

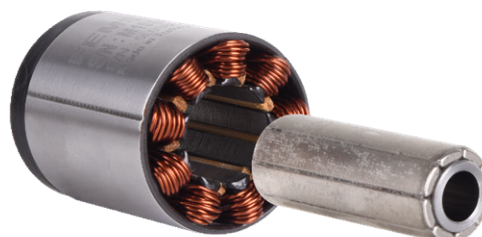


Powerful & Compact

Thanking to state-of-the art magnetic designs, Femsan's L and C series Frameless BLDC Motors delivers high torque density, low cogging and low stator & rotor mass in a thermally optimized structure. Direct drive technology provides long life and simple installation to today's design engineers. This product group is delivered as frameless kit (rotor and stator sets) and offer precision control of speed, accuracy and position in machines that rely on complex motion.

Features

- Robust mechanic structure and low rotor inertia enable perfect control for dynamic axes.
- Compatible with wide range of drives and controllers.
- Optimized hollow shaft size for easy routing of system elements.
- Maintenance free



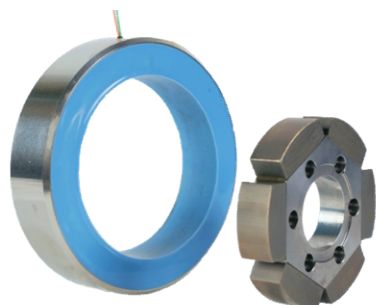
Applications

- Robotics
- Machine Tools
- Weapon Stations
- Sight Systems
- Scanning & Printing
- Gimbal Sensors
- Rotary Tables
- Tracking Systems

Various diameters, supply voltage and speed options are available upon request

Why Femsan?

Qualification is one of the major advantage of Femsan products. All frameless motors are qualified for harsh environment conditions. **Customization** is an expert area for Femsan Motor. In the case of non-standard requests, we will be happy to offer proper technical solution. **Options** are almost infinite at Femsan. Pre-Aligned latching hall effect sensors, sleeve over rotor magnets, epoxy encapsulation to stator windings, thermal sensor among phases, laser marked armatures are applicable options.



L A T - Limited Angle Torque Motors & Torque Motors

Besides the Frameless BLDC Motors, Femsan range also covers Limited Angle Torque Motors and Torque Motors.

Ask for details from sales@femsan.com



Part Number	L 028 04	L 038 06	L 040 08	C 06 05 1	L 036 01	
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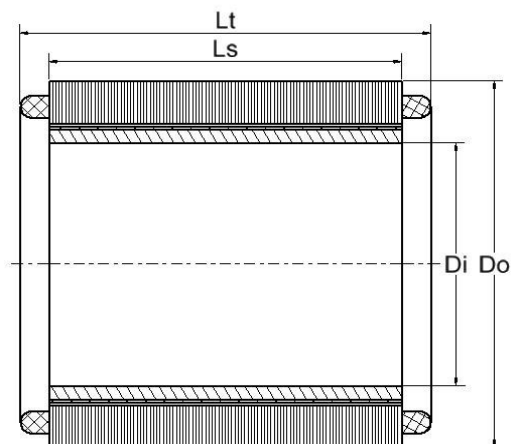
Values at Nominal Voltage

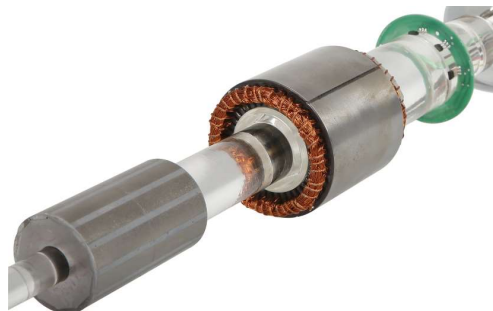
DC Bus Voltage	120	120	120	150	28	V.
No Load Speed	27.500	9.020	6.400	3.100	10.500	r.p.m.
Output Power	275	156	260	275	16	W.
Rated Speed	20.000	6.000	5.500	2.750	8.500	r.p.m.
Continuous Torque	0,13	0,25	0,45	0,95	0,018	Nm.
Continuous Current	3	2,2	2,7	2,2	0,65	A.
Peak Torque	0,33	2,35	1,62	2	0,1	Nm.
Peak Current	8	20	10	4,3	4	A.

Torque Constant	0,043	0,114	0,166	0,43	0,028	Nm./A.
Voltage Constant	4,36	13,3	18,75	48,4	2,67	Vp/krpm
Resistance	2,1	2,9	1,5	3,9	0,44	Ohm
Inductance	1,12	1,3	1,35	4,6	2	mH.
Feedback	N. A. / Hall Sensor available upon request					
Number of Poles (2p)	4	8	16	12	12	

Dimensions

Outer Diameter of Stator	D o	28	38	40	60	36	mm.
Stack Length of Stator	L s	43	58	81	51	12	mm.
Inner Diameter of Rotor	D i	5	9,5	10,2	12,7	15	mm.
Total Length including winding heads	L t	64	76	98	70	20	mm.





Part Number	L 038 04	L 087 02	C 06 04	L 087 03	L 136 02	
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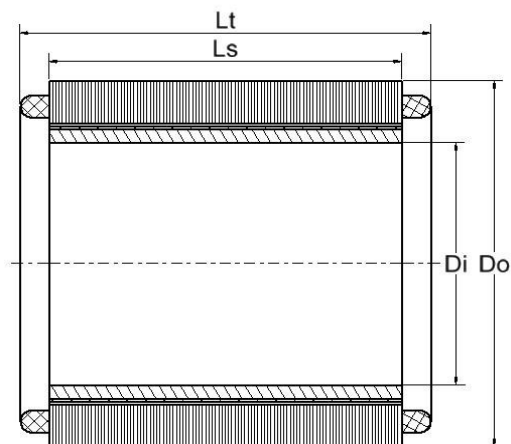
Values at Nominal Voltage

DC Bus Voltage	28	28	28	48	28	V.
No Load Speed	5.700	1.175	2.600	3.450	800	r.p.m.
Output Power	100	56	170	300	56	W.
Rated Speed	4.800	900	2.300	2.900	460	r.p.m.
Continuous Torque	0,2	0,6	0,7	1,0	1,2	Nm.
Continuous Current	4,3	0,85	6,5	8,0	2,2	A.
Peak Torque	0,4	1,5	1,35	1,6	3	Nm.
Peak Current	8,5	2,1	12	13	5,5	A.

Torque Constant	0,047	0,71	0,107	0,125	0,54	Nm./A.
Voltage Constant	4,9	23,8	10,77	13,9	35,0	Vp/krpm
Resistance	0,45	1,0	0,35	0,25	0,76	Ohm
Inductance	0,48	1,2	0,35	0,24	0,74	mH.
Feedback	N. A. / Hall Sensor available upon request					
Number of Poles (2p)	8	32	12	32	24	

Dimensions

Outer Diameter of Stator	D o	38	87	60	87	136	mm.
Stack Length of Stator	L s	38	18	40	25	24	mm.
Inner Diameter of Rotor	D i	9,2	58	10	58	100	mm.
Total Length including winding heads	L t	50	28	60	35	36	mm.





Part Number	C 06 05 2	L 165 04	L 152 02	L 165 10	L 355 10	
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Values at Nominal Voltage

DC Bus Voltage	28	72	28	72	72	V.
No Load Speed	2.100	550	225	200	110	r.p.m.
Output Power	210	315	110	315	660	W.
Rated Speed	1.600	500	120	150	70	r.p.m.
Continuous Torque	1,25	6,0	8,8	20	90	Nm.
Continuous Current	9,6	4,5	6,0	4,75	14	A.
Peak Torque	3	12	12,4	40	180	Nm.
Peak Current	19	9	9,0	10	30	A.

Torque Constant	0,13	1,33	1,46	4,21	6,43	Nm./A.
Voltage Constant	13,3	131	124	360	655	Vp/krpm
Resistance	0,37	0,5	1,2	1,7	0,4	Ohm
Inductance	0,4	1,3	2,7	4,34	9,44	mH.
Feedback	N. A. / Hall Sensor available upon request					
Number of Poles (2p)	12	32	40	32	40	

Dimensions

Outer Diameter of Stator	D o	60	165	152	165	355	mm.
Stack Length of Stator	L s	51	43	20	100	100	mm.
Inner Diameter of Rotor	D i	12,7	118	118,8	118	203	mm.
Total Length including winding heads	L t	71	58	30	116	128	mm.

