


# QAA 059

## INSTALLATION INSTRUCTIONS


**for the Cable Joint**  
**Ex-Con 22/4, 22/4 Si and 25/7 for ELK-AG**  
(Part No.: 0X81115, 0X81135, 0X81140)

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	Revision 10	07.08.2019

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

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## 1. Application

The cable joint is used for the connection of single wire series cable in hazardous areas Zone 1 and 21. The nominal Voltage is 550V.

### 1.1 Marking

The joint is marked in the following way:

eltherm GmbH Burbach Ex-Con <Type> 550V / 20A  
 II 2G Ex eb IIC T6...T3 Gb  II 2D Ex tb IIIC TX Db  
 IBExU04ATEX1005X <Lot-No. ...>  0637  
 IECEx IBE 13.0012 X  
 Warnung: Nicht unter Spannung öffnen!  
 Warning: Do not open while energized!

### 1.2 Suitable Cable

The joint shall only be used for connection of single wire series cable and cold lead consisting of resistance wire, electric insulation plastic (fluoropolymer), protection braid and outer jacket (fluoropolymer) which are approved according to Directive 2014/34/EU, special conditions mentioned in the relevant ATEX certificate shall be observed. The outer diameters of the cable shall be within the range given in paragraph 3. "preparatory work". The connection of two heating cables shall only be made when the sum of both cross sections is bigger than 1.5 mm<sup>2</sup>.

### 1.3 Temperature Range

The maintenance temperature depends on the actual current and ranges from -32°C (-60°C for Ex-Con 22/4 Si) to + 170°C. The current load must not exceed 20 A while the total current per cross section of the heating cable must not exceed 30 A/mm<sup>2</sup>. The following maintenance temperatures are to be observed:


Temperature Class	Max. Maintenance Temperature at currents up to		
	10A	15 A	20A
T6	60°C	45°C	25°C
T5	75°C	60°C	40°C
T4	110°C	95°C	75°C
T3	170°C	155°C	135°C
dust	TX-10K	TX-15K	TX-20K

The maximum ambient temperature under power off conditions is Tp=200°C. The surface temperature of the connected heating cable shall be limited in a suitable way, e.g. by choosing either a stabilized or a controlled design according to EN 60079-30-2.

### 1.4 Assembly and Installation of Cable Joint

Proper assembly is shown on the following pages. The stated cable dimensions, creeping distances and torques must be observed. Make sure cable entry and crimp connection are done properly. For the crimp connection only the listed tools shall be used.

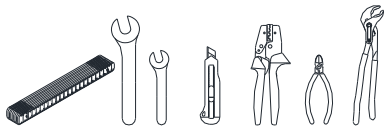
During operation, the cable joint is to be fixed onto the surface to be heated. It is to be covered in the same way as the associated heating cable (e.g. by self adhesive aluminium tape or by heat transfer aids). This also fulfills the requirement of protection of the cable joint against light and against electrostatic charge.

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The integrated strain relief fulfills the reduced requirements of EN 60079-0. Therefore, it is required to install the attached cables in a fixed way and to create an additional strain relief on the heated surface.

The joints Ex-Con 22/4 and 22/4 Si with OD 22 mm are designed for low mechanical loads only (4J) and shall therefore always be installed with additional mechanical protection.

## 2. Recommended Tools

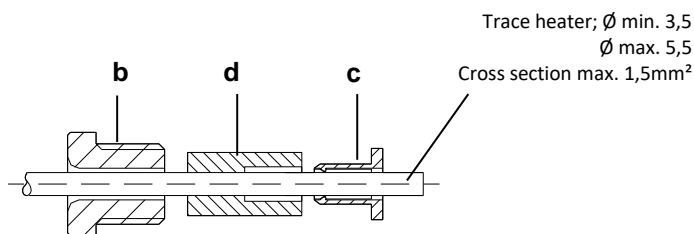


## 3. Contents of Kit

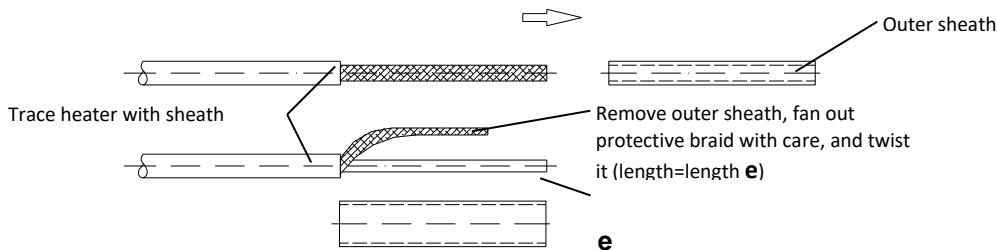
a.	Sleeve	1
b.	Fastening screw	2
c.	Strain relief	2
d.	Seal with graduated bore:	2
e.	PTFE - sleeve $\varnothing$ 6,35x35	1
f.	Crimp $\varnothing$ 3.2x9	1
g.	Crimp $\varnothing$ 4x9	2


## 4. Preparing Heater

### 4.1

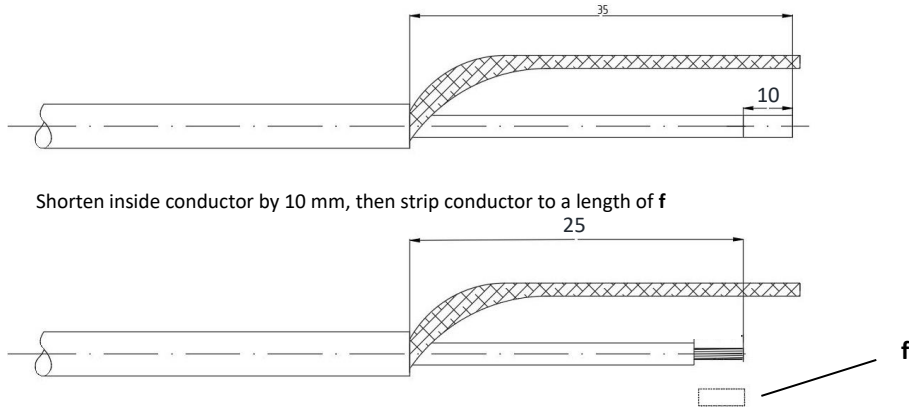


### 4.2

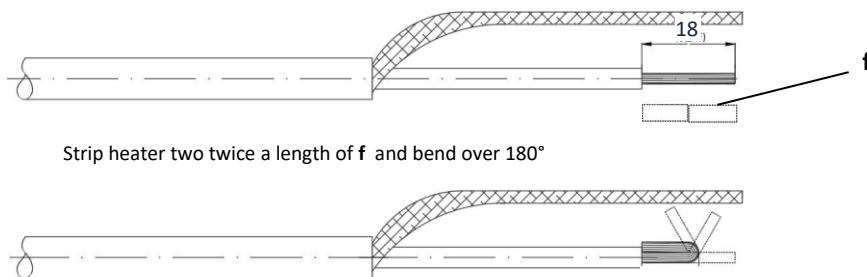


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### 4.3 Heaters with conductor diameter $\geq 1\text{mm}$

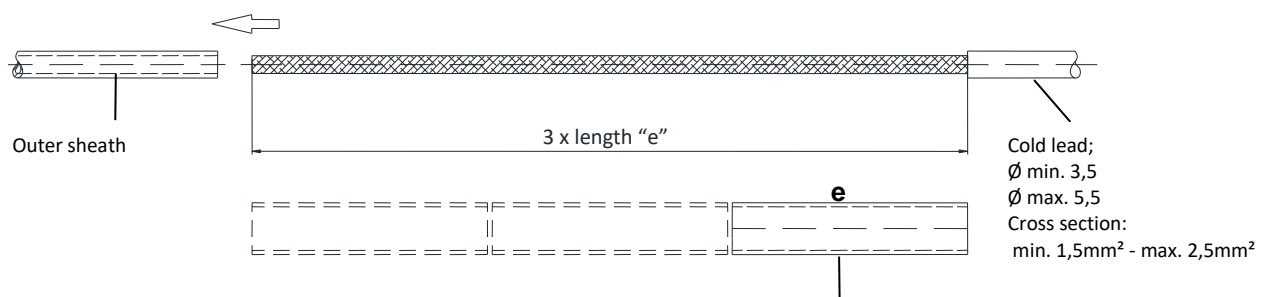



### 4.4 Heaters with conductor diameter $< 1\text{mm}$



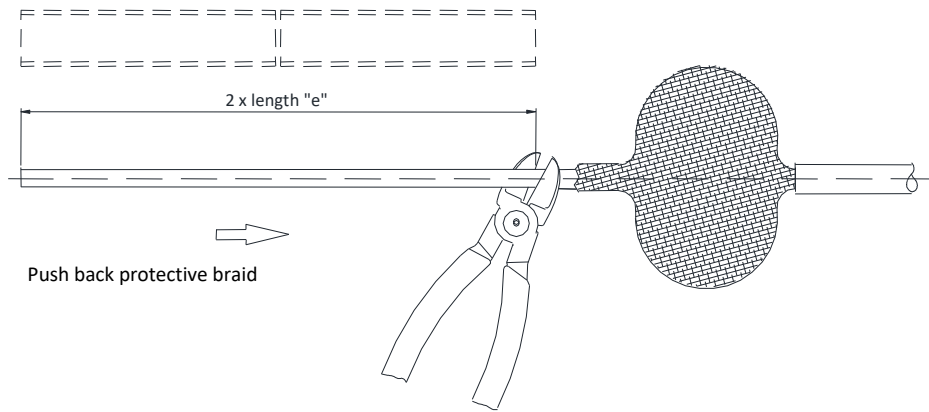
## 5. Preparation of Cold Lead

### 5.1

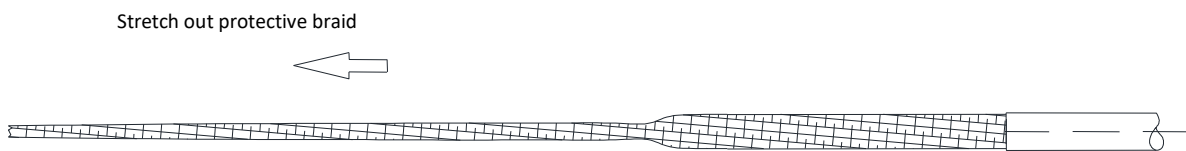


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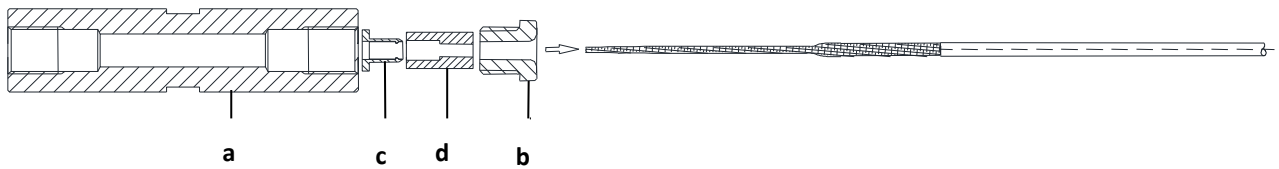
5.2



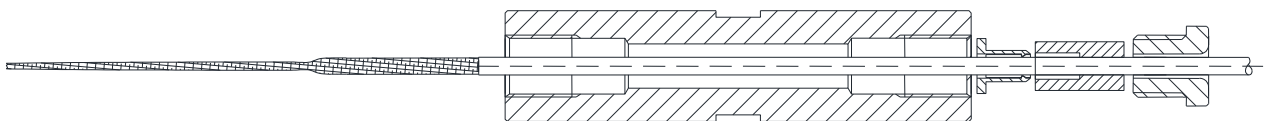
5.3



5.4

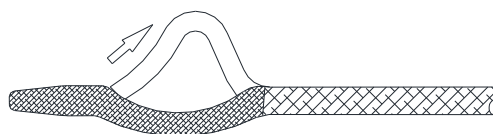



5.5



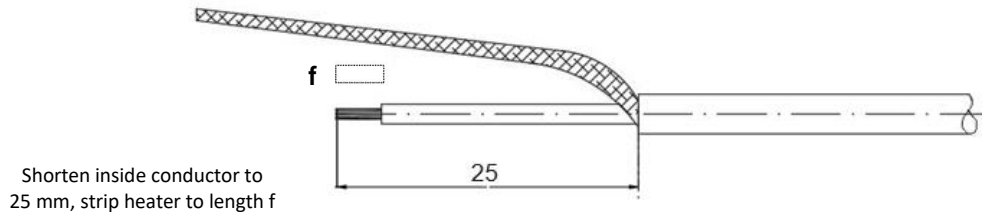
5.6

fan out protective braid  
with care and  
pull out conductor



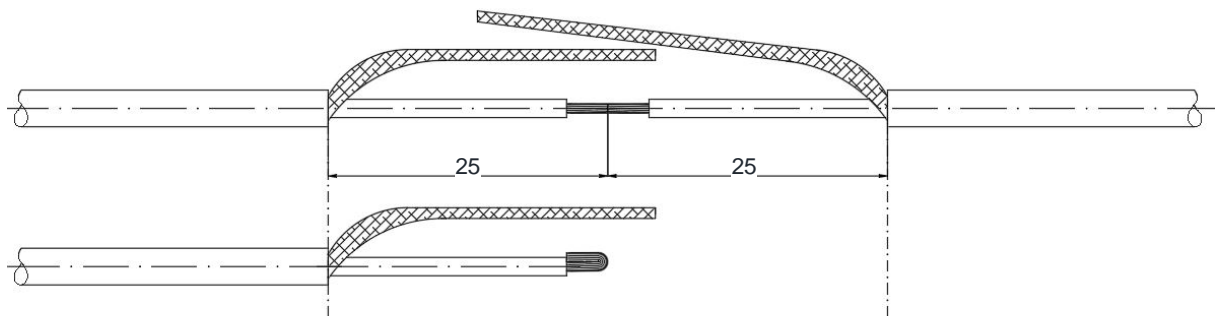
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## 5.7



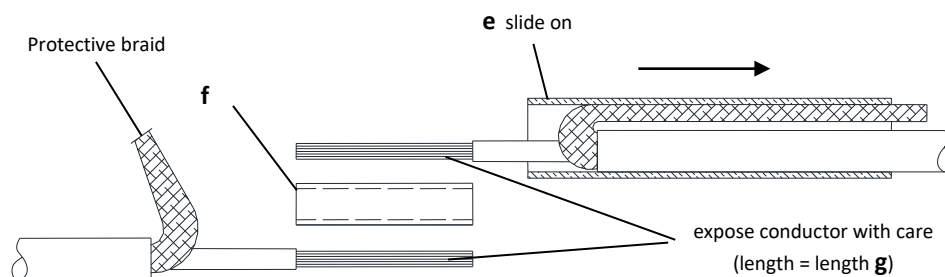
## 6. Crimp Connection

### 6.1 Check strip lengths

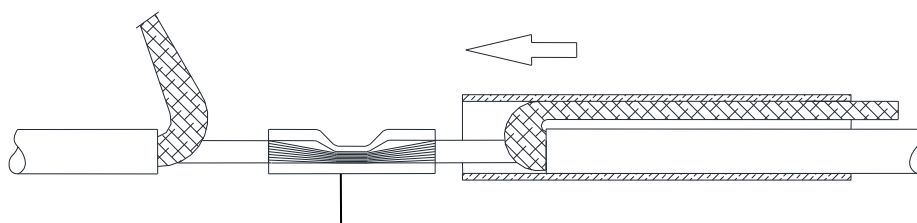


### 6.2


**f** (use **g** only when connecting two 2.5 mm<sup>2</sup> cold leads!)



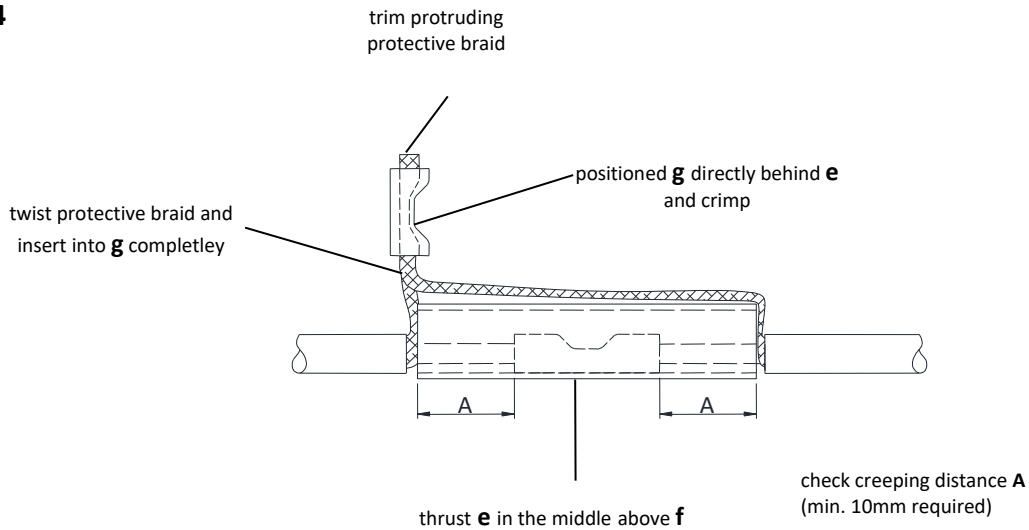
### 6.3



Insert exposed conductors into crimp connector completely. Ensure that all wires are inside the crimp connector. Press with tool suitable for crimps  $\varnothing$  3,2 mm (in the case of f) or  $\varnothing$  4mm (in the case of g) (e.g. Stocko WZ100 with die E66 or equivalent)

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## 6.4



## 7. Completion

