



**QAA – 143**  
**Operating Instructions Junction Box ELAK-R**

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**1. Technical Data**

<b>Ambient Temp. Range:</b>	<b>-45°C to + 50°C</b>
<b>Nominal Voltage:</b>	<b>550 V</b>
<b>Nominal Current:</b>	<b>28 A</b>
<b>Enclosure:</b>	<b>Polyamide (dia. approx. 150 mm, H approx. 125 mm)</b>
<b>IP-Rating:</b>	<b>IP 65</b>
<b>Weight:</b>	<b>approx. 750 g</b>
<b>Cable Entries:</b>	<b>Polyamide</b>

Size	Cable Dia. (mm)	Wrench (mm)	Torque (Nm)	
			Mounting Thread	Pressure Screw
M16	4-7	15	2,5	2 - 1,65
M20	5,5-13	24	3,75	3,5 - 2,5
M25	8 - 17	29	5	5 -3

**Terminals:**

Terminal Size (mm <sup>2</sup> )	Conductor Cross Section (mm <sup>2</sup> )	Current (A)
1,5	0,5 – 2,5	15
2,5	0,5 – 4	21
4	0,5 - 6	28

## QAA - 143

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**Attention:** the following steps should only be carried out by workers trained for the handling of electrical equipment.

### 2. **Receipt of Equipment:**

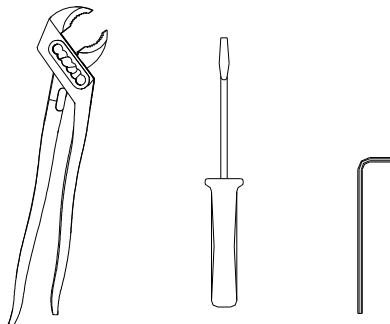
On receipt of the goods check the junction box and the accessories and compare with the data on the delivery note to ensure that the correct material was supplied.

### 3. **Storage:**

The goods have to be stored in a dry place at an ambient temperature of  $-0 \dots +50^{\circ}\text{C}$ .

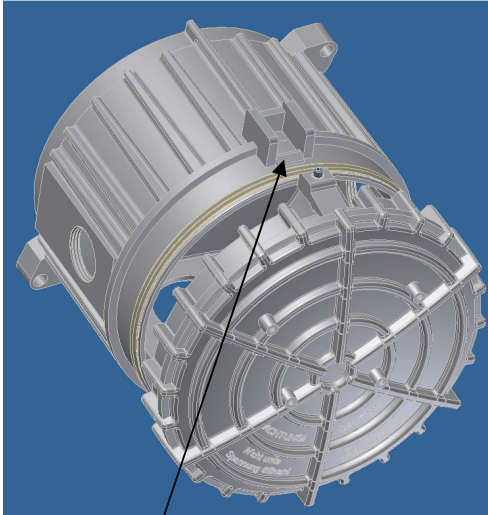
### 4. **Closing and opening the connection box**

**Recommended tools:**

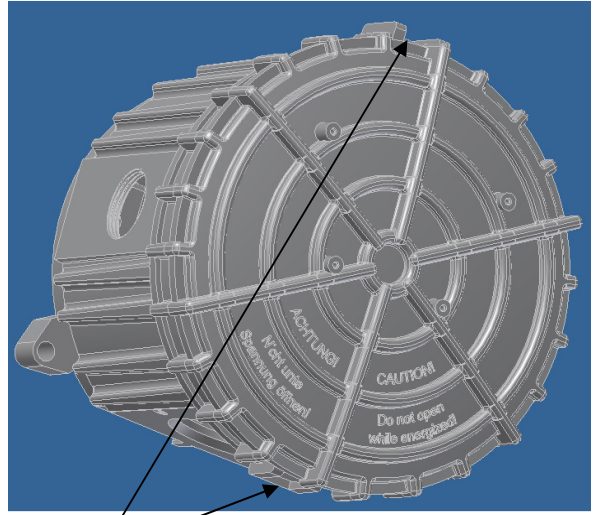


**QAA - 143**

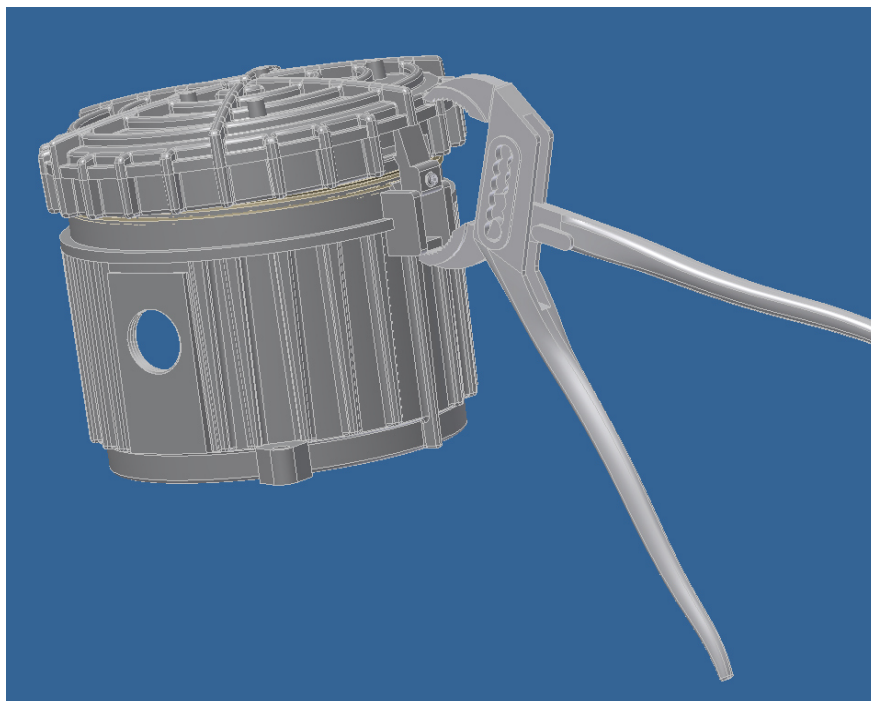
a) closing



Detent hook with hex socket grub screw has to be placed here



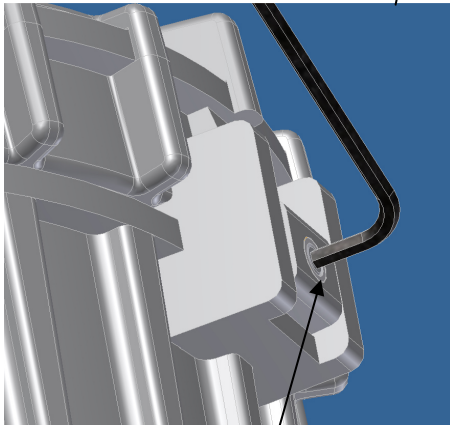
Press cover in the area of the detent hooks and...



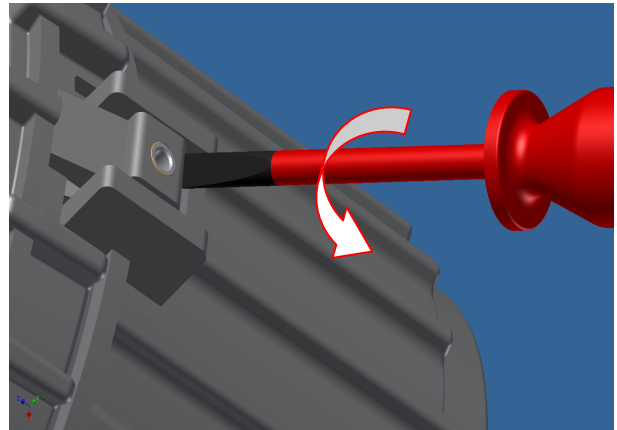
...engage both hooks with a „click”

**QAA - 143**

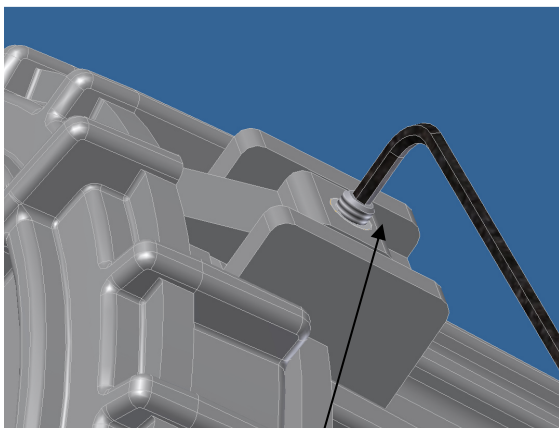
**b) opening**



turn the hex socket grub screw clockwise with a hex. socket screw key No. 2 until the detent hooks top is aligned with the racks



Put a slotted screw driver between detent hook and back base and slide hook some millimeters forward (by turning the screw driver)



turn the hex socket grub screw counter-clockwise with a hex. socket screw key No. 2 until it slightly protrudes from the hook



Take cover away (by means of screw driver if necessary)

## **5. Installation:**

(Installation of the ELAK-R designed with 42 mm hole : see Installation instruction „ELAK-RS“ QAA-113)

- choose the installation site carefully with respect to the mechanical withstand of enclosure and cable entries and with respect to the permitted ambient temperature range.
- secure the equipment to appropriate support
- fixed installation of all cables is required. They need to be secured outside the box as near as possible to the cable entry
- screws of unused terminals are to be tightened
- the seals of the cable entries must not be exchanged or interleaved
- entry threads may be reduced by a suitable reduction gland. Reduction glands must not be interleaved
- before installation of devices into unused threads it is to be verified that the threads are undamaged and clean and that the thread of the device is of the correct type
- All openings (cover, installation entries for cable entries, cable entries ) are to be closed tightly after connection of the cables. The torques given in chapter 1 „Technical Data“ are to be observed

**Caution:** excessive tightening of glands can compromise the IP rating!

- the lid of the junction box is prepared for the mounting of identification tags provided by the customer. Mounting screws 2.2x 6 mm are to be used for this purpose.

## **6. Testing:**

the below listed steps are to be followed after completion of the heating circuit installation:

- visual check of the junction box for possible mechanical damage. Damaged boxes must not be taken into operation and need to be exchanged
- check of the cover of the junction box and of the attached cable entries for tight fit and correct sealing. All holes must be closed by appropriate plugs or cable glands

## **7. Operation and Maintenance:**

- the local effective regulations regarding the operation of electrical equipment shall be observed
- operation is only permitted within the limits given in chapter 1 „Technical Data“ and on the label (Voltage, Current, Operating Temperature, Ambient Temperature, IP Rating)
- a visual check of junction box, cable entries and cables for integrity and tight fit is recommended in suitable intervals (depending on the operating and environmental conditions). If required, cable entries are to be tightened; damaged junction boxes or cable entries are to be replaced by experienced personnel

### **Attention:**

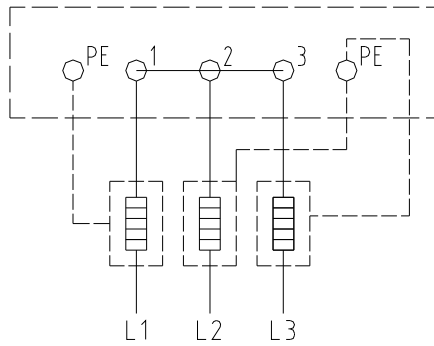
The junction box (and also the cable entries!) must not be opened while energized.

- if repair work is done on heated components, the junction box has to be protected against damages.
- after completion of repair works on heated components, the junction box has to be tested again according to chapter 6 “Testing”
- damaged junction boxes must not be operated

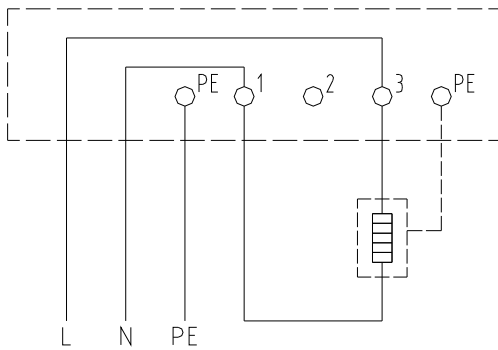
**QAA - 143**

**8. Wiring Diagrams (by Part Numbers):**

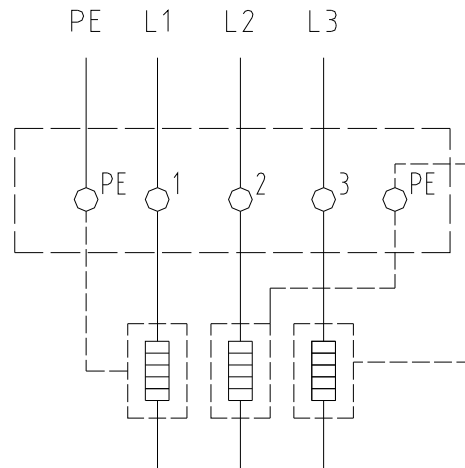
**0920051**



**0920052 (two phase)  
 0920053**

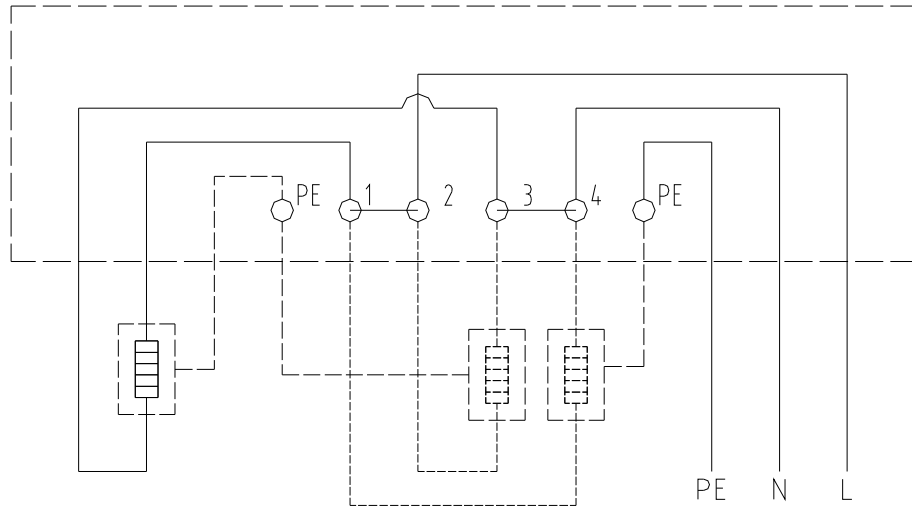


**0920052 (three phase)**



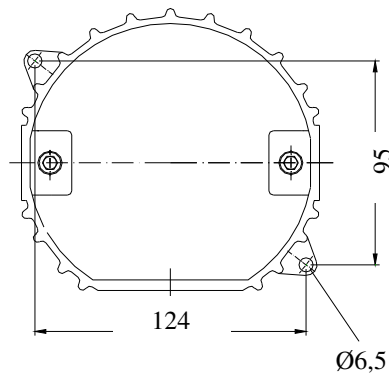
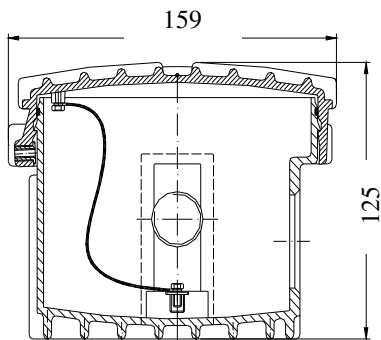
**QAA - 143**

**0920057**



**0920058** see installation instructions of the connected temperature sensors

**9. Dimensioned Drawings**



Space for plastic label by

