Managing DC Energy

Dynamic Brake-Manager

DBM 4.0
Dynamic Brake-Manager
DBM 4.0

The device acts as a brake chopper in DC links, which means that the DBM 4.0 switches onto a safe brake resistor when the set voltage is exceeded, thereby diverting braking energy from the system in a highly dynamic manner. The DBM 4.0 can be attached to individual drive controllers as well as multi-axis systems or larger DC networks. Its key features are integration capacity, performance and communication skills. Depending on the application, the Dynamic Brake Manager DBM 4.0 can be provided as an individual device or in conjunction with a safe brake resistor, also provided from Koch.

Intelligent brake unit
for medium output
> for all drive controllers with direct DC-BUS access
> integrated self-monitoring
> controllable

Environmental conditions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>-10°C to +65°C (transport, storage)</td>
</tr>
<tr>
<td></td>
<td>0°C to +40°C (operation)</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>&lt;95% (transport, storage)</td>
</tr>
<tr>
<td></td>
<td>&lt;85% (operation)</td>
</tr>
<tr>
<td>Type of cooling</td>
<td>air cooling (convection)</td>
</tr>
<tr>
<td>Protection class of the housing</td>
<td>IP20</td>
</tr>
<tr>
<td>Degree of contamination</td>
<td></td>
</tr>
<tr>
<td>of installation location</td>
<td></td>
</tr>
</tbody>
</table>

Technical Data DBM 4.0

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum brake power</td>
<td>28.8 kW up to 5% duty cycle (120 s cycle)</td>
</tr>
<tr>
<td>Max. operating voltage</td>
<td>800 VDC</td>
</tr>
<tr>
<td>Dimensions mm H x W x D</td>
<td>340 x 102 x 187 mm</td>
</tr>
<tr>
<td>Digital I/Os</td>
<td>+</td>
</tr>
<tr>
<td>Bus connection</td>
<td>RS422/RS485</td>
</tr>
<tr>
<td>Weight</td>
<td>ca. 6.0 kg</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Depending on the application

Performance/Duty cycle-diagram
Dynamic Brake-Manager DBM 4.0

Brake power at cycle time t = 120 s
Easy connection
The DBM 4.0 acts as a brake unit in conjunction with a suitable safe brake resistor in a DC link.
The device is connected at the front panel.
1. R+ and R- ports under “Load” for connection of the braking resistor
2. The ports under “Drive” for connection of the plus and minus poles of the DC Link of the drive controller
3. Digital interface 4. RS422/RS485 port 5. RS422/RS485 port

Adaptability
The flexible DBM 4.0 can be run with various single resistors or combinations, depending on the application. Should one DBM 4.0 not be enough, a parallel connection is an option. Thanks to its communication skills, important information such as status, performance, and DC link voltage can be read at any time, even in BUS systems.

Brake example with safe brake resistor B3H3.6100-1000IP65

Performance/Duty cycle–diagram DBM 4.0 in conjunction with safe brake resistor B3H3.6100-1000IP65

The safe brake resistor is selected according to the performance requirement and the duty cycle. Koch customers can expect optimal solutions for all operating points and corresponding DBM 4.0 devices. The safe brake resistor can be placed where waste heat is most easily dissipated.
Managing DC Energy

Active Energy Management Solutions and Safe Brake Resistors for Electric Drives

We offer:

- **Tested product quality**
- **Certified processes**
  - we undergo regular inspections by third parties
- **Individual application support**
  - owing to our modular system we can offer more than 60,000 solutions
- **Machine-specific implementation**
  - we match our products with your machines
- **High reaction rate**
  - we provide you with a suitable offer in the shortest possible time
- **Short delivery times**
  - all components are in stock
- **On-time deliveries every time**
  - we deliver on schedule in optimal lot sizes
- **Reliable partner**
  - we strive for long-term business relationships
- **Direct customer relationships**
  - www.brakeenergy.com

We look forward to hearing from you!

KOCH

Michael Koch GmbH, Zum Grenzgraben 28, D-76698 Ubstadt-Weiher
Phone (+49) 7251 / 96 26 20, Fax (+49) 7251 / 96 26 21
www.brakeenergy.com, mail@brakeenergy.com