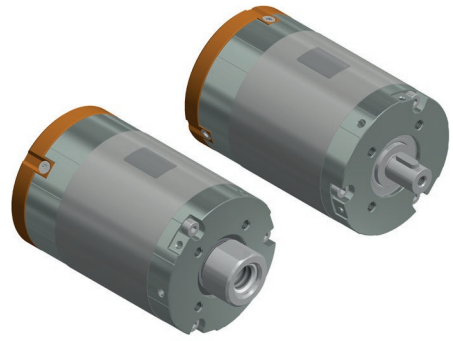


t-Rex 3206 (long version, focus torque)
I-65-86-L36 S2



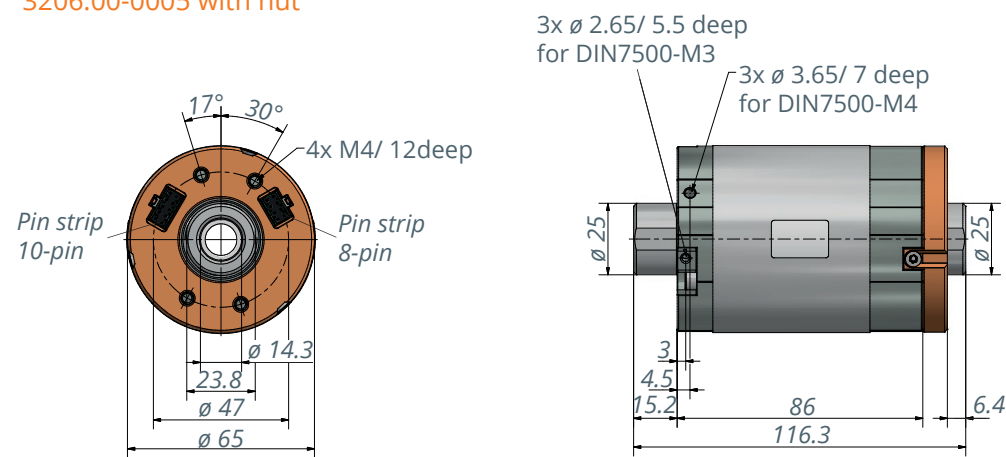
Description

14-pole BLDC motor with high-performance neodymium magnets and three digital Hall sensors to detect the rotor position. The electrical connections are designed as a plug-in system. Additional power electronics are required to operate the motor. The design of the motor with a hollow shaft allows the output on both sides.

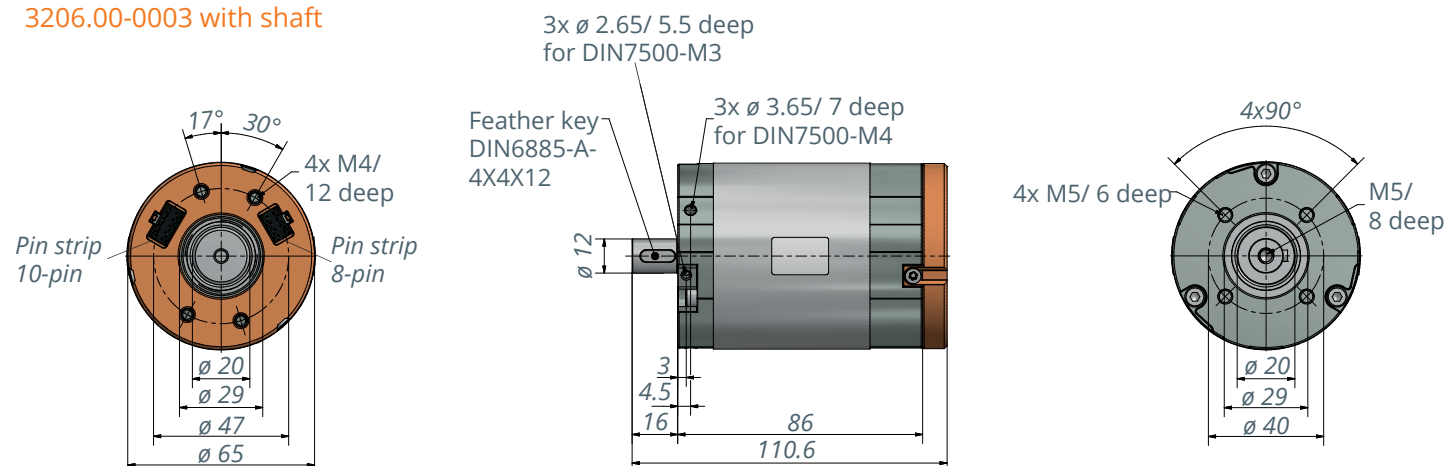
Special features

- Designed with **focus on max. torque**
- Enormous performance density – 3 times stronger than motors of comparable size
- High overload resistance
- Ideally suited as direct drive, or generator for gearless applications
- Special winding upon request
- Design and manufacture of motor to specified operating point is possible

3206.00-0005 with nut



3206.00-0003 with shaft



t-Rex 3206 I-65-86 L36 S2 DH	3206.00-0005/ 3206.00-0003		
Rated voltage	24 VDC	36 VDC	48 VDC
Rated current	3.6 A	3.6 A	3.4 A
Rated torque	1.3 Nm	1.25 Nm	1.2 Nm
Rated speed	507 rpm	817 rpm	1123 rpm
Shaft power (output)	68 W	107 W	140 W
Max. efficiency	84 %	86 %	87 %
Idle speed	655 rpm	970 rpm	1306 rpm
No-load current	0.3 A	0.3 A	0.35 A
Stall torque	6,7 Nm	8,6 Nm	8,6 Nm
Starting current at idle speed	20 A	25 A	24 A
Torque constant	0.335 Nm/A	0.344 Nm/A	0.358 Nm/A
Speed constant	27 rpm/V	27 rpm/V	27 rpm/V

Motor parameters

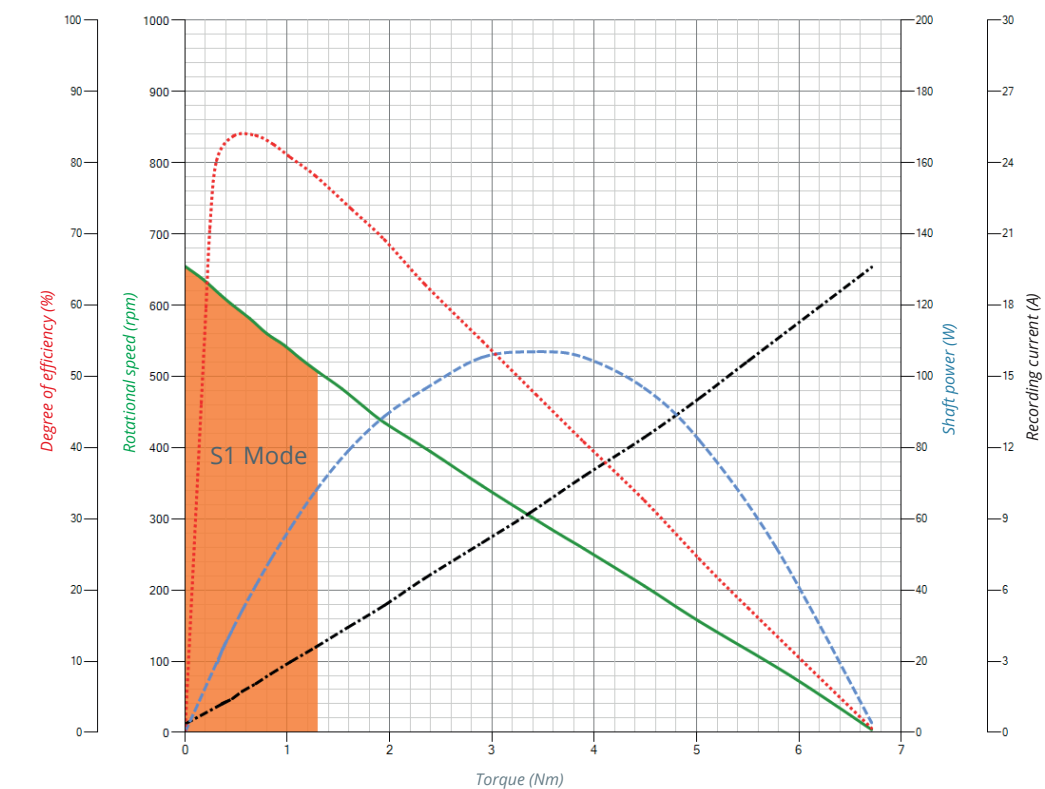
<i>Terminal resistance (phase to phase)</i>	121 mOhm
<i>Terminal inductance (phase to phase)</i>	916 µH
<i>Rotor inertia</i>	104 kg* mm²
<i>Number of poles</i>	14
<i>Interconnection of the motor</i>	Star
<i>Number of coils per phase</i>	2
<i>Interconnection of coils</i>	2 Series
<i>Direction of rotation</i>	bidirectional

Note: Max. ambient temperature = 40 °C, controller-specific
At the nominal point (TU = 20°C), controller-specific

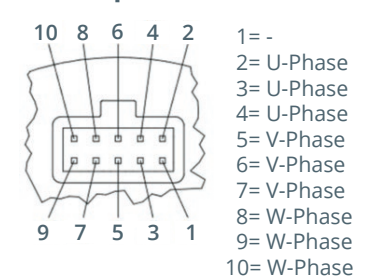
Motor cable approx. 1.5 m

Item number: 3200.53-05

Motor characteristics at 24 V

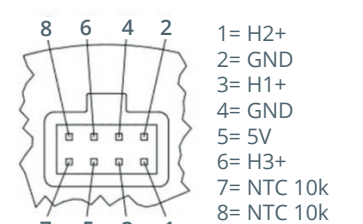


Motor phases



Socket strip RM 2.54 / 10 PIN
W+P 3491-10

Hall-sensors



Socket strip RM 2.54 / 8 PIN
W+P 3491-08

Digital Hall-sensors

Supply of sensors: 5 V DC $\pm 10\%$ / Power consumption: $< 70\text{ mA}$

Output signals of sensors: „single ended“ TTL 5 V output

Signal structure: The Hall sensors have a 120° phase shift to each other. Due to the 14-pole design the

Signal frequency is seven times higher than the speed

Temperature sensor: NTC 10k B-value 3650 K