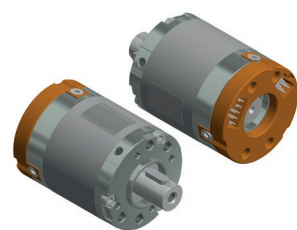


t-Rex 3200 (short version, focus torque)

I-44-47-L41 S2



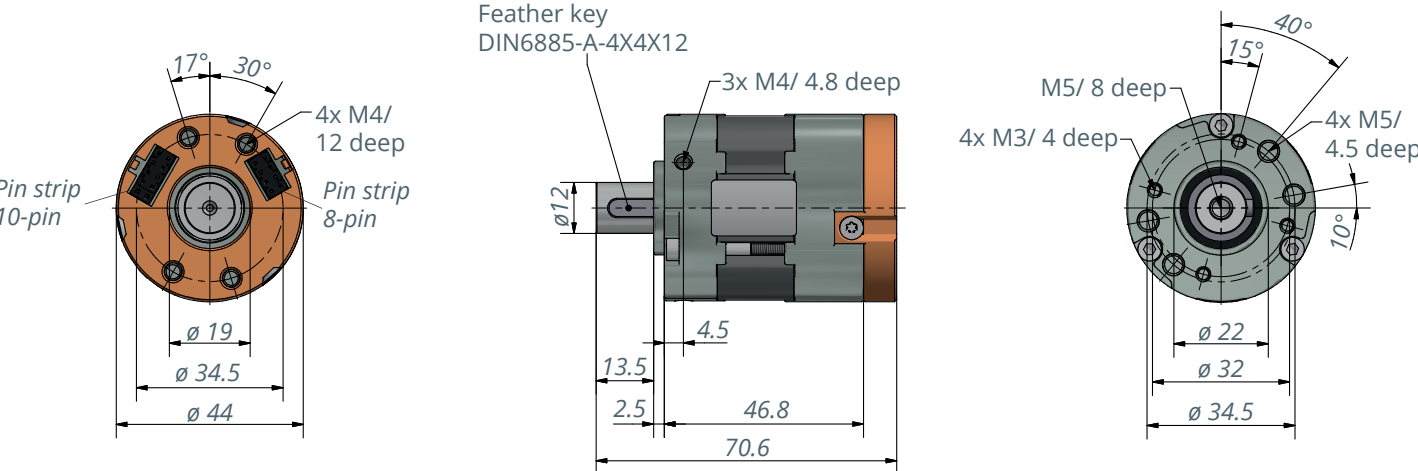
Description

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. Motor design with a hollow shaft is also available upon request. This allows the implementation of output on both sides.

Special features

- Designed with **focus on 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

3200.00-3000 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

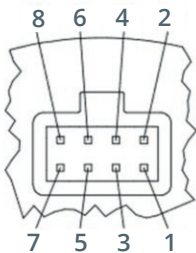
Signal structure

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

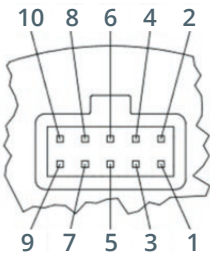
Hall-sensors



- 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 3200-I-44-47 L41 S2 DH	3200.00-3000		
Rated voltage	24 VDC	36 VDC	48 VDC
Rated current	2.6 A	2.4 A	2.2 A
Rated torque	0.2 Nm	0.18 Nm	0.15 Nm
Rated speed	2000 rpm	3250 rpm	4664 rpm
Shaft power (output)	41 W	62 W	74 W
Max. efficiency	70 %	72 %	72 %
Idle speed	2700 rpm	4090 rpm	5480 rpm
No-load current	0.4 A	0.45 A	0.45 A
Stall torque	1.0 Nm	1.3 Nm	1.5 Nm
Starting current at idle speed	14 A	18 A	20 A
Torque constant	0.077 Nm/A	0.073 Nm/A	0.073 Nm/A
Speed constant	113 rpm/V	114 rpm/V	114 rpm/V

Motor parameters

Terminal resistance (phase to phase)	1.09 Ohm
Terminal inductance (phase to phase)	98 μH
Rotor inertia	125 $\text{kg}^* \text{mm}^2$
Number of poles	14
Interconnection of the motor	Star
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 ($T_U = 20^\circ\text{C}$), controller-specific

Motor characteristics at 24 V

Motor cable approx. 1.5 m

Item number: 3200.53-05

