

# Interface Description



Label Printer

# Hermes+

Made in Germany

## 2 Interface Description - Translation of the Original Version for the following products

2

Family	Type
Hermes+ L	Hermes+ 2L
	Hermes+ 4L
	Hermes+ 4.3L
	Hermes+ 6L
Hermes+ R	Hermes+ 2R
	Hermes+ 4R
	Hermes+ 4.3R
	Hermes+ 6R

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## 1.1 Instructions

Important information and instructions are designated as follows:

**Danger!**

Draws attention to an exceptionally great, imminent danger to your health or life due to hazardous voltages.

**Danger!**

Draws attention to a danger with high risk which, if not avoided, may result in death or serious injury.

**Warning!**

Draws attention to a danger with medium risk which, if not avoided, may result in death or serious injury.

**Caution!**

Draws attention to a danger with low risk which, if not avoided, may result in minor or moderate injury.

**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.

**Environment!**

Advices on protecting the environment.

- ▶ Handling instructions
- ▷ Reference to chapter, position, picture number or document.
- \* Option (accessories, peripherals, extras).

Time Viewed in the display / monitor.

1.2 Content of the Documentation

The documentation contains the description of the following interfaces, which are especially defined for Hermes+ :

- I/O interface (10)
- Connector warning light (11)
- Connector emergency stop (12)
- Connector central compressed air valve (9)

The RS-232 interface (11) is uniformly defined for all cab label printers ▷ Configuration Manual.

The interface for cab Applicators is an USB interface for data transfer between cab modules only. Therefore there is no further description in this manual.

All other interfaces are standardized and therefore no matter of this documentation.

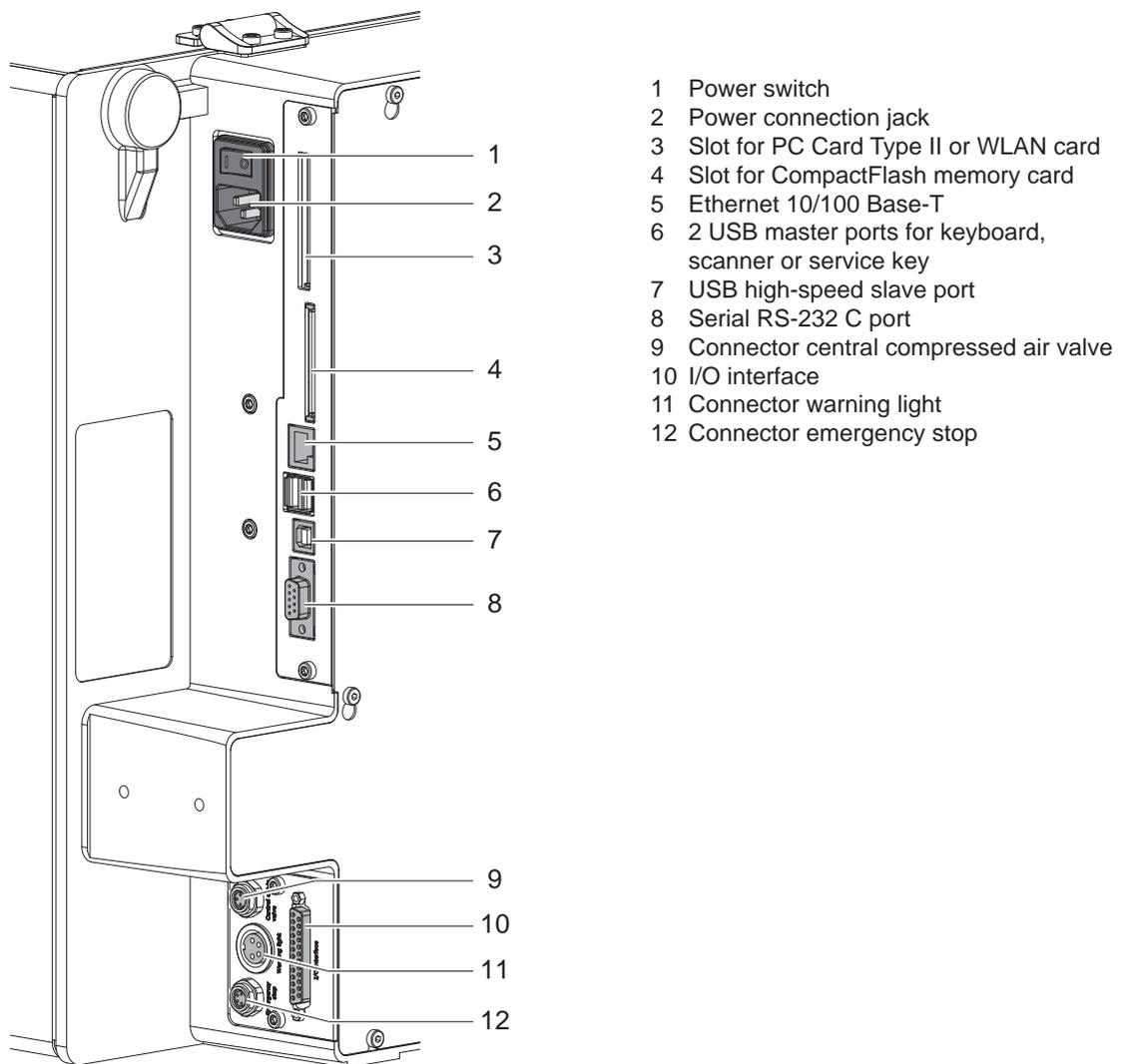


Fig. 1 Connections

For use in a network the print module is equipped with an I/O interface to start and interrupt the printing and labelling process. It also passes on state information as well as error messages to the control of the network.

## 2.1 Pin Assignment

The interface has a 25 pin SUB-D connector.

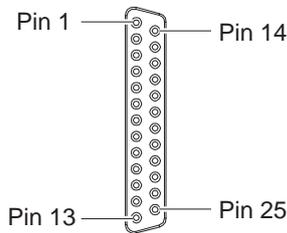


Fig. 2 I/O interface

Pin	Signal	Name	Description		Activation / Active State
			without applicator	with applicator	
1		DREE	-	Print first label in mode "Apply-Print"	Switch on +24V between Pin 1 and Pin 25
2		VWE	Warning end of labels This signal reports that there is available only a few amount of media.		Contact between Pin 2 and Pin 20 (RUDEL) is open
3		SUE	-	Lower end position The pad of the applicator is in the labelling position	Contact between Pin 3 and Pin 20 (RUDEL) ist closed
4		PTE	Label transport ON Labels are fed by the print module		Contact between Pin 4 and Pin 20 (RUDEL) ist closed
5		SOE	-	Upper end position The pad of the applicator is in the position where the labels are taken from the printer.	Contact between Pin 5 and Pin 20 (RUDEL) ist closed
6		GND	Ground (0 V) for sensors or trigger switches		
7	-	-	-		-
8		FME	Error "Out of paper" or "Out of ribbon" There is no (more) material (labels or ribbon) in the printer. The operation is stopped and the details and type of error can be read from the display. The last label printed while the error occurred will be repeated.		Contact between Pin 8 and Pin 20 (RUDEL) is open
9		EDG	Print job available Print jobs are stored in the print module.		Contact between Pin 9 and Pin 20 (RUDEL) is closed
10		DB	Printer is ready The printer is in Ready state.	Printer and applicator are ready Printer and applicator are in Ready state.	Contact between Pin 10 and Pin 20 (RUDEL) is closed
11		FEED	Label feed A blank label is forwarded to synchronize the label transport; label feed is proceeded only if no print job is available or an error has occurred		Switch on +24V between Pin 11 and Pin 25
12		WDR	Repeat print The last printed label is repeated, counters are not altered in mode "Print-Apply" only		+24V between Pin 12 and Pin 25
13		START	Print start signal Precondition : The superior control has confirmed with the ETE signal that the previous label has been taken from the peel-off position.	Print/application start signal	+24V between Pin 13 and Pin 25

Pin	Signal	Name	Description		Activation / Active State
			without applicator	with applicator	
14		PSE	Pause ON/OFF		Pause ON when +24V between Pin 14 and Pin 25
15		VWF	Warning end of ribbon This signal reports that there is available only a few amount of transfer ribbon.		Contact between Pin 15 and Pin 20 (RUDEL) is open
16		ETE	Label has been taken Confirmation of the superior control that the label has been taken from the peel-off position. Required for the validity of a new start signal.	-	Switch on +24V between Pin 16 and Pin 25
17		DAL	Cancel print job The current print job is cancelled and deleted from the print buffer.		Switch on +24V between Pin 17 and Pin 25
18		RST	Reset		Switch on +24V between Pin 18 and Pin 25
19		24P	Internal operating voltage +24V, Si T 100mA for external consumers e.g. sensors, trigger switches		
20		RUDEL	Common reverse line for all output signals with reference potential e.g. EXT_24P		
21		ESP	Label in peel-off position	Applicator is ready for mode "Apply-Print"	Contact between Pin 21 and Pin 20 (RUDEL) is closed
22		SAA	General error message Error message of both, printer or applicator		Contact between Pin 22 and Pin 20 (RUDEL) is open
23		STP	Stop signal to interrupt the labelling cycle		Switch on +24V between Pin 23 and Pin 25
24		EDR	-	Turn label 90° Signal for applicators with selection of label orientation	Switch on +24V between Pin 24 and Pin 25
25		GND_EXT	Ground of the external 24 V		

Table 1 Pin assignment of the I/O interface

## 2.2 Circuit Diagram of Inputs and Outputs

The **inputs** are optocouplers with a current limiting resistor of 2.2 k $\Omega$  for a voltage of 24 V in the input circuit. All input have the common reverse line GND\_EXT :

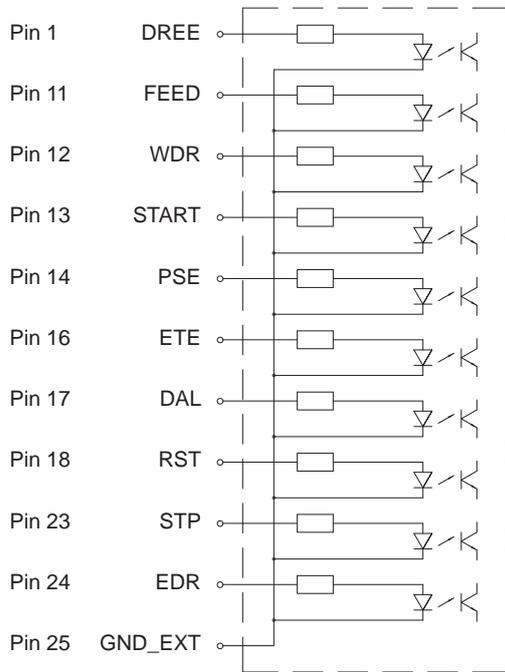


Fig. 3 Circuit of the inputs

All **outputs** are realized through solid state relays which outputs are connected with one another one-sided. The joint line is lead to the plug connector as RUEL signal.

The switch function of the outputs is to open or close the contact between the joint line RUEL and the respective output.

Electrical requirements :  $U_{\max} = 42V$  ,  $I_{\max} = 100mA$

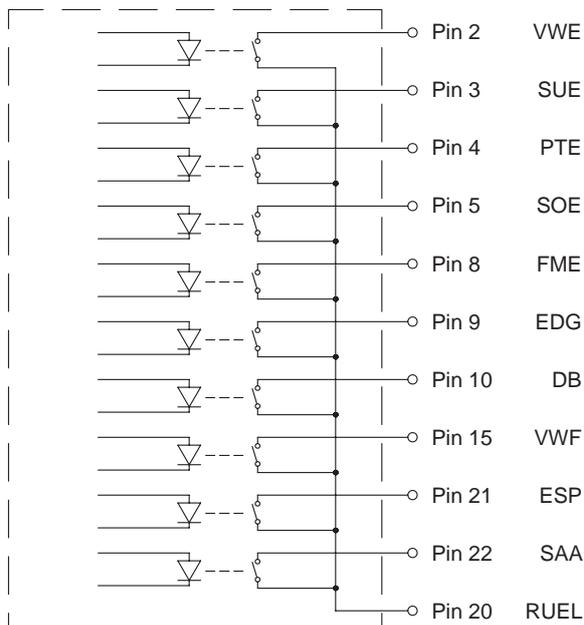


Fig. 4 Circuit of the outputs

2.3 External Minimum Circuit

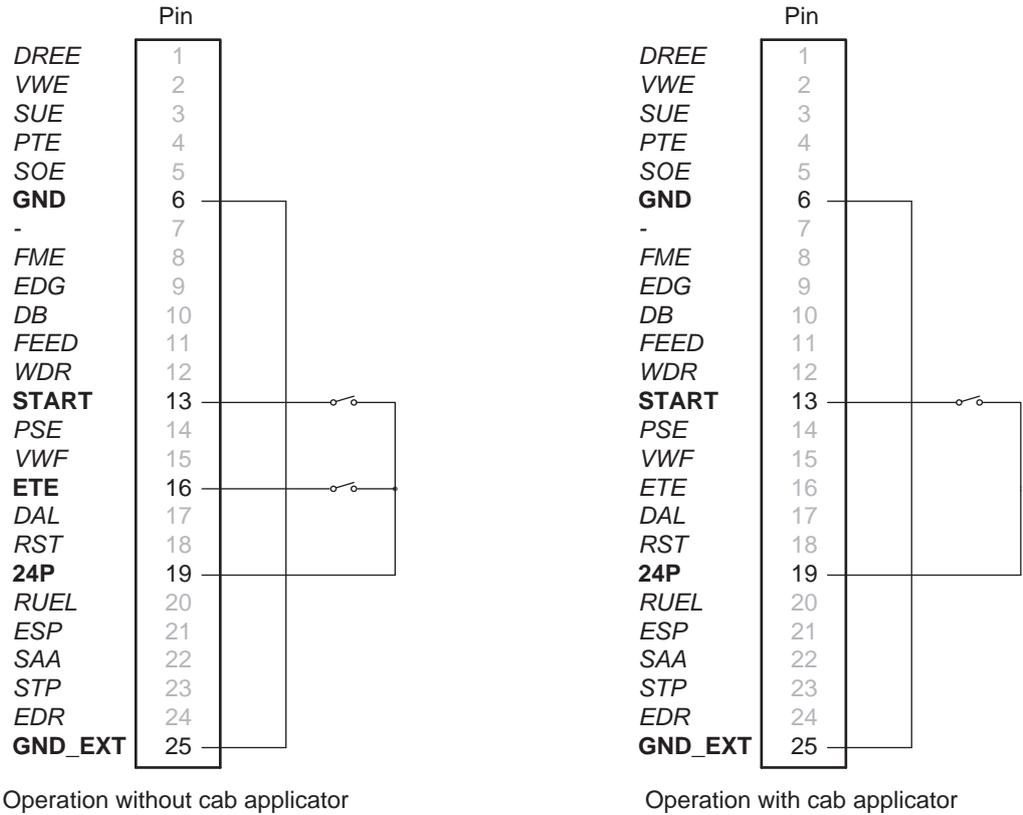


Fig. 5 External minimum circuit of the I/O interface using the internal voltage 24P

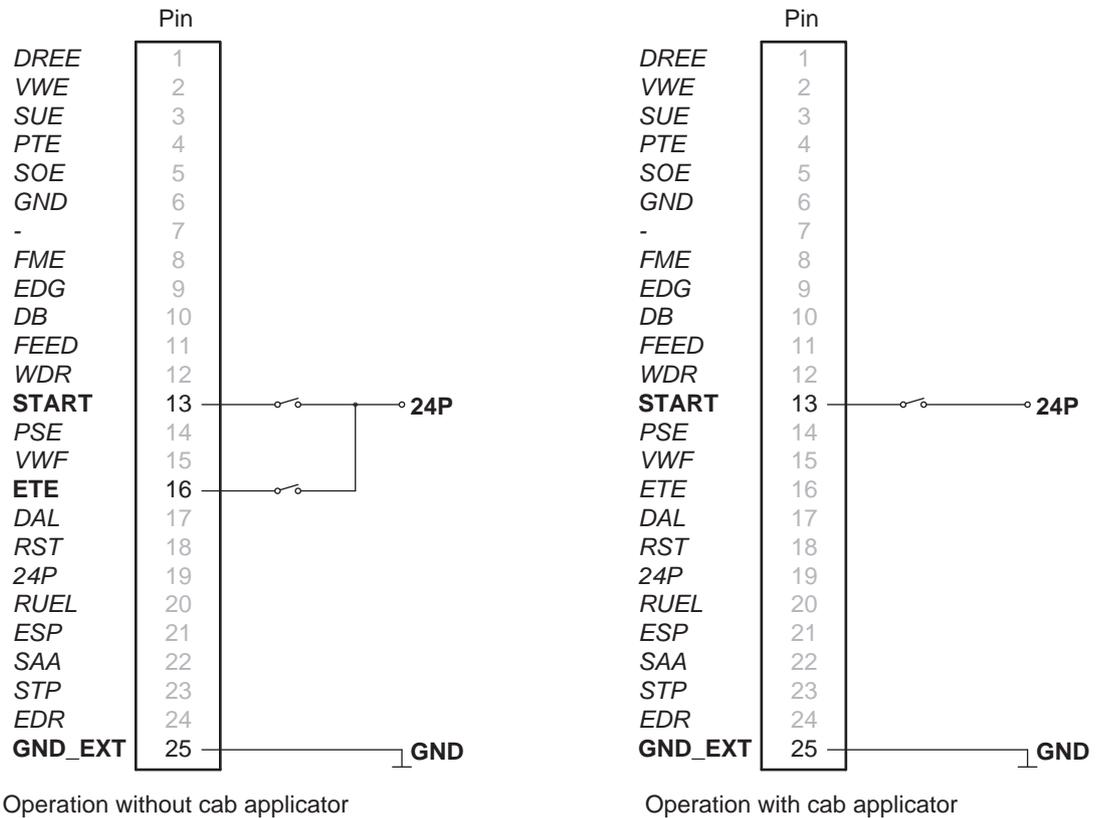


Fig. 6 External minimum circuit of the I/O interface with external voltage supply

2.4 Signal Map

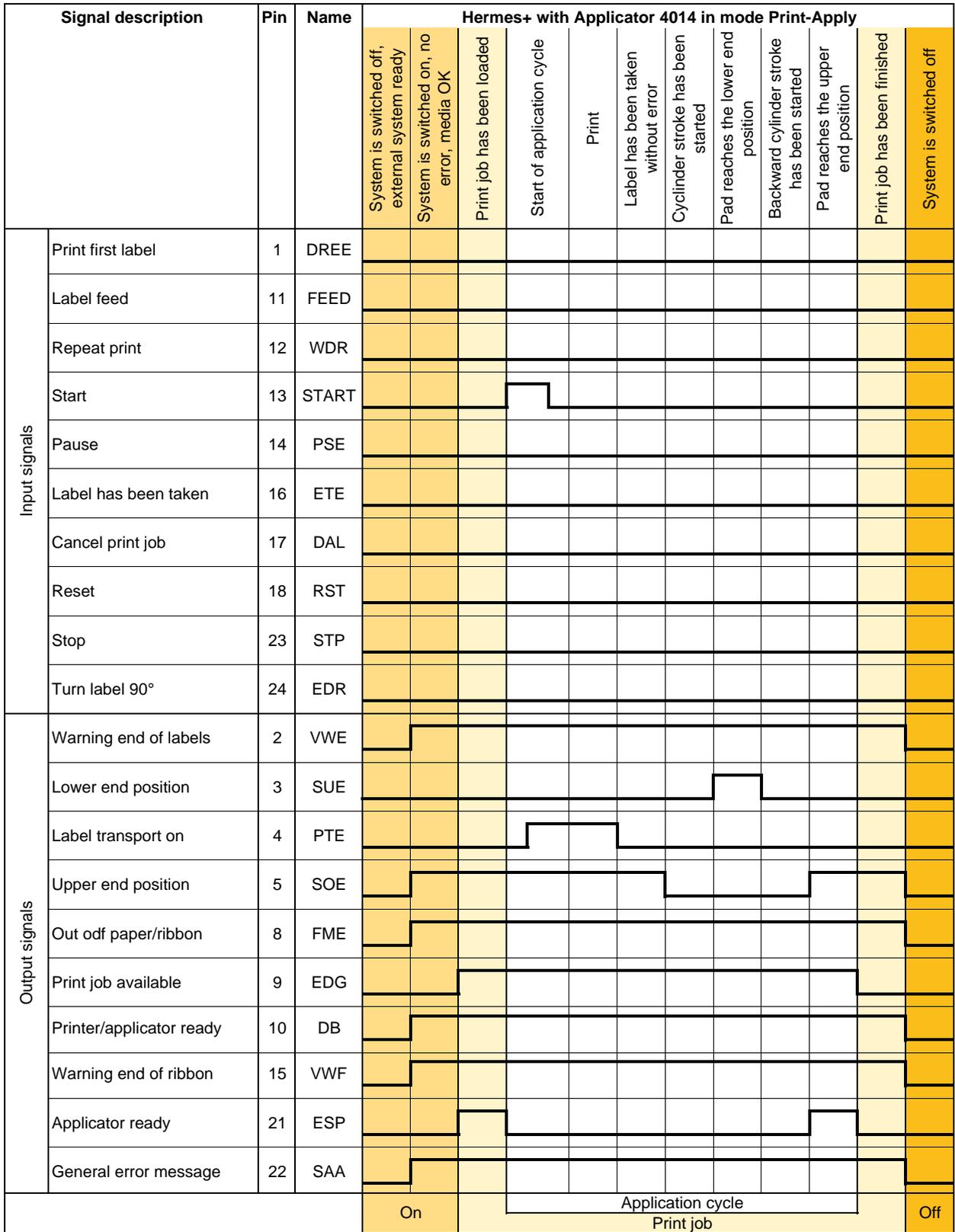
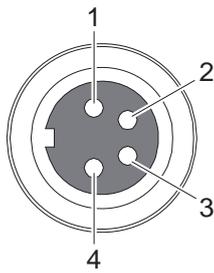


Fig. 7 Signal map Hermes+ with applicator 4014 in mode Print-Apply

### 3 Connector Warning Light



Pin	Direction	Name	Description	Active State
1	⊖ →	24V	Internal operating voltage 24 V	
2	⊖ →	/SGR	Device is switched on	low
3	⊖ →	/SGE	Warning ribbon end or label end is active	low
4	⊖ →	/SRT	Error	low

Fig. 8 Connector warning light Table 2 Pin assignment connector warning light

### 4 Connector Emergency Stop

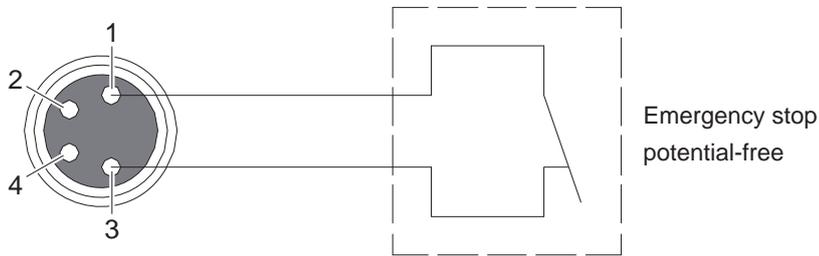


Fig. 9 Connector emergency stop

With an emergency stop connected to the 4-pin socket the compressed air in the labelling system can be switched off by a central valve.

### 5 Connector Central Compressed Air Valve

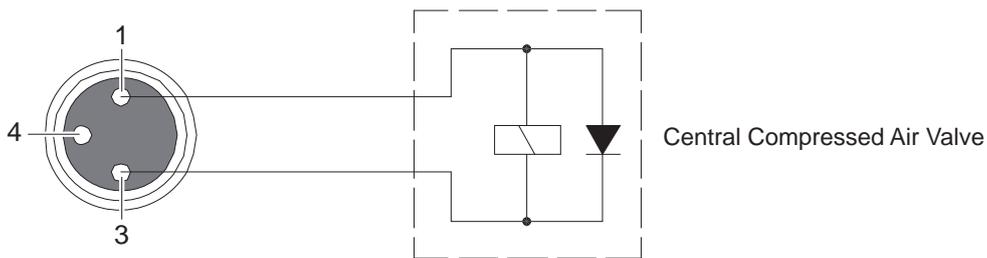


Fig. 10 Connector central compressed air valve

With a central compressed air valve connected to the 3-pin socket the compressed air in the labelling system can be switched off by an emergency stop.