

Additional Instructions

Light barrier

IMPORTANT
READ CAREFULLY BEFORE USE
KEEP FOR FUTURE REFERENCE

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1	General information	3
2	Assembly.....	4
2.1	Assembling the light barrier	4
2.2	Connecting the light barrier	6
2.3	Setting up the light barrier	9
2.4	Adjusting the software settings	11
3	Switching the light barrier on/off	12

1 General information

The 0195 590064 kit comprises a light barrier designed for class 195. The light barrier uses an optical signal to detect where the sewing material begins or ends. Following this signal, the machine will sew the number of stitches set by the user and cut off the threads.



Information

The light barrier can be used to detect the seam end OR the seam beginning (📖 p. 11).

The light barrier mode most commonly used is seam end detection. When set to this mode, the machine will create the seam end in fully automatic fashion; the user can take their foot off the pedal as soon as the end of the sewing material has been detected (position **0**). The machine will automatically sew the remainder of the preset stitches and cut off the threads.

Components of the kit

Check whether the scope of delivery for kit **0195 590064** is correct prior to installation.

Part number	Quantity	Description
9204 201067	2	Pan-head screw
9204 201657	2	Pan-head screw
9330 000087	2	Washer
9815 920046	1	Light barrier
Z133 000602	1	Bracket
9815 920024	1	Reflecting foil
0195 490080	1	Holder
9840 121001	2	Cable tie

2 Assembly

2.1 Assembling the light barrier

WARNING



Risk of injury!

Punctures, crushing or cutting possible.

Do not assemble the light barrier unless the machine is switched off and disconnected from the mains grid.

NOTICE

Property damage!

Cables may be kinked, twisted, crushed or cut.

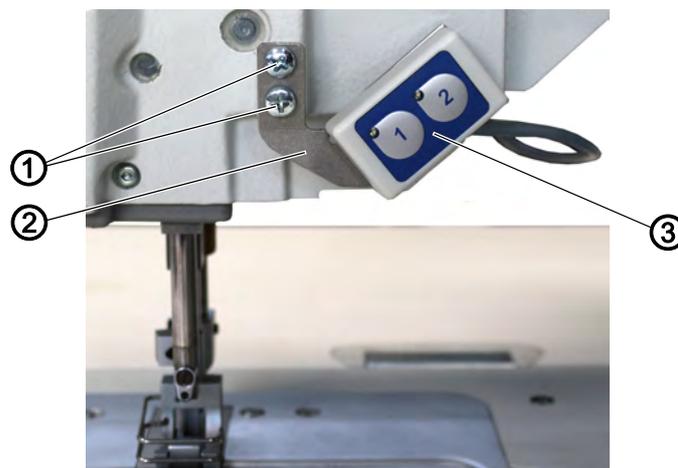
Do not kink, twist, or crush cables and do not lay them across sharp edges.



Order

1. **Assemble the light barrier.**
2. Connect the light barrier (📖 p. 6).
3. Set up the light barrier (📖 p. 9).
4. Adjust the software settings (📖 p. 11).

Fig. 1: Assembling the light barrier (1)



(1) - Screw
(2) - Holder

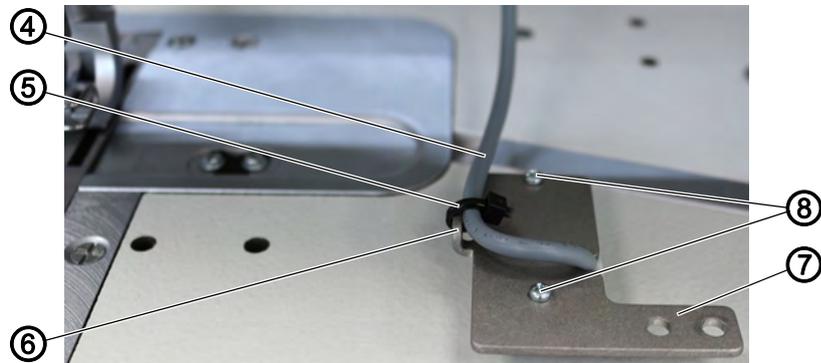
(3) - Button



To assemble the light barrier:

1. Loosen the screws (1) and take off the button (3).

Fig. 2: Assembling the light barrier (2)

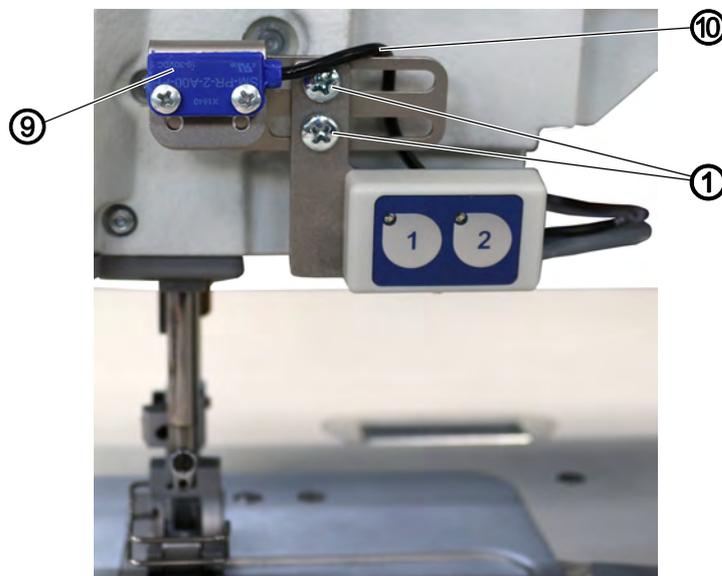


- | | |
|-----------------|--------------|
| (4) - Cable | (7) - Holder |
| (5) - Cable tie | (8) - Screw |
| (6) - Bracket | |



2. Sever the old cable tie on the rear of the button (3).
3. Removing the old holder (2) from the button (3) requires that you loosen 2 screws (8).
- Replace the old holder (2) with the new holder (7).
4. Tighten the new holder (7) to the button (3) using screws (8).
5. Tighten the cable (4) to the bracket (6) using a new cable tie (5).

Fig. 3: Assembling the light barrier (3)



- | | |
|---------------------|--------------|
| (1) - Screw | (10) - Cable |
| (9) - Light barrier | |



6. Tighten the light barrier (9) to the housing with the holder (7) and the screws (1).

⚠ When doing so, make sure cables (4) and (10) are not kinked, twisted or crushed.

- Use a cable tie to tie cables (4) and (10) together behind the button (3) so that the operator will not be hindered during sewing.

You can now connect the light barrier (📖 p. 6).

2.2 Connecting the light barrier

WARNING



Risk of injury!

Punctures, crushing or cutting possible.

Do not connect the light barrier unless the machine is switched off and disconnected from the mains grid.

NOTICE

Property damage!

Cables may be kinked, twisted, crushed or cut.

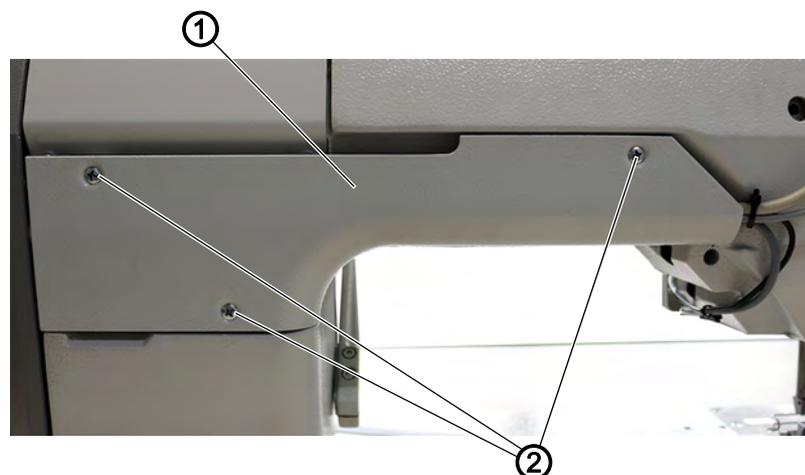
Do not kink, twist, or crush cables and do not lay them across sharp edges.



Order

- Assemble the light barrier (📖 p. 4).
- Connecting the light barrier**
- Set up the light barrier (📖 p. 9).
- Adjust the software settings (📖 p. 11).

Fig. 4: Connecting the light barrier (1)



(1) - Rear cover

(2) - Screw



To connect the light barrier:

1. Loosen the screws (2).
2. Remove the rear cover (1).

Fig. 5: Connecting the light barrier (2)



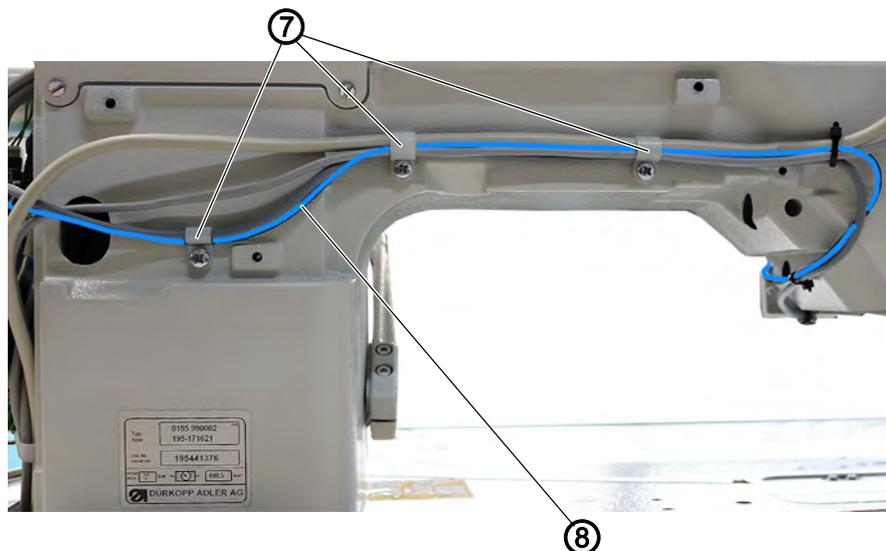
- (3) - Handwheel
- (4) - Screw

- (5) - Screw
- (6) - Cover on the side



3. Loosen the 3 screws (4).
4. Remove the handwheel (3).
5. Loosen the 5 screws (5).
6. Remove the cover on the side (6).

Fig. 6: Connecting the light barrier (3)



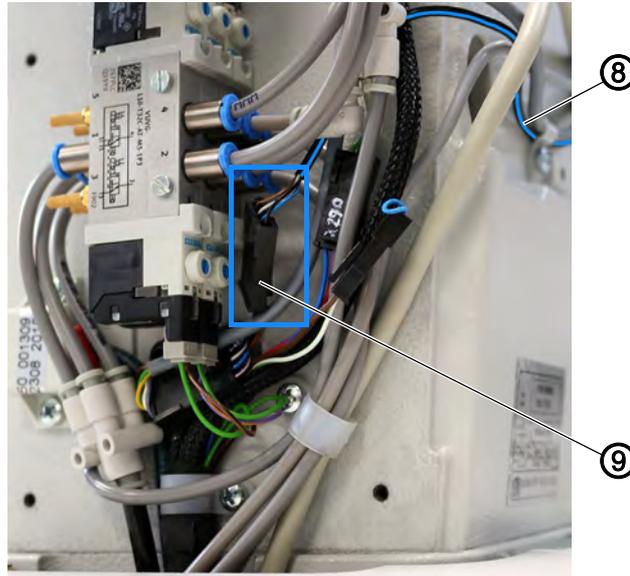
- (7) - Cable clamp

- (8) - Cable



7. Install the cable (8) through the cable clamps (7) (see figure above).

Fig. 7: Connecting the light barrier (4)



(9) - Plug connection

(8) - Cable



8. Connect the plug connection of the cable (8) to plug connection (9) as specified in the wiring diagram (*Operating/Service Instructions 195*).

↳ The light barrier is now connected.

9. Place the cover on the side (6) and tighten it with the screws (5).

10. Place the handwheel (3) and tighten it with the screws (4).

11. Place the rear cover (1) and tighten it with the screws (2).

You can now set up the light barrier (p. 9).

2.3 Setting up the light barrier

WARNING



Risk of injury!

The machine remains switched on while the light barrier is being set up.

Work with caution when the machine is switched on; do not press the pedal inadvertently.



Order

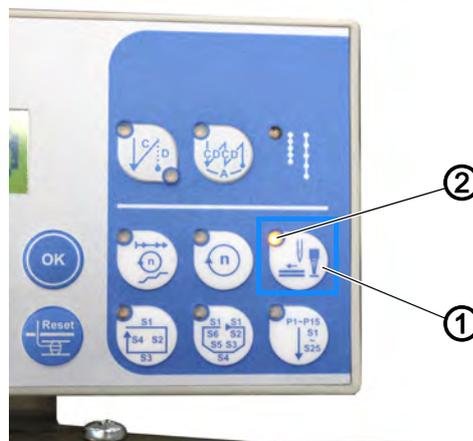
1. Assemble the light barrier (📖 p. 4).
2. Connect the light barrier (📖 p. 6).
3. **Set up the light barrier.**
4. Adjust the software settings (📖 p. 11).



To set up the light barrier:

1. Connect the machine to the mains grid.
2. Switch on the machine.

Fig. 8: Setting up the light barrier (1)



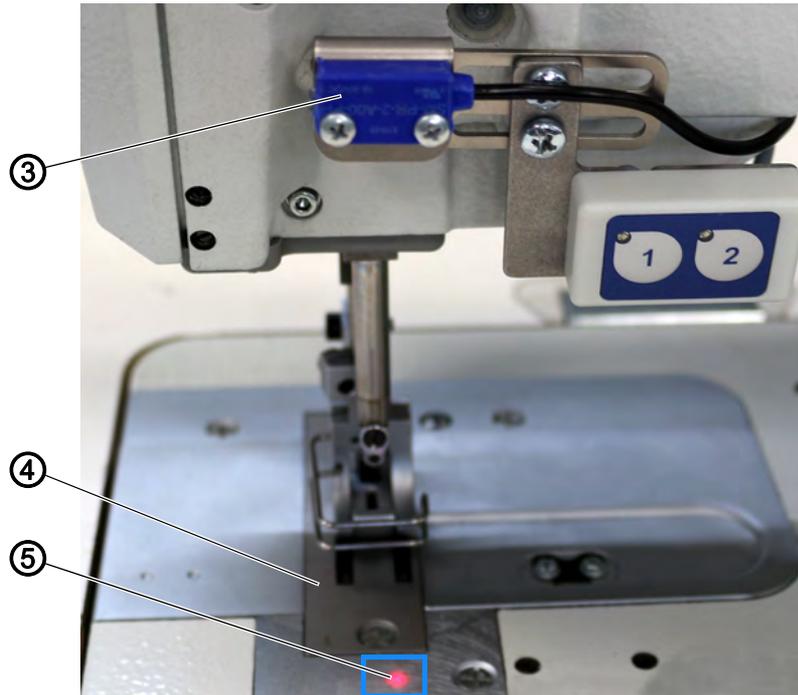
(1) - Button

(2) - Lamp



3. To switch on the light barrier, press button (1).
- ↙ The lamp (2) lights up, indicating that the light barrier is switched on.

Fig. 9: Setting up the light barrier (2)



(3) - Light barrier
(4) - Throat plate

(5) - Red dot

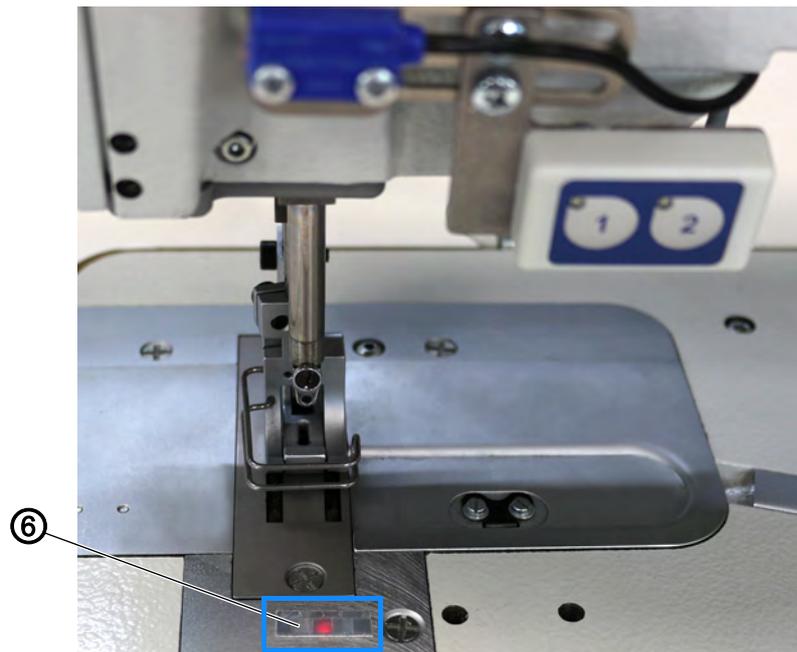
↪ The red dot (5) appears.

The red dot (5) marks the spot starting with which the machine will detect the end of the sewing material.



4. Align the light barrier (3) such that red dot (5) is situated in front of the throat plate (4) (see figure above).

Fig. 10: Setting up the light barrier (3)



(6) - Strip of reflecting foil



5. Cut off a strip of self-adhesive reflecting foil (6) (included in the scope of supply) with a length of approx. 1.5 cm.
 6. Apply the strip of reflecting foil in front of the throat plate (4), ensuring that the red dot (5) hits it in the center.
- ↳ If the red dot (5) is reflected by the strip of reflecting foil (6) during sewing, the light barrier will detect that the sewing material ends.

You can now adjust the settings in the software ( p. 11).

2.4 Adjusting the software settings



Order

1. Assemble the light barrier ( p. 4).
2. Connect the light barrier ( p. 6).
3. Set up the light barrier ( p. 9).
4. **Adjust the software settings.**

There are several light barrier parameters that you can adjust at the Operator and the Technician level using the control panel ( *Parameter list 195*).

Technician level

The most important setting at the Technician level is the **light barrier mode**:

- **1** = Seam beginning detection
- **2** = Seam end detection

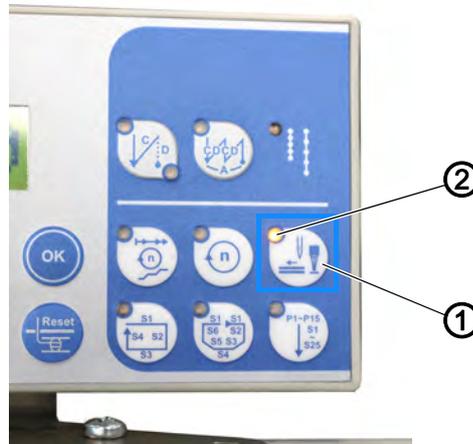
Among others, you can also set the speed at which the specified stitches are supposed to be sewn and the number of seconds that are supposed to pass between seam beginning detection and the beginning of sewing.

Operator level

The Operator lever can be used to set how many stitches are supposed to be sewn (0-255) as soon as the light barrier detects the beginning/end of the sewing material. The machine will then cut the threads off automatically.

3 Switching the light barrier on/off

Fig. 11: Switching the light barrier on/off (1)



(1) - Button

(2) - Lamp



To switch the light barrier **on**:

1. To switch on the light barrier, press button (1).
- ↳ The lamp (2) lights up, indicating that the light barrier is switched on.



To switch the light barrier **off**:

1. Press the button (1).
- ↳ The lamp (2) is no longer lit, indicating that the light barrier is switched off.



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