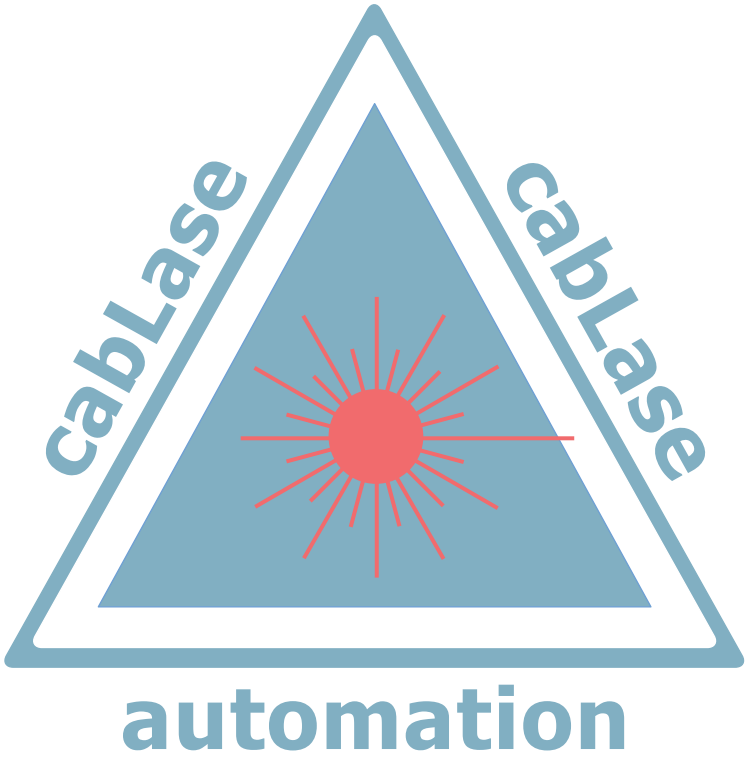
Technical Information



Integration FL+ into FL Peripherals

(not applicable to THS+Basic, THS+M and LSG+65)

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2

Contents

3

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Editing

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Topicality

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2.1 Notes

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.

3 Instructions

Instructions to exchange the FL marking laser by the FL+ marking laser within an existing peripherical system.
I/O- and Remote cable need to be exchanged and E-Stop / Interlock wiring (refer to chapter 5) have to be adapted.

3.1 FL-PCI:

5527478 Adaptercable set FL-PCI/FL+, consisting of:

- Adapter cablel User I/O CON2 FL-PCI/FL+ 0,3 meter
- Adapter cable Remote CON3 FL/FL+ 0,3 meter

3.2 FL-TCP:

5527479 Adapter cable set FL-TCP/FL+, consisting of:

- Adapter cable User I/O CON2 FL-TCP/FL+ 0,3 meter
- Adapter cable Remote CON3 FL/FL+ 0,3 meter

3.3 E-Stop Wiring for FL+

Two versions are possible:

- Integration E-Stop and Interlock **with** feedbaack contact (chapter 5.1)
- Integration E-Stop and Interlock **without** feedback contact (chapter 5.2)

Note!
The FL+ has no E-Stop at the front panel. Wiring may, as described in Chapter 5, be realized. Alternatively, it is sufficient to integrate the FL+ marking laser into an existing E-Stop circuit.

4.1 Pinout FL E-Stop – CON4

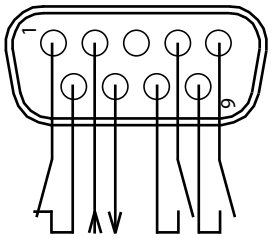

Figure 1: FL Interface Interlock / E-Stop (Sub-D socket 9 pole)

PIN	Description ICL/E-Stop CON4	Remark	Correlation	Current	Function
1	E-Stop IN	E-Stop Circuit Input	●	potential free	NC
2	E-Stop OUT	E-Stop Circuit Output	●●	potential free	NC
3	Not Used				
4	Interlock 1	Safety Interlock 1	●●●	potential free	NO
5	Interlock 2	Safety Interlock 2	●●●●	potential free	NO
6	E-Stop IN	E-Stop Circuit Input	●	potential free	NC
7	E-Stop OUT	E-Stop Circuit Output	●●	potential free	NC
8	Interlock 1	Safety Interlock 1	●●●	potential free	NO
9	Interlock 2	Safety Interlock 2	●●●●	potential free	NO

Table 1: Pinout Interface FL Interlock / E-Stop

4.2 Pinout FL+ E-Stop – CON4

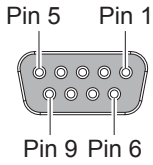

Figure 2: FL+ Interface Interlock / E-Stop (Sub-D socket 9 pole)

Pin	Name	Description	Activation / active
1	FP24V	Internal operating voltage +24 V, max. 500 mA	
2	E-Stop signaling contact connection A	Status of E-Stop relay' Device ready for operation when signal active	Contact between Pin 2 and Pin 7 is open, if the E-Stop is not activated, i.e. the E-Stop relay is not current fed
3	Interlock Signaling contact connection A	Status of Interlock-Relay' Device ready for operation when signal active	Contact between Pin 3 and Pin 8 is open, if the safety circuit is closed, i.e. the Interlock relay is current fed
4	Interlock IN	Interlock relay Connection for safety switch Device ready for operation when signal active	Active, if connected to +24V between Pin 4 and Pin 9
5	GND INT	0 V intern	
6	E-Stop IN	Emergency Stop relay Connection for E-Stop Device ready for operation when signal active	Active, if connected to +24V between Pin 6 and Pin 9
7	E-Stop signaling contact connection B	Status of E-Stop relay' (return circuit)	▷ Pin 2
8	Interlock signaling contact connection B	Status of Interlock relay' (return circuit)	▷ Pin 3
9	GND EXT	Common GND potential for Interlock IN and E-Stop IN	

Table 2: Pinout Interface FL+ Interlock / E-Stop

5.1 E-Stop and Interlock with Feedback Contact

Single-channel E-STOP circuit. There is no redundancy in the E-Stop control circuit.

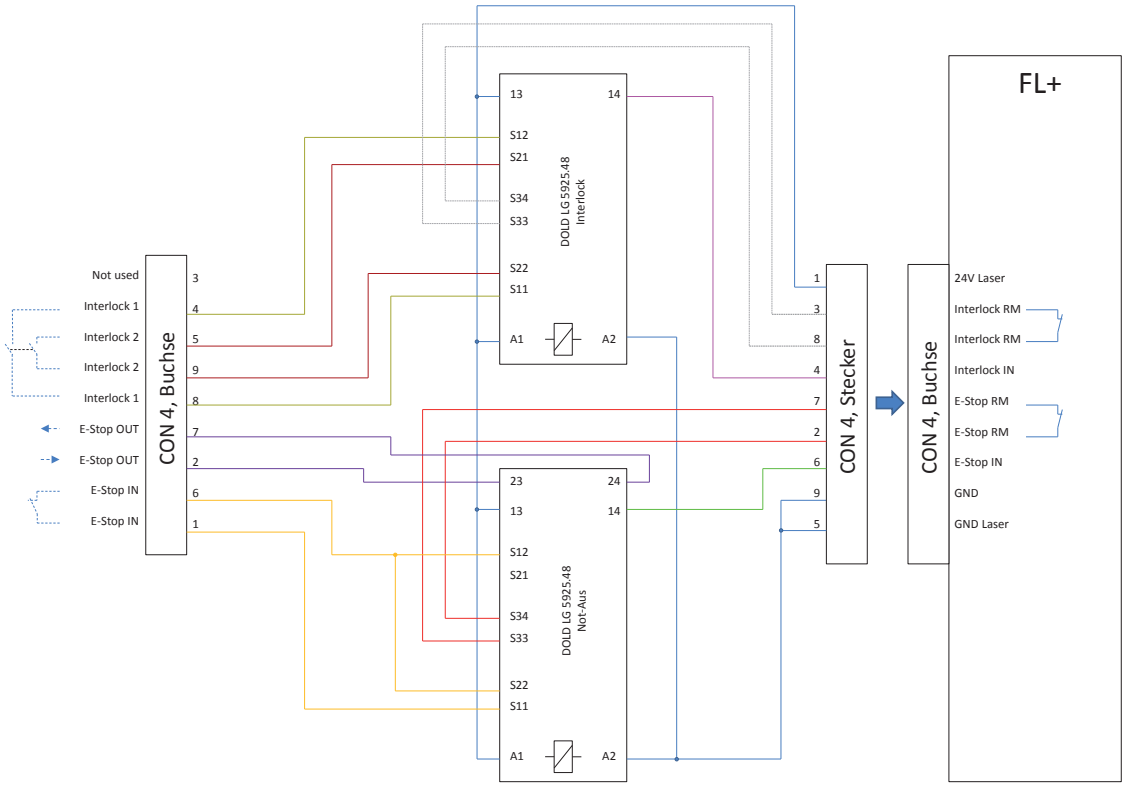

Figure 3: Wiring diagram E-Stop and Interlock with feedback contact

5.2 E-Stop and Interlock without Feedback Contact

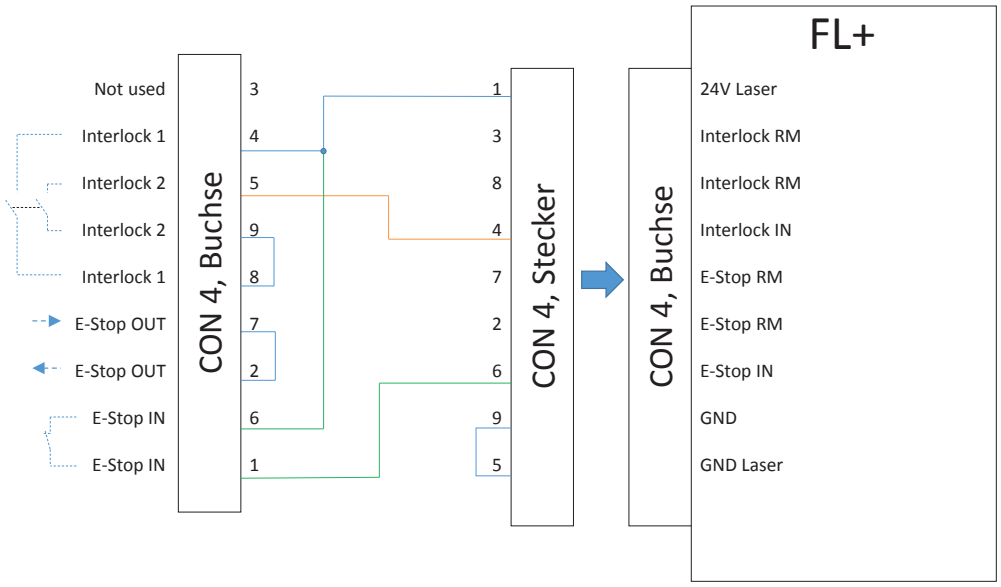

Figure 4: Wiring diagram E-Stop and Interlock without feedback contact

6.1 Section of Data Sheet Safety Relais (Dold Co.)

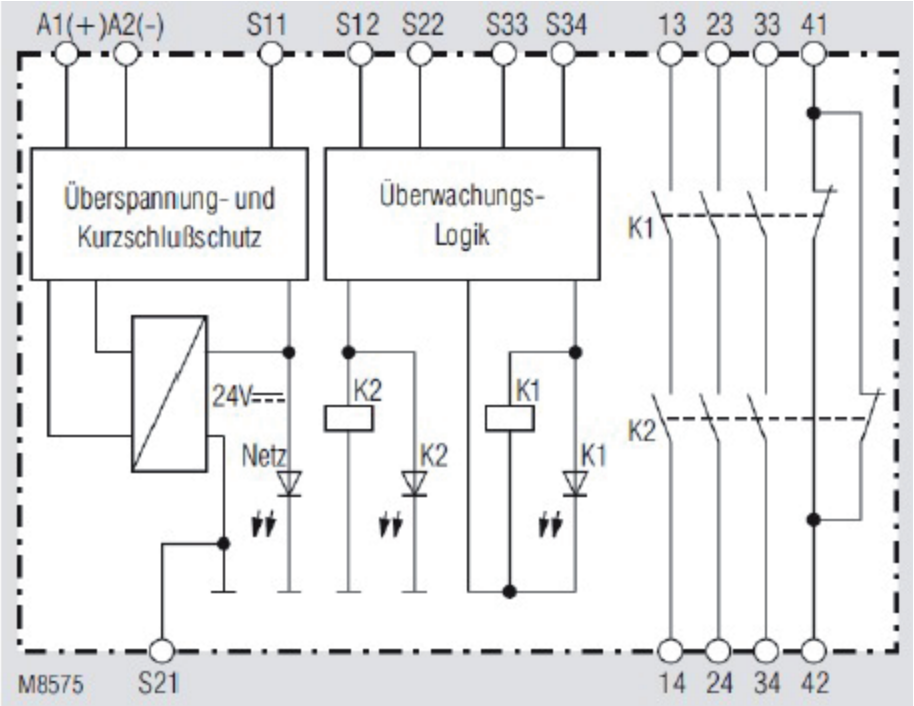

Figure 5: Block diagram safety relais from Dold 5925

7 Reference Documents

Position	Description
1	Assembly Instructions Marking Laser FL
2	Assembly Instructions Marking Laser FL+
3	Data Sheet Safety Relais Dold: http://de.dold.com/datenblaetter/Schaltgeraete/LG5925_de.pdf