Linear motor LM 136MM

**Technical data:** size LMx136MM-xxxL-056S

**Characteristics and nominal values:**

The conditions for the following nominal values are:

- DC bus voltage of 560 V (400 V_C)
- ambient temperature of 40 °C
- maximum winding temperature of 180 °C (In.CL.H)
- liquid cooling with water-antifreeze

<table>
<thead>
<tr>
<th>Motor length LM x stack length L</th>
<th>Unit</th>
<th>136-050L</th>
<th>136-100L</th>
<th>272-100L</th>
<th>272-400L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force constant k_Flx</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage constant k_Vlx</td>
<td>V/m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back emf U_Blx</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminal inductance L_T</td>
<td>mH</td>
<td>39.8</td>
<td>19.9</td>
<td>10.2</td>
<td>2.54</td>
</tr>
<tr>
<td>Terminal resistance R_T</td>
<td>Ω</td>
<td>4.26</td>
<td>2.13</td>
<td>1.11</td>
<td>0.27</td>
</tr>
<tr>
<td>Maximum power P_max</td>
<td>kW</td>
<td>2.2</td>
<td>4.09</td>
<td>8.48</td>
<td>33.7</td>
</tr>
<tr>
<td>Maximum force F_max</td>
<td>N</td>
<td>709</td>
<td>1.641</td>
<td>2.827</td>
<td>11.256</td>
</tr>
<tr>
<td>Maximum current I_max</td>
<td>A</td>
<td>13</td>
<td>25</td>
<td>51</td>
<td>104</td>
</tr>
<tr>
<td>Thermal resistance R_T</td>
<td>K/W</td>
<td>0.270</td>
<td>0.135</td>
<td>0.065</td>
<td>0.017</td>
</tr>
</tbody>
</table>

Continuous stall force F_c

| No-load speed v_n | m/s | 7.2      | 14.3     | 28.4     | 114      |
| Width of poles T | mm | 17       |          |          |          |
| Rated force F_r | N/m | 353      | 779      | 1.056    | 4.826    |
| Rated current I_r | A  | 5.3      | 11.7     | 16       | 73       |
| Rated speed v_r | m/s | 6        | 8        | 8        | 7        |
| Weight active part | m | 1.85     | 3.7      | 7.4      | 26.9     |
| Weight of mover | m | 15.5     | 1        | 2        | 8        |
| Dynamic α | m²/P |          |          |          | 1.80     |
| Radial force F_r | N | ±300     | ±600     | ±1200    | ±4200    |

**Motor characteristic:** size LMx136MM-xxxL-056S

**Options of customization:**

- voltage range from 5 – 750 V
- demand of speed, current and power
- stator frequency up to 2400 Hz
- temperature range -55 °C – +260 °C
- explosion proof increased safety
- vacuum 10⁻⁵ mbar, inert gas atmosphere
- radhard, dose 3 - 10⁻⁶ to 10⁻⁸ ΜGy-Si
- cooling: liquid, fan, air, oil
- certification on demand UL, Ex, CE
- motor with housing, encoder and brake

**Dimensions of the frameless motor:**

- with potted stator
- user manual available on request
- option: customized dimensions