

## Positioning Band Profile Program 0815

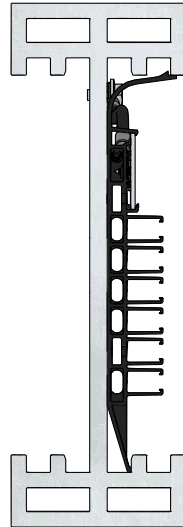
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### Order number:

Positioning band profile: 08-B020-7484 and 08-B020-6780

Cable set PE: 08-L020-0255

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## 1 Terminology

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Positioning band = The information carrier for positioning systems. It is printed with matrix codes (QR codes) or bar-codes for example.

Positioning band profile = Carrier for holding (attaching) the different positioning bands.

Cable set PE = The cable set PE and the fastening material are used for the professional electrical grounding of the positioning band profiles on the EMS support profile.

## 2 Scope of Delivery Cable Set PE

The scope of delivery of the cable set PE (order no.: 08-L020-0255) contains:

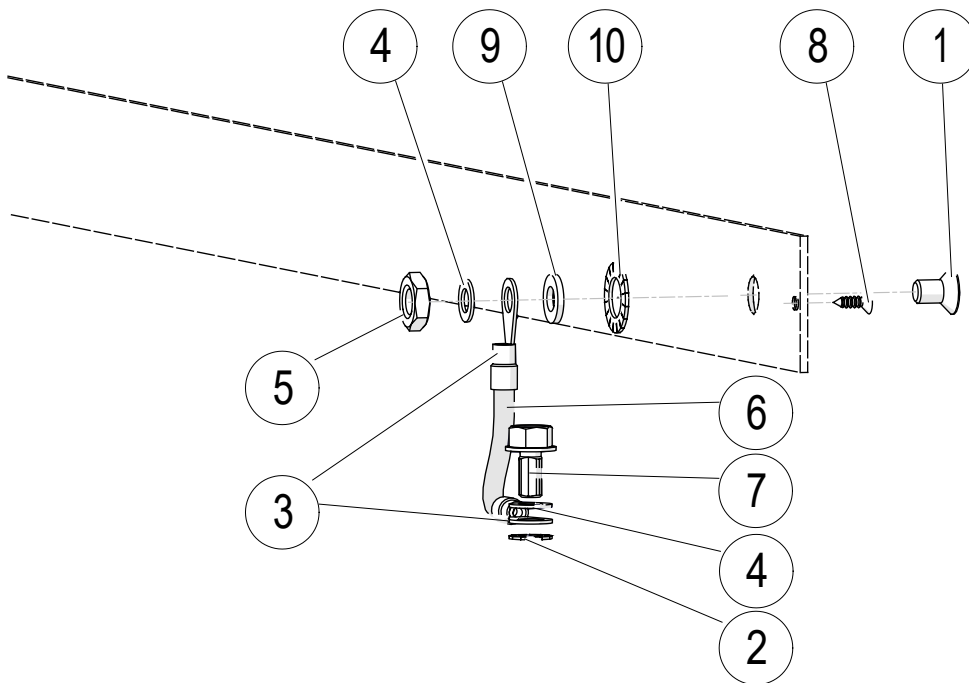


Fig. 1: Cable set PE (08-L020-0255)

Item	Name
1	Countersunk screw DIN7991 M6x10-8.8-ZN5AN
2	Serrated washer A6,4 DIN6798 galvanized
3	Ring shape cable lug 1.5-2.5 mm <sup>2</sup> M6
4	Locking edge washer SHB-M-D6,1-Geomet
5	Hex nut DIN 439-M6-A2F
6	PVC core cable H07VV-K-1x2,5-GNGE
7	Self-tapping screw TAPTITE DIN7500-DE-M06x012-ZN5AN
8	EJOT PT Screw K30X8 WN1423
9	Washer DIN125 A6,4 GA
10	Serrated washer A10,5-FD.ST DIN6798

The core cable (item 6) is delivered as a prefabricated cable.

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### 3 Scope of Delivery of the Positioning Band Profile

Positioning band profile (pre-punched aluminum sheet):

- Order no.: 08-B020-6780: 4000 mm
- Order no.: 08-B020-7484: 6000 mm

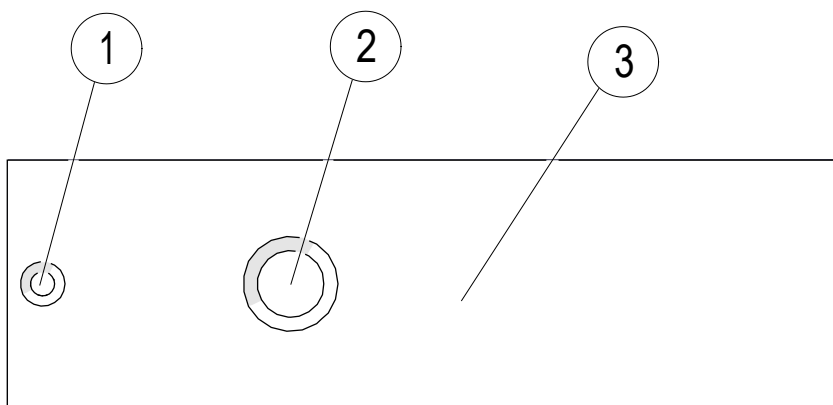


Fig. 2: Positioning band profile (08-B020-6780 and 08-B020-7484)

Item	Name
1	Countersunk hole for EJT PT Screw K30X8 WN1423
2	Countersunk hole for PE cable set
3	Adhesion surface



**NOTE!**

#### Not included in the delivery:

- Positioning band
- Cable set PE (order no.: 08-L020-0255)
- **The EJT PT Screws K30X8 WN1423 (see item 8 in Fig. 1) are included in the scope of supply of the cable set PE (see chapter 2).**

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### 4 Required Tools

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Machining and fixing of positioning band profile:

- Metal saw
- Drill diam. 3.4 mm
- Drill diam. 9.4 mm
- Countersink: 90 °
- Phillips screwdriver for self-drilling drill screw
- Torque wrench (9 Nm)

For fixing of the hanger clamp:

- Drill diam. 2.5 mm

Fastening of cable set PE:

- Hex screwdriver SW 4
- Crescent wrench SW 10
- Drill diam. 5.5 mm
- Torque wrench (8.8 Nm)

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### 5 Order of Installation

It is recommended to mount the positioning band profile and the associated cable set PE as the first component, as otherwise the accessibility to the EMS support profile is limited.

#### 5.1 Preparing the Positioning Band Profile (Sections)

If it is necessary to shorten the positioning band profile on site, the holes for the EJOT PT Screw K30X8 WN1423 and for the countersunk screw (DIN7991 M6x10-8.8) must be drilled and countersunk (see Fig. 3). The required part lengths are to be cut according to size with a metal saw on site. The cuts must be deburred with a file.

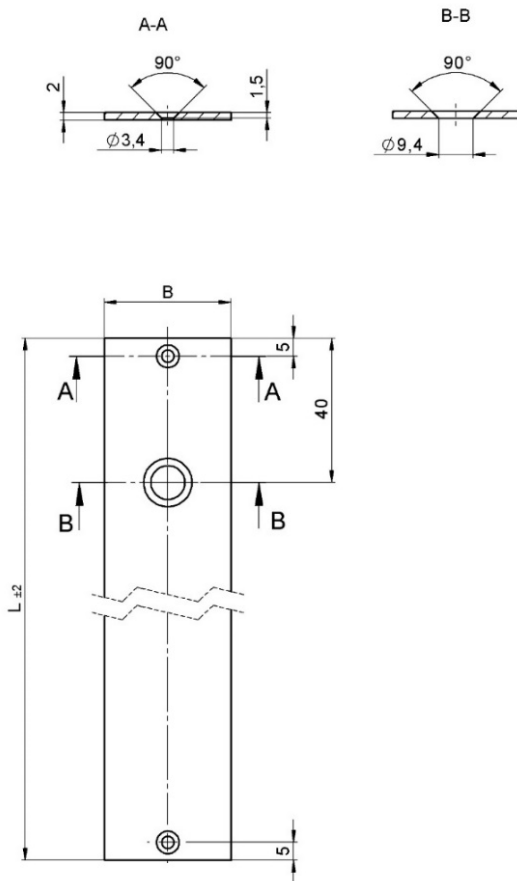


Fig. 3: Drill and countersink positioning band profile (order no.: 08-B020-6780 / 08-B020-7484)

L = 4000 mm or 6000 mm

Curves in the EMS carrier profile can be realized without pre-bending the positioning band profile by clipping into the rail holders. For inside bends, it is recommended to plan an additional fixing screw on a rail holder in the middle of the curve.

## 5.2 Installing the Cable Set PE

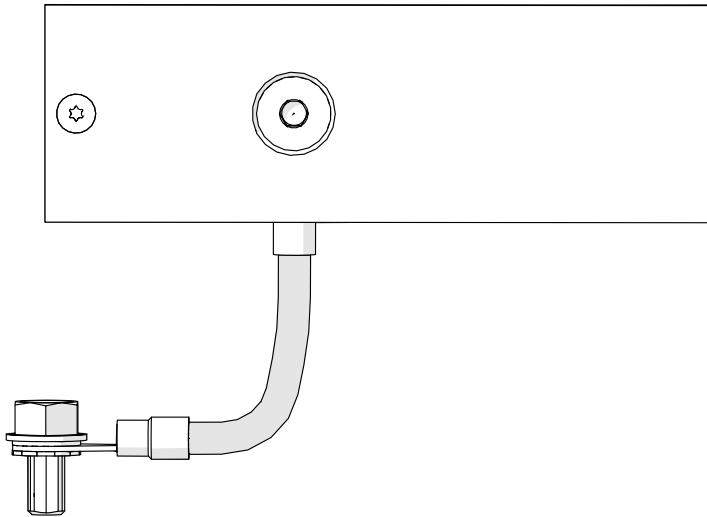


Fig. 4: Adhesive surface of the positioning band profile (countersunk surface)



**You must connect or ground the positioning strip profiles with the EMS support profile!**

It must be ensured that the EMS support profile is properly connected to the protective conductor of the electrical equipment. In the event of a fault, the cable set PE ensures that no fault voltage can be applied to the positioning band profile.

- The installation of the cable set PE on the positioning band profile must be done in the correct direction.
- The countersunk side of the positioning band profile must point to the right in the direction of travel.
- The countersunk side of the positioning band profile is the adhesive surface for the positioning band (see Fig. 4).
- Assemble the cable set PE with the countersunk screw DIN 7991 (item 1), the washer DIN125 A6,4 GA (item 9), serrated washer (item 10) and the locking edge washer (item 4) in the correct order on the positioning band profile (see Fig. 1). Tightening torque for countersunk screw DIN 7991: 8.8 Nm

### 5.3 Installing the Positioning Band Profile



#### Risk of injury due to electric shock!

Due to the isolated structure, each positioning band profile is connected to the EMS carrier profile via a cable set PE. In the event of a fault, the cable set PE ensures that no error voltage can be applied to the positioning band profile.

→ The cable set PE (order no.: 08-L020-0255) must be installed on the EMS support profile (see chapter 5.4)

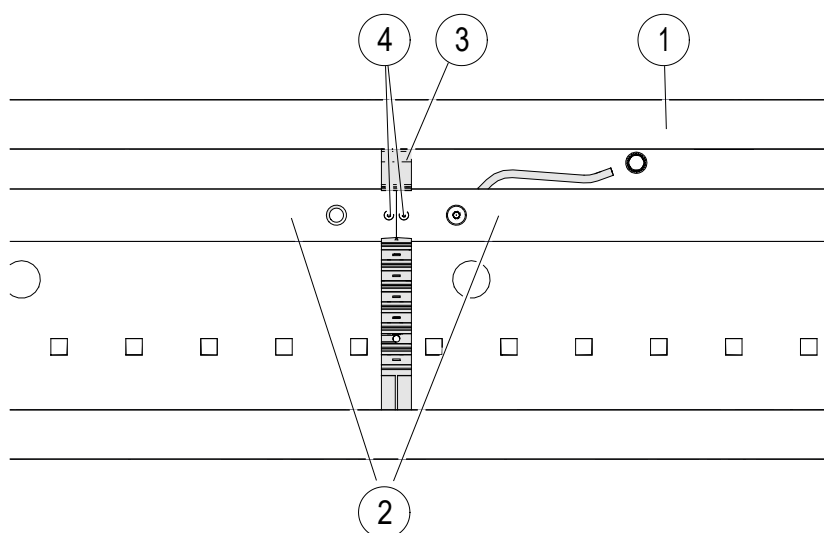


Fig. 5: Overview of positioning band profile, rail holder and EMS profile

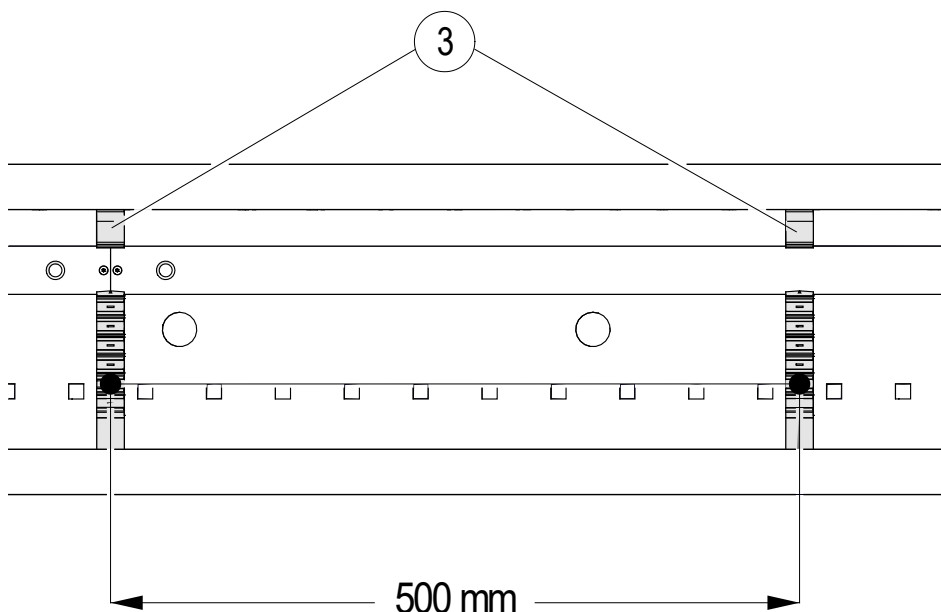


Fig. 6: Distance between rail holders



### Positioning Band Profile

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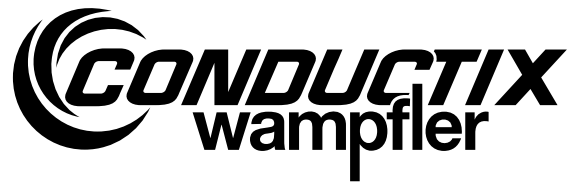
- Secure the positioning band profile (item 2) to the rail holder (item 3) in the EMS profile (item 1).
- Pay attention to correct positioning of the positioning band profile:
- The countersunk holes point towards the fitter, while the cable ends show the pre-assembled cable set PE in the direction of the EMS support profile.
- Clip the rail holders (item 3) into the EMS support profile (item 1) at a distance of approx. 500 mm. Distance at horizontal bends: 400 mm, distance between inner and outer bends: 250 mm. The rail holders (item 3) must be clipped in vertically (see Fig. 9)
- The rail holders (item 3) have a molded receptacle for the positioning band profile (item 2). When clipping in the rail holders, make sure that the molded receptacle points upwards (see Fig. 7 and Fig. 8).
- Pre-drill the hanger clamps with a diam. 2.5 mm:  

Clip the positioning band profile into the hanger clamps and align it exactly (the hanger clamps must be vertically clipped see Fig. 10). For fixing the positioning band profile it is necessary to pre-drill the hanger clamps with a diam. of 2.5 mm. To do this, drill through the outermost countersunk hole (see item 1 in Fig. 2) of the positioning band profile.
- Screw the positioning band profiles onto the ends of a rail holder (item 3) with EJOT PT Screw K30X8 WN1423 (item 4) (for the position of the screws, see Fig. 3).
- Mount the individual positioning band profiles continuously on the front side.

#### The following must also be observed:

- Pre-drilling the rail holders (item 3) is necessary.
- When tightened, the EJOT PT Screw K30X8 WN1423 must lie neatly in the countersink to give a flat adhesive surface for the positioning band.
- Compare the dimensions of the installation position of the positioning band profile with the system drawings during the installation process.

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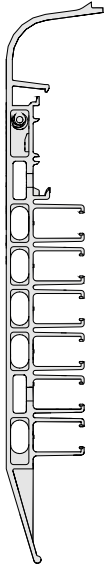


Fig. 7: Hanger clamps 0815

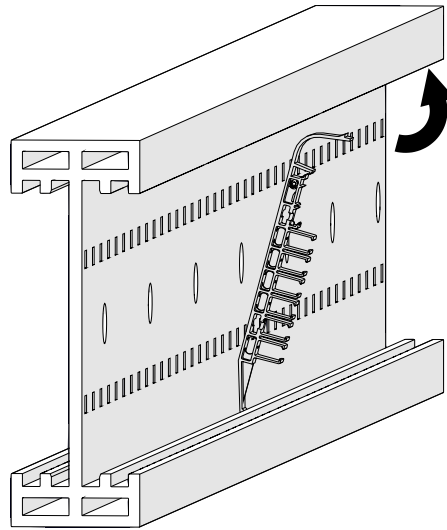


Fig. 8: Clip in rail holder

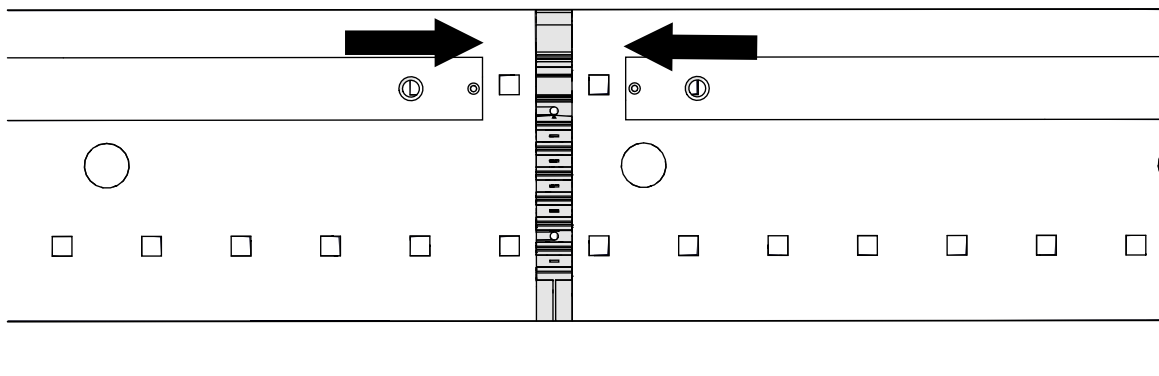
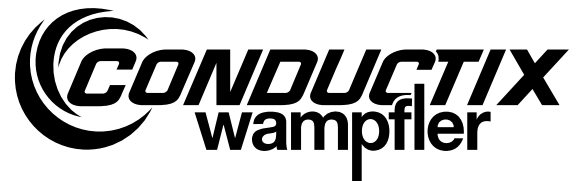


Fig. 9: Position the positioning band profile in the rail holder

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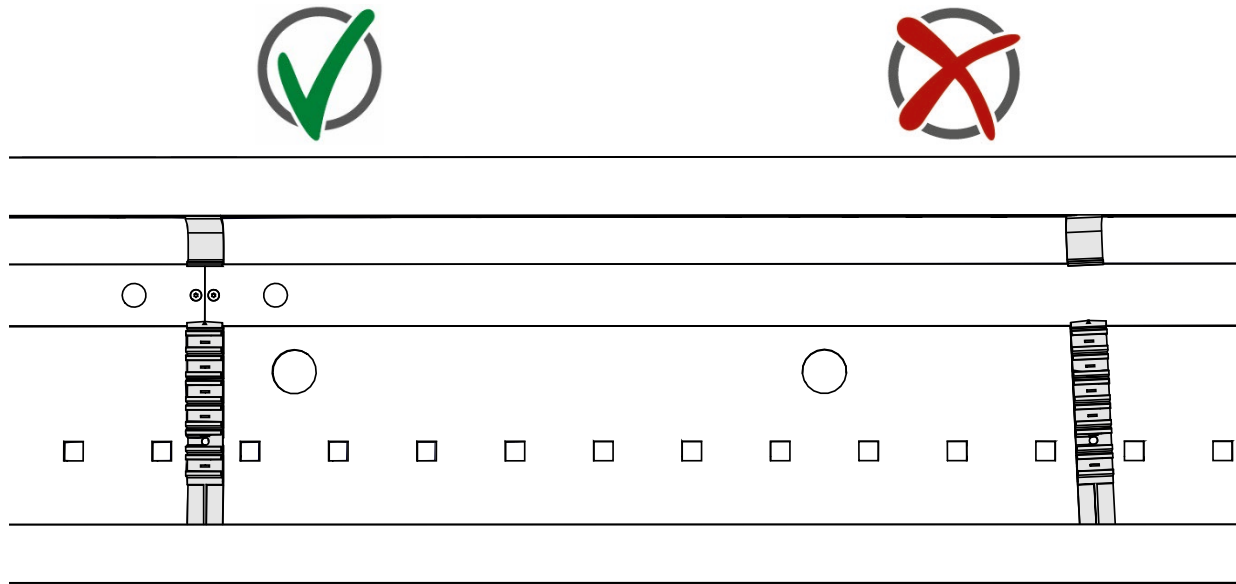


Fig. 10: Correct: Rail holder vertically clipped, Incorrect: Rail holder not vertically clipped



**Angle errors in the rail holders act like fixed points on the sliding behavior!**

→ Ensure vertical arrangement of the rail holder (see Fig. 10)!

#### 5.4 Electrical connection to the EMS support profile

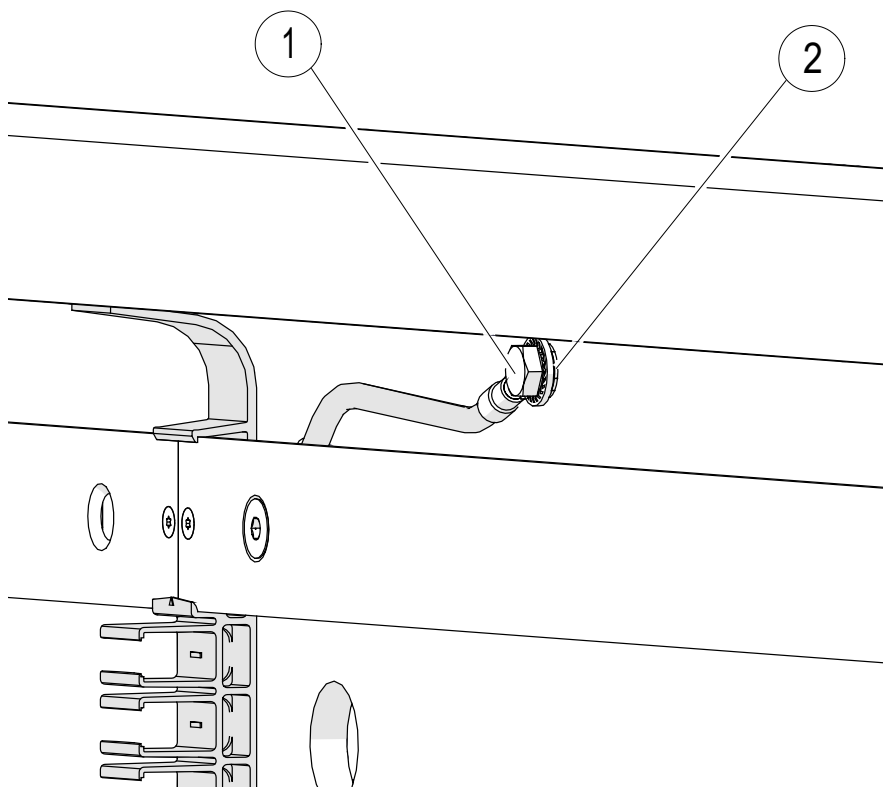


Fig. 11: Electrical connection of the cable set PE to the EMS support profile

It depends on the accessibility whether the electrical connection is made before or after mounting the positioning band profile.

The electrical connection to the EMS support profile is produced as a connection point with the self-threading screw DIN 7500 (item 1):

- Drill the web of the EMS support section at the correct position at right angles ( $\varnothing$  5.5 mm).
- Screw the free cable end of the cable set PE with the self-threading screw DIN 7500 (item 1) and the serrated washer DIN 6798 (item 2) onto the EMS carrier profile. Tightening torque for self-threading screw DIN 7500: 9 Nm



#### NOTE!

**For the grounding of the SEW slotted waveguide with SEW positioning band profile, the cable set PE can also be used!**

→ Please refer to the SEW documentation in the appendix for this purpose!

#### 5.5 Notes on adhesion of the positioning bands

The positioning bands are bonded to the positioning band profile. Any positioning bands from other manufacturers, up to a width of 35 mm, can be bonded to the positioning band profile.

The working methods may differ depending on the positioning band manufacturer. With regard to the technical requirements and the procedure, the technical documentation of the corresponding manufacturer must be consulted.



**CAUTION!**

##### **Bonding at low temperatures is critical for technical reasons!**

When bonding the positioning bands on the positioning band profile, the following must be observed:

- Follow applicable installation instructions of the selected manufacturer
- The minimum processing temperature of the manufacturer must be strictly observed for bonding. Bonding at low temperatures has proven to be critical in practice

It should be ensured that the positioning bands are placed in the correct locations. The engineering and the corresponding installation plan of the positioning bands are created by the customer.

The positioning bands and the associated installation plans must be available at the start of installation.

#### 5.6 Notes on expansion points

Expansion points in the EMS support profile also require expansion points in the positioning band profile. The mechanical design of an expansion point depends on the type of positioning band. The respective technical version must be taken from the technical documentation of the manufacturer.



**NOTE!**

##### **The production of an expansion point on site may prove to be too complicated / time-consuming!**

- Pre-installation preparation is necessary. For this please consult the technical documentation of the respective manufacturer!

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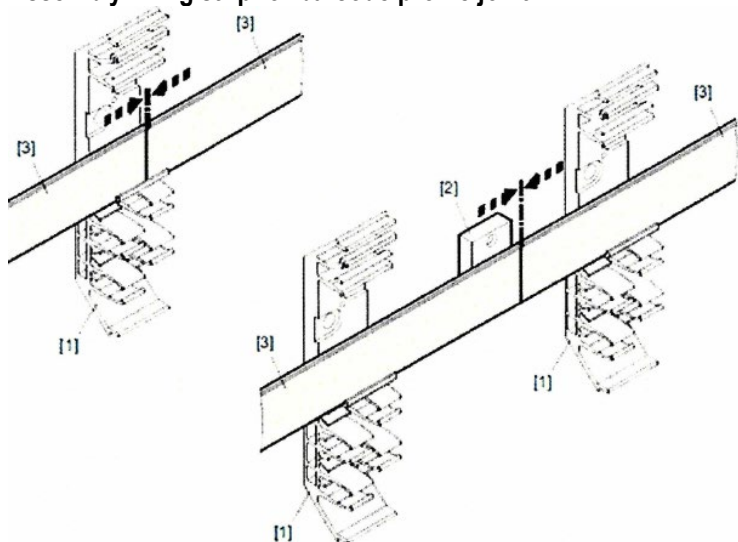
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## Appendix: SEW-slotted waveguide and barcode

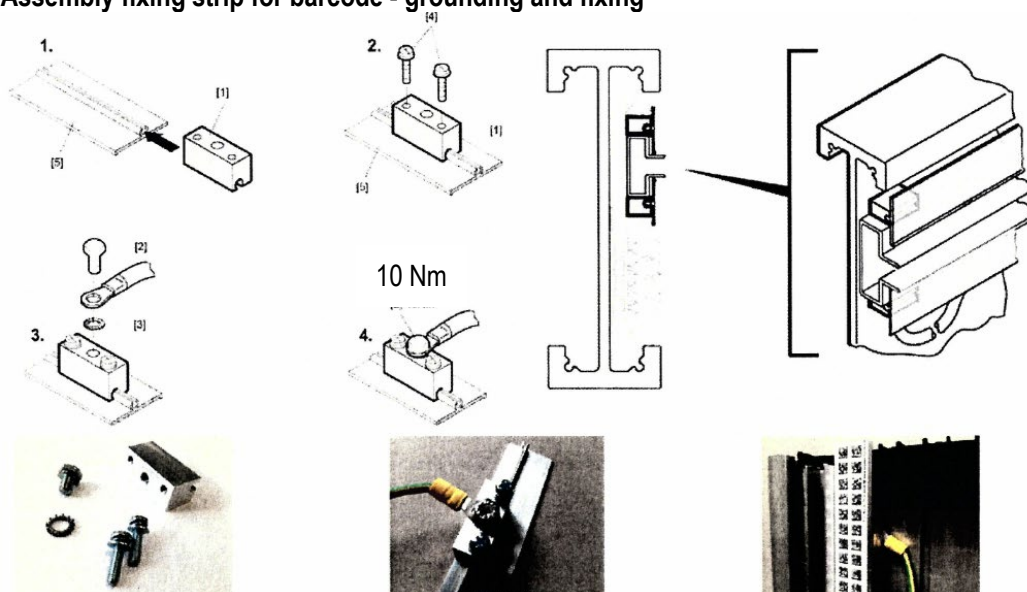
### Assembly fixing strip for barcode profile joint



- [1] Hanger clamp
- [2] Connecting piece or grounding piece
- [3] Barcode profile

The barcode profiles should either hit each other in the hanger clamp or in a grounding piece, because the barcode sticker cannot permanently fix the profile sections against each other.

### Assembly fixing strip for barcode - grounding and fixing



If necessary, the fixing strips must be grounded in accordance with local regulations and should be secured against displacement and jumping out.

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There are the following possibilities for fixation and grounding:

#### A) Grounding piece

The grounding piece can be mounted next to a hanger clamp and thus the profile strip can be secured against displacement.

The grounding piece can align a profile joint next to a hanger clamp.

#### B) Drill and countersink 3.3 mm

Perforate the fixing strip in the hanger clamp and countersink it so that the barcode adhesive tape can be glued flush with the surface.

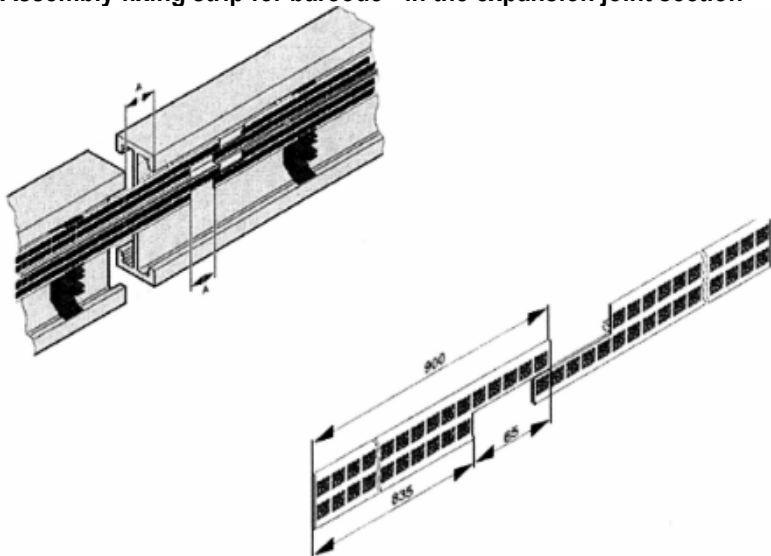
Then fasten with the self-procured self-tapping countersunk screws (M4x35) provided by yourself.

Finally, clearly mark the point at the profile edge or the slotted waveguide with Edding, otherwise the point is difficult to find during disassembly/conversion.

**AFTER the assembly, clean the slotted waveguide from dirt and chips (suck out or blow out)!**

**The SEW scope of delivery does not include grounding cables!**

#### Assembly fixing strip for barcode - in the expansion joint section



For expansion joints there are prefabricated L-shaped cut-out fixing strips.

In the section of expansion joints, the fixing strip must be secured against displacement:

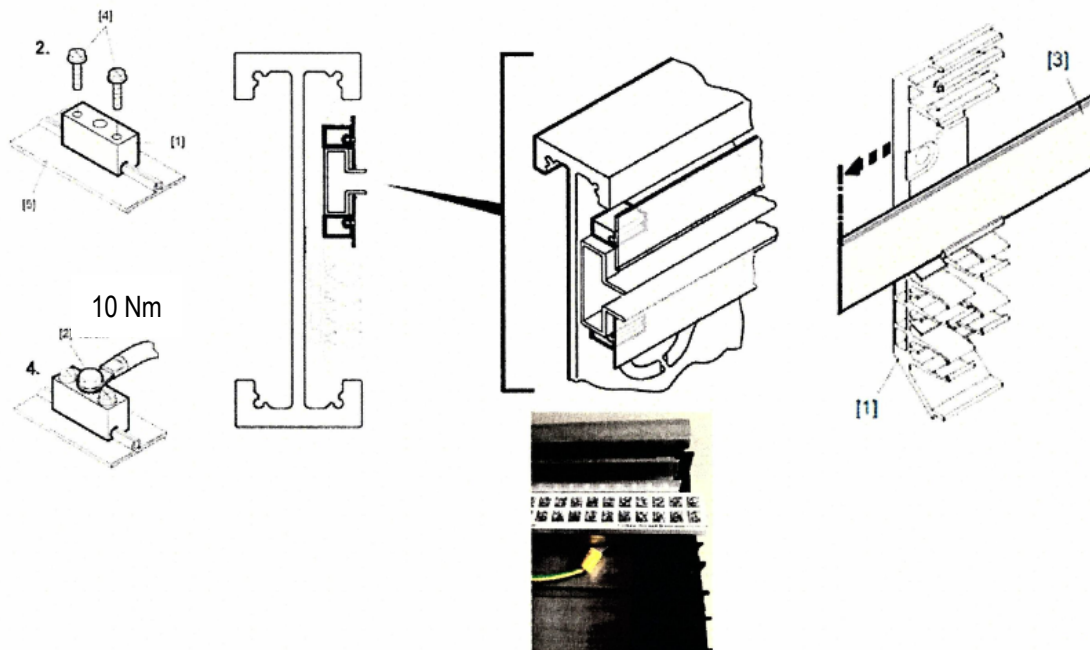
- The right fixing strip to the right of the expansion joint, the left fixing strips to the left of the expansion joint.
- The distance between the right and left fixing strip must be equal to the opening width of the expansion joint.

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Protection against displacement can be made e.g. with grounding pieces or self-procured countersunk screws (M4x35).  
**Assembly fixing strip for barcode - in the area of lifters, switches**



The fixing strip must be brought close to lifters or switches, as the barcode must not be interrupted for more than 20 mm even with reliable evaluation.

In the area of lifters and switches, the fixing strip must be secured against displacement in order to prevent mechanical collisions.

Protection against displacement can be made e.g. with grounding pieces or self-procured countersunk screws (M4x35). In the area of horizontal arches, the bending radius of the fixing strip must be adapted to the radius of the mounting rail during installation.

Bends should be avoided so that the distance of the barcode reader is the same over the entire distance and mechanical collisions, e.g. with the current collectors can be avoided.

If the fixing strip is mounted e.g. in the outer bend with slight bend tension, it must be secured against jumping out in order to prevent damage to the running system.

Protection against jumping out can be achieved with self-procured countersunk screws (M4x35).

**There are the following possibilities for fixation:**

#### **A) Grounding piece**

The grounding piece can be mounted next to a hanger clamp and thus the profile strip can be secured against displacement.



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#### B) Drill and countersink 3.3 mm

Perforate the fixing strip in the hanger clamp and countersink it so that the barcode adhesive tape can be glued flush with the surface.

Then fasten with the self-procured self-tapping countersunk screws (M4x35) provided by yourself.

Finally, clearly mark the point at the profile edge or the slotted waveguide with Edding, otherwise the point is difficult to find during disassembly/conversion.

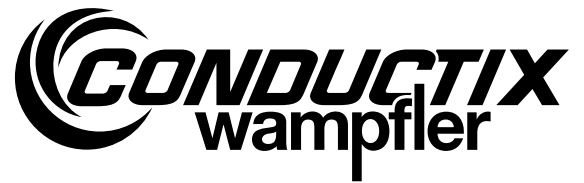
**AFTER the assembly, clean the slotted waveguide from dirt and chips (suck out or blow out)!**

#### Required tools

Tools list for slotted waveguide assembly

Designation	Size	Application
Allen key	Size TX8	Bossard screws
Hexagon socket	Size 2 and 2.5	Countersunk head screw
Screwdriver for recessed-head screws	PH2	Combination screw grounding kit
Large screwdriver for recessed-head screws	e.g. 1.5 x 6.5	Connecting plates
Socket wrench	SW10	Grounding screw M6
Drill	2.5 mm	Bossard screw
Drill	3.3 mm	Spacer bolt and countersunk screw
Drill	9 mm	Power feed
90° countersink	Ø 10 mm	Countersunk head screws
Screw tap	M3	Bossard screw
Screw tap	M4	Spacer bolt and countersunk screw
Miter-box saw, cross-cut saw	with saw blade for aluminum	Slotted waveguide, barcode strip
Deburrer/file		Deburring
Hammer	300-400 grams	Grains, etc.
Grains		
Felt-tip pen/pencil/Edding		
Knife/cutter		Barcode tape
Cleaning spray		Barcode strip/barcode tape
(Battery) drilling machine		
Suction device or compressed air		Internal cleaning slotted waveguide

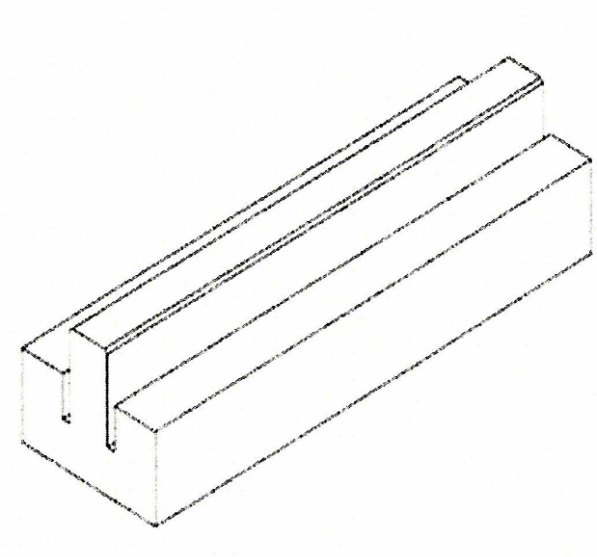
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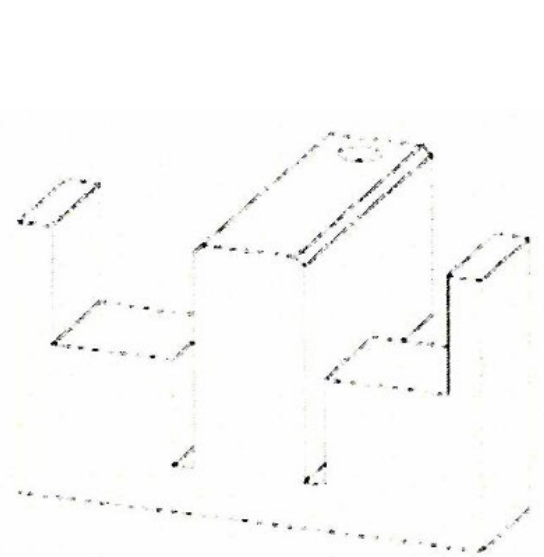
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### Tools and assembly aids



**Clamping aid for sawing**

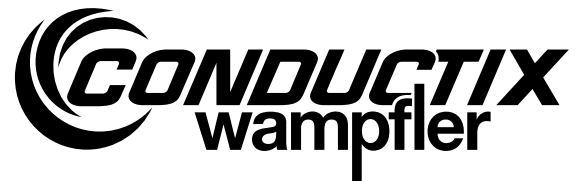


**Drilling jig for slotted waveguide profile**

# Installation Instructions

## Positioning Band Profile Program 0815

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