Operator's Manual

cab
we identify more

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

Peel-off Adapter	PS5
Present Sensor	PS6
	PS6V
	PS8
	PS9

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Editor

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Topicality

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Table of Contents

1.1 Instructions

Important information and instructions are designated as follows:

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

i **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).

i **Note!**
The complete documentation can also currently be found in the Internet.

In peel-off mode print jobs will by split in 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 from the used PS module type.

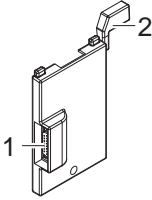|	PS5	PS6	PS6V	PS8	PS9
Peripheral interface for external control of the peel-off mode	x	x	x	-	-
Detection of the label in the peel position by an optical sensor	-	x	x	x	x
Sensor position fixed	-	x	-	x	-
Sensor position variable	-	-	x	-	x
Distance operating point of the sensor to the paper edge (mm)	-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

Table 1   Functions
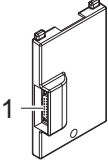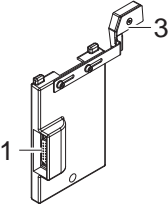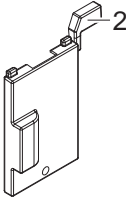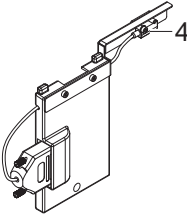
	PS5 • Control of the peel-off mode by external signals only. • Signal exchange via peripheral interface (1).
	PS6 • Detection of labels in peel-off position by a see-through sensor with fixed sender (2). • Print of a label directly after removing the previous one from the peel position (automatic mode) oder 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 2   Models

> **Note!**
> **Keep the original packaging for later transports.**

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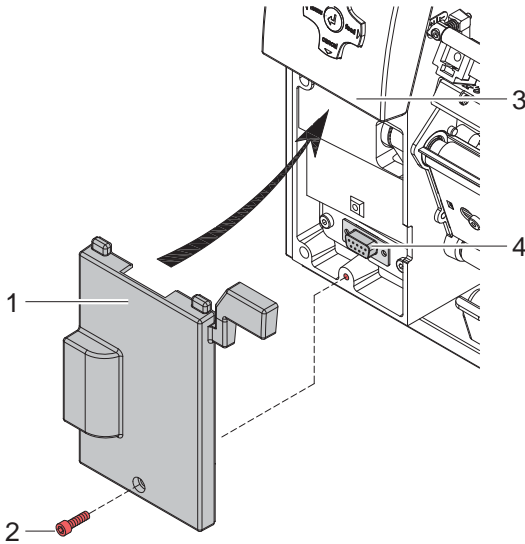> ▶ **Use devices only in a clean and dry environment.**

Figure 1   Mounting a peel-off module

▶ 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"

ℹ️ **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

4.2 Peel-off Adapter PS5

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

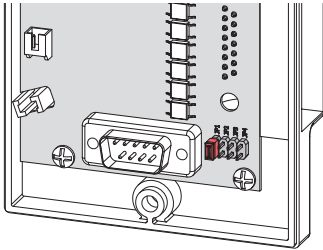### 4.2.1 Mode 1a - Starting Print and Confirming Label Removal with Two Signals

Figure 2   Jumper at position **JP1**

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

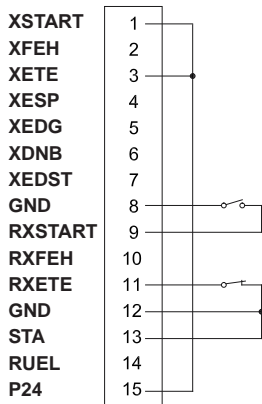|	
XSTART	1
XFEH	2
XETE	3
XESP	4
XEDG	5
XDNB	6
XEDST	7
GND	8
RXSTART	9
RXFEH	10
RXETE	11
GND	12
STA	13
RUEL	14
P24	15

Figure 3   External minimal circuit at the peripheral interface for mode 1a

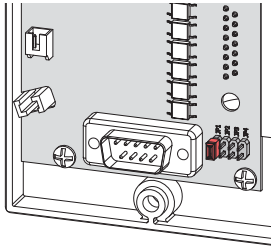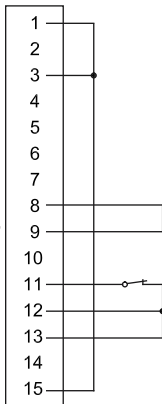**4.2.2 Mode 1b - Starting Print and Confirming Label Removal with Signal XETE**

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 an transported to the peel position.

▶ Remove the label.

▶ Confirm the label removal with signal **XETE**.
The next cycle will be started.

XSTART	1	
XFEH	2	
XETE	3	
XESP	4	
XEDG	5	
XDNB	6	
XEDST	7	
GND	8	
RXSTART	9	
RXFEH	10	
RXETE	11	
GND	12	
STA	13	
RUEL	14	
P24	15	

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

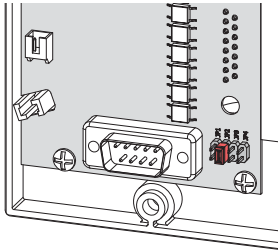## 4.2.3 Mode 2 - Starting Print and Confirming Label Removal with Signal XSTART

Figure 6   Jumper at position **JP2**

▶ Send a print job.

▶ Activate **XSTART** and hold it active.
The first label will be printed an transported to the peel position.

▶ Remove the label.

▶ Confirm the label removal with deactivation of **XSTART**.
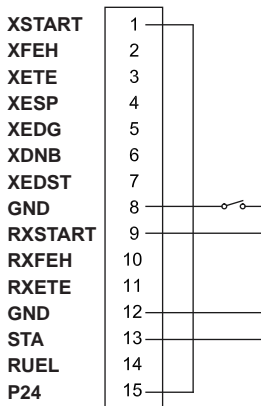
▶ Activate **XSTART** again to start the next cycle.

XSTART	1
XFEH	2
XETE	3
XESP	4
XEDG	5
XDNB	6
XEDST	7
GND	8
RXSTART	9
RXFEH	10
RXETE	11
GND	12
STA	13
RUEL	14
P24	15

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.
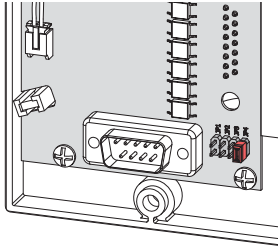The jumper must be at position JP4.

Figure 8 Jumper at position **JP4**

4.3.1 Automatic Mode

The present sensor is installed without external circuit.

▶ 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.

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 an transported to the peel position.

▶ Remove the label.

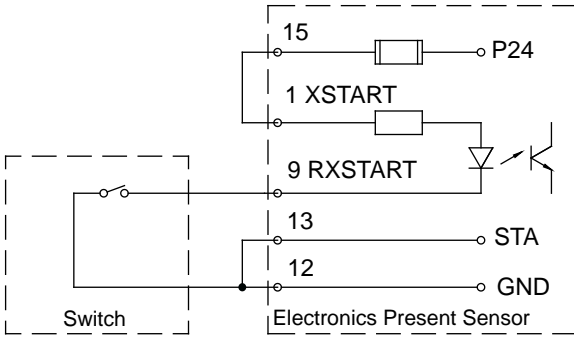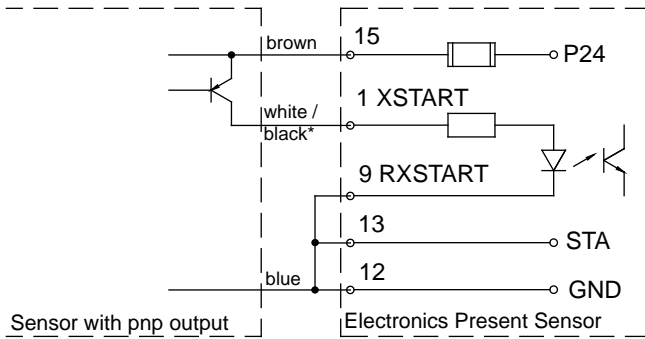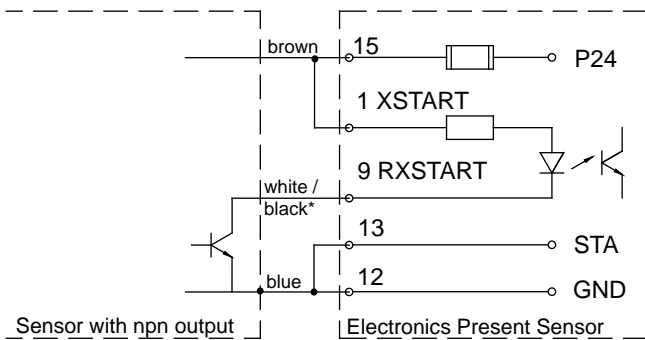▶ Activate **XSTART** to start the next cycle.

Figure 9   External circuit with hand or foot switch

* depending on sensor model

Figure 10 External circuit with optical sensor (pnp output)
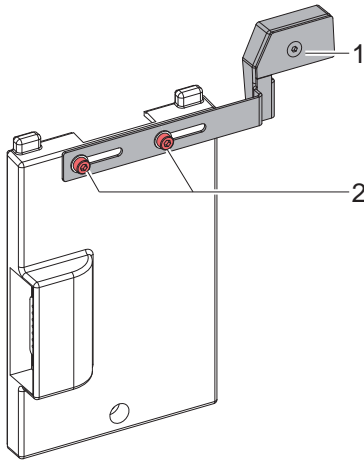

* depending on sensor model

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

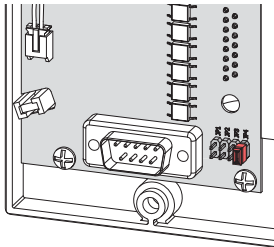All information about PS6 in chapter 4.3 are valid for PS6V too.

4.5 Present Sensor PS8

Figure 13 Jumper at position **JP4**

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.
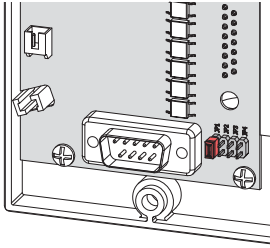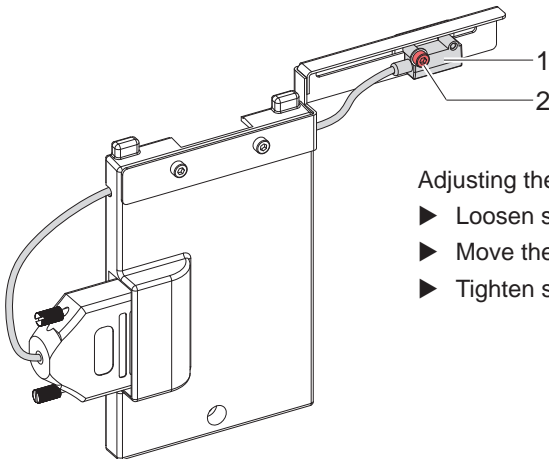
4.6   Present Sensor PS9

Figure 14 Jumper at position **JP1**

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

Figure 15 Adjusting the sensor

PS9 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.

Machine Parameters

▶ Press the **menu** button.

▶ Select `Setup > Machine param.`.

Parameter		Meaning	Default
	`Demand sensor`	Configuration of the peel-off parameters for devices with peel-off function.	
	`> 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.`.

Parameter		Meaning	Default
	`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`

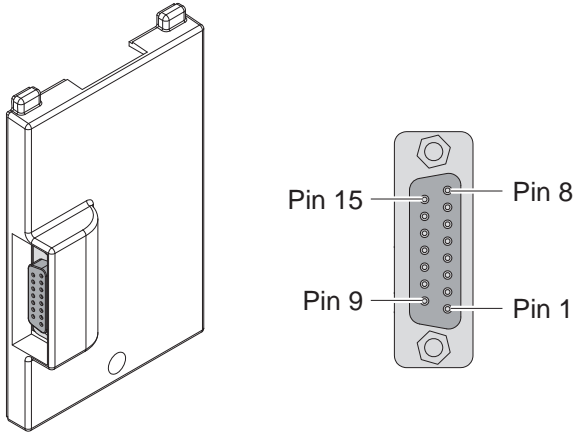Table 4 Parameters of the menu `Setup > Print param.` `> Backfeed`

6.1   Pin Assignment

Figure 16 Peripheral interface PS5 / PS6

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

Table 5   Pin assignment peripheral interface

6.2 Signals

ⓘ **Note!**
That chapter describes the standard functions of the signals only.
For more information about the special functions ▷Programming
manual printer

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

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

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.

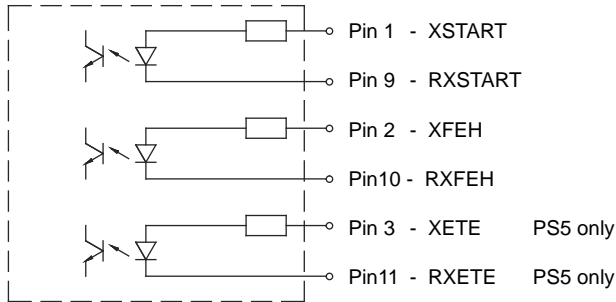For that the following signal pairs result:

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.

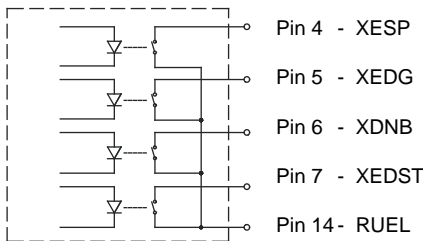$U_{max} = 42 \text{ V}$ $\qquad I_{max} = 100 \text{ mA}$

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