



# Applicator Interface Kit

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For PX4ie, PX6ie

## Installation Guide

## Introduction

The installation guide describes the Applicator Interface kit for PX4ie and PX6ie printers.

The guide also describe how to physically install and configure the Applicator board in the printers.

## Contents

- One Applicator interface board
- Two flat cables
- Two #T10 torx screw
- One #T20 torx screw

The only tools required for the installation are #T10 and #T20 Torx screwdrivers and a small wrench.

## Installing the Applicator Interface Kit



**Warning:** The installation described in this section must only be performed by an authorized service technician. Honeywell assumes no responsibility for personal injury or damage to the equipment if the installation is performed by an unauthorized person.



**Follow standard ESD guidelines to avoid damaging the equipment.**



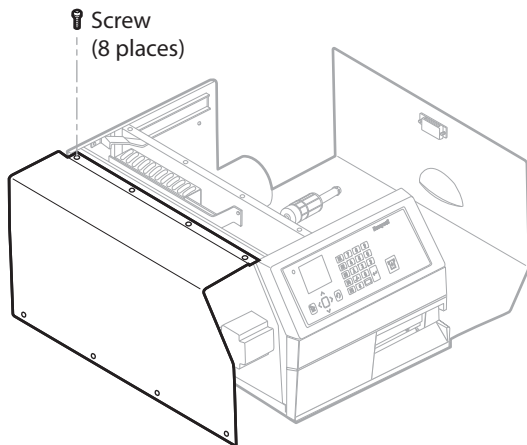
**Caution:** Before you begin, turn off the printer and disconnect the power cord and communication cables.

Follow the procedure to physically install the Applicator Interface board in the printer.

**Note:** This procedure applies to both the PX4ie and PX6ie. For simplicity, the PX4ie is depicted in the illustrations.

1. Turn off the power and disconnect the power cord.
2. Disconnect all communication cables.
3. Open the right-hand door.

- Remove the eight #T10 Torx screws that hold the left-hand cover.

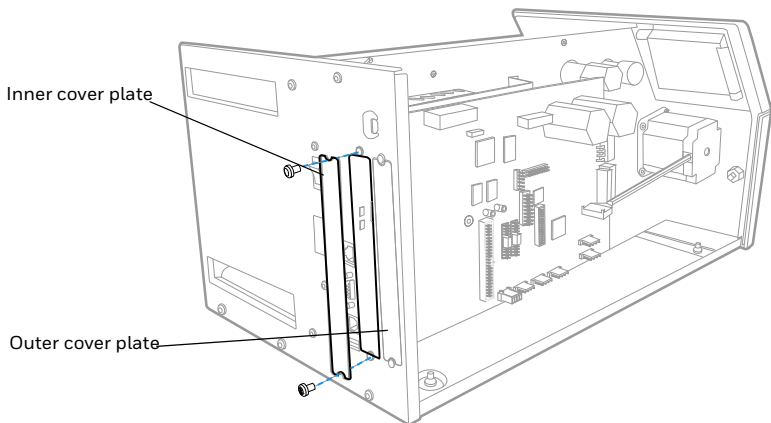


- Put the cover aside on a soft cloth or similar to avoid scratches.



**Warning:** The electronics compartment contains high voltage components and wires. Do not open the electronics compartment before the printer is safely disconnect from any AC supply.

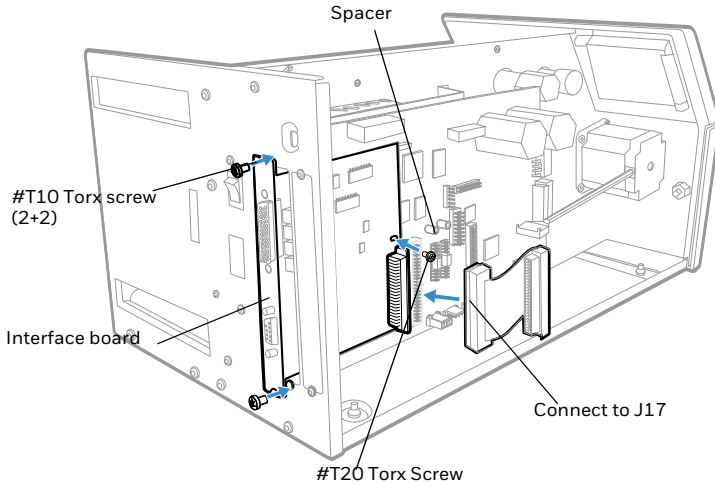
- Remove the one or two cover plates depending on how many interface boards you are going to install. Each plate is held by two #T10 Torx screws.



**Note:** Applicator interface card must be installed in the innermost position.

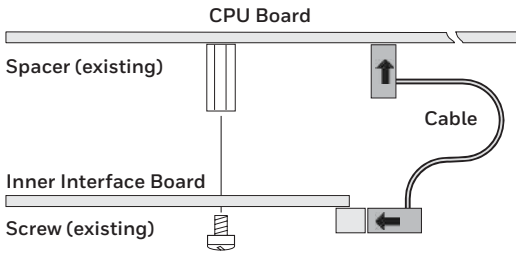
- Save the cover plate(s) for possible later use. Keep the screws.

8. Remove the #T20 Torx screw fitted on the hexagonal spacer at the center of the CPU board. Keep the screw.
9. If necessary, reconfigure the interface board by fitting or removing circuits and straps according to the descriptions of each board.
10. Attach the flat cable included in the kit to connector on the CPU board.
11. Insert the interface board with the component side facing right, as seen from behind.



12. Installation of one board: Attach the interface board in the innermost slot in the printer's rear plate using the two screws left over when you removed the original cover plate. Using the #T20 Torx screw you previously removed, attach the interface board to the hexagonal spacer at the center of the CPU board.
13. The kit contains two flat cables, one with two connectors for use with a single interface board and one with three connectors for use with double interface boards. Connect the appropriate flat cable to connector P1 on the interface board.

14. The flat cable should run as illustrated.



15. Put the cover back on the electronics compartment.

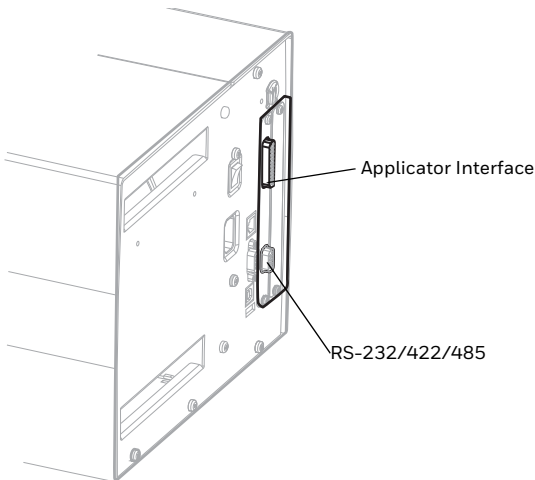
16. Connect the communication cables to the connectors on the printer's rear plate.

17. Connect the power cord and switch on the power.

18. In case the interface provides additional serial communication ports, enter the Setup Mode to set the proper communication parameters for these ports.

## Remarks

- The left-hand slot is the slot closest to the center section.
- Always start by fitting an interface board in the left-hand slot.



# Serial Interface

This chapter describes how to modify the interface board for RS-232 non-isolated (standard), RS-422 isolated/full duplex, or RS-485 isolated/half duplex on the port and explains the configuration of the interface connector.

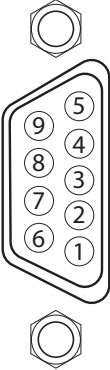


**Caution:** When fitting driver circuit and straps before installing the interface board, make sure that the circuit is not fitted upside down (see front end markings in the illustration). Also make sure that the “legs” of the circuit fit into the slots in the socket and are not bent. Take ample precautions to protect the board and circuits from electrostatic discharges.

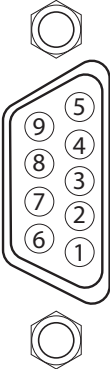
Install the jumpers and ICs on the board to configure it for the type of serial communication you want to use.

To configure the board as:	Install these jumpers and ICs:
RS-232	<ol style="list-style-type: none"><li>1 Install a jumper on P3 so that the A is in the middle of the jumper.</li><li>2 Install IC, 360-028-001 (MAX238) on SKT3 with pin 1 located where the arrow points to SKT3 toward the bottom of the board.</li></ol>
RS-422	<ol style="list-style-type: none"><li>1 Install jumpers on P4 and P5.</li><li>2 Install IC, 360-027-001 (MAX1490), across sockets SKT1 and SKT4 with pin 1 located where the arrow is pointing to SKT1 towards the bottom of the board.</li></ol>
RS-485	<ol style="list-style-type: none"><li>1 Install a jumper on P2.</li><li>2 (Optionally) Install a jumper on P5 if this printer is going to be connected to the end of the cable.</li><li>3 Install IC, 360-026-001 (MAX1480), across SKT2 and SKT5 with pin 1 located where the arrow is pointing to SKT2 towards the bottom of the board.</li></ol>

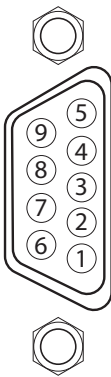
## RS-232 Connector Configuration

RS-232 Socket as seen from the outside	DB-9 Socket	Signal	Meaning
	1		External +5VDC max 500mA (automatic switch off at overload, short-circuit protected)
	2	TXD	Transmit data
	3	RXD	Receive data
	4	DSR	Data set ready
	5	GND	Ground
	6	DTR	Data terminal ready
	7	CTS	Clear to send
	8	RTS	Request to send
	9	-	Not used

## RS-422 Connector Configuration

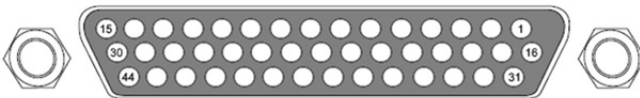
RS-422 Socket as seen from the outside	DB-9 Socket	Signal	Meaning
	1		External +5VDC max 500mA (automatic switch off at overload, short-circuit protected) provided strap is fitted on P3:A which spoils the galvanical isolation
	2	+TXD	+Transmit data
	3	+RXD	+Receive data
	4	-	
	5	GNDE	Ground
	6	-	
	7	-RXD	-Receive data
	8	-TXD	-Transmit data
	9	-	

## RS-485 Connector Configuration

RS-485 Socket as seen from the outside	DB-9 Socket	Signal	Meaning
	1		External +5VDC max 500mA (automatic switch off at overload, short-circuit protected) provided strap is fitted on P3:A which spoils the galvanical isolation
	2	+DATA	
	3	-	
	4	-	
	5	GNDE	Ground
	6	-	
	7	-	
	8	-DATA	
	9	-	

**Note:** The increased use of LAN networks has made the RS-485 interface somewhat obsolete, because RS-485 requires a special communication protocol and a dedicated wiring system limited to 1,200m (4000ft). We only recommend RS-485 for existing applications and advise the customer to consider a LAN network solution for new applications.

## Applicator Interface



When the Applicator interface board is installed, upon boot up, the firmware will detect it and the configurations and settings for the interface board will be displayed on the LCD User interface and the printer web page.

The applicator interface supports applicator signals with 8 digital IN ports with optocouplers, 8 digital Out ports with optocouplers, and 4 OUT ports with relays.

The board has no straps or circuits to be fitted or removed. All signals are available on a DB-44 pins socket.

The Applicator Interface board also provides an option of three port styles (Z-style, S-style, I-style) and one External Error Port.



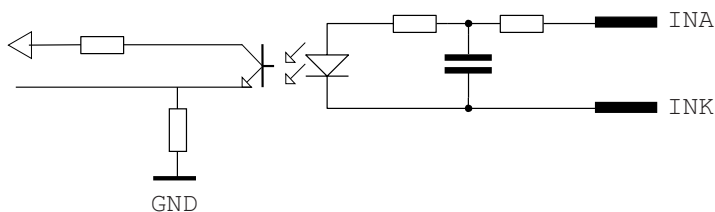
## Applicator Interface IN Signals

The Applicator Interface supports 8 digital input ports with optocouplers. All in signals are asserted by setting the pin LOW and de-asserted by setting the pin HIGH.

### IN Signals Specification

Signal	Description	Min.	Typical	Max.
Vin [High]	Input Voltage High	10V	24V	40V
Vin [Low]	Input Voltage Low	-1V	0V	1V

### Simplified schematic of a digital IN port



### IN Signals Connector Configuration

Pin	Signal	Description
10	StartPrint_A	Start print Anode Opto In Channel
40	StartPrint_K	Start print Cathode Opto In Channel
26	Feed_A	Feed Anode Opto In Channel
11	Feed_K	Feed Cathode Opto In Channel
41	Pause_A	Pause Anode Opto In Channel
27	Pause_K	Pause Cathode Opto In Channel
12	Reprint_A	Reprint Anode Opto In Channel
42	Reprint_K	Reprint Cathode Opto In Channel
28	AppErr1_A	Applicator Error 1 Anode Opto In Channel
13	APPErr1_K	Applicator Error 1 Cathode Opto In Channel
43	AppErr2_A	Applicator Error 2 Anode Opto In Channel
29	APPErr2_K	Applicator Error 2 Cathode Opto In Channel
14	AppErr3_A	Applicator Error 3 Anode Opto In Channel
44	APPErr3_K	Applicator Error 3 Cathode Opto In Channel

Pin	Signal	Description
30	RTWINEXT_K	External input signal for Ready-to-work indicator Anode Opto In Channel
15	RTWINEXT_A	External input signal for Ready-to-work indicator Cathode Opto In Channel

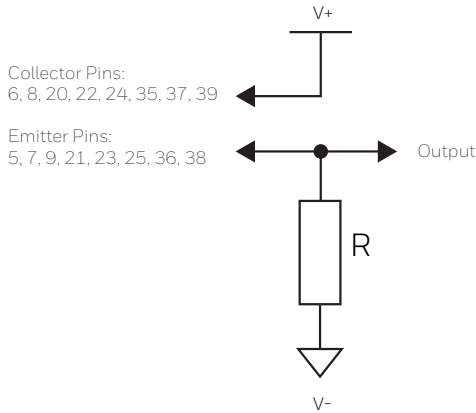
## Applicator Interface OUT Signals

The Applicator Interface supports 8 digital output port with optocoupler. There are two methods to connect the output ports on the 44 pins D-Sub connector of the Applicator Interface card, Active High or Active Low.

The recommended/default connection is Active Low, in accordance with this user guide's logic (Assert = LOW, De-assert = HIGH).

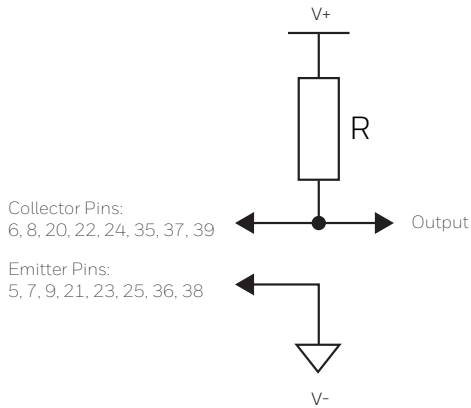
### Active Low (Recommended)

Output level is V+ when de-asserted, Output level is V- when asserted.



### Active High

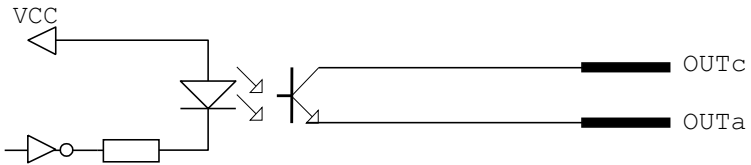
Output level is V+ when asserted, Output level is V- when de-asserted.



### OUT Signals Specification

Signal	Description	Max.
Vceo	Collector-Emitter breakdown voltage	35V
Veco	Emitter-Collector breakdown voltage	6V
Ic	Collector Current	15mA

### Simplified schematic of a digital IN port



### OUT Signals Connector Configuration

Pin	Signal	Description
20	RibbonLow_C	Ribbon Low Collector Opto Out Channel
5	RibbonLow_E	Ribbon Low Emitter Opto Out Channel
35	Error_C	Error Collector Opto Out Channel
21	Error_E	Error Emitter Opto Out Channel
6	EndPrint_C	End Print Collector Opto Out Channel
36	EndPrint_E	End Print Emitter Opto Out Channel

Pin	Signal	Description
22	MediaOut_C	Media Out Collector Opto Out Channel
7	MediaOut_E	Media Out Emitter Opto Out Channel
37	RibbonOut_C	Ribbon Out Collector Opto Out Channel
23	RibbonOut_E	Ribbon Out Emitter Opto Out Channel
8	DataReady_C	Data Ready Collector Opto Out Channel
38	DataReady_E	Data Ready Emitter Opto Out Channel
24	VOID_C	VOID Collector Opto Out Channel
9	VOID_E	VOID Emitter Opto Out Channel
39	RTWOUTEXT_C	External output signal for Ready-to-Work Indicator Collector Opto Out Channel
25	RTWOUTEXT_E	External output signal for Ready-to-Work Indicator Emitter Opto Out Channel

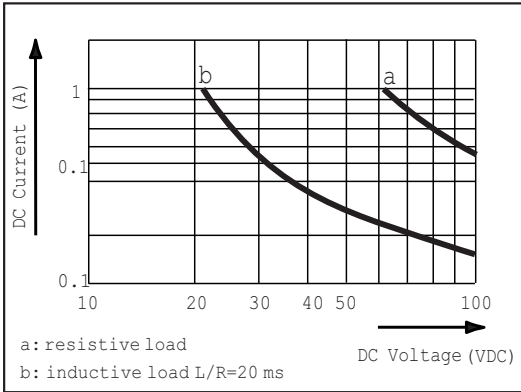
## Relay Out

The applicator card support 4 relay output ports. The relay of the OUT ports are configured using the DC 5V and DC 24V settings. Relay 1 and Relay 3 are configured by DC 5V setting and Relay 2 and Relay 4 are configured by DC 24V setting. DC 5V and DC 24V settings are legacy applicator card settings, no power is supplied by PX4IE/6IE applicator card. Any signals that are within the max load breaking capacity of the relay can be connected to the relays.

## Max AC Load Breaking Capacity

Signal	Description	Max.
I	Current	1A
Psw AC	Switching power	100VA AC
Vsw AC	Switching voltage	100V AC

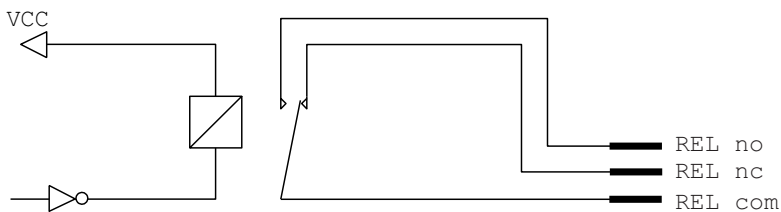
## Max DC Load Breaking Capacity



## Connector Configuration

Pin	Signal	Description
16	REL1nc	Relay 1 Normally Closed
1	REL1no	Relay 1 Normally Open
31	REL1com	Relay 1 Common
17	REL2nc	Relay 2 Normally Closed
2	REL2no	Relay 2 Normally Open
32	REL2com	Relay 2 Common
18	REL3nc	Relay 3 Normally Closed
3	REL3no	Relay 3 Normally Open
33	REL3com	Relay 3 Common
19	REL4nc	Relay 4 Normally Closed
4	REL4no	Relay 4 Normally Open
34	REL4com	Relay 4 Common

## Simplified schematics of a relay OUT port



## Applicator Interface Port Functionality

The Applicator Interface port contains IN and OUT signals which can be read and set by APIs provided by the printer. This interface can be used to coordinate and control sequence of activities and actions taken between the printer and a connected external applicator in a production environment. Signals that activate or reprints a label to be printed, or signals of error events like media or ribbon out allows an automated production line environment using a printer and applicator.

Not all signals are available and supported by all the styles. Some port styles may not support all the signals.

## Configuring Applicator Port Settings

The applicator interface supports three different applicator modes:

- Z-Style: Choose this mode for a Zebra-type applicator.
- S-Style: Choose this mode for a Sato-type applicator.
- I-Style: This mode combines Z-Style or S-Style settings with the ability to trigger external I/O systems via the External Error port.

You can configure applicator port settings from the web browser interface or in Setup Mode through printer.

## Web Browser Interface

1. Open a web browser on your PC.
2. In the address bar, type the IP address of your printer and press Enter. The printer web page appears.
3. Click **Login**.
4. Type your Username and Password and then click **Login**. The default value for Username is **itadmin** and the default value for Password is **pass**.
5. Click the **Configure** tab.

6. From the menu, click **System Settings > Manage I/O**.
7. Chose **Enable** from the drop down list for the Applicator.
8. From the menu, click **Configure > Printing > Applicator**. Choose desired settings from the drop down lists.


<b>Setting</b>	<b>Description</b>
Style	I-Style, Z-Style, S-Style
Startprint	Level or Pulse
Endprint	Mode 0, Mode 1/Type3, Mode2/Type4, Mode3/Type 1, Mode 4/Type 2
Ribbon/Media Low	Enables/disables the printer low ribbon alert message. Enables/disables the printer low media alert message.
Reprint	Enables/disables reprinting the last label sent to the printer (by using the Reprint signal)
Error on Pause	Enable this setting to set the “Service Required” signal when the printer is paused. This setting is supported by Z-Style only.
Error Port	Enables/disables the printer external error port.
RTW	Configures the Ready-to-Work indicator on the printer front panel. Choose from: <ul style="list-style-type: none"> <li>• Mode 1 - Signal is asserted low when no events are active in the System Health Monitor (SHM).</li> <li>• Mode 2 - Signal is asserted low when the printer motor is idle.</li> <li>• Mode 3 - Signal is asserted low when the printer motor is idle and no events are active in the SHM.</li> </ul>
DC 5V	Switches REL1com and REL3com between REL1nc, REL1no, REL3nc and REL3no. Selecting Internal 5V will switch REL1nc and REL3nc to REL1com and REL3 com respectively. Selecting External 5V will switch REL1no and REL3no to REL1com and REL3com respectively. <b>Note:</b> Users are not restricted to connect DC 5V to these lines.

Setting	Description
DC 24V	Switches REL2com and REL4com between REL2nc, REL2no, REL4nc and REL4no. Selecting Internal 24V will switch REL2nc and REL4nc to REL2com and REL4 com respectively. Selecting External 24V will switch REL2no and REL4no to REL2com and REL4com respectively. <b>Note:</b> Users are not restricted to connect DC 24V to these lines.

9. Click **Save**. The settings are saved.

## Setup Mode

Use the printer navigation buttons to view and change settings.

1. Press home button 
2. Navigate **Menu > Settings > System Settings > Manage I/O**.
3. Choose **Enable**.
4. From the menu, select **Menu > Settings > Printing > Applicator**.

## About Applicator Interface IN Signals

This section describes the INPUT signals.

**Note:** All IN signals are asserted low and de-asserted high.

Signal	Description
Startprint	Starts a print job. Choose either Level or Pulse. <ul style="list-style-type: none"> <li>• Level: The printer starts printing labels when the startprint signal is asserted and continues printing until the signal is de-asserted.</li> <li>• Pulse: The printer prints one label when the startprint signal is asserted. The startprint signal must be de-asserted and then asserted to print the next label.</li> </ul>
Feed	Feeds a single label. Not supported by S-Style.
Pause	Toggles between Pause mode and printing. Not supported by S-Style.
Reprint	Reprints the last valid label.
Apperr1	Applicator error 1.
Apperr2	Applicator error 2.



Signal	Description
Apperr3	Applicator error 3.
RTWINEXT	External input signal which you can use to monitor the operational status of the entire system.

## About Applicator Interface OUT Signals

This section describes the Applicator OUT signals.

**Note:** *Unless described otherwise, all OUT signals are asserted low and de-asserted high.*

Signal	Description
Data Ready	Asserted when the printer is ready to receive a startprint signal and execute the current print job. De-asserted when the print cycle ends. Not supported by S-Style.
Endprint	<p>Asserted during or after a print cycle. The endprint signal also behaves differently depending on the applicator port endprint mode. When the startprint signal is received, the endprint signal may or may not be asserted.</p> <p>There are five options to choose from:</p> <ul style="list-style-type: none"> <li>• Mode 0: Endprint signal is never asserted.</li> <li>• Mode 1 (Z-Style)/Type 3 (S-Style): Asserted low during print/feed cycle.</li> <li>• Mode 2 (Z-Style)/Type 4 (S-Style): Asserted high during print/feed cycle.</li> <li>• Mode 3 (Z-Style)/Type 1 (S-Style): Asserted low for at least 20 ms after print/feed cycle end.</li> <li>• Mode 4 (Z-Style)/Type 2 (S-Style): Asserted high for at least 20 ms after print/feed cycle end.</li> </ul>
Ribbon low	Asserted when the ribbon roll diameter drops below a predefined level. De-asserted while the roll diameter remains above the predefined level.
Media low	Asserted when the media roll diameter drops below a predefined level. De-asserted while the media roll diameter remains above the predefined level.
Media out	Asserted when the printer is out of media. Activates an SHM PaperOut event in the System Health Monitor (SHM). De-asserted when the same event is deactivated.

Signal	Description
Ribbon out	Asserted when the printer is out of ribbon. Activates an SHM RibbonOut event in the System Health Monitor (SHM). De-asserted when the same event is deactivated.
RFIDTagError	Asserted when an error related to the RFID tag is occurred during print job and voids the labels. De-asserted when the printer attempts to reprint the problematic label. Unsuccessful reprint will re-assert RFIDTagError signal and an error is reported to System Health Monitor (SHM).
RTWOUTEXT	External output signal for the Ready-to-Work indicator. Behavior depends on the current setup. Signal may be asserted when there are no active events in the System Health Monitor (SHM), when the printer motor is idle, or both. This signal is inactive when the Error Port option is disabled.
SERVICEREQ (Service Required)	Asserted low when an event in the System Health Monitor (SHM) is activated. De-asserted when no events are active in the SHM. Supported only by I-Style. A “service required” event is also activated when the Error Port is enabled and any applicator errors is detected. This signal is also asserted when the Error on Pause option is enabled.

## Programming Applications for the printer

The printer includes Honeywell Fingerprint, a programming language that resides on the printer. Fingerprint is an easy-to-use programming tool for label formatting and printer customization.

Fingerprint also includes a slave protocol, Honeywell Direct Protocol, which allows layouts and variable data to be downloaded from a host and combine into labels, tickets, and tags with a minimum of programming. Honeywell Direct Protocol also includes a versatile error handler and a flexible counter function.

## Fingerprint Commands for the printer

The ON PORTIN, PORTIN, PORTOUT, and ON PORTOUT Fingerprint commands support applicator functionality for the printer. These commands are functional when the printer applicator port status is enabled. This section includes basic information for each of these commands. For more information, see the Fingerprint Command reference manual.

### ON PORTIN

This command allows a Fingerprint application to detect in signals. If a particular in signal is asserted, the application moves to the subroutine responsible for carrying out tasks related to that in signal. One command is available for detection of each of the 8 in signals.

**Note:** *This command is not supported by the Direct Protocol.*

Example:

- ON PORTIN.STARTPRINT GOSUB nnn

### PORTIN

This command is a version of the PORTIN(PORT) command and checks the current state of a specified signal. This command returns -1 if the signal is asserted, or 0 if the signal is de-asserted.

**Note:** *This command is supported by Fingerprint and Direct Protocol.*

Example:

- PORTIN.STARTPRINT

or

- PORTIN.RIBBONLOW

## PORTOUT

Supports manually modifying the dataready signal. PORTOUT is not allowed when the applicator port style is set to S-Style.

**Note:** *This command is not supported by Direct Protocol.*

Example:

- PORTOUT.DATAREADY ON
- PORTOUT DATAREADY OFF

Where ON asserts the dataready signal low and OFF de-asserts the dataready signal high.

## ON PORTOUT

This command allows a Fingerprint application to detect when out signals have been reset to default values. The command moves to a specified subroutine whenever the applicator port status is enabled, and whenever the applicator port style is changed.

Example:

- ON PORTOUT.RESET GOSUB nnn

## Fingerprint and Applicator Signals

When you use Fingerprint, all in signals and the Dataready out signal are handled by Fingerprint. Other out signals are handled by firmware.

### Feed

When the Feed in signal is received, the application moves to a specified subroutine that feeds labels until the Feed in signal is de-asserted.

Example

- 10 ON PORTIN.FEED GOSUB 200  
...  
200 FORMFEED  
210 RETURN

### Pause

When the Pause in signal is received, the application moves to a specified subroutine that finishes the current print job and then places the printer in pause mode.

Example

- 10 ON PORTIN.PAUSE GOSUB 90  
...  
90 pause printer

## Startprint

When the Startprint signal is received, the application moves to a specified subroutine that starts the print job. The Startprint signal must be preceded by the dataready signal as seen in this example.

Example

- 10 PORTOUT.DATAREADY on  
20 ON PORTIN.STARTPRINT GOSUB 60  
...  
60 my print routine  
70 PRINTFEED  
80 RETURN

## Reprint

When the Reprint signal is received, the application moves to a specified subroutine that reprints the last valid label.

Example:

- ...  
100 ON PORTIN.REPRINT GOSUB 150  
...  
150 PRINTFEED -1,1  
160 RETURN

## Printfeed

The dataready signal must be set manually by the Fingerprint application before a printfeed is issued when using with an applicator.

## Handling External Applicator Errors

When an error signal (apperr1, apperr2, or apperr3) is received, the application moves to a specified subroutine that takes action based on error severity.

Example

- ...  
60 ON PORTIN.APPERR1 GOSUB 100  
...  
100 perform error handling  
110 RETURN

## Handling Internal System Errors

For internal system errors, the system error signal status can be read at any time within the application so appropriate measures can be taken. When any of these errors occur, the appropriate out signal (including the error) is asserted:

- Ribbon low
- Ribbon out
- Media low
- Media out
- RFID tag error

Example

- 10 IF PORTIN.RIBBONLOW GOTO 200  
...  
200 perform error handling  
210 RETURN

## Resetting Out Signals

Out signals are reset to their default values when certain options are changed by using the SETUP menu. When the reset is detected, the application moves to a specified subroutine and performs the tasks necessary to reinitialize the print engine.

Example

- 10 ON PORTOUT.RESET GOSUB 150  
...  
150 perform initialization  
160 RETURN

## Direct Protocol and Applicator Signals

In Direct Protocol, all in and out signals are handled by the Direct Protocol firmware.

### Feed

There are two ways to trigger blank label feeding:

- by manually pressing Feed on the printer front panel. The printer feeds a single blank label.
- by using the Feed in signal. When this signal is detected, the printer feeds blank labels as long as internal applicator flag indicates that the Feed signal is asserted.

## Pause

The applicator can toggle the current pause state by using the pause IN signals to simulate pressing Pause on the printer front panel.

## Startprint

When the printfeed command is executed, the print process sets the dataready signal and then waits for the startprint signal to be detected before proceeding with the print job.

The print process will not set another dataready signal until the current print job de-asserts the previous dataready signal. This prevents the printer from printing a new label before the previous label is completed.

## Reprint

This signal works much the same way as startprint. The reprint signal is detected under two conditions:

- when the printer is idle.
- when the printer is waiting for a startprint signal during the execution of a printfeed command.

The printer prints only one label at a time.

## Handling External Applicator Errors

The external applicator error in signals (APPERR1, APPERR2, APPERR3, RTWINEXT) should be asserted when external applicator errors occur. When one of these signals is detected, an associated event is activated in the System Health Monitor (SHM). When the issue causing the error has been resolved and the error signals are de-asserted, the events are deactivated in the SHM.

## Handling Internal System Errors

When a system error occurs that activates an event in the SHM, the “service required” signal is asserted. The external RTW out signal can be de-asserted, depending on the current print engine RTW setting.

When any of these errors occur, the appropriate out signal (including the error) is asserted:

- Ribbon low
- Ribbon out
- Media low
- Media out
- RFID tag error

# Error Messages

## ERRNOAPP

**Message:** Operation not allowed. Applicator Port disabled.  
**Cause:** Application send an applicator port command to the printer and the applicator port is disabled.  
**Error number:** 88

## ERRAPP

**Message:** Operation not allowed. Applicator Port enabled.  
**Cause:** Application sent the Fingerprint command PORTOUT(PORT) ON/OFF on a port used by the applicator port when the applicator is enabled.  
**Error number:** 89

## ERRINPUTON

**Message:** Operation not allowed in Direct Protocol  
**Cause:** Running the PORTOUT.DATAREADY ON/OFF or PORTIN.<SIGNAL>GOSUB XXX commands when the printer is set to using Direct Protocol.  
**Error number:** 90

## EAPPERR1

**Message:** Applicator Error 1  
**Cause:** AppErr1 in signal detected.  
**Result:** Activates event in System Health Monitor (SHM).  
**Error number:** 1340

## EAPPERR2

**Message:** Applicator Error 2  
**Cause:** AppErr2 in signal detected.  
**Result:** Activates event in System Health Monitor (SHM).  
**Error number:** 1341



### EAPPERR3

**Message:** Applicator Error 3  
**Cause:** AppErr3 in signal detected.  
**Result:** Activates event in System Health Monitor (SHM).  
**Error number:** 1342

### ERTWINEXT

**Message:** RTW External Error  
**Cause:** RTWExternal in signal detected.  
**Result:** Activates event in System Health Monitor (SHM).  
**Error number:** 1343

### ENODATAREADY

**Message:** Dataready not enabled  
**Cause:** Application sent a PRINTFEED in Fingerprint when the applicator port is enabled, the style is set to I-Style or Z-Style, and the dataready signal is not enabled.  
**Result:** Terminates the printfeed command without printing a label.  
**Error number:** 1344

## Display Messages

These messages appear in the printer display under certain conditions when a PRINTFEED command is run.

**Message:** APPLICATOR PORT: Wait for signal  
**Cause:** Running a PRINTFEED command blocks execution until a startprint signal is received. The message appears when execution has been blocked for a few seconds.

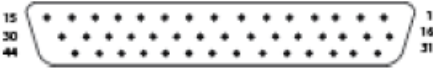
**Message:** APPLICATOR PORT: Wait for reprint  
**Cause:** Running a PRINTFEED -1,1 command blocks execution until a reprint signal is received. The message appears when execution has been blocked for a few seconds.

## Port Pinout Mapping for Applicator Interface

The Physical connectors of the Z, S style connectors and the External Error port connector pins are mapped to the 44-pin connector of the applicator interface option board.

The mapping of the applicator interface ports are detailed below.

### DB-44 Connector Pin



Applicator Interface (44 pin)		External Error Port (8 pin)			
Pin	Type	Pin	Signal	Type	Description
28	Input	1	AppErr_1	Input	Applicator error#1
13					
43	Input	2	AppErr_2	Input	Applicator error#2
29					
14	Input	3	AppErr_3	Input	Applicator error#3
44					
30	Input	4	AppErr_4	Input	Honeywell Ready-to-Work indicator input for external errors (RtW_In_Ext)
15					
39	Output	6	RTW_Out	Output	Honeywell Ready-to-Work indicator output for total system indicator
25					

Applicator Interface (44 pin)		Equivalent I-Style, Z-Style signal pin			Equivalent S-style signal pin		
Pin	Type	Pin	Signal	Type	Pin	Signal	Type
10	Input	3	Startprint	Input	5	Startprint	Input
40							
26	Input	4	Feed	Input			
11							
41	Input	5	Pause	Input			
27							
12	Input	6	Reprint	Input	7	Reprint	Input
42							
20	Output	9	Ribbon Low	Output	10	Ribbon Low	Output
5							
35	Output	10	Service Required	Output	4	Error	Output
21							
6	Output	11	End Print	Output	6	End Print	Output
36							
22	Output	12	Media Out	Output	1	Media Out	Output
7							
37	Output	13	Ribbon Out	Output	3	Ribbon Out	Output
23							
8	Output	14	Data Ready	Output			
38							
24	Output	15	VOID	Output			
9							

## Support

To search our knowledge base for a solution or to log into the Technical Support portal and report a problem, go to [www.hsmcontactsupport.com](http://www.hsmcontactsupport.com).

## Documentation

Product documentation is available at [www.honeywellaidc.com](http://www.honeywellaidc.com).

## Limited Warranty

For warranty information, go to [www.honeywellaidc.com](http://www.honeywellaidc.com) and click **Resources > Product Warranty**.

## Patents

For patent information, see [www.hsmpats.com](http://www.hsmpats.com).

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