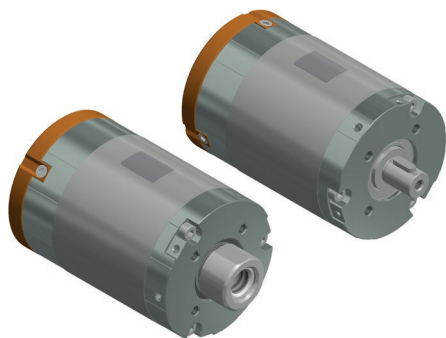


t-Rex 3206 (long version, focus speed)

I-65-86-H36 S2



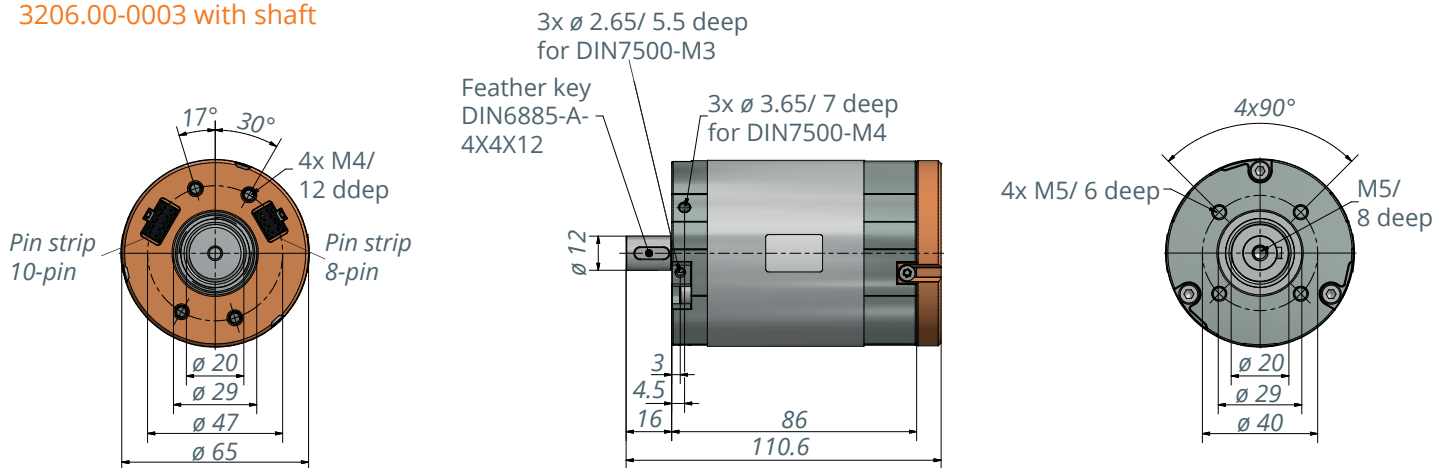
Description

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. speed**
- 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

3206.00-0003 with shaft



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

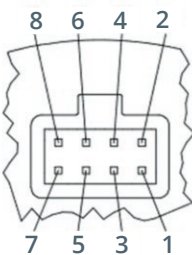
Signal structure

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

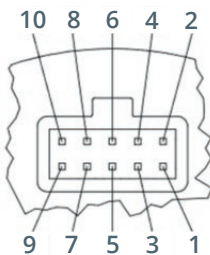
Hall-sensors



- 1= H2+
- 2= GND
- 3= H1+
- 4= GND
- 5= 5V
- 6= H3+
- 7= NTC 10K
- 8= NTC 10K

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

Motor phases



- 1= -
- 2= U-Phase
- 3= U-Phase
- 4= U-Phase
- 5= V-Phase
- 6= V-Phase
- 7= V-Phase
- 8= W-Phase
- 9= W-Phase
- 10= W-Phase

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

t-Rex 3206 I-65-86 L36 S2 DH	3206.00-0004		
Rated voltage	24 VDC	36 VDC	48 VDC
Rated current	7.2 A	6.5 A	5.8 A
Rated torque	1.3 Nm	1.15 Nm	1 Nm
Rated speed	1100 rpm	1730 rpm	2360 rpm
Shaft power (output)	150 W	208 W	248 W
Max. efficiency	88 %	90 %	89 %
Idle speed	1300 rpm	1950 rpm	2600 rpm
No-load current	0.4 A	0.6 A	0.6 A
Stall torque	7 Nm	6 Nm	5 Nm
Starting current at idle speed	38 A	31 A	26 A
Torque constant	0.183 Nm/A	0.195 Nm/A	0.192 Nm/A
Speed constant	54 rpm/V	54 rpm/V	54 rpm/V

Motor parameters

Terminal resistance (phase to phase)	0.25 Ohm
Terminal inductance (phase to phase)	372 μH
Rotor inertia	104 kg* mm ²
Number of poles	14
Interconnection of the motor	Triangle
Number of coils per phase	2
Interconnection of coils	2 Series
Direction of rotation	bidirectional

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

Motor characteristics at 24 V

Motor cable approx. 1.5 m Item number: 3200.53-05

