**Planetary Gearheads**

20 Nm

For combination with
DC-Micromotors
Brushless DC-Motors
Motion Control Systems

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**Series 38A**

<table>
<thead>
<tr>
<th>Housing material</th>
<th>Geartrain material</th>
<th>38A</th>
</tr>
</thead>
<tbody>
<tr>
<td>steel</td>
<td>steel</td>
<td></td>
</tr>
</tbody>
</table>

Recommended max. input speed for:
- continuous operation: 4 500 min⁻¹
- at no-load: ≤ 0,5 °

Bearings on output shaft:
- ball bearings

Shaft load, max.:
- radial (14,5 mm from mounting face): ≤ 200 N
- axial: ≤ 490 N

Shaft press fit force, max.:
- radial: ≤ 0,02 mm
- axial: ≤ 0,3 mm

Shaft play:
- radial (14,5 mm from mounting face): ≤ 0,02 mm
- axial: ≤ 0,3 mm

Operating temperature range: - 25 ... + 90 °C

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### Technical data

<table>
<thead>
<tr>
<th>Number of gear stages</th>
<th>Continuous torque [Nm]</th>
<th>Intermittent torque [Nm]</th>
<th>Mass without motor, ca. [g]</th>
<th>Efficiency, max. [%]</th>
<th>Reduction ratio (exact)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>9,6</td>
<td>190</td>
<td>96</td>
<td>4:1</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>32</td>
<td>260</td>
<td>94</td>
<td>12:1</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>29</td>
<td>320</td>
<td>94</td>
<td>25:1</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>32</td>
<td>330</td>
<td>90</td>
<td>36:1</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>29</td>
<td>340</td>
<td>80</td>
<td>200:1</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>32</td>
<td>410</td>
<td>80</td>
<td>240:1</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>29</td>
<td></td>
<td></td>
<td>1 600:1</td>
</tr>
</tbody>
</table>

L2 [mm] = length without motor
L1 [mm] = length with motor

<table>
<thead>
<tr>
<th>Orientation with respect to motor terminals not defined</th>
</tr>
</thead>
<tbody>
<tr>
<td>4x M3 5 deep</td>
</tr>
<tr>
<td>+0,3[A]</td>
</tr>
</tbody>
</table>

For more combinations see table. Example of combination with 3863...CR.

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**Scale reduced**

- Flat key DIN 6885 A3x3x18
- DIN 332-DS M3 9 deep

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Specifications subject to change without notice.

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For notes on technical data and lifetime performance refer to "Technical Information".

Edition 2019

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