Operator's Manual

Peel-off Adapter / Present Sensor
PS5 / PS6 / PS6V / PS8 / PS9

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<th>PS5</th>
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<td>Present Sensor</td>
<td>PS6</td>
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<td></td>
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<td></td>
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</tbody>
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1.1 Instructions

Important information and instructions are designated as follows:

! **Attention!**

Draws attention to potential risks of property damage or loss of quality.

! **Note!**

Advices to make work routine easier or on important steps to be carried out.

▶ Handling instructions

▷ Reference to chapter, position, picture number or document.

* Option (accessories, peripherals, extras).

**Time**

Viewed in the display / monitor.

1.2 Intended Use

- The devices are options only for cab A+ label printer to dispense of material which approved by the manufacturer. Any other use or use going beyond this shall be regarded as improper use. The manufacturer/supplier shall not be liable for damage resulting from unauthorized use; the user shall bear the risk alone.

- Perform only those actions described in this operating manual. Work going beyond this may only be performed by trained personnel or service technicians.

! **Attention!**

The use of a Peel-off Adapter / Present Sensor requires a printer model designed for the peel-off mode (A+/xxxP).

! **Note!**

The complete documentation can also currently be found in the Internet.
In peel-off mode print jobs will be split into cycles with the following steps:

- A label will be printed, peeled-off from the liner and presented in the peel position. The print job stops.
- The label will be removed from the peel position. Then depending on the printer settings a label backfeed will be carried out. That way the front edge of the next label will be fed back ahead of the printing line.

The cycle will be repeated till the end of the print job.

The possibilities to control the peel-off mode are depending on the used PS module type.

<table>
<thead>
<tr>
<th></th>
<th>PS5</th>
<th>PS6</th>
<th>PS6V</th>
<th>PS8</th>
<th>PS9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peripheral interface for external control of the peel-off mode</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Detection of the label in the peel position by an optical sensor</td>
<td>-</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Sensor position fixed</td>
<td>-</td>
<td>x</td>
<td>-</td>
<td>x</td>
<td>-</td>
</tr>
<tr>
<td>Sensor position variable</td>
<td>-</td>
<td>-</td>
<td>x</td>
<td>-</td>
<td>x</td>
</tr>
<tr>
<td>Distance operating point of the sensor to the paper edge (mm)</td>
<td>-</td>
<td>8</td>
<td>10 - 22</td>
<td>8</td>
<td>Customer specific</td>
</tr>
</tbody>
</table>

Table 1 Functions
### PS5
- Control of the peel-off mode by external signals only.
- Signal exchange via peripheral interface (1).

### PS6
- Detection of labels in peel-off position by a see-through sensor with fixed sender (2).
- Print of a label directly after removing the previous one from the peel position (automatic mode) or after additional receipt of an external signal (label on demand mode).
- Signal exchange for label on demand mode via peripheral interface (1).

### PS6V
- Special version of PS6 with horizontally adjustable sender (3)

### PS8
- Detection of labels in peel-off position by a see-through sensor with fixed sender (2).
- Print of a label directly after removing the previous one from the peel position.

### PS9
- Detection of labels in peel-off position by a horizontally adjustable reflective sensor (4).
- Adjusting range customer specific
- Print of a label directly after removing the previous one from the peel position.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Models</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PS5</td>
</tr>
<tr>
<td></td>
<td>PS6</td>
</tr>
<tr>
<td></td>
<td>PS6V</td>
</tr>
<tr>
<td></td>
<td>PS8</td>
</tr>
<tr>
<td></td>
<td>PS9</td>
</tr>
</tbody>
</table>
Note!
Keep the original packaging for later transports.

Attention!
Damage and failure in function by dust, dirtiness and humidity.
► Use devices only in a clean and dry environment.

Switch off the printer.
► Push the guides of the peel-off module (1) under the control panel (3).
► Press the module against the printer. Ensure that the SUB-D9 connector of the module will be connected to the peripheral interface (4) of the printer.
► Secure the module with screw (2).
4.1 General Settings

- Activate the peel-off mode in the software. In direct programming use the "P" command.
  - Programming Manual of the printer.
- Configure the peel-off parameters.
  - "5 Printer Configuration"

**Note!**

The peel-off parameters are only accessible with a peel-off adapter or present sensor only.

On the back side of the modules there is a jumper system with 4 possible jumper settings.

- For PS5 set the jumper to JP1 or JP2 to select the mode.
- For PS6, PS6V and PS8 the jumper must remain at position JP4
- For PS9 the jumper must remain at position JP1
4 Operation

4.2 Peel-off Adapter PS5

PS5 can be operated in three different modes depending on the jumper setting and the external circuit.

4.2.1 Mode 1a - Starting Print and Confirming Label Removal with Two Signals

![Diagram of PS5 with jumper settings](image)

Figure 2  Jumper at position JP1

- Send a print job.
- Activate XSTART. The first label will be printed and transported to the peel position.
- Remove the label.
- Confirm the label removal with signal XETE.
- Activate XSTART to start the next cycle.

![Diagram of peripheral interface](image)

Figure 3  External minimal circuit at the peripheral interface for mode 1a
4.2.2 Mode 1b - Starting Print and Confirming Label Removal with Signal XETE

Figure 4  Jumper at position JP1

- Hold signal **XSTART** permanently active.
  For that connect Pin 1 (XSTART) with Pin 15 (P24) and Pin 8 (GND) with Pin 9 (RXSTART).
- Send a print job.
  The first label will be printed and transported to the peel position.
- Remove the label.
- Confirm the label removal with signal **XETE**.
  The next cycle will be started.

Figure 5  External minimal circuit at the peripheral interface for mode 1b
4 Operation

4.2.3 Mode 2 - Starting Print and Confirming Label Removal with Signal XSTART

Figure 6  Jumper at position JP2

- Send a print job.
- Activate XSTART and hold it active. The first label will be printed and transported to the peel position.
- Remove the label.
- Confirm the label removal with deactivation of XSTART.
- Activate XSTART again to start the next cycle.

![Diagram showing jumper at position JP2]

Figure 7  External minimal circuit at the peripheral interface for mode 2
4.3 Present Sensor PS6

PS6 can be operated in two different modes. The operating mode depends on external circuit at the peripheral interface. The jumper must be at position JP4.

![Figure 8 Jumper at position JP4](image)

4.3.1 Automatic Mode

The present sensor is installed without external circuit.

- Send a print job.
  - The first label will be printed and transported to the peel position.
- Remove the label.
  - The next label will be printed and transported to the peel position.

4.3.2 Label on Demand Mode

To start a peel-off cycle the signal **XSTART** must be sent from an external control.

For that mode pin 13 (STA) must be connected with pin 12 (GND).

- Send a print job.
- Activate **XSTART**.
  - The first label will be printed and transported to the peel position.
- Remove the label.
- Activate **XSTART** to start the next cycle.
4 Operation

Figure 9  External circuit with hand or foot switch

Figure 10  External circuit with optical sensor (pnp output)

Figure 11  External circuit with optical sensor (npn output)
4.4 Present Sensor PS6V

PS6V is a special version of PS6 with adjustable sender of the see-through sensor.

Adjusting the sensor:
- Loosen 2 screws (2).
- Move the sender (1) sidewards.
- Tighten 2 screws (2).

Figure 12 Adjusting the sensor

All information about PS6 in chapter 4.3 are valid for PS6V too.

4.5 Present Sensor PS8

PS8 is immediately ready for use.
- Send a print job.
  The first label will be printed an transported to the peel position.
- Remove the label.
  The next label will be printed an transported to the peel position.

Figure 13 Jumper at position JP4
4.6 Present Sensor PS9

Adjusting the sensor:
- Loosen screw (1).
- Move the sensor (2) sidewards.
- Tighten screw (1).

PS9 is immediately ready for use.
- Send a print job.
  The first label will be printed and transported to the peel position.
- Remove the label.
  The next label will be printed and transported to the peel position.
### Machine Parameters

- Press the **menu** button.
- Select **Setup > Machine param.**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Meaning</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand sensor</td>
<td>Configuration of the peel-off parameters for devices with peel-off function.</td>
<td></td>
</tr>
</tbody>
</table>
| > Peel position| Shift the position of the dispensed label relative to the dispensing edge.  
The Peel position can also be set via software. The offset values from the **Machine param.** menu and the software are added together. | 0,0 mm |
| > Backfeed delay| Delay time between removing the label from the peel position and the backfeed of the label. | 250 ms |
| > Limit peel-off spd. | Limitation of the print speed in the peel-off mode to 100 mm/s (203/300 dpi) respectively 50 mm/s (600 dpi).. | On     |

Table 3 Parameters of the menu **Setup > Machine param.**  
> Demand sensor

### Print Parameters

- Press the **menu** button.
- Select **Setup > Print param.**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Meaning</th>
<th>Default</th>
</tr>
</thead>
</table>
| Backfeed  | Method for backfeeding the label medium. Backfeeding is necessary in the peel-off mode since the front edge of the following has already passed the print line when peeling off the first label  
always: Backfeeding occurs independently of label contents.  
smart: Backfeeding only occurs when the next label is not yet fully prepared when peeling off the current label. Otherwise, the second label is pushed on and completed after removal of the first label without backfeeding. | smart   |

Table 4 Parameters of the menu **Setup > Print param.**  
> Backfeed
6 Peripheral Interface

6.1 Pin Assignment

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Direction</th>
<th>Standard Function</th>
<th>Special function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>XSTART</td>
<td>Input</td>
<td>Start</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>XFEH</td>
<td>Input</td>
<td>External error</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>XETE</td>
<td>Input</td>
<td>Label has been taken</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>XESP</td>
<td>Output</td>
<td>Label in peel position</td>
<td>Control bit 3</td>
</tr>
<tr>
<td>5</td>
<td>XEDG</td>
<td>Output</td>
<td>No print job available</td>
<td>Control bit 1</td>
</tr>
<tr>
<td>6</td>
<td>XDNB</td>
<td>Output</td>
<td>Printer not ready</td>
<td>Control bit 2</td>
</tr>
<tr>
<td>7</td>
<td>XEDST</td>
<td>Output</td>
<td>Print has been started</td>
<td>Control bit 0</td>
</tr>
<tr>
<td>8</td>
<td>GND</td>
<td></td>
<td>Ground (0V)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>RXSTART</td>
<td>(Input)</td>
<td>Start (reverse line)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>RXFEH</td>
<td>(Input)</td>
<td>External error (reverse line)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>RXETE</td>
<td>(Input)</td>
<td>Label is taken (reverse line)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>GND</td>
<td></td>
<td>Ground (0V)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>STA</td>
<td>Input</td>
<td>Start signal enabled</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>RUEL</td>
<td>Output</td>
<td>Reverse line (for all outputs)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>P24</td>
<td>(Output)</td>
<td>Operating voltage +24V, Si T 100mA</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 Pin assignment peripheral interface

Figure 16 Peripheral interface PS5 / PS6
## 6.2 Signals

**Note!**
That chapter describes the standard functions of the signals only.
For more information about the special functions [Programming manual printer](#).

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Description</th>
<th>Activation / Active State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>XSTART</td>
<td>Start</td>
<td>+24 V between Pin 1 and Pin 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Start of print and label transport to the peel position</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pin 13 (STA) must be connected with Pin12 (GND) to enable the signal evaluation.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>XFEH</td>
<td>External error</td>
<td>+24 V between Pin 2 and Pin 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Error message from the external control.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The print job will be stopped, the display shows the error message &quot;External error&quot;.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Confirm the error correction by pressing the pause key. If the error occurred during label printing, the print of the label will be repeated.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>By pressing the cancel key the print job will be canceled and the printer will be reset to its initial state.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>XETE</td>
<td>Label has been taken</td>
<td>0 V between Pin 3 and Pin 11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>for PS5, Mode 1a and 1b only:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Confirmation of the label removal</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>XESP</td>
<td>Label in peel position</td>
<td>Contact between Pin 4 and Pin 14 is open</td>
</tr>
<tr>
<td>5</td>
<td>XEDG</td>
<td>No print job available</td>
<td>Contact between Pin 5 and Pin 14 is open</td>
</tr>
<tr>
<td>6</td>
<td>XDNB</td>
<td>Printer not ready</td>
<td>Contact between Pin 6 and Pin 14 is open</td>
</tr>
<tr>
<td></td>
<td></td>
<td>An error occurred in the printer.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The print job will be stopped the error type (Out of ribbon, out of paper, no label found...) will be shown on the display.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After error correction press the feed key to synchronize the paper feed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Press the pause key to continue the print job.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>XEDST</td>
<td>Print has been started</td>
<td>Contact between Pin 7 and Pin 14 is open</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The print start will be indicated with 20 ms pulse.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>GND</td>
<td>Ground ( 0 V )</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>RXSTART</td>
<td>Start (reverse line)</td>
<td></td>
</tr>
</tbody>
</table>
## Peripheral Interface

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Description</th>
<th>Activation / Active State</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>RXFEH</td>
<td>External error (reverse line)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>RXETE</td>
<td>Label is taken (reverse line)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>GND</td>
<td>Ground (0V)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>STA</td>
<td>Start signal enabled&lt;br&gt;<strong>XSTART will only be evaluated when STA is active.</strong></td>
<td>Connecting Pin 13 with Pin 12 (GND)</td>
</tr>
<tr>
<td>14</td>
<td>RUEL</td>
<td>Reverse line (for all outputs)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>P24</td>
<td>Operating voltage +24 V, Si T 100 mA&lt;br&gt;<strong>ATTENTION ! Output !!!</strong>&lt;br&gt;Do not connect any external voltage to Pin 15</td>
<td></td>
</tr>
</tbody>
</table>

*Table 6  Signals of peripheral interface PS5, PS6*
6.3 **Internal Circuit of the Inputs**

The inputs XSTART, XFEH and XETE are designed for an operating voltage of 24 V. For each signal X(input) exists a separate reverse line RX(input) at the connector. For that the following signal pairs result:

- Pin 1 - XSTART
- Pin 9 - RXSTART
- Pin 2 - XFEH
- Pin 10 - RXFEH
- Pin 3 - XETE  PS5 only
- Pin 11 - RXETE  PS5 only

Figure 17  Internal circuit of the inputs

Input STA (Pin 13) must be connected to GND (Pin 12) to enable the signal XSTART.

6.4 **Internal Circuit of the Outputs**

For the outputs solid-state relays are used. The outputs have the common reference potential RUEL (Pin 14). Switching the outputs is realized by opening or closing a contact between RUEL and the respective output.

\[ U_{\text{max}} = 42 \, \text{V} \quad I_{\text{max}} = 100 \, \text{mA} \]

Pin 4 - XESP
Pin 5 - XEDG
Pin 6 - XDNB
Pin 7 - XEDST
Pin 14 - RUEL

Figure 18  Internal circuit of the outputs
The peel-off adapter and the present sensors comply with the relevant fundamental regulations of the EU Rules for Safety and Health:

- Directive 2014/30/EU relating to electromagnetic compatibility
- Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment

EU Declaration of Conformity

▷ [https://www.cab.de/media/pushfile.cfm?file=3066](https://www.cab.de/media/pushfile.cfm?file=3066)