Motor operating device UEMC 40K8_for Sectos

- Innovative design for DA solutions
<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>General</td>
</tr>
<tr>
<td>004</td>
<td>Standards</td>
</tr>
<tr>
<td>005</td>
<td>Transport and storage</td>
</tr>
<tr>
<td>005</td>
<td>Construction</td>
</tr>
<tr>
<td>006</td>
<td>Installation</td>
</tr>
<tr>
<td>007</td>
<td>Electrical connection</td>
</tr>
<tr>
<td>007</td>
<td>Operation</td>
</tr>
<tr>
<td>008</td>
<td>Service</td>
</tr>
<tr>
<td>008</td>
<td>Spare parts</td>
</tr>
<tr>
<td>009</td>
<td>Technical details</td>
</tr>
<tr>
<td>010 – 014</td>
<td>Modules and accessories</td>
</tr>
<tr>
<td>015 – 016</td>
<td>Instruction for recycling the product</td>
</tr>
<tr>
<td>017 – 020</td>
<td>Alternative models</td>
</tr>
<tr>
<td>021 – 024</td>
<td>Dimension drawings</td>
</tr>
<tr>
<td>025 – 035</td>
<td>Circuit diagram</td>
</tr>
</tbody>
</table>
General

UEMC 40 K8 is a motor operating device mainly intended for operating the Sectos. The motor operating device will disengage from the switch-mechanism after each operation so that it is possible to operate the switch manually. Manual operation is realised by turning the shaft of the switch, using a hand operating device, or turning an operating level with a hook stick. If a separate hand operating device is used, it must not automatically lock the switch in the end positions.

Standards

The motor operating device complies with the following standards.
- IEC 265
- Voltage test 2 kV, 50 Hz, 1 min, except for the motor 1.5 kV
- VDE 0530 motor voltage test
Transport and storage

The motor operating device is normally delivered installed in the Sectos switch. If separately delivered, it is packed in a cardboard box. The type number is marked on the box. If the device is to be stored for a long period, it should be stored indoors in a dry area.

Construction

The motor operating device comprises of a motor, gear wheel, a screw gear and a lifting arm mechanism.

Material:
• Screw stainless steel
• Nut bronze
• Gear wheels bronze

The motor A-2 drives gear wheels A-3 and A-4. Gear wheel A-4 rotates screw A-6 which pulls nut A-5. The nut turns the lifting arm A-1, but disengages from the lifting arm after operation so that it is possible to operate the switch disconnector manually directly from the shaft. Position limit switches A-S1 and A-S2, break the control current and stop the motor after performing the operation.

A-1 Lifting arm
A-2 Motor
A-3 Gear wheel
A-4 Gear wheel
A-5 Nut with roller
A-6 Screw
A-7 Support
A-S1 Position limit switch
A-S2 Position limit switch
Installation

Important
Before starting the installation, check that the disconnector is isolated and earthed and that all electrical safety regulations and instructions have been followed.

A. Fitting the control box
Fit the control box if it has been delivered. The position of the control box is to be chosen so that the cabling to the box is as short as possible. This is important especially if the control voltage is 24 kV.

B. Fitting the motor control mechanism
The motor control mechanism is normally fitted to the disconnector if it is ordered at the same time. However if the motor control mechanism is to be fitted afterwards then read the following instructions.

C. Dismantling
• Operate the disconnector to the open position. Check the position indicator
• Mark the position of the control tube and operating lever and remove them from the disconnector
• Remove the mechanism box cover by removing the three screws. Open the cover carefully with a screwdriver and ensure that the seal is not damaged
• Remove the position indicator chain system. Refer to the disconnectors installation instructions or a separate instruction

D. Fitting the motor control mechanism
• Fit the motor control mechanism to the disconnectors axle so that the point of lifting arm B-2 is in a position so that dimension X is 10...15 mm

Note: The motor control mechanism does not have any fixing screws to tighten. The small play between the motor control mechanism and the limiting surface does not effect the operation of the mechanism.

• Re-fit the position indication chain system. Refer to the disconnector installation instructions
• Connect the wiring for the motor control mechanism into the socket. The wiring can be accessed by removing the socket fixing screws and pulling it slightly out. The numbering of the wiring is normally the same as for the plug numbering, but check the numbering from the respective circuit diagram
  • Fit the cover for the mechanisms box
  • Fit the control tube and operating lever observing the positioning marks made

E. Test operating
• First test operate by hand
• Then using the electrical controls test operate the unit. Ensure that the motor control mechanism drives the disconnector to the open and closed positions. Check that the disconnector can also be earthed with the manual operating lever if the unit is the three position device such as the NXB
• Check that the position indicator is functioning correctly
Electrical connection motor operating device

Type: UEMC 40 KB_/1
Circuit diagram: 31 UEMC 207
Includes: motor and limit switches.

Protective MCB
The use of a protective MCB in the supply circuit of the motor operating device is recommended. In order that the MCB will protect the motor against overload, the type is to be chosen for the respective voltage as detailed in chapter 11.9. If an operating box, or a separate control unit is included, the MCB is already connected to the circuit.

Operation

a) Motor control
The motor operating device can be electrically operated by remote control or by using I and 0 push buttons. The motor operating device engages automatically when starting.

b) Manual control
The motor operating device is mechanically disengaged in both the open and closed positions. Manual operation is realised by turning the shaft of the switch, using a hand operating device, or turning a operating level with a hook stick.

c) Motorized operation after manual operation
After manual operation e.g. open, the power unit is not in synch with the disconnector and needs an extra electrical operations open – close for resetting. After two manual operations e.g. open–close, the dis-connector is in synch and does not need this double operation.

d) Earthing
The Sectos switch type NXB_ can be operated to the earthed positions only by manual operating. When the motor operating device is in the earthed position, it is mechanically disengaged and can not perform any operations even if the motor should start.
Service

The motor operating device is service free under its estimated life time, but it is recommended to grease following points at revision or repairing works.

- Screw A-6
- Lifting arm sliding surfaces A-1
- Structure slides A-7
- Gear wheels A-3 and A-4

Grease: ISOFLEX TOPAS NCA 52

If other types of lubrication are used, they must be of good quality, and suitable for use in the same range of temperatures as the operating device.

A-1 Lifting arm
A-2 Motor
A-3 Gear wheel
A-4 Gear wheel
A-5 Nut with roller
A-6 Screw
A-7 Support
A-S1 Position limit switch
A-S2 Position limit switch

Spare parts

Typical spare parts:

<table>
<thead>
<tr>
<th>Spare parts</th>
<th>Type</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor+gear wheel</td>
<td>M1</td>
<td>2YJ63101-24VDC</td>
</tr>
<tr>
<td>Diode</td>
<td></td>
<td>BY255</td>
</tr>
<tr>
<td>Rectifier</td>
<td>V5</td>
<td>• REC BR 3510</td>
</tr>
<tr>
<td>Limit switch</td>
<td>S1, S2</td>
<td>• OMR Z-15GW22-B</td>
</tr>
<tr>
<td>Contactor</td>
<td>KA1+KA2</td>
<td>• ABB VBC6-30-01</td>
</tr>
</tbody>
</table>
### Technical details

<table>
<thead>
<tr>
<th>Weight</th>
<th>4 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating time</td>
<td>Opening 2 s</td>
</tr>
<tr>
<td></td>
<td>Closing 2 s</td>
</tr>
<tr>
<td>Operating angle</td>
<td>110°</td>
</tr>
<tr>
<td>Operating torque</td>
<td>150 Nm</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-40...+55 °C</td>
</tr>
<tr>
<td>Motor</td>
<td>Rectified DC</td>
</tr>
<tr>
<td>Contactors power requirement</td>
<td>3 W</td>
</tr>
<tr>
<td>Shortest control pulse</td>
<td>0.1 s</td>
</tr>
<tr>
<td>Operating voltage range</td>
<td>0.85...1.1 x Un</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Motor operating device</th>
<th>Rated current ¹</th>
<th>Max. current ²</th>
<th>Protective MCB type</th>
</tr>
</thead>
<tbody>
<tr>
<td>UEMC 40 K8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– 24 VDC/</td>
<td>10 A</td>
<td>40 A</td>
<td>S201-K10</td>
</tr>
<tr>
<td>– 48 VDC/</td>
<td>5 A</td>
<td>20 A</td>
<td>S202-K4</td>
</tr>
<tr>
<td>– 60 VDC/</td>
<td>4 A</td>
<td>17 A</td>
<td>S202-K4</td>
</tr>
<tr>
<td>– 110 VDC/</td>
<td>2 A</td>
<td>9 A</td>
<td>S202-K2</td>
</tr>
<tr>
<td>– 125 VDC/</td>
<td>2 A</td>
<td>9 A</td>
<td>S202-K2</td>
</tr>
<tr>
<td>– 220 VDC/</td>
<td>1 A</td>
<td>4.5 A</td>
<td>S201M-K1</td>
</tr>
</tbody>
</table>

For AC supplies, use rectified motor current.

¹ Rated current is the current under normal working conditions.

² Max. current is the current value for a stalled load from the motor operating device.
## Modules and accessories

### 11.1 Motor operating device

<table>
<thead>
<tr>
<th>Type</th>
<th>Circuit diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>UEMC 40 K8 – 24 VDC/1</td>
<td>31 UEMC 207</td>
</tr>
<tr>
<td>UEMC 40 K8 – 48 VDC/1</td>
<td></td>
</tr>
<tr>
<td>UEMC 40 K8 – 60 VDC/1</td>
<td></td>
</tr>
<tr>
<td>UEMC 40 K8 – 110 VDC/1</td>
<td></td>
</tr>
<tr>
<td>UEMC 40 K8 – 125 VDC/1</td>
<td></td>
</tr>
<tr>
<td>UEMC 40 K8 – 220 VDC/1</td>
<td></td>
</tr>
</tbody>
</table>

Includes: Motor

Limit switches dimension drawing: 135 UEMC 23

### 11.2 Operating box type: UEMC–A1

**Material:** Stainless steel AISI 304

**Degree of protection:** IP 55

**Includes:**
- Mounting plate
- Self-regulating heater 45 W, 110...250 V AC/DC
- Relay panel
- Pole fixing element

**Dimension drawing:** 135 UEMC 24

**Space for:**
- Batteries
- Charger
- 1 or 2 operating circuits when batteries and charger are included
- Max. 4 operating circuits for models without batteries and charger
11.3 Operating box type: UEMC–A2
Material: Stainless steel AISI 304
Degree of protection: IP 55
Includes:
- Mounting plate
- Self-regulating heater 45 W, 110...250 V AC/DC
- Relay panel
- Pole fixing element
Dimension drawing: 135 UEMC 25
Space for:
- Batteries
- Charger
- 1 or 2 operating circuits
- Remote control equipment

11.4 Operating box type: UEMC–A3
Material: Stainless steel AISI 304
Degree of protection: IP 55
Includes:
- Mounting plate
- Self-regulating heater 45 W, 110...250 V AC/DC
- Relay panel
- Pole fixing element
Dimension drawing: 135 UEMC 26
Space for:
- Batteries
- Charger
- 1 to 4 operating circuits
- Remote control equipment
11.5 Batteries
The batteries are hermetically sealed, with suspension electrolytes, maintenance-free and usable in any position.

Manufacturer: Panasonic

When ordering batteries from ABB, please use the type designations mentioned in points a...e.

The battery capacity is dependent on what type of radio and remote control system is to be supplied, and how long the station is to operate after battery charging voltage is removed.

Without other loading a 24 V-12 Ah battery can be used to operate a motor operating device more than 8 hours without needing recharging.

a. Type: 12Ah-24 V
   Includes: 2 pcs. batteries connected in series
   Circuit diagram: 31 UEMC281.1

b. Type: 20Ah-24 V
   Includes: 2 pcs. batteries connected in series
   Circuit diagram: 31 UEMC281.1

c. Type: 24Ah-24 V
   Includes: 2 pcs. batteries connected in series
   Circuit diagram: 31 UEMC281.1

11.6 Operating circuit

a. Main circuit

<table>
<thead>
<tr>
<th>Type</th>
<th>Circuit diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZJ 261</td>
<td>31 UEMC 261</td>
</tr>
</tbody>
</table>

Includes: MCB: s
Selector switch
Suitable for: operating box UEMC_A_
Note X10: terminals

b. Operating circuit with contactors

<table>
<thead>
<tr>
<th>Type</th>
<th>Circuit diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>UEZJ – C1</td>
<td>31 UEMC 271</td>
</tr>
<tr>
<td>– 24 VDC/1</td>
<td>31 UEMC 272</td>
</tr>
<tr>
<td>– 60 VDC/1</td>
<td>“</td>
</tr>
<tr>
<td>– 110 VDC/1</td>
<td>“</td>
</tr>
<tr>
<td>– 125 VDC/1</td>
<td>“</td>
</tr>
<tr>
<td>– 220 VDC/1</td>
<td>“</td>
</tr>
</tbody>
</table>

Includes: Contactors
MCB push buttons
Suitable for: Operating box UEMC–A_
Note: The operating box can include one or more operating circuits.
X11: terminals for motor no: 1
X12: terminals for motor no: 2
X13: terminals for motor no: 3
X14: terminals for motor no: 4
11.7 Control unit

<table>
<thead>
<tr>
<th>Type</th>
<th>Circuit diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>UEZJ 1 – 24 VDC/4</td>
<td>31 UEMC 230</td>
</tr>
<tr>
<td>UEZJ 1 – 48 VDC/4</td>
<td>31 UEMC 231</td>
</tr>
<tr>
<td>UEZJ 1 – 60 VDC/4</td>
<td></td>
</tr>
<tr>
<td>UEZJ 1 – 110 VDC/4</td>
<td></td>
</tr>
<tr>
<td>UEZJ 1 – 125 VDC/4</td>
<td></td>
</tr>
<tr>
<td>UEZJ 1 – 220 VDC/4</td>
<td></td>
</tr>
<tr>
<td>UEZJ 1 – 110 VAC/4</td>
<td></td>
</tr>
<tr>
<td>UEZJ 1 – 230 VAC/4</td>
<td></td>
</tr>
</tbody>
</table>

11.8 Protective MCB

Used to connect the supply circuit and protect the motor against overloading.

In order that the MCB will protect the motor against overload, the type is to be chosen for the respective voltage as detailed below.

<table>
<thead>
<tr>
<th>Type</th>
<th>For motor voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>S201-K10</td>
<td>24 VDC</td>
</tr>
<tr>
<td>S202-K4</td>
<td>48 VDC</td>
</tr>
<tr>
<td>S202-K4</td>
<td>60 VDC</td>
</tr>
<tr>
<td>S202-K2</td>
<td>110 VDC</td>
</tr>
<tr>
<td>S202-K2</td>
<td>125 VDC</td>
</tr>
<tr>
<td>S201M-K1DC</td>
<td>220 VDC</td>
</tr>
</tbody>
</table>
11.9 Auxiliary contact for MCB
Includes: 1NO/1NC contacts

11.10 Control push buttons
Type: UEZJ 3
Includes: – I-button, with text CLOSE
– O-button, with text OPEN
– On/off selector switch, with text REMOTE
ON/OFF

11.11 Rectifier –REC BR 3510
Used for AC supplies.
Circuit diagram: 31 UEMC 281.5

11.12 Lifting hook
Type: UEMZ 1010

11.13 Thermostat
Type: UEMZ 895
Recommended setting values: +20 °
Circuit diagram: 31 UEMC 282

11.14 Indicator lights
Type: UEZJ-HR1/24V (red)
UEZJ-HG1/24V (green)
Circuit diagram: 31 UEMC 282

11.15 Alarm circuit
a. Type: UEMZ 896
Circuit diagram: 31 UEMC 282
b. Type: UEMC 897
Circuit diagram: 31 UEMC 282
**Instruction for recycling the product**

12.1 Introduction

This document includes instructions for recycling the product UEMC 40 K8. The document includes which material that are used in the products and handling instructions when the product is taking out of use.

The environment regulation varies from country to country and develops fast. Due to this it is recommended to contact the local customers and inform them about how to handle when the product is taking out of use.

Together with this document it should be given information to the local customers about returning of the product that is taking out of use.

ABB Xiamen Electrical Controlgear Co., Ltd. can give more information.

Information that is in this document is not part of an extract or deal, it supposes to be the most correct and trustful and can be changed without notice. The publisher will not take any responsibility for the consequences.

12.2 The products casing

The product is cased in card, paper and foampiastic. The card and the paper can be recycled normally. The foampiastic can be i.e. used for energy production in a facility build for this purpose.

To avoid pollution when making unnecessary transports the manufacturer will not accept used package. Recycling has to be arranged locally according to local instructions. Recycling is recommended when it saves rawmaterial and reduces the waste.

12.3 Material of the product

Information about the construction and main parts of the operating device can be found in point 4 construction. The steel parts are normally surface treated (electrical gaivanized). This does not affect the recycling.

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Material</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lifting arm</td>
<td>Steel</td>
<td>0.3 kg</td>
</tr>
<tr>
<td>2</td>
<td>Motor</td>
<td>Several ¹</td>
<td>1.7 kg</td>
</tr>
<tr>
<td>3</td>
<td>Gear wheel</td>
<td>Bronze</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Gear wheel</td>
<td>Bronze</td>
<td>0.4 kg</td>
</tr>
<tr>
<td>5</td>
<td>Nut</td>
<td>Bronze</td>
<td>0.2 kg</td>
</tr>
<tr>
<td>6</td>
<td>Screw</td>
<td>Stainless steel</td>
<td>0.2 kg</td>
</tr>
<tr>
<td>7</td>
<td>Frame</td>
<td>Stainless steel</td>
<td>1.3 kg</td>
</tr>
<tr>
<td>S1</td>
<td>Limit switch</td>
<td>Several ²</td>
<td></td>
</tr>
<tr>
<td>S2</td>
<td>Limit switch</td>
<td>Several ²</td>
<td></td>
</tr>
</tbody>
</table>

¹ The motors are mainly made of materials that are easily to recycle, such as iron, copper and sink. Their recycling is also economically.

The weight for the really light parts are not printed, the operating device also contains screws, nuts, washes and rivets of steel and also some parts that not are important when recycling.

Over 50% of the weight of the product are big metal parts, which are easy to recycle (3.1 metal parts and box). The motor is over 43 % of the weight and it is also easy to recycle. Also some of the accessories are metal parts that are easy to recycle.

12.3.2 Accessories and spare parts

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Material</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control cabinet ³</td>
<td>Several ³</td>
<td>Depending on the model</td>
</tr>
<tr>
<td>2</td>
<td>Relayunit</td>
<td>Several</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>M.c.b.</td>
<td>Several</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Auxiliary contact</td>
<td>for m.c.b.</td>
<td>Several</td>
</tr>
<tr>
<td>5</td>
<td>Control push buttons</td>
<td>Several</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Rectifier</td>
<td>Several</td>
<td></td>
</tr>
</tbody>
</table>

³ Mostly of stainless steel.
⁴) See installation and operating manual for the control cabinet 34 UEMC 46.
12.4 Recycling the product
To deal with junk requires in most countries permission and you have to get permission for your own company.

Information about local junkyards can be obtained from the agency of environment.

A product that is not in use anymore can be taking care of in two alternatively ways. The product can be manually demolished or be crushed mechanically.

Before the process all parts that are containing problem waste have to be removed and send to a facility made for this purpose.

Information about the facilities can be obtained from the local agency of environment.

12.4.1 Manual demolition
The product can be demolished manually and the parts are sorted depending of what material they are containing according this table.

- Steel *
- Bronze *
- Plastic
- Cablejunk – other

The metal parts are easy to recycle the others accor-ding to locally arrangements. No especially tools are needed for the demolition.

*) More information, see 12.4.3.1 Directory over eventual damaging material and problem waste.

12.4.2 Mechanical crushing
In this process the whole product will be crushed to small metal pieces and will be sorted automatically. Components containing dangerous material must be re-moved before the crushing (for more information see 12.4.3.1 Directory over eventual damaging material and problem waste).

12.4.3 Eventual damaging material and problem waste
Definition and regulation for damaging material varies from country to country and changes all the time. Materials used in the manufacturing are typical for electrically- and electronically products. Some are classed as problem waste, if they can be found in ministry of environments waste-and problem waste catalogue. It is based on the EU regulations. The directory over different parts material content is based on EACEM (European Association of Consumer Electronics Manu-facturers) directory and problem waste catalogue. In the note column it is marked if the part is problem waste.

12.4.3.1 Directory over eventual damaging material and problem waste

<table>
<thead>
<tr>
<th>Part</th>
<th>Damaging material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Steel</td>
<td>Grease *)</td>
<td>Problem waste</td>
</tr>
<tr>
<td>Bronze</td>
<td>Grease *)</td>
<td>Problem waste</td>
</tr>
<tr>
<td>Cables</td>
<td>PVC **)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

*) Parts mentioned under point 8 service are greased with grease (Isoflex NCA 52).

**) Does not inhibit granulating in suitable facility.

More information about the grease can be ordered from the manufacturer.

Internet: www.klueber.com

12.4.4 Possible reclycling method
The mentioned way to recycle is one possible method but there are also many other methods.

- Steel Recycles as material
- Bronze Recycles as material
- Plastic Burns for energy production
- Cables To cable granulating facility
- Problem waste To problem waste facility
- Other Burns or is transported to a dumping ground
Alternative models

ALT 1

Main circuit
- UEZJ 261
- 31 UEMC 261

Control circuit
- UEZJ-C1 - 24 VDC/1
- UEZJ-C1 - 48 VDC/1
- UEZJ-C - 60 VDC/1
- UEZJ-C1 - 110 VDC/1
- UEZJ-C1 - 125 VDC/1
- UEZJ-C1 - 220 VDC/1

Max. 2 pcs
- 31 UEMC 271
- 31 UEMC 272

Batteries
- 12 Ah 12 V
- 20 Ah 12 V
- 24 Ah 12 V

- 31 UEMC 281

Charger
- Input AC110 V - AC220 V
- Output 24 VDC - 48 VDC - 110 VDC - 220 VDC

- 31 UEMC 281

Motor operating device
- UEMC 40 KB - 24 VDC/1
- UEMC 40 KB - 48 VDC/1
- UEMC 40 KB - 60 VDC/1
- UEMC 40 KB - 110 VDC/1
- UEMC 40 KB - 125 VDC/1
- UEMC 40 KB - 220 VDC/1

- 31 UEMC 207

Operating box
- UEMC-A1

Sectos
- Switch-disconnector

NXA_A2
NXA_A3
NXA_A4
NXB_

Accessories
- Switch-disconnector

UEMC 40 K8 – 24 VDC/1
UEMC 40 K8 – 48 VDC/1
UEMC 40 K8 – 60 VDC/1
UEMC 40 K8 – 110 VDC/1
UEMC 40 K8 – 125 VDC/1
UEMC 40 K8 – 220 VDC/1

UEMC 261
Motor operating device

Sectos Switch-disconnector

Operating box

Main circuit

Control circuit

Maximum 2 pcs

Batteries

Charger

Input: AC110 V; AC220 V
Output: 24 VDC; 48 VDC; 110 VDC; 220 VDC

Type

Circuit diagram

Accessories
ALT 3

11.1
Sectos Switch-disconnector
NXB

11.1
Motor operating device
UEMC 40 KB – 24 VDC/1

31 UEMC 207

11.4
Operating box
UEMC–A3

Main circuit
UEZJ 261

31 UEMC 261

Control circuit
UEZJ–C1 – 24 VDC/1

Max. 4 pcs

31 UEMC 271

11.5
Batteries
12 Ah 12 V
20 Ah 12 V
24 Ah 12 V

31 UEMC 281

11.6
Charger
Input AC110 V - AC220 V
Output 24 VDC - 48 VDC - 110 VDC - 220 VDC

31 UEMC 281
**Motor Operating Device UEMC 40K8**

**Sectors Switch-disconnector**

**NXB**

**Motor Operating Device**
- UEMC 40 K8 – 24 VDC/1
- UEMC 40 K8 – 48 VDC/1
- UEMC 40 K8 – 60 VDC/1
- UEMC 40 K8 – 110 VDC/1
- UEMC 40 K8 – 125 VDC/1
- UEMC 40 K8 – 220 VDC/1

**Control Circuit**
- UEZJ 1 – 24 VDC/4
- UEZJ 1 – 48 VDC/4
- UEZJ 1 – 60 VDC/4
- UEZJ 1 – 110 VDC/4
- UEZJ 1 – 125 VDC/4
- UEZJ 1 – 220 VDC/4
- UEZJ 1 – 110 VAC/4
- UEZJ 1 – 230 VAC/4

**Protective MCB**
- STO S271 K8 Un = 24 VDC
- STO S272 K4 Un = 48 VDC
- STO S272 K4 Un = 60 VDC
- STO S272 K2 Un = 110 VDC
- STO S272 K2 Un = 125 VDC
- STO S282 UCK1 Un = 220 VDC
- STO S272 K2 Un = 110 VAC
- STO S272 K1 Un = 230 VAC

**Aux. Contacts for MCB**
- STO S2-5/H

**Control Push Buttons**
- UEZJ 3
Dimension drawing

135 UEMC 23 A

Motor operating device  UEMC 40 K8_/1
135 UEMC 24 B

Operating box                   UEMC-A1

3xPg16+1xPg21
3xPk16+1xPk21
3xPr22.5+1xPr28.3
135 UEMC 25 B

Operating box

UEMC-A2
135 UEMC 26 D

Operating box                 UEMC-A3
Ø 22
30 20
845
47.5 78.5
500
30
50
75
800
95
330
3xPg16+1xPg21
3xPk16+1xPk21
3xPr22.5+1xPr28.3

*) Free space
Open door

456*)
317*)
315*)
Circuit diagram

31 NXB 7 C

M1 = Motor operating device
S7 = Gas density switch
S8 = Auxiliary contact
S9 = Interlocking switch
X3 = Plug in connector
X11 = Terminal blocks for motor No. 1
X12 = Terminal blocks for motor No. 2
X13 = Terminal blocks for motor No. 3
X14 = Terminal blocks for motor No. 4
31 UEMC 207 F

Motor operating device UEMC 40 K 8

- 24 VDC/1
- 48 VDC/1
- 60 VDC/1
- 110 VDC/1
- 125 VDC/1
- 220 VDC/1

K1, K2 = Operating contactos
1) S9 = Interlocking switch

Option, see instruction for the switch-disconnector.

31 UEMC 230 B

Control unit UEZJ 1

- 24 VDC/4

F1 = MCB
K1, K2 = Operating contactos
31 UEMC 231 B

Control unit UEZJ 1
- 48 VDC/4
- 60 VDC/4
- 110 VDC/4
- 125 VDC/4
- 220 VDC/4
- 110 VAC/4
- 230 VAC/4

F1 = MCB
K1, K2 = Operating contactors
K3 = Relay
V5 = Rectifier only for AC
R1 = Resistor for 110-230 V
31 UEMC 261 B

For 12...24 VDC

Main circuit  UEZJ 261
Peruskylent  Grundkoppling
F7 = MCB for heater and charger
F6 = MCB for remote control
S6 = Remote control selector
R1 = Heater

* G1 = Charger
* G2,G3 = Batteries
* To be ordered separately, see 31 UEMC 281
31 UEMC 262 B

For 48...220 VDC

Main circuit  UEZJ 262
F7  = MCB for heater and charger
F6  = MCB for remote control
S6  = Remote control selector
R1  = Heater

* G1       = Charger
* G2,G3 = Batteries
* To be ordered separately, see 31 UEMC 281
31 UEMC 271 A

Control circuit  UEMC - C1  •  24 VDC/1

F1  = MCB for motor  
S45  = Push buttons 
K1, K2  = Operating contactors 

*)  X11: for motor No. 1  
X12 : for motor No. 2  
X13 : for motor No. 3  
X14 : for motor No. 4
31 UEMC 272 A

Control circuit  UEZJ - C1

- 48 VDC/1
- 60 VDC/1
- 110 VDC/1
- 125 VDC/1
- 220 VDC/1

F1  = MCB for motor
S5  = Push buttons
K1, K2 = Operating contactors
K3  = Relay
R3  = Resistor for 110-230 V

*) X11 : for motor No. 1
X12 : for motor No. 2
X13 : for motor No. 3
X14 : for motor No. 4
31 UEMC 281 C

1. (+)
   X10: 8
   G2
   G3
   X10: 10
   (-)

2. (+)
   X10: 8
   G2
   X10: 10
   (-)

4. (L1)
   X10: 4
   G1
   F10
   X10: 6
   (N)
   7
   (+)

5. (L1)
   X10: 4
   V5
   X10: 6
   (N)
   9
   (-)

G1 = Charger
G2, G3 = Batteries
V5 = Rectifier
F10 = Fuse
31 UEMC 282 B

F7 = MCB for power supply
F6 = MCB for remote control
S6 = Control selector
F1 = MCB for motor
1) Motor No. 1
2) Motor No. 2
3) Motor No. 3
4) Motor No. 4
R1 = Heater

Thermostat

Indicator light, red

Indicator light, green

Remote of local

Alarm circuit
31 UEMC 291 B

For 12...24 VDC

F1 = MCB for motor
S45 = Push buttons
K1, K2 = Operating contactors
M1 = Motor
S1 = Limit switch
S9 = Interlocking contact
F7 = MCB for heater and charger
F6 = MCB for remote control
S6 = Remote control selector
G1 = Charger
G2, G3 = Batteries
R1 = Heater
31 UEMC 292 B

- F1 = MCB for motor
- S45 = Push buttons
- K1, K2 = Operating contactors
- M1 = Motor
- S1 = Limit switch
- S9 = Interlocking contact
- F7 = MCB for heater and charger
- S6 = MCB for remote control
- K3 = Relay
- R1 = Heater

For a detailed explanation of the circuit diagram, please refer to the accompanying text.