To use MCBs, fuses, contactors etc. which give off arcs in potentially hazardous areas, they must be integrated in Ex-d distributions.

For just this purpose, Eaton’s Crouse-Hinds Business offers a distribution system comprising flameproof aluminium enclosures and Ex-e steel terminal boxes with a polyester powder coating suited for tropical and marine climates. Seven enclosure sizes can be combined into large distributions allowing integration of built-in components up to 630 A and 690 V.

To simplify the integration of large installations, bus-bar systems for up to 630 A are used.

Customer-specified distributions are planned individually, taking explosion-protection requirements into account.

Explosion-protected signal lamps, indicating and control components are built into connection and bus-bar boxes, as required. Alternatively, these boxes can be supplied as separate terminal and control boxes. CEAG explosion-protected metal distributions fulfil all the requirements specified by the chemical, petrochemical and offshore industries.

- Modular design
- Rated current up to 630 A
- Generously dimensioned terminal compartment
- Suited for tropical and maritime climates through powder coating
- Cable entries via removable flanges
- Main switch can be actuated from outside
- Metal parts without finish are corrosion resistant
- Explosion group IIC
The modular design provides an economical and clearly arranged method of putting together distributions on the unit construction system using connection and bus bar boxes in the type of protection “Increased Safety”. The individual flameproof distribution enclosures are joined together via the flange openings of the Ex-e connection boxes and the bus bar boxes. It is also possible to put together completely flameproof distributions by using flameproof cable glands.

The flameproof enclosures are also available as empty enclosures with and without Ex-e connection boxes as well as with and without main switches for equipping by the customer. In this case, please note that national standards require a special inspection by an authorized expert. Also single or multi-wire bushings with connectors can be mounted on the distributions, if required. Alternatively, these leads can be connected to a terminal rail.

Any conventional industrial switchgear that gives off arcs or sparks during operation can be built into these flameproof enclosures. The power dissipation must not exceed the values stated in the PTB certificate.

The various circuits can be connected quickly and economically via a bus-bar system.

If required, individually encapsulated control and indicating units, such as pushbuttons, control switches or Ex-e measuring instruments as well as Ex-i digital indicating instruments can be built into the Ex-e connection or bus-bar boxes.

The enclosures can be combined into large distribution system on standardised wall mounting or free-standing frameworks. The frameworks come in standardized sizes to accommodate the enclosure modules and can be extended as required.

For outdoor installations, we recommend canopies to protect the distribution system from the sun and rain. Smaller distributions are mounted on flat or U-rails. All enclosures are made of hot-dip galvanised steel.
Ex d Light alloy enclosure for motor starter

<table>
<thead>
<tr>
<th>Marking acc. to 94/9/EC</th>
<th>II 2 G Ex de ia(ib) [ia(ib)] IIIC/IIB T6/T5/T4 Gb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marking acc. to IECEx</td>
<td>Ex de IIC T6, T5, T4 Gb Ex de IIB T6, T5, T4 Gb</td>
</tr>
<tr>
<td>EC-Type Examination Certificate</td>
<td>PTB 99 ATEX 1057</td>
</tr>
<tr>
<td>IECEx-Certificate of Conformity</td>
<td>IECEx PTB 12.0026</td>
</tr>
</tbody>
</table>

Permissible ambient temperature:
-20 °C up to +40 °C
-55 °C up to +55 °C (option)

Rated voltage:
690 V

Rated current:
630 A

Protection class:
I

Connecting terminals:
up to 300 mm²

Degree of protection acc. to EN 60529:
IP54 (IP66 on request)

Weight:
see ordering details

Enclosure material:
aluminium die-cast housing

Enclosure colour:
pebbles grey, cover dark grey

Ordering details

<table>
<thead>
<tr>
<th>Content Motor capacity to AC 3</th>
<th>Type</th>
<th>Main switch</th>
<th>Cable glands</th>
<th>Weight approx.</th>
<th>Degree of protection nach EN 60529</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct circuit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 kW</td>
<td>1</td>
<td>25 A</td>
<td>3 x M25</td>
<td>14.5 kg</td>
<td>IP54</td>
<td>EXKO 71 5000 F 0000</td>
</tr>
<tr>
<td>15 kW</td>
<td>2</td>
<td>25 A</td>
<td>2 x M32 / 1 x M25</td>
<td>24.5 kg</td>
<td>IP54</td>
<td>EXKO 71 5000 H 0000</td>
</tr>
<tr>
<td>22 kW</td>
<td>4</td>
<td>40 A</td>
<td>2 x M40 / 1 x M25</td>
<td>37.5 kg</td>
<td>IP54</td>
<td>EXKO 71 5000 K 0000</td>
</tr>
<tr>
<td>Reversing circuit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 kW</td>
<td>1</td>
<td>25 A</td>
<td>3 x M25</td>
<td>14.5 kg</td>
<td>IP54</td>
<td>EXKO 71 5100 F 0000</td>
</tr>
<tr>
<td>15 kW</td>
<td>2</td>
<td>25 A</td>
<td>2 x M32 / 1 x M25</td>
<td>24.5 kg</td>
<td>IP54</td>
<td>EXKO 71 5100 H 0000</td>
</tr>
<tr>
<td>22 kW</td>
<td>4</td>
<td>40 A</td>
<td>2 x M40 / 1 x M25</td>
<td>39.5 kg</td>
<td>IP54</td>
<td>EXKO 71 5100 K 0000</td>
</tr>
<tr>
<td>Star-delta starter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.5 kW</td>
<td>2</td>
<td>40 A</td>
<td>4 x M25</td>
<td>25 kg</td>
<td>IP54</td>
<td>EXKO 71 5200 B 0000</td>
</tr>
<tr>
<td>12.5 kW</td>
<td>2</td>
<td>40 A</td>
<td>4 x M25</td>
<td>25 kg</td>
<td>IP54</td>
<td>EXKO 71 5200 D 0000</td>
</tr>
<tr>
<td>18.5 kW</td>
<td>4</td>
<td>40 A</td>
<td>3 x M32 / 1 x M25</td>
<td>37 kg</td>
<td>IP54</td>
<td>EXKO 71 5200 F 0000</td>
</tr>
<tr>
<td>30.0 kW</td>
<td>4</td>
<td>63 A</td>
<td>3 x M32 / 1 x M25</td>
<td>39 kg</td>
<td>IP54</td>
<td>EXKO 71 5200 H 0000</td>
</tr>
<tr>
<td>37.0 kW</td>
<td>5</td>
<td>100 A</td>
<td>1 x M40 / 2 x M32</td>
<td>64 kg</td>
<td>IP54</td>
<td>EXKO 71 5200 K 0000</td>
</tr>
<tr>
<td>55.0 kW</td>
<td>5</td>
<td>100 A</td>
<td>1 x M25</td>
<td>64 kg</td>
<td>IP54</td>
<td>EXKO 71 5200 M 0000</td>
</tr>
</tbody>
</table>

The motor starters are completely wired for connection by customer.
Further switching capacities up to 630 A on request.
Please state motor operating voltage and rated current in your order.
Dimension drawing | Wiring diagram

Type 1

Type 2

Type 4

Type 5

X = fixing dimension

Direct online starter

Reversing starter

Star-delta starter

Dimensions in mm
### Technical data

**Ex d light alloy empty enclosures**

| Marking accd. to 94/9/EC | II 2 G Ex de ia/ib [ia/ib] II  
II 2 D Ex tD A21 IP66 |
| EC-Type Examination Certificate | PTB 98 ATEX 1054U |
| IECEx-Certificate of Conformity | IECEx PTB 12.0026 |
| Marking accd. to IECEx | Ex de IIC / IIB Gb / Ex tb III C Db  
Ex de IIB T6; T5; T4 Gb |
| Permissible ambient temperature | –20 °C up to +40 °C  
–55 °C up to +60 °C (option) |
| Rated voltage | 690 V |
| Rated current | 630 A |
| Connecting terminals | up to 300 mm² |
| Degree of protection accd. to EN 60529 | IP54 (IP66 on request) |
| Weight | see ordering details |
| Enclosure material | aluminium die-cast housing |
| Enclosure colour | coating suited for tropical and marine climates finish polyester coating in RAL 7032/7022 |

### Ordering details

<table>
<thead>
<tr>
<th>Content</th>
<th>Power dissipation</th>
<th>Rated current</th>
<th>Weight</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex d light alloy empty enclosures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Size 1 | T6 80 W  
T5 120 W | T6 125 A | 8 kg | on request |
| Size 2 | T6 150 W  
T5 210 W | T6 260 A | 16 kg | on request |
| Size 4 | T6 210 W  
T5 280 W | T6 400 A | 23 kg | on request |
| Size 5 | T6 300 W  
T5 420 W | T6 400 A | 40 kg | on request |
| Size 7 | T6 300 W  
T5 420 W | T6 400 A | 55 kg | on request |
| Size 6 | T6 700 W  
T5 975 W | T6 630 A | 195 kg | on request |
Dimension drawing

Size 1

Size 2

Size 4

Size 5

Size 7

X = fixing dimension

Dimensions in mm
## Technical data

### Sheet steel-connection box
- **Marking accd. to 94/9/EC**
  - II 2 G Ex de ia/ib [ia/ib] IIC T4 - T6
  - II 2 D Ex tD A21 IP66 T80 °C, T95 °C, T100 °C
- **EC-Type Examination Certificate**
  - PTB 00 ATEX 1073
- **Permissible ambient temperature**
  - –55 °C up to +55 °C
- **Rated voltage**
  - 690 V
- **Rated current**
  - 630 A
- **Connecting terminals**
  - up to 240 mm²
- **Degree of protection accd. to EN 60529**
  - IP65 (IP66 on request)
- **Enclosure material**
  - steel
- **Enclosure colour**
  - finish polyester powder coating in RAL 7032

### Sheet steel-bus-bar box
- **Marking accd. to 94/9/EC**
  - II 2 G Ex de ia/ib [ia/ib] IIC T4 - T6
  - II 2 D Ex tD A21 IP66 T80 °C, T95 °C, T100 °C
- **EC-Type Examination Certificate**
  - PTB 00 ATEX 1073
- **Permissible ambient temperature**
  - –55 °C up to +55 °C
- **Rated voltage**
  - 690 V
- **Rated current**
  - 250 A, 400 A, 630 A
- **Rated short-circuit current**
  - 35 kA, 53 kA, 59.2 kA
- **Rated thermal short-time current**
  - 9.4 kA (1s), 10.7 kA (1s), 13.2 kA (1s)
- **Terminal cross section**
  - up to 240 mm²
- **Degree of protection accd. to EN 60529**
  - IP65 (IP66 on request)
- **Enclosure material**
  - steel
- **Enclosure colour**
  - finish polyester powder coating in RAL 7032

## Ordering details

<table>
<thead>
<tr>
<th>Content</th>
<th>Max. no. of built-in control units</th>
<th>Module size</th>
<th>Length of terminal rail</th>
<th>Weight</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sheet steel-connection box</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AK 1-2</td>
<td>4</td>
<td>1</td>
<td>1 x 190 mm</td>
<td>4.3 kg</td>
<td>on request</td>
</tr>
<tr>
<td>AK 2-2</td>
<td>15</td>
<td>2</td>
<td>2 x 300 mm</td>
<td>7.0 kg</td>
<td>on request</td>
</tr>
<tr>
<td>AK 4-1</td>
<td>15</td>
<td>4</td>
<td>3 x 300 mm</td>
<td>9.5 kg</td>
<td>on request</td>
</tr>
<tr>
<td>AK 6-1</td>
<td>21</td>
<td>5</td>
<td>3 x 410 mm</td>
<td>11.5 kg</td>
<td>on request</td>
</tr>
<tr>
<td>AK 6-1</td>
<td>52</td>
<td>6</td>
<td>3 x 630 mm</td>
<td>23.5 kg</td>
<td>on request</td>
</tr>
<tr>
<td><strong>Sheet steel-bus-bar box</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSK 1</td>
<td>20</td>
<td>1</td>
<td>1 x 295 mm</td>
<td>11.0 kg</td>
<td>on request</td>
</tr>
<tr>
<td>SSK 2</td>
<td>28</td>
<td>2</td>
<td>2 x 405 mm</td>
<td>15.0 kg</td>
<td>on request</td>
</tr>
<tr>
<td>SSK 3</td>
<td>52</td>
<td>3</td>
<td>2 x 625 mm</td>
<td>23.0 kg</td>
<td>on request</td>
</tr>
<tr>
<td>SSK 4</td>
<td>72</td>
<td>4</td>
<td>2 x 845 mm</td>
<td>31.0 kg</td>
<td>on request</td>
</tr>
</tbody>
</table>
## Dimension drawing

<table>
<thead>
<tr>
<th>Size</th>
<th>Sheet steel-connection box</th>
<th>Sheet steel-bus-bar box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size 1</td>
<td><img src="image1" alt="Sheet steel-connection box" /></td>
<td><img src="image2" alt="Sheet steel-bus-bar box" /></td>
</tr>
<tr>
<td>Size 2</td>
<td><img src="image3" alt="Sheet steel-connection box" /></td>
<td><img src="image4" alt="Sheet steel-bus-bar box" /></td>
</tr>
<tr>
<td>Size 3</td>
<td><img src="image5" alt="Sheet steel-connection box" /></td>
<td><img src="image6" alt="Sheet steel-bus-bar box" /></td>
</tr>
<tr>
<td>Size 4</td>
<td><img src="image7" alt="Sheet steel-connection box" /></td>
<td><img src="image8" alt="Sheet steel-bus-bar box" /></td>
</tr>
<tr>
<td>Size 5</td>
<td><img src="image9" alt="Sheet steel-connection box" /></td>
<td><img src="image10" alt="Sheet steel-bus-bar box" /></td>
</tr>
<tr>
<td>Size 6</td>
<td><img src="image11" alt="Sheet steel-connection box" /></td>
<td><img src="image12" alt="Sheet steel-bus-bar box" /></td>
</tr>
</tbody>
</table>

Dimensions in mm:

- **Size 1**: 215x126mm
- **Size 2**: 325x126mm
- **Size 3**: 307x252mm
- **Size 4**: 435x325mm
- **Size 5**: 450x307mm
- **Size 6**: 655x252mm

*Note: Dimensions are approximate and may vary slightly.*