

# Operating Instructions



F01039y



## R120 / R121A Charging Bar

BA-en-3030-2308





# List of Contents

<b>1</b>	<b>Overview</b>	<b>5</b>
<b>2</b>	<b>Safety notice</b>	<b>7</b>
2.1	Proper use	7
2.2	Hazard identification	7
2.3	Work and operational safety	8
2.4	Protection against contact	10
2.5	Inspection of the protective resistors - contact protection	10
2.6	Technical progress	10
<b>3</b>	<b>Installation and assembly</b>	<b>11</b>
3.1	Length of the charging bar	11
3.2	Length of the high voltage cable	11
3.3	Adjust the angle coupling	11
3.4	Installation of the charging bar	12
3.5	Connecting the high voltage cable to the KNH18, KNH34 / KNH64, KNH35 / KNH65 generators, to the KNHV3 / KNHV6 distributor box and to the charging bar R121A	14
3.6	Connecting the high voltage cable of the charging bar to the high voltage generator POWER CHARGER PC and the PCV / PCV6 distributor boxes	16
3.7	Disconnecting the high voltage cable	17
<b>4</b>	<b>Operation</b>	<b>17</b>
4.1	Operating voltage	17
4.2	Operating modes	17
4.3	Startup	18
4.4	Function control	18
<b>5</b>	<b>Maintenance</b>	<b>19</b>
<b>6</b>	<b>Troubleshooting</b>	<b>20</b>
<b>7</b>	<b>Technical specifications</b>	<b>21</b>
<b>8</b>	<b>Dimensions</b>	<b>22</b>
<b>9</b>	<b>Spare parts and accessories</b>	<b>23</b>
<b>A</b>	<b>ANNEX</b>	<b>25</b>
A.1	Quick plug-in connection for charging components for plug variant M	25
	<b>Declaration of Conformity</b>	<b>26</b>
	<b>UKCA Conformity</b>	<b>27</b>

## Dear customer

The R120 / R121A charging bar is a universal bar for supply voltage values below 15 kV. The insulated assembly can generate voltages of up to 60 kV (see chap. 3.4).

The charging bar is used for charging surfaces for the purpose of tacking, adhering or locking. The variable active lengths of the charging bars allow them to be adapted to your specific in-process conditions and requirements.

The charging bar is mainly used where production processes and cycles run faster and with less interference if the substrates used (such as films, foils, papers etc.) adhere to each other.

The bars are operated with the appropriate high voltage generators supplied by Eltex. These can be adjusted to match the different active lengths of the bars and so allow optimized operation.

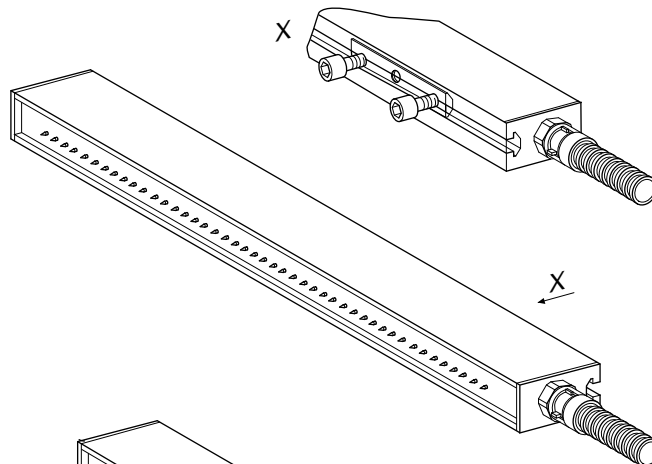
To avoid any risk of personal injury or damage to property, please read these operating instructions carefully before starting the bars.

Should you have any questions, queries or suggestions for improvements, we would like to hear from you. We always look forward to a lively exchange of opinions with the users of our appliances.

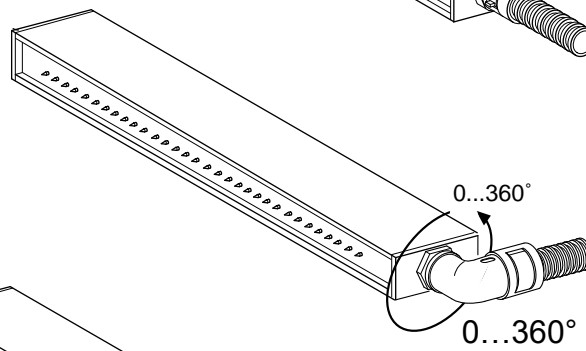
# 1. Overview

Fig. 1:

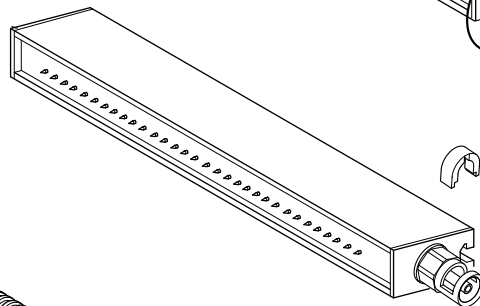
**R120/A**  
with axial  
connection,  
integrated and  
encapsulated  
cable



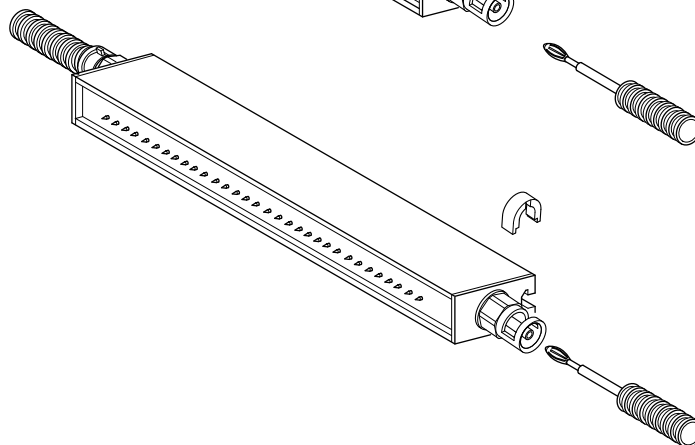
**R120/W**  
with radial  
connection,  
integrated and  
encapsulated  
cable



**R121A**  
with axial  
connection,  
detachable cable



**R121A**  
with two axial  
connections,  
detachable cables



## **The variety of charging bars**

available differs essentially in their installation lengths and in the connection of the high voltage cable. Both the installation length and the variable active length of a charging bar allow the units to be adapted to the most varied applications.

The dimensions of the bar are shown in chap. 8 Dimensions.

The parallel configuration of two or more bars allows surface-covering charging or operating the unit at high web speeds.

The maximum total length of the charging bar is 3.985 mm.

## 2. Safety

The charging bars of the series R120 / R121A have been designed, assembled and tested in accordance with state-of-the-art engineering standards, and they have left our factory in good condition in terms of safety engineering. If operated improperly, the bars may nonetheless cause injury to personnel or damage to property. For these reasons please read these instructions fully and observe the safety notices at all times.

For warranty conditions, please refer to the General Terms and Conditions (GTC), see [www.eltex.de](http://www.eltex.de).



### Warning!

Once the supply voltage of the generator has been activated, never touch the emission tips of the charging bars. Disconnect the electrical supply by switching off the high voltage generator before carrying out any maintenance or cleaning work.

### 2.1 Proper use

The charging bars of the series R120 / R121A must only be used for applying static electrical charges onto paper, fabrics, foils, plastics etc. for the purpose of creating a static adhesion effect.

The R120 / R121A charging bars may only be operated with the accompanying Eltex high voltage generators (see chap. 7 Technical specifications). These allow the flexible adaptation to the required high voltages and currents for different active bar lengths. The safe operation of the charging bars is only guaranteed by using these Eltex generators.

The manufacturer cannot be held liable under the terms of the warranty if the appliances are tampered with or are operated improperly.

Modifying or rebuilding the charging bars is not permitted.

Use only original spare parts and accessories supplied by Eltex.

### 2.2 Hazard identification

These operating instructions refer to possible dangers and risk with the following symbols:



#### Warning!

This symbol in the operating instructions refers to certain steps or manipulations which, when carried out improperly, may result in personal injuries.



#### Caution!

This symbol in the operating instructions refers to certain steps or manipulations which may cause damage to property.

## 2.3 Work and operational safety



### Warning!

Electric shock hazard!

Carefully observe the following notes and the complete [chapter 2 "Safety", page 7!](#)

- Before carrying out repairs, cleaning or maintenance work and before resetting after malfunctions, switch off the generator and disconnect the mains supply voltage (see [chapter 5 "Maintenance", page 19](#), [chapter 6 "Troubleshooting", page 20](#)).
- Before carrying out any work involving the units, the machine which has the units fitted must not be in operation (see [chapter 5 "Maintenance", page 19](#), [chapter 6 "Troubleshooting", page 20](#)).
- Any work involving the units must be carried out by qualified electricians (see [chapter 5 "Maintenance", page 19](#), [chapter 6 "Troubleshooting", page 20](#)).
- Disconnect or connect the high voltage plugs only with the generator switched off and with the machine at rest. Also, disconnect the supply voltage to the high voltage generator.
- The bars passively absorb energy from the moving substrate web. The high voltage cable must be plugged in or grounded to the generator. If the high voltage cable is disconnected, the plug is live (high voltage) and applies with full power on the plug; this may cause a spark discharge and may lead to a risk of injury. Disconnected high voltage plugs are not permitted or have to be grounded (see [chapter 5 "Maintenance", page 19](#)).
- The high voltage cable must be pushed up to the stop (90 mm for KNH18, KNH34 / KNH35, 120 mm for KNH64 / KNH65 and 150 for POWER CHARGER PC) into the cable inlet! The connecting area of the high voltage cable must be kept clean (see [chapter 3.5 "Connecting the high voltage cable to the KNH18, KNH34 / KNH64, KNH35 / KNH65 generators, to the KNHV3 / KNHV6 distributor box and to the charging bar R121A", page 14](#), [chapter 3.6 "Connecting the high voltage cable of the charging bar to the high voltage generator POWER CHARGER PC and the PCV / PCV6 distributor box", page 16](#)).
- To avoid creepage currents which may damage the charging bar and the mounting material, attach the charging bar with insulating mounting material; observe the bolt depth (see [chapter 3.4 "Installation of the charging bar", page 12](#)).
- When routing the cable, select the attachment points such that mechanical damage to the cable (e.g. chafing against rotating machine parts) is ruled out (see [chapter 3.4 "Installation of the charging bar", page 12](#)).



- In applications with movable charging bar (e.g. film draw strips), attach the high voltage cables such that there is no cable movement in the connecting zone of the generator (see [chapter 3.4 "Installation of the charging bar", page 12](#)).
- The current must not be allowed to exceed 1 mA per meter of active charging bar length. The minimum operating current for any stable-current working point must be >0.5 mA (see [chapter 4 "Operation", page 17](#)).
- Check the units and the high voltage cables at regular intervals and before startup for any damage. Any damaged components must be repaired or replaced before continuing to operate the unit, or the units must be disabled.
- Make sure that the units are clean at all times.  
Dirt results in malfunctions and in premature wear of the units.
- When cleaning the bars do not soak the bars and the high voltage cable in solvent and do not damage the emission tips; allow the solvent to evaporate completely before restarting the unit (see [chapter 5 "Maintenance", page 19](#), [chapter 6 "Troubleshooting", page 20](#)).
- During operation, no continuous sparking (electric arc) must be visible on the bar tips (see [chapter 5 "Maintenance", page 19](#), [chapter 6 "Troubleshooting", page 20](#)).
- Do not touch the emission tips - risk of injury.  
If the high voltage supply is connected, reflex responses to electrical irritation can lead to secondary accidents; the charging bar as such is safe to touch. If contact is made ( $\leq 20$  tips), the energy transferred is so low that there is no risk of injury.
- Potential dangers for persons with cardiac pacemakers  
The contact of several emission tips with the hand can trigger or suppress a single impulse. Such a single influence is irrelevant. A repeated contact during a short period can be excluded because the electrical irritation causes a warning effect. The charging bar as such is safe to touch. If contact is made, the energy transferred is so low that there is no risk of injury.
- The operation of the bars can generate ozone. The ozone concentration levels developing near the bars depend on many different factors such as site of installation, bar current and voltage, air circulation, etc., and can therefore not be specified in general terms.  
If the maximum allowable concentration of ozone must be observed at the site of installation of the bar, the concentration must be measured on site.  
The AGW value (maximum admissible concentration) serves to assess the ozone concentration at the workplace. The user must make sure that the appropriate national AGW value is at no times exceeded, e.g.

in Germany the ozone concentration occurring during the operation of the system must not exceed the recommended value based on international limits of 0.06 ml/m<sup>3</sup> (0.12 mg/m<sup>3</sup>).

- **Static on personnel**

Static charges on personnel are unlikely if the bars are installed properly. Personnel must wear conductive footwear.

Please note all national regulations regarding electrostatic charge (e.g. TRGS 727 in Germany).

## **2.4 Protection against contact**

The site of installation and/or use of the units is outside the control of Eltex, contact protection against inadvertent contact of the bars and of live components by personnel as specified by the employer's liability insurance association may have to be provided (e.g. DGUV V3 in Germany). Contact protection devices made of conductive material must be grounded.

## **2.5 Inspection of the protective resistors - contact protection**

The function and the appearance of the protective resistors must be inspected at regular intervals. The inspection intervals are specified in the accident prevention regulations, as amended (e.g. in Germany DGUV V3). Eltex recommend inspection intervals of 6 months.

The function of the series resistors must be checked using a suitable measuring device. The test voltage must be 1,000V. The measured resistance between the high-voltage connection and the individual emission tip must not fall below 320 MOhm and not exceed 480 MOhm.

## **2.6 Technical progress**

The manufacturer reserves the right to modify the technical specifications in compliance with technical progress. Eltex are pleased to give you any information on the current status of developments and on any changes and modifications in the operating instructions.

### 3. Installation and assembly

#### 3.1 Length of the charging bar

Depending on intended use, the total length of the charging bar may be selected within the range from 85 mm to 3,985 mm in steps of 15 mm each. The total length is made up of active length plus 70 mm. Another 100 mm (approx.) must be provided for plugs and bending radius of the cable.

#### 3.2 Length of the high voltage cable

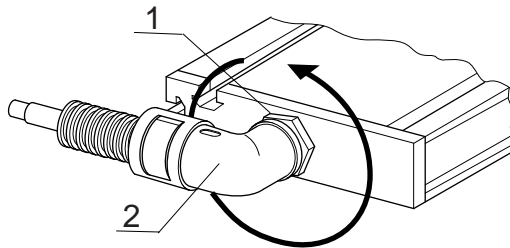
The standard length of the high voltage cable feeding the charging bar is 5 meters. Special lengths on request. For cable extension use high voltage distributor box (connection of high voltage plug see chap. 3.5).

#### 3.3 Adjust the angle coupling

If the bar has a angle coupling, then it is aligned towards the tips during ex factory delivery.

Fig. 2:  
Angle coupling

- 1 Lock nut
- 2 Angle coupling



0... 360° (max. 1 revolution)

To turn the angle connection, proceed as follows:

- Loosen the lock nut.
- Turn the angle coupling in its desired position.
- Re-tighten the lock nut.

The maximum permissible angle of turn of the angle coupling is 360°.

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### 3.4 Installation of the charging bar

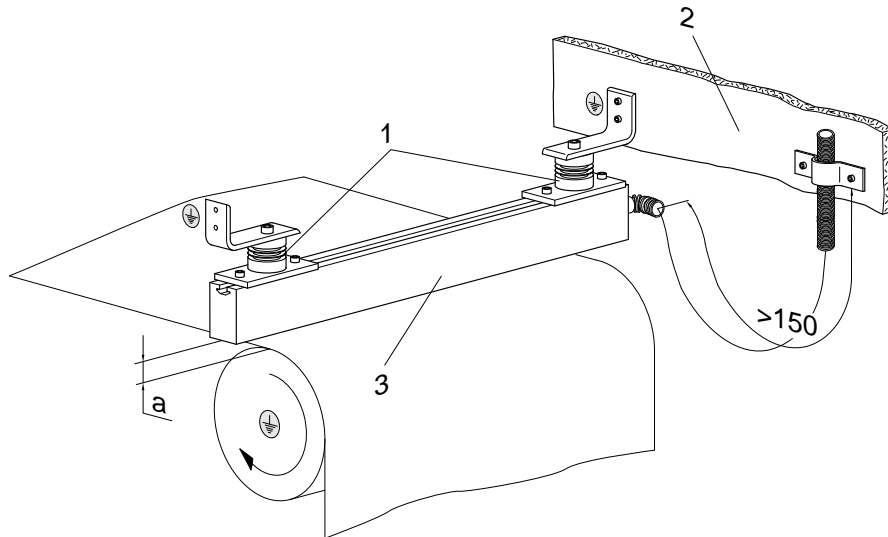


To avoid creepage currents which may damage the charging bar and the mounting material, attach the charging bar with insulating mounting material.

The length of the current creepage path (= shortest distance along a surface between the tip of the charging bar and ground) depends on the maximum operating voltage of the charging bar.

maximum operating voltage	minimum creepage distance
15 kV	50 mm
30 kV	80 mm
60 kV	160 mm

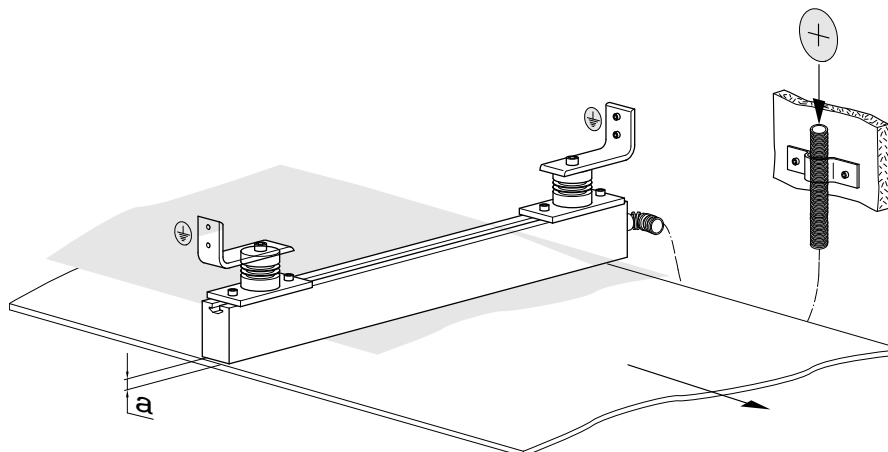
Fig. 3:  
Installation  
example using  
Eltex mounting  
material,  
charging against  
ground (roller)



- 1 Eltex insulator
- 2 Machine wall
- 3 Bar

Z00474y

Fig. 4:  
Installation  
example using  
Eltex mounting  
material,  
charging a foil  
against ground  
with positive high  
voltage



Z00475y

Applications: tacking protective foil, laminating decorative substrate etc.

The installation profile of the charging bar has a fluting. The sliding nuts are pushed into this fluting, and the charging bar is bolted to these sliding nuts.



**Caution!**  
Observe the bolt depth!

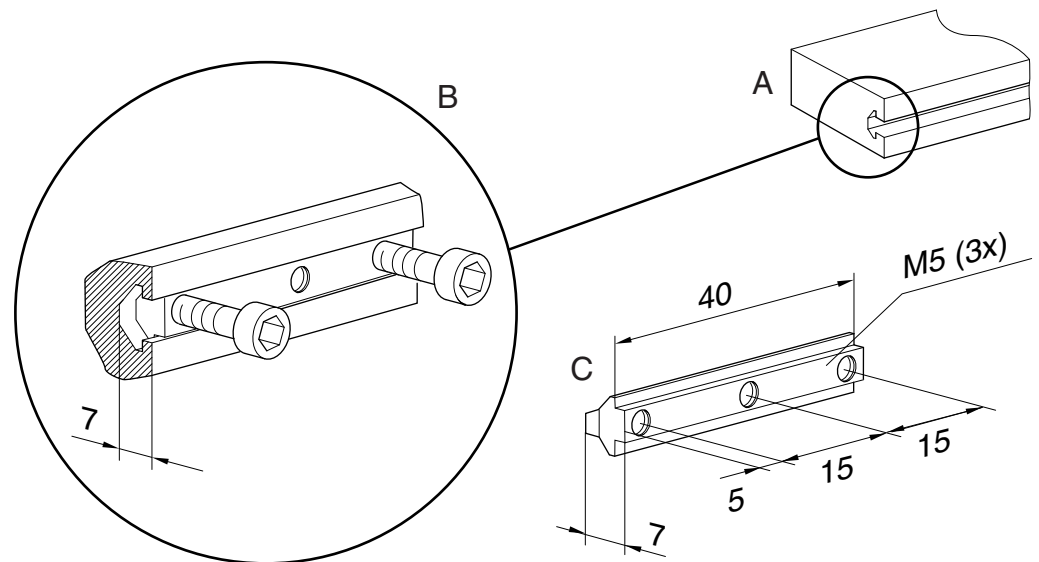


Fig. 5:  
Assembly details

**A** Charging bar profile with one fluting

**B** Profile section

Max. bolt depth 6.5 mm

Torque: 0.4 Nm plastic screw and sliding nut

Secure bolts against working loose (e.g. Loctite 243)

**C** Sliding nut

Total length below 1 meter = 2 off

Total length below 2 meters = 3 off

Total length below 3 meters = 4 off

Total length below 4 meters = 5 off



**Warning!**

When routing the cable, select the attachment points such that mechanical damage to the cable (e.g. chafing against rotating machine parts) is ruled out.

In applications with movable charging bar (e.g. film draw strips), attach the high voltage cables such that there is no cable movement in the connecting zone of the generator.

### 3.5 Connecting the high voltage cable to the KNH18, KNH34 / KNH64, KNH35 / KNH65 generators, to the KNHV3 / KNHV6 distributor box and to the charging bar R121A

The connection of the high voltage cable of the charging bars to the KNH18, KNH34 / KNH35 or KNH64 / KNH65 high voltage generators with max. 25 kV, max 30 kV or max. 60 kV is described in the operating instructions of the respective generators.



#### Warning!

Electric shock hazard!

Work may be carried out only if:

- the supply voltage to the generator has been disconnected,
- the machine is at standstill because the bars pick up charges if the substrat web is running.

#### Method:

Connect the bars to the generator via the prefabricated high voltage cable. Push the high voltage cables up to the stop into the socket connection. Finally, secure the adapter inside the socket with the clip provided (see fig. 6).

Cables without adapters have a color-coded marking on the flexible tubing. This marking must lie flush with the outside edge of the coupling.

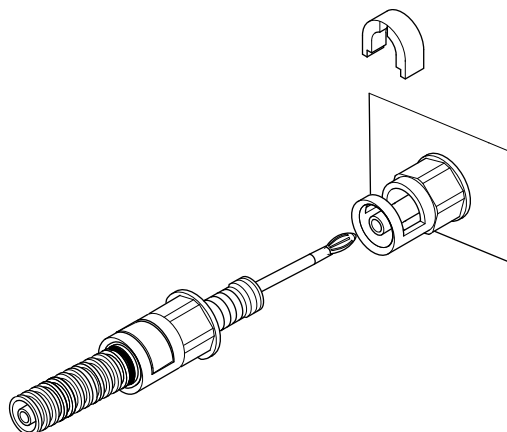


Fig. 6:  
Connecting the  
high voltage cable

**Note:** The clip must be fully inserted.

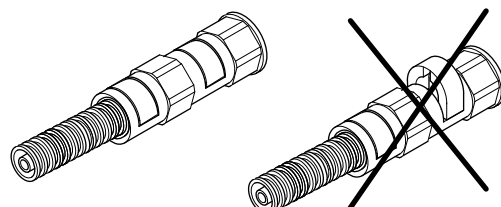


Fig. 7:  
Inserting the clip

correct

incorrect



**Caution!**

The high voltage cable must be pushed up to the stop (90 mm for KNH18, KNH34 / KNH35 and 120 mm for KNH64 / KNH65) into the cable inlet!  
The connecting area of the high voltage cable must be kept clean!

### 3.6 Connecting the high voltage cable of the charging bar to the high voltage generator POWER CHARGER PC and the PCV / PCV6 distributor box



#### Warning!

Electric shock hazard!

Work may be carried out only if:

- the supply voltage to the generator has been disconnected,
- the machine is at a standstill because the bars pick up charges if the substrat web is running.

#### Method:

Connect the bars via the prefabricated high voltage cable. Push the high voltage cables up to the stop into the socket connection. Finally, the crew connection is tightened.

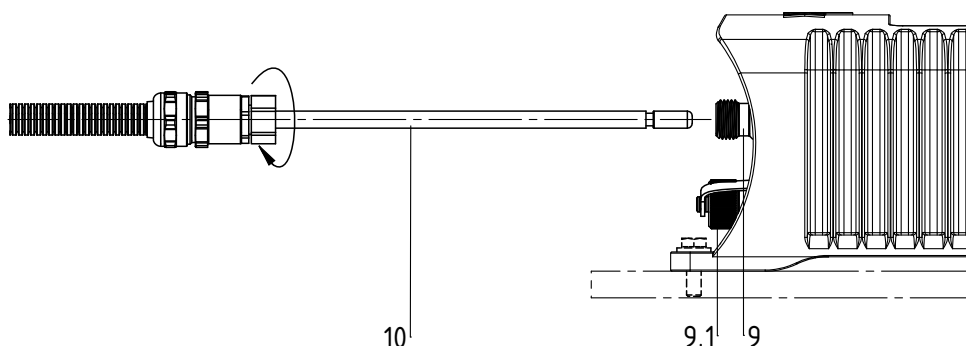


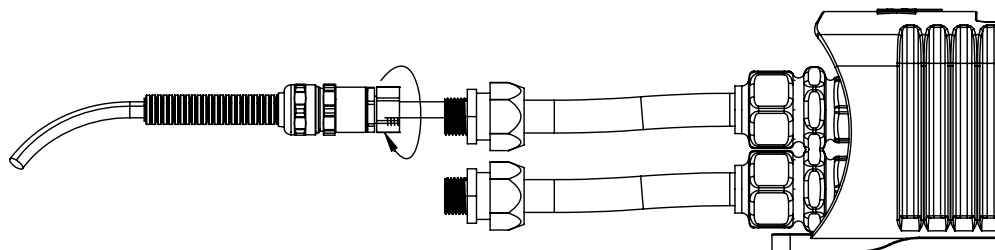
Fig. 8:  
Connecting the  
high voltage cable

9 / 9.1 High voltage outputs

10 High voltage cable

Z-116035ay\_4

Fig. 9:  
Connecting the  
high voltage cable  
with 60 kV



9.1 High voltage cable connections with 60 kV

Z-116035by\_7

#### Note:

The screw connection must be fastened with a torque of 3 Nm.



#### Caution!

The high voltage cable must be pushed up to the stop (150 mm) into the cable inlet! The connecting area of the high voltage cable must be kept clean!!



### 3.7 Disconnecting the high voltage cable



#### Warning!

Electric shock hazard!

Work may be carried out only if:

- the supply voltage to the generator has been disconnected,
- the machine is at standstill because the bars pick up charges if the substrate web is running.

Take off the clip at the KNH\_\_ generators, the KNHV\_ distributor boxes and/or the R121A bar, using a 3 mm screw driver. Then pull out the cable.

Disconnect the union nut (SW18) at the POWER CHARGER PC generators and the PCV\_ distributor boxes. Then pull out the cable.

## 4. Operation

### 4.1 Operating voltage

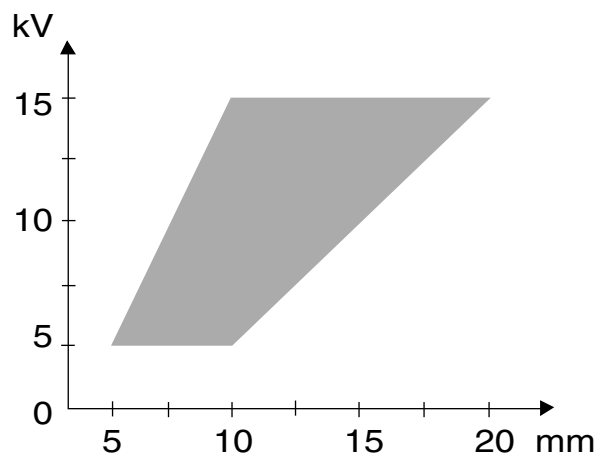
The charging bar is operated with high voltage between 5...15 kV, with adequate insulation with up to 60 kV. Make sure that the correct distance between the charging bar and the substrate surface is maintained. With an operating voltage of 15 kV, the minimum distance should be 10 mm. The working range is shown in fig. 10.

### 4.2 Operating modes

The charging bars are usually operated with constant voltage, i.e. the high voltage generated by the generator is non-adjustable. This operating mode is recommended for all applications in which the substrate to be charged has a high intrinsic resistance and where no creepage currents caused by contamination is expected.



The current must not be allowed to exceed 1 mA per meter of active charging bar length.



*Example:  
the active charging bar length  
is 515 mm,  
maximum rated current:  
1 mA/metre x 0.515 metre =  
0.515 mA.*

Fig. 10:  
Working range of  
the charging bar  
as factor of voltage  
and distance

If the charging bar is used in applications where strong contamination must be expected, the operating mode Current Constant ought to be selected on the generator. This will prevent energy being drawn off in an uncontrolled manner through creepage currents and damage to charging bars and installation material.



The minimum operating current for any stable-current working point must be  $>0.5$  mA.

### **4.3 Startup**

Once all the connections have been correctly made, the system is operational and the supply voltage can be switched on at the generator.

### **4.4 Function control**

Use the Eltex Volt Stick or a glow-lamp voltage tester to check the proper function of the emission tips. Quote Article No. 109136 when ordering the Volt Stick from Eltex.

## 5. Maintenance



### Warning!

Electric shock hazard!

- Switch off the generator and disconnect the supply voltage before carrying out any maintenance or repair work.
- The machine which has the units fitted must not be in operation.
- The bars passively absorb energy from the moving substrate web. The high voltage cable must be plugged in or grounded to the generator. If the high voltage cable is disconnected, the plug is live (high voltage) and applies with full power on the plug; this may cause a spark discharge and may lead to a risk of injury. Disconnected high voltage plugs are not permitted or have to be grounded.
- Repairs and maintenance work must only be carried out by qualified personnel.

To ensure the proper function of the charging bars, clean the bars regularly depending on pollution using compressed air free of oil and water (max.  $6 \times 10^5$  Pa, commercial pistol) and a brush with soft plastic bristles (see chapter 9 "Spare parts and accessories", page 23).

Clean grease, ink, glue, paper dust, etc. off the discharging bar using a suitable solvent (benzine). Do not soak the bars and the high voltage cable in solvent!

To maintain adequate insulation, insulating mounting material must be cleaned at regular intervals.



### Warning!

Risk of deflagration!

Allow the solvent to evaporate completely before restarting the unit.



### Caution!

Do not damage the emission tips when cleaning the bars. Brush only in longitudinal direction.



### Caution!

No continuous sparking (electric arc) must be visible on the bar tips.

### Inspection of the protective resistors - contact protection

The function and the appearance of the protective resistors must be inspected at regular intervals. The inspection intervals are specified in the accident prevention regulations, as amended (e.g. in Germany DGUV V3).

The function of the series resistors must be checked using a suitable measuring device. The test voltage must be 1,000V. The measured resistance between the high-voltage connection and the individual emission tip must not fall below 320 MOhm and not exceed 480 MOhm.

## 6. Troubleshooting



### Warning!

Electric shock hazard!

- Switch off the generator and disconnect the supply voltage before carrying out any maintenance or repair work.
- The machine which has the units fitted must not be in operation.
- Repairs and maintenance work must only be carried out by qualified electricians.

### Malfunction: decrease in efficiency

Cause	Remedy
Polluted charging bar / insulator	Clean the bars / insulators using compressed air free of oil and water and a brush with soft plastic bristles. Use a suitable solvent to remove dirt or grease. (see chap. 5 Maintenance). (In operation no continuous sparking (electric arc) must be visible on the bar tips). <b>Caution!</b> Do not immerse the charging bar in solvent.
Defective charging bar	Check the charging bar for any defects which may be caused by creepage currents. Replace the charging bar and install it to make sure that creepage currents can not develop. See chap. 3 Installation and assembly.
Worn charging bar	Depending on application, the emission tips are subject to more or less wear and tear. If the tips have burnt down to a distance of 1 mm from the encapsulating compound, replace the charging bar.

## 7. Technical specifications

### R120 / R121A

as shown on  
appliance  
marking



Bar element	glass-fibre-reinforced synthetic GRP
Encapsulating compound	PU
Emission tips	stainless steel
Ambient operating temperature	0...+60 °C (+32...+140 °F)
Ambient humidity	max. 60 % relative humidity non-dewing
Operating voltage	max. 15 kV to max. 60 kV, depending on insulation
Operating current	max. 1 mA per meter of active bar length
High voltage power supply	via Eltex high voltage generators series KNH18, KNH34 / 35, KNH64 / 65 and POWER CHARGER PC
High voltage cable	prefabricated high voltage cable in plastic tube with plug for the high voltage generator, length 1...35 m (standard length 5 m)
Dimensions	see fig. 11
Total bar length	max. 3,985 mm
Weight	1 kg/m
UL approval	File No. E227156 (max. 30 kV)

## 8. Dimensions

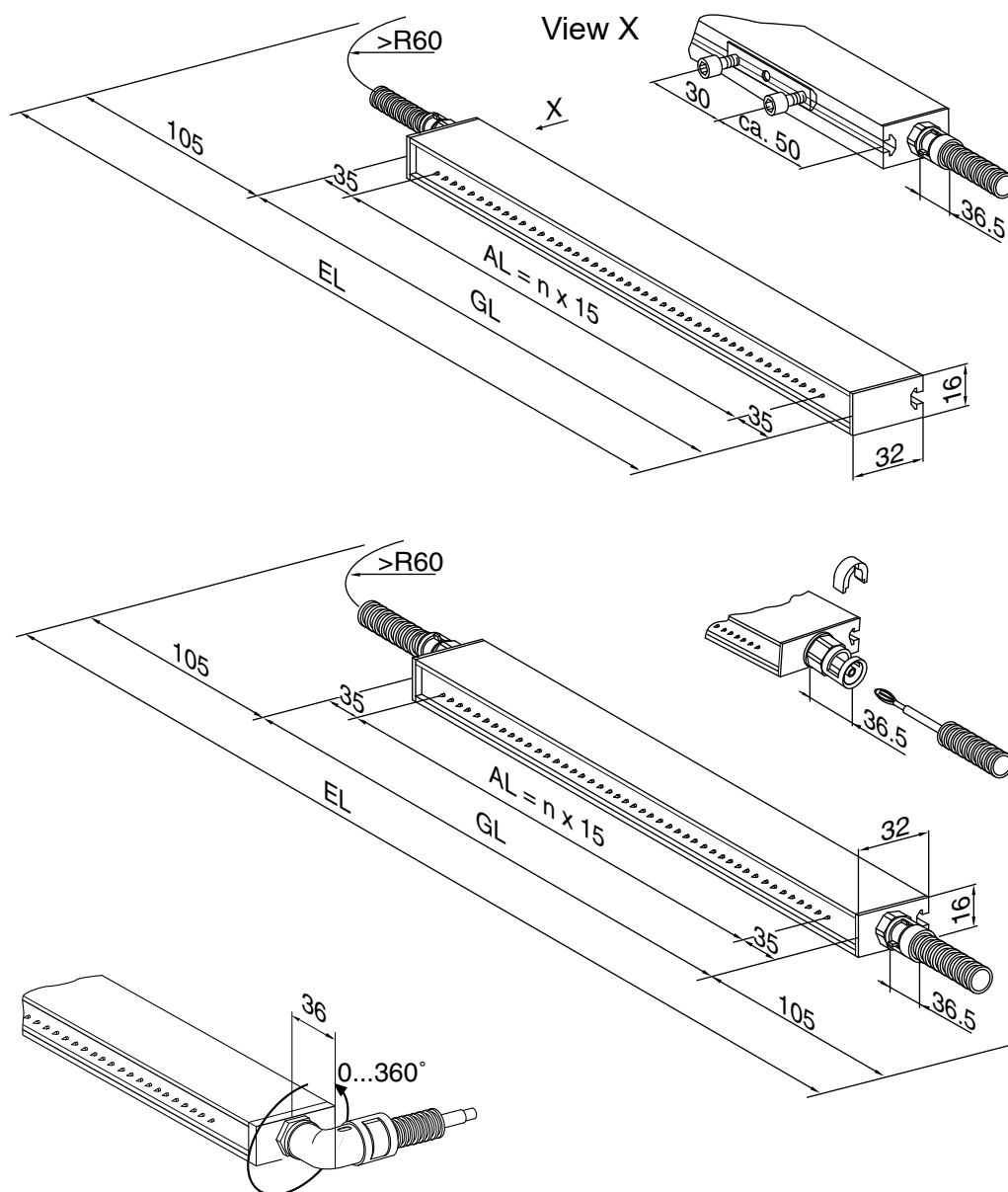


Fig. 11:  
Dimensions of the  
charging bar,  
alternative  
connections of  
high voltage cable

Examples for calculating the active length  
 $n = \text{any number between 1 and 261, e.g. } n = 150$   
 The active length is therefore  $AL = 150 \times 15 = 2250 \text{ mm}$

$AL = \text{Active length}$   
 $GL = \text{Total length}$   
 $EL = \text{Installation length}$   
 $n = \text{Whole number, depending on active length}$

## 9. Spare parts and accessories

Article	Article number
Bar bracket with clamp	HA01/___
Bar bracket with aluminium profile section	HA06/___
Eltex installation kit for voltages up to 60 kV: insulators, base plate, sliding nuts, bolts	105204
Installation material for bars: sliding nut with bolts and washers	105826
Flexible corrugated polyamide tubing	MCH02184
Plug R Set for fabricating the high voltage cable with flexible tube for 30 kV bars, for connection to the generators KNH__	104165
Plug Q Set for fabricating the high voltage cable with flexible tube for 30 kV bars, bar side (for R121A only)	104170
Plug U Set for fabricating the high voltage cable with flexible tube for 60 kV bars, for connection to the generators KNH__	109501
Plug M Quick plug-in connection, generator side	102992
Plug Y Kit for cutting the high voltage cable to size with flexible tube for 30 kV charging bars for connection of the generator POWER CHARGER PC (external diameter of the cable min. 6.55 mm) resp. modification set for charging plug Y,	117985
Plug X Kit for cutting the high voltage cable to size with flexible tube for 60 kV charging bars for connection of the generator POWER CHARGER PC (external diameter of the cable min. 6.55 mm) resp. modification set for charging plug X	117986

<b>Article</b>	<b>Article number</b>
Coaxial crimping ratchet, hexagonal 5.41 mm	102952
Segmented plug	ELM08600
Arresting lock (U-clip) for screw connection	102475
Cleaning brush with handle	RBR22
Volt Stick	109136
Operating Instructions (specify language)	BA-xx-3030

Please specify the article number when ordering.



## A. ANNEX

### A.1 Quick plug-in connection for charging components for plug variants M (only in connection with the generators KNH18, KNH34, KNH35)



#### Warning!

Connect only to the generator side! Make sure that no high voltage applies at the end of the cable after disconnecting the plug!

Before connecting or disconnecting the plug, deactivate the supply voltage of the high voltage generator manually. If bars are mounted above fast-running substrate webs, the machine must be stopped to avoid passive charges being picked by the bars. Ignoring this safety notice may result in damage to machinery and personal injury!

#### Preparing the connection

The quick plug-in connection consists of two sections: the actual plug (1) and the coupling adapter (2). When delivered, the plug and the coupling adapter are connected. Separate the sections by pulling back the plug interlock (3).

To prepare the connection, push the coupling adapter into the high voltage connection (4) of the generator or distributor and secure with the clip (5).

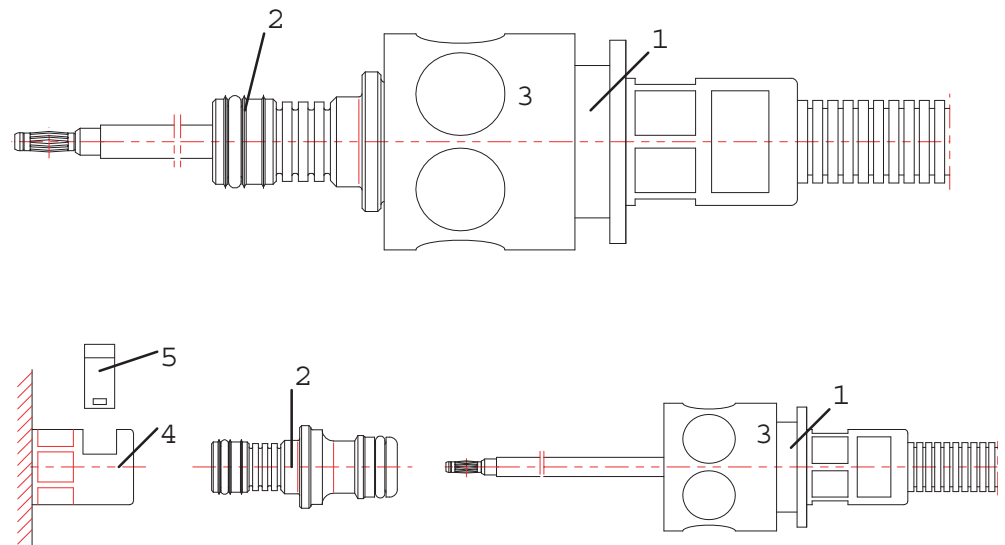


Fig. 12:  
Quick plug-in con-  
nection for charging  
components

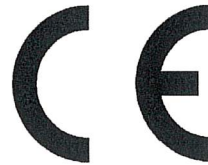
**Connecting:** Insert the plug into the prepared high voltage connection until the lock engages audibly.

**Disconnecting:** Pull back the interlock and pull out the plug.

# EU-Declaration of Conformity

CE-3030-en-2011

Eltex-Elektrostatik-Gesellschaft mbH  
Blauenstraße 67 - 69  
D-79576 Weil am Rhein



declares in its sole responsibility that the product

## Charging Bar Type xxR120xx / xxR121Axx (according to Eltex reference code)

complies with the following directives and standards.

Relevant EU-Directive:

**2014/35/EU**

Low Voltage Directive

Harmonized standard applied:

EN 60204-1:2018

Safety of machinery – Electrical equipment of machines –  
General requirements

Relevant EU-Directive:

**2014/30/EU**

EMC Directive

Harmonized standards applied:

EN IEC 61000-6-2:2019

Electromagnetic compatibility (EMC)  
Generic standards – Immunity for industrial environments

EN 55011:2016 + A1:2017

Industrial scientific and medical equipment –  
Radio-frequency disturbance characteristics – limits and methods  
of measurement

Relevant EU-Directive:

**2011/65/EU**

RoHS Directive

in the version effective at the time of delivery.

Eltex-Elektrostatik-Gesellschaft mbH keep the following documents for inspection:

- proper operating instructions
- plans
- other technical documentation

Weil am Rhein, 16.11.2020  
Place/Date



Lukas Hahne, Managing Director

# UKCA Declaration of Conformity

CA-3030-en-2208

Eltex-Elektrostatik-Gesellschaft mbH  
Blauenstraße 67 - 69  
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declares in its sole responsibility that the product

**Charging Bar Type xxR120xx / xxR121Axx** (according to Eltex reference code)

complies with the following directives and standards.

Applicable Regulation:

**S.I. 2016 No. 1101**

Electrical Equipment (Safety) Regulations

Used Designated Standard:

BS EN 60204-1:2018

Applicable Regulation:

**S.I. 2016 No. 1091**

Electromagnetic Compatibility Regulations

Used Designated Standard:

BS EN IEC 61000-6-2:2019

BS EN 55011+A2:2016

Applicable Regulation:

**S.I. 2012 No. 3032**

RoHS Regulations

in the version effective at the time of delivery.

Eltex-Elektrostatik-Gesellschaft mbH keep the following documents for inspection:

- proper operating instructions
- plans
- other technical documentation

Weil am Rhein, 30.08.2022  
Place/Date



Lukas Hahne, Managing Director

# Eltex offices and agencies

The addresses of all  
Eltex agencies can be  
found on our website at  
[www.eltex.de](http://www.eltex.de)



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