figure 3-30: Status Output Connector Pin Diagram

Note: *Figure 3-30 represents the view of the connector from the back of the printer.*

Pin	Function
DIN Pin 1	Red lamp negative supply
DIN Pin 2	Amber lamp negative supply
DIN Pin 3	Green lamp negative supply
DIN Pin 4	+24 VDC supply to the strobe/siren
DIN Pin 5	Strobe/siren negative supply
DIN Pin 6	+24 VDC common to the traffic lights

Table 3-3: Status Output Connector Pinouts

Note: *The mating cable (male, 6 pin DIN connector - P/N: 500-0036-577).*

3.2.7.6 Relay Switches

The relay switches connector is a 7 way DIN connector. This connector supports the following relays:

- Relay 'A', you can use the relay to provide a 'Print Ready' output.
- Relay 'B', you can use the relay to provide a 'Warning' output.

These relays have electrical ratings of 1 - 30 VDC, 500 mA maximum. It is suggested to use +24 VDC. For example, if the printer is in a print ready state, the normally open (N.O.) contacts closes and informs the host that the printer is in a print ready state. If the printer is removed from the print mode for any reason (removed from print), printer faults out, thus opens the contacts. The pin allocation is shown in Table 3-4.

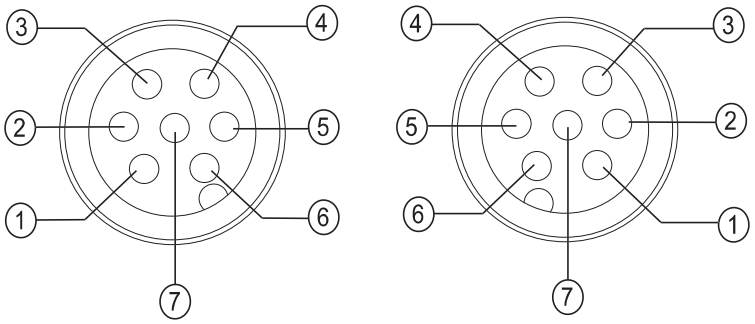

Figure 3-31: Relay Switches Connector Pin Diagram

Note: *Female connector (see Figure 3-31) represents the view of the connector from the back of the printer.*

Connector Pin		Function	Wire Color
Female Pin	Male Pin		
DIN Pin 1	DIN Pin 6	Relay A - Normally open contact	White
DIN Pin 2	DIN Pin 5	Relay A - Normally closed contact	Red
DIN Pin 3	DIN Pin 4	Relay A - Common contact	Black
DIN Pin 4	DIN Pin 3	Relay B - Normally open contact	Green
DIN Pin 5	DIN Pin 2	Relay B - Normally closed contact	Blue
DIN Pin 6	DIN Pin 1	Relay B - Common contact	Brown
DIN Pin 7	DIN Pin 7	Not used	-

Table 3-4: Relay Switches Connector Pinouts

Note: *The mating cable - P/N SP378810 (male, 7 pin DIN connector - P/N: 500-0036-583).*

Note: *These outputs are cold contact relays. It will not supply control voltage to the host system. If the host is going to send a control voltage through these contacts, it is suggested to use +24 VDC.*