

ElectroCraft Low Noise RapidPower™ Xtreme Planetary Gear Motors

Product Datasheets for

LRPX22

LRPX32

LRPX40





About ElectroCraft

ElectroCraft, Inc. is a global provider of dependable, application-engineered fractional-horsepower motor and motion products. ElectroCraft custom manufacturing services cover the following products: AC motors, PMDC motors, brushless DC motors, stepper motors, servo motors, gearboxes, gearmotors, linear actuators, drives, servo drives, integrated motor drives.

Our products are found in thousands of different applications within industrial, commercial, and consumer product markets. While ElectroCraft provides a wide array of standard products with many configurable options, we have built our brand on custom OEM solutions that meet the precise performance, cost and quality our customers require.

For OEM customers who are unsatisfied with having to design around inflexible off-the-shelf products, our technical knowledge and customizable product families provide for a design experience which results in motor and motion systems that provide superior reliability and performance at the lowest possible cost. To learn more, visit www.electrocraft.com

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(844) 338-8114

The **LRPX** carefully integrates the unique RPX series motor with a custom planetary gearbox. The result is a small form factor BLDC motor that can produce high torque at low RPM and offer strong, smooth operation with low noise!

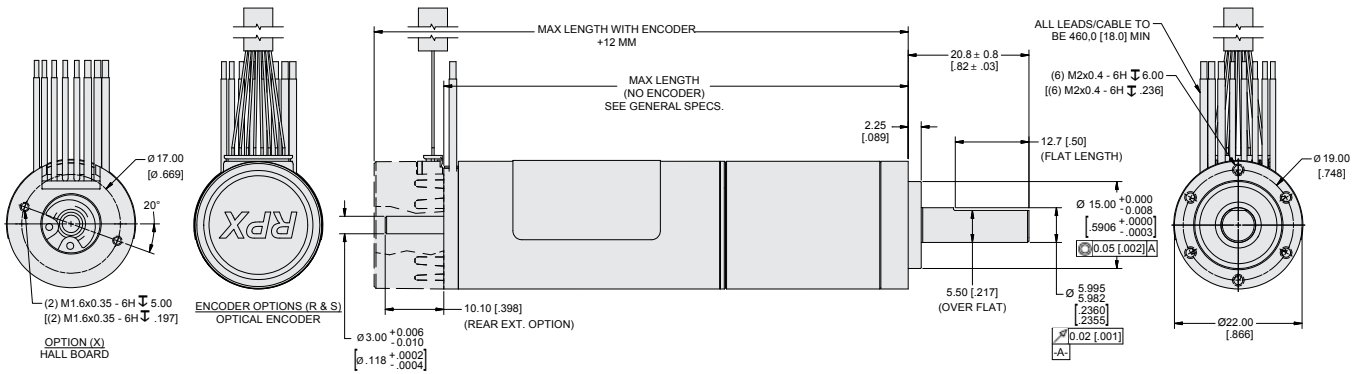
Features:

- High torque density delivers class-leading torque from compact frame size.
- 8 pole motor; high torque at low speeds.
- High load capacity.
- Low heat generation.
- Low noise & High efficiency compared to similar gearmotors.
- Up to IP65.

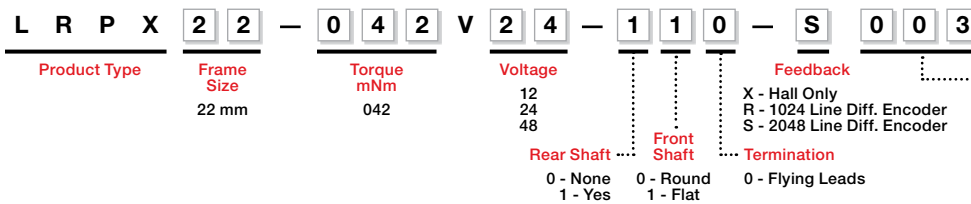


LRPX22 BRUSHLESS DC MOTOR	
Size:	22mm (0.866 in) diameter
Peak Torque:	3.0 Nm (424.8 oz.in)
Continuous Stall Torque:	2.5 Nm (354 oz.in)
Speed:	Up to 2286 RPM

All measurements in mm [inches]



LRPX Model Number



Ratio		Ratio	
003	3.5:1	094	93.92:1
004	4.33:1	116	116.28:1
008	7.76:1	144	143.96:1
012	12.25:1	150	150.06:1
015	15.17:1	186	185.79:1
019	18.78:1	230	230.03:1
027	26.83:1	285	284.8:1
033	33.22:1	329	328.71:1
043	42.88:1	353	352.6:1
053	53.08:1	407	406.97:1
066	65.72:1	504	503.87:1
081	81.37:1	624	623.84:1

Applications:**Medical Science****Automated Equipment**

- Fluid Pumps
- Air / Ventilation Pumps
- Blood Transfusers
- Diagnostic and Imaging Systems

Surgical Robots and Robotic Assistants

- Traction Motors for Mobile Systems
- Arm/Gripper Positioning and Force Control

Lab Automation Equipment

- Dispensing Systems
- Sample Handling Systems
- Analysis Systems
- Centrifuges

Robotics

- Traction Motors for Mobile Applications
- Steering Systems for Mobile Applications
- Arm/Gripper Positioning and Force Control

Industrial Automation

- Industrial Machinery
- Material Handling and Conveyor Equipment
- Automated Guided Vehicles (AGVs)
- Sorting and Packing Systems
- Dispensing Machines

Electronics / Semiconductor Manufacturing

- Wafer Handling and Processing Systems
- Assembly, Test and Packaging Systems

Transportation**Automotive & Commercial Vehicles**

- Power Seats
- Fan & Pump Motors
- Emission Control Systems
- Drive by Wire and Driver Assist Systems
- Autonomous Vehicle Camera & Sensor Controls

Aerospace

- Flight Control Systems
- Commercial UAV Flight Motors
- Pumps / Actuators

Marine & Shipbuilding

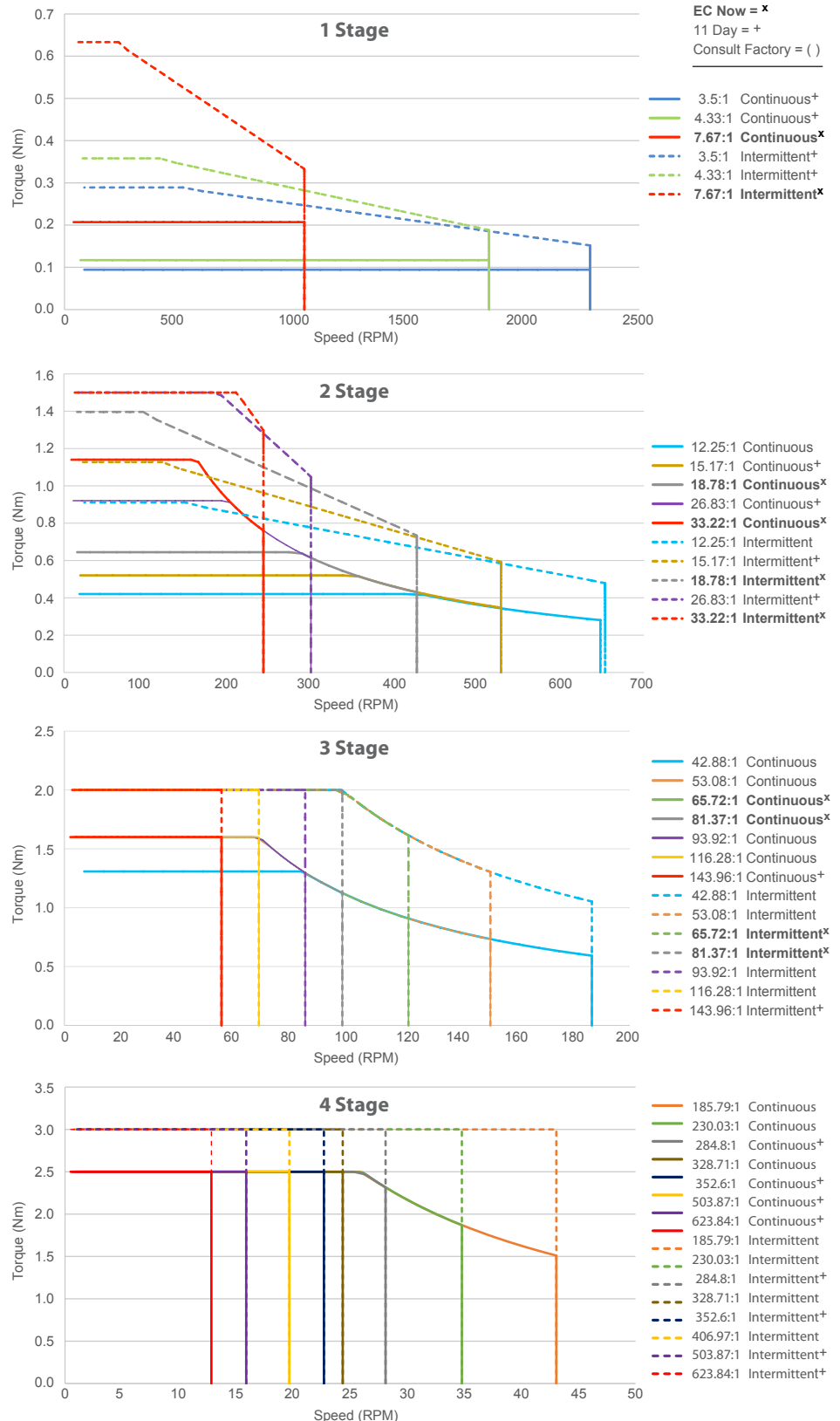
- Gyro Stabilization Systems
- Steering Pumps

Military/Defense

- Military Robots
- Mobile Radar and Communication Systems
- Flight Control Systems
- Military UAV Flight Motors
- Guidance Systems

Agriculture

- Automated Planting Equipment
- Automated Harvesting Equipment
- Farm Machinery Control Systems
- Agricultural Robots

LRPX22 Speed Torque Performance

Your Genius. Our Drive.

ElectroCraft, Inc.
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 Stratham, NH 03885-2578 USA

Tel: (844) 565-6144

Email: sales@electrocrafter.com
 www.electrocrafter.com

Winding Specifications

Part Number	Voltage	Resistance	Inductance	No. of Poles	Torque Constant		Voltage Constant		Continuous Running			Peak		
	Units	Volts	Ohms		mH	Nm/A	oz-in/A	V-sec/rad	V/kRPM	Torque (Nm)	RPM	Current (A)	Torque (Nm)	RPM

Motor Only

LRPX22-42V12	12	0.56	0.22	8	0.008	1.19	0.01	0.80	0.04	8000	5.0	0.09	1700	10.8
LRPX22-42V24	24	2.39	0.9	8	0.017	2.35	0.02	1.60	0.04	8000	2.5	0.09	1700	5.5
LRPX22-42V48	48	9.72	3.6	8	0.032	4.53	0.03	3.30	0.04	8000	1.3	0.09	1700	2.8

One Stage Gearbox

LRPX22-042V12-___-004	12	0.56	0.22	8	0.026	3.75	0.03	2.80	0.13	2286	5.0	0.29	486	10.8
LRPX22-042V24-___-004	24	2.39	0.9	8	0.052	7.40	0.05	5.60	0.13	2286	2.5	0.29	486	5.5
LRPX22-042V48-___-004	48	9.72	3.6	8	0.101	14.27	0.11	11.55	0.13	2286	1.3	0.29	486	2.8
LRPX22-042V12-___-004	12	0.56	0.22	8	0.033	4.64	0.03	3.47	0.16	1846	5.0	0.35	392	10.8
LRPX22-042V24-___-004	24	2.39	0.9	8	0.065	9.71	0.07	6.93	0.16	1846	2.5	0.35	392	5.5
LRPX22-042V48-___-004	48	9.72	3.6	8	0.125	17.67	0.14	14.30	0.16	1846	1.3	0.35	392	2.8
LRPX22-042V12-___-008	12	0.56	0.22	8	0.058	8.21	0.06	6.13	0.29	1043	5.0	0.63	222	10.8
LRPX22-042V24-___-008	24	2.39	0.9	8	0.115	16.22	0.12	12.27	0.29	1043	2.5	0.63	222	5.5
LRPX22-042V48-___-008	48	9.72	3.6	8	0.221	31.27	0.24	25.30	0.29	1043	1.3	0.63	222	2.8

Two Stage Gearbox

LRPX22-042V12-___-012	12	0.56	0.22	8	0.083	11.80	0.09	9.80	0.28	653	3.4	0.90	139	10.8
LRPX22-042V24-___-012	24	2.39	0.9	8	0.165	23.33	0.19	19.60	0.28	653	1.7	0.90	139	5.5
LRPX22-042V48-___-012	48	9.72	3.6	8	0.318	44.96	0.39	40.43	0.28	653	0.9	0.90	139	2.8
LRPX22-042V12-___-015	12	0.56	0.22	8	0.103	14.61	0.12	12.13	0.35	527	3.4	1.12	112	10.8
LRPX22-042V24-___-015	24	2.39	0.9	8	0.204	28.88	0.23	24.27	0.35	527	1.7	1.12	112	5.5
LRPX22-042V48-___-015	48	9.72	3.6	8	0.393	55.67	0.48	50.05	0.35	527	0.9	1.12	112	2.8
LRPX22-042V12-___-019	12	0.56	0.22	8	0.128	18.09	0.14	15.02	0.43	426	3.4	1.38	91	10.8
LRPX22-042V24-___-019	24	2.39	0.9	8	0.252	35.75	0.29	30.04	0.43	426	1.7	1.38	91	5.5
LRPX22-042V48-___-019	48	9.72	3.6	8	0.487	68.93	0.59	61.97	0.43	426	0.9	1.38	91	2.8
LRPX22-042V12-___-027	12	0.56	0.22	8	0.183	25.85	0.20	21.47	0.61	298	3.4	1.50	63	8.2
LRPX22-042V24-___-027	24	2.39	0.9	8	0.361	51.09	0.41	42.93	0.61	298	1.7	1.50	63	4.2
LRPX22-042V48-___-027	48	9.72	3.6	8	0.696	98.49	0.85	88.55	0.61	298	0.9	1.50	63	2.2
LRPX22-042V12-___-033	12	0.56	0.22	8	0.226	32.01	0.25	26.58	0.76	241	3.4	1.50	51	6.6
LRPX22-042V24-___-033	24	2.39	0.9	8	0.447	63.26	0.51	53.16	0.76	241	1.7	1.50	51	3.4
LRPX22-042V48-___-033	48	9.72	3.6	8	0.861	121.94	1.05	109.63	0.76	241	0.9	1.50	51	1.7

Three Stage Gearbox

LRPX22-042V12-___-043	12	0.56	0.22	8	0.263	37.18	0.33	34.30	0.62	187	2.4	2.00	40	7.6
LRPX22-042V24-___-043	24	2.39	0.9	8	0.519	73.47	0.66	68.60	0.62	187	1.2	2.00	40	3.9
LRPX22-042V48-___-043	48	9.72	3.6	8	1.000	141.64	1.35	141.49	0.62	187	0.6	2.00	40	2.0
LRPX22-042V12-___-053	12	0.56	0.22	8	0.325	46.03	0.41	42.47	0.77	151	2.4	2.00	32	6.2
LRPX22-042V24-___-053	24	2.39	0.9	8	0.642	90.97	0.81	84.93	0.77	151	1.2	2.00	32	3.1
LRPX22-042V48-___-053	48	9.72	3.6	8	1.238	175.36	1.67	175.18	0.77	151	0.6	2.00	32	1.6
LRPX22-042V12-___-066	12	0.56	0.22	8	0.402	56.99	0.50	52.58	0.95	122	2.4	2.00	26	5.0
LRPX22-042V24-___-066	24	2.39	0.9	8	0.795	112.63	1.00	105.16	0.95	122	1.2	2.00	26	2.5
LRPX22-042V48-___-066	48	9.72	3.6	8	1.533	217.11	2.07	216.88	0.95	122	0.6	2.00	26	1.3
LRPX22-042V12-___-081	12	0.56	0.22	8	0.498	70.56	0.62	65.10	1.18	98	2.4	2.00	21	4.0
LRPX22-042V24-___-081	24	2.39	0.9	8	0.985	139.44	1.24	130.19	1.18	98	1.2	2.00	21	2.0
LRPX22-042V48-___-081	48	9.72	3.6	8	1.898	268.81	2.56	268.52	1.18	98	0.6	2.00	21	1.1
LRPX22-042V12-___-094	12	0.56	0.22	8	0.575	81.44	0.72	75.13	1.36	85	2.4	2.00	18	3.5
LRPX22-042V24-___-094	24	2.39	0.9	8	1.137	160.94	1.43	150.27	1.36	85	1.2	2.00	18	1.8
LRPX22-042V48-___-094	48	9.72	3.6	8	2.191	310.26	2.96	309.93	1.36	85	0.6	2.00	18	0.9
LRPX22-042V12-___-116	12	0.56	0.22	8	0.712	100.83	0.89	93.02	1.60	69	2.2	2.00	15	2.8
LRPX22-042V24-___-116	24	2.39	0.9	8	1.407	199.27	1.78	186.04	1.60	69	1.1	2.00	15	1.4
LRPX22-042V48-___-116	48	9.72	3.6	8	2.713	384.13	3.66	383.72	1.60	69	0.6	2.00	15	0.7
LRPX22-042V12-___-144	12	0.56	0.22	8	0.882	124.84	1.10	115.17	1.60	56	1.8	2.00	12	2.3
LRPX22-042V24-___-144	24	2.39	0.9	8	1.742	246.71	2.20	230.34	1.60	56	0.9	2.00	12	1.1
LRPX22-042V48-___-144	48	9.72	3.6	8	3.358	475.58	4.54	475.08	1.60	56	0.5	2.00	12	0.6



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Winding Specifications Continued

Part Number	Voltage	Resistance	Inductance	No. of Poles	Torque Constant		Voltage Constant		Continuous Running			Peak		
	Units	Volts	Ohms		mH	Nm/A	oz-in/A	V-sec/rad	V/kRPM	Torque (Nm)	RPM	Current (A)	Torque (Nm)	RPM

Four Stage Gearbox

LRPX22-042V12-_-_-_-186	12	0.56	0.22	8	1.024	145.00	1.42	148.63	1.90	43	1.9	3.00	9	2.9
LRPX22-042V24-_-_-_-186	24	2.39	0.9	8	2.024	286.55	2.84	297.77	1.90	43	0.9	3.00	9	1.5
LRPX22-042V48-_-_-_-186	48	9.72	3.6	8	3.901	552.39	5.85	613.11	1.90	42	0.5	3.00	9	0.8
LRPX22-042V12-_-_-_-230	12	0.56	0.22	8	1.268	179.53	1.76	184.02	2.36	35	1.9	3.00	7	2.4
LRPX22-042V24-_-_-_-230	24	2.39	0.9	8	2.505	354.78	3.51	368.04	2.36	35	0.9	3.00	7	1.2
LRPX22-042V48-_-_-_-230	48	9.72	3.6	8	4.829	683.91	7.25	759.09	2.36	35	0.5	3.00	7	0.6
LRPX22-042V12-_-_-_-285	12	0.56	0.22	8	1.570	222.27	2.18	227.84	2.50	28	1.6	3.00	6	1.9
LRPX22-042V24-_-_-_-285	24	2.39	0.9	8	3.102	439.25	4.35	455.67	2.50	28	0.8	3.00	6	1.0
LRPX22-042V48-_-_-_-285	48	9.72	3.6	8	5.979	846.75	8.97	939.83	2.50	28	0.4	3.00	6	0.5
LRPX22-042V12-_-_-_-329	12	0.56	0.22	8	1.812	256.54	2.51	262.97	2.50	24	1.4	3.00	5	1.7
LRPX22-042V24-_-_-_-329	24	2.39	0.9	8	3.580	506.98	5.02	525.93	2.50	24	0.7	3.00	5	0.8
LRPX22-042V48-_-_-_-329	48	9.72	3.6	8	6.901	977.30	10.36	1084.74	2.50	24	0.4	3.00	5	0.4
LRPX22-042V12-_-_-_-353	12	0.56	0.22	8	1.943	275.19	2.69	282.08	2.50	23	1.3	3.00	5	1.5
LRPX22-042V24-_-_-_-353	24	2.39	0.9	8	3.840	543.83	5.39	564.17	2.50	23	0.7	3.00	5	0.8
LRPX22-042V48-_-_-_-353	48	9.72	3.6	8	7.403	1048.35	11.11	1163.60	2.50	23	0.3	3.00	5	0.4
LRPX22-042V12-_-_-_-407	12	0.56	0.22	8	2.243	317.62	3.11	325.58	2.50	20	1.1	3.00	4	1.3
LRPX22-042V24-_-_-_-407	24	2.39	0.9	8	4.432	627.68	6.22	651.16	2.50	20	0.6	3.00	4	0.7
LRPX22-042V48-_-_-_-407	48	9.72	3.6	8	8.544	1210.00	12.82	1343.01	2.50	20	0.3	3.00	4	0.4
LRPX22-042V12-_-_-_-504	12	0.56	0.22	8	2.777	393.25	3.85	403.10	2.50	16	0.9	3.00	3	1.1
LRPX22-042V24-_-_-_-504	24	2.39	0.9	8	5.488	777.13	7.70	806.19	2.50	16	0.5	3.00	3	0.5
LRPX22-042V48-_-_-_-504	48	9.72	3.6	8	10.579	1498.09	15.88	1662.77	2.50	16	0.2	3.00	3	0.3
LRPX22-042V12-_-_-_-624	12	0.56	0.22	8	3.438	486.88	4.77	499.07	2.50	13	0.7	3.00	3	0.9
LRPX22-042V24-_-_-_-624	24	2.39	0.9	8	6.794	962.17	9.53	998.14	2.50	13	0.4	3.00	3	0.4
LRPX22-042V48-_-_-_-624	48	9.72	3.6	8	13.098	1854.78	19.66	2058.67	2.50	13	0.2	3.00	3	0.2

General Specifications

Part Number	Ratio (approx.)	Ratio (Exact)	Backlash (avg) (Degrees)	Length (Motor + Gearhead) (mm)	Weight (g)	Temperature Range (°C)	System Inertia (g.cm ²)
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One Stage Gearbox

LRPX22-042V_-_-_-_-003	3.50	7/2	1.0	80.9	134	-40 °C to +100 °C	1.4
LRPX22-042V_-_-_-_-004	4.33	13/3	1.1	80.9	134	-40 °C to +100 °C	1.3
LRPX22-042V_-_-_-_-008	7.67	23/3	1.2	80.9	134	-40 °C to +100 °C	1.2

Two Stage Gearbox

LRPX22-042V_-_-_-_-015	15.17	91/6	1.1	86.2	144	-40 °C to +100 °C	1.2
LRPX22-042V_-_-_-_-019	18.78	169/9	1.2	86.2	144	-40 °C to +100 °C	1.2
LRPX22-042V_-_-_-_-027	26.83	161/6	1.2	86.2	144	-40 °C to +100 °C	1.2
LRPX22-042V_-_-_-_-033	33.22	299/9	1.3	86.2	144	-40 °C to +100 °C	1.2

Three Stage Gearbox

LRPX22-042V_-_-_-_-066	65.72	1183/18	1.2	91.5	154	-40 °C to +100 °C	1.2
LRPX22-042V_-_-_-_-081	81.37	2197/27	1.2	91.5	154	-40 °C to +100 °C	1.2
LRPX22-042V_-_-_-_-144	143.96	3887/27	1.2	91.5	154	-40 °C to +100 °C	1.2

Four Stage Gearbox

LRPX22-042V_-_-_-_-285	284.80	15379/54	1.2	97.3	164	-40 °C to +100 °C	1.2
LRPX22-042V_-_-_-_-353	352.60	28561/81	1.3	97.3	164	-40 °C to +100 °C	1.2
LRPX22-042V_-_-_-_-504	503.87	27209/54	1.4	97.3	164	-40 °C to +100 °C	1.2
LRPX22-042V_-_-_-_-624	623.84	50531/81	1.5	97.3	164	-40 °C to +100 °C	1.2



The **LRPX** carefully integrates the unique RPX series motor with a custom planetary gearbox. The result is a small form factor BLDC motor that can produce high torque at low RPM and offer strong, smooth operation with low noise!

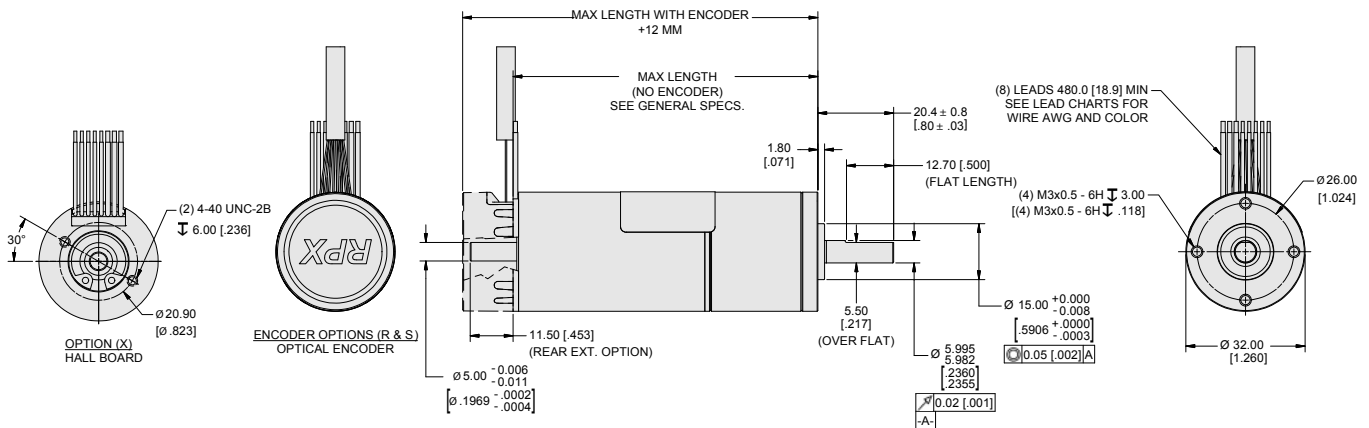
Features:

- High torque density delivers class-leading torque from compact frame size.
- 8 pole motor; high torque at low speeds.
- High load capacity.
- Low heat generation.
- Low noise & High efficiency compared to similar gearmotors.
- Up to IP65.

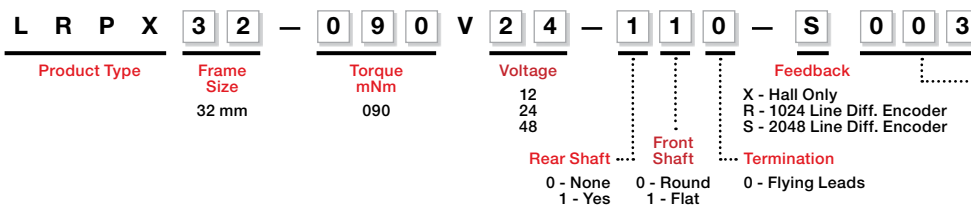


LRPX32 BRUSHLESS DC MOTOR	
Size:	32mm (1.25 in) diameter
Peak Torque:	Up to 8.0 Nm (1,133 oz.in)
Continuous Stall Torque:	Up to 6.0 Nm (849.7 oz.in)
Speed:	Up to 2489 RPM

All measurements in mm [inches]



LRPX Model Number



Ratio		Ratio	
003	3.21:1	116	115.9:1
005	4.88:1	137	137.1:1
006	5.77:1	162	162.3:1
010	10.33:1	192	192.0:1
016	15.67:1	246	245.5:1
019	18.54:1	291	290.6:1
024	23.77:1	344	343.0:1
028	28.13:1	372	372.4:1
033	38.28:1	441	440.7:1
050	50.37:1	522	521.6:1
060	59.61:1	565	564.8:1
076	76.39:1	617	617.2:1
090	90.40:1	668	668.4:1
107	106.9:1	791	791.0:1

Applications:**Medical Science
Automated Equipment**

- Fluid Pumps
- Air / Ventilation Pumps
- Blood Transfusers
- Diagnostic and Imaging Systems

Surgical Robots and Robotic Assistants

- Traction Motors for Mobile Systems
- Arm/Gripper Positioning and Force Control

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- Commercial UAV Flight Motors
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Marine & Shipbuilding

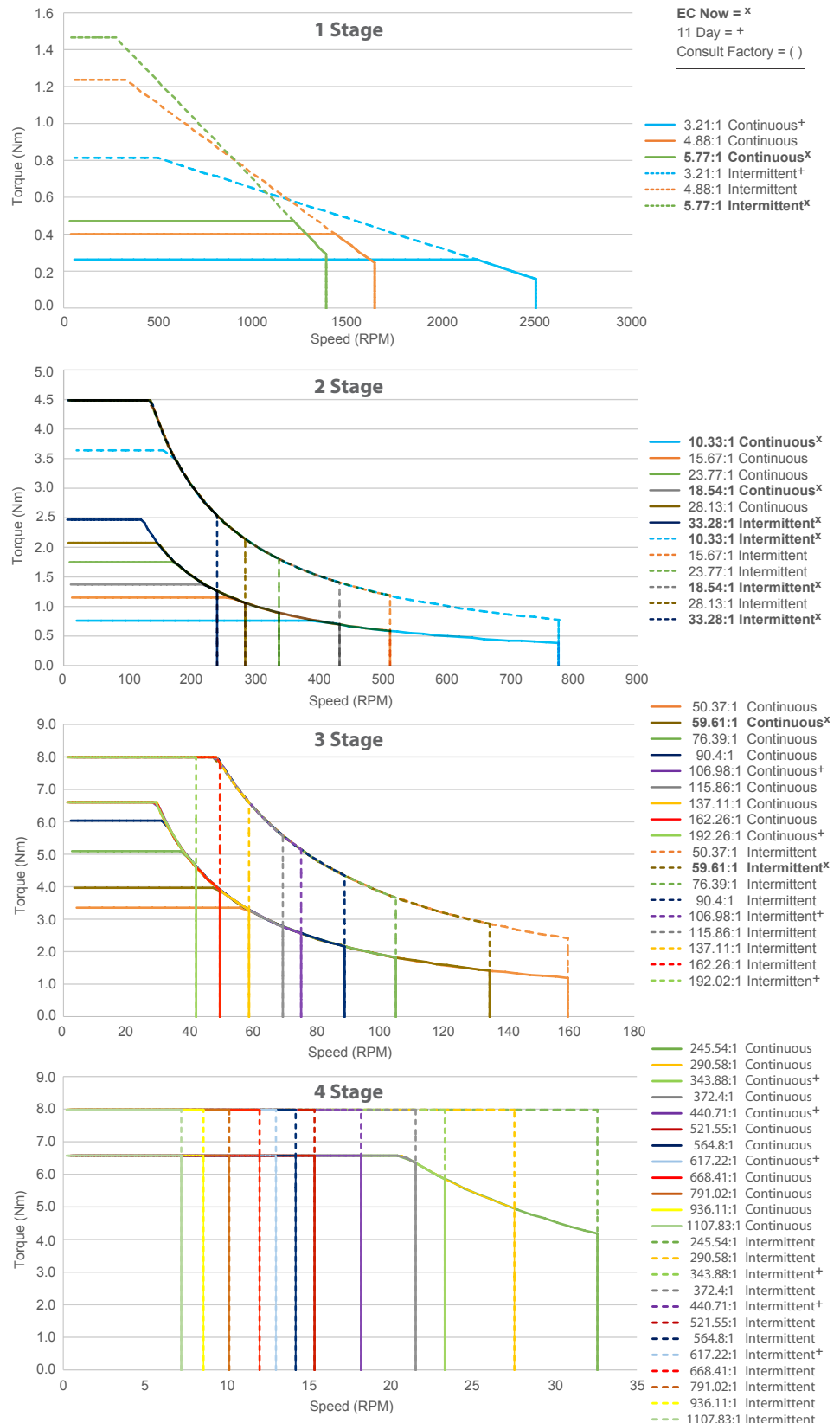
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- Steering Pumps

Military/Defense

- Military Robots
- Mobile Radar and Communication Systems
- Flight Control Systems
- Military UAV Flight Motors
- Guidance Systems

Agriculture

- Automated Planting Equipment
- Automated Harvesting Equipment
- Farm Machinery Control Systems
- Agricultural Robots

LRPX32 Speed Torque Performance**Your Genius. Our Drive.**

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Part Number	Voltage	Resis- tance	Induc- tance	Number of Poles	Torque Constant		Voltage Constant		Continuous Running			Peak		
	Units	Volts	Ohms		mH	N-m/A	oz-in/A	V-sec/ rad	V/kRPM	Torque (Nm)	RPM	Current (A)	Torque (Nm)	RPM

Four Stage Gearbox

LRPX32-090V12-___-246	12	0.22	0.193	8	1.965	278.32	48.9E-6	466.7E-9	4.19	33	2.1	8.00	7	4.1
LRPX32-090V24-___-246	24	0.96	0.600	8	3.793	537.16	97.7E-6	933.4E-9	4.19	33	1.1	8.00	7	2.1
LRPX32-090V48-___-246	48	3.68	2.300	8	7.712	1092.12	195.5E-6	1.9E-6	4.19	33	0.5	8.00	7	1.0
LRPX32-090V12-___-291	12	0.22	0.193	8	2.326	329.37	41.3E-6	394.4E-9	4.96	28	2.1	8.00	6	3.4
LRPX32-090V24-___-291	24	0.96	0.600	8	4.489	635.70	82.6E-6	788.7E-9	4.96	28	1.1	8.00	6	1.8
LRPX32-090V48-___-291	48	3.68	2.300	8	9.127	1292.45	165.2E-6	1.6E-6	4.96	28	0.5	8.00	6	0.9
LRPX32-090V12-___-344	12	0.22	0.193	8	2.753	389.79	34.9E-6	333.2E-9	5.87	23	2.1	8.00	5	2.9
LRPX32-090V24-___-344	24	0.96	0.600	8	5.312	752.30	69.8E-6	666.5E-9	5.87	23	1.1	8.00	5	1.5
LRPX32-090V48-___-344	48	3.68	2.300	8	10.801	1529.53	139.6E-6	1.3E-6	5.87	23	0.5	8.00	5	0.7
LRPX32-090V12-___-372	12	0.22	0.193	8	2.981	422.12	32.2E-6	307.7E-9	6.36	21	2.1	8.00	4	2.7
LRPX32-090V24-___-372	24	0.96	0.600	8	5.753	814.70	64.4E-6	615.4E-9	6.36	21	1.1	8.00	4	1.4
LRPX32-090V48-___-372	48	3.68	2.300	8	11.697	1656.39	128.9E-6	1.2E-6	6.36	21	0.5	8.00	4	0.7
LRPX32-090V12-___-441	12	0.22	0.193	8	3.528	499.55	27.2E-6	260.0E-9	6.60	18	1.9	8.00	4	2.3
LRPX32-090V24-___-441	24	0.96	0.600	8	6.808	964.14	54.5E-6	520.0E-9	6.60	18	1.0	8.00	4	1.2
LRPX32-090V48-___-441	48	3.68	2.300	8	13.842	1960.22	108.9E-6	1.0E-6	6.60	18	0.5	8.00	4	0.6
LRPX32-090V12-___-522	12	0.22	0.193	8	4.175	591.19	23.0E-6	219.7E-9	6.60	15	1.6	8.00	3	1.9
LRPX32-090V24-___-522	24	0.96	0.600	8	8.057	1140.99	46.0E-6	439.4E-9	6.60	15	0.8	8.00	3	1.0
LRPX32-090V48-___-522	48	3.68	2.300	8	16.381	2319.79	92.0E-6	878.9E-9	6.60	15	0.4	8.00	3	0.5
LRPX32-090V12-___-565	12	0.22	0.193	8	4.521	640.22	21.2E-6	202.9E-9	6.60	14	1.5	8.00	3	1.8
LRPX32-090V24-___-565	24	0.96	0.600	8	8.725	1235.62	42.5E-6	405.8E-9	6.60	14	0.8	8.00	3	0.9
LRPX32-090V48-___-565	48	3.68	2.300	8	17.740	2512.19	85.0E-6	811.5E-9	6.60	14	0.4	8.00	3	0.5
LRPX32-090V12-___-617	12	0.22	0.193	8	4.940	699.63	19.4E-6	185.7E-9	6.60	13	1.3	8.00	3	1.6
LRPX32-090V24-___-617	24	0.96	0.600	8	9.535	1350.29	38.9E-6	371.3E-9	6.60	13	0.7	8.00	3	0.8
LRPX32-090V48-___-617	48	3.68	2.300	8	19.386	2745.31	77.8E-6	742.6E-9	6.60	13	0.3	8.00	3	0.4
LRPX32-090V12-___-668	12	0.22	0.193	8	5.350	757.65	18.0E-6	171.4E-9	6.60	12	1.2	8.00	2	1.5
LRPX32-090V24-___-668	24	0.96	0.600	8	10.326	1462.28	35.9E-6	342.9E-9	6.60	12	0.6	8.00	2	0.8
LRPX32-090V48-___-668	48	3.68	2.300	8	20.994	2973.00	71.8E-6	685.8E-9	6.60	12	0.3	8.00	2	0.4
LRPX32-090V12-___-791	12	0.22	0.193	8	6.332	896.63	15.2E-6	144.9E-9	6.60	10	1.0	8.00	2	1.3
LRPX32-090V24-___-791	24	0.96	0.600	8	12.220	1730.51	30.3E-6	289.7E-9	6.60	10	0.5	8.00	2	0.7
LRPX32-090V48-___-791	48	3.68	2.300	8	24.845	3518.35	60.7E-6	579.5E-9	6.60	10	0.3	8.00	2	0.3
LRPX32-090V12-___-936	12	0.22	0.193	8	7.493	1061.10	12.8E-6	122.4E-9	6.60	9	0.9	8.00	2	1.1
LRPX32-090V24-___-936	24	0.96	0.600	8	14.462	2047.94	25.6E-6	244.8E-9	6.60	9	0.5	8.00	2	0.6
LRPX32-090V48-___-936	48	3.68	2.300	8	29.402	4163.72	51.3E-6	489.6E-9	6.60	9	0.2	8.00	2	0.3
LRPX32-090V12-___-999	12	0.22	0.193	8	8.868	1255.74	10.8E-6	103.4E-9	6.60	7	0.7	8.00	1	0.9
LRPX32-090V24-___-999	24	0.96	0.600	8	17.114	2423.59	21.7E-6	206.9E-9	6.60	7	0.4	8.00	1	0.5
LRPX32-090V48-___-999	48	3.68	2.300	8	34.796	4927.48	43.3E-6	413.8E-9	6.60	7	0.2	8.00	1	0.2

General Spec. Table

Part Number	Ratio (approx.)	Ratio (Exact)			Backlash (avg) (Degrees)	Length (Motor + Gearhead) (mm)	Weight (g)	Temperature Range (°C)	System Inertia (g.cm²)
One Stage Gearbox									
LRPX32-090V___-003	3.21	45	/	14	0.7	82.7	277	-40 °C to +100 °C	9.6
LRPX32-090V___-005	4.88	39	/	8	0.8	82.7	277	-40 °C to +100 °C	8.7
LRPX32-090V___-006	5.77	75	/	13	0.9	82.7	277	-40 °C to +100 °C	8.5
Two Stage Gearbox									
LRPX32-090V___-010	10.33	2025	/	196	1.0	89.9	310	-40 °C to +100 °C	8.2
LRPX32-090V___-016	15.67	1755	/	112	1.2	89.9	310	-40 °C to +100 °C	8.1
LRPX32-090V___-019	18.54	3375	/	182	0.8	89.9	310	-40 °C to +100 °C	8.0
LRPX32-090V___-024	23.77	1521	/	64	1.0	89.9	310	-40 °C to +100 °C	8.0
LRPX32-090V___-028	28.13	225	/	8	1.0	89.9	310	-40 °C to +100 °C	8.0
LRPX32-090V___-033	33.28	5625	/	169	1.0	89.9	310	-40 °C to +100 °C	8.0
Three Stage Gearbox									
LRPX32-090V___-050	50.37	78975	/	1568	1.2	96.3	342	-40 °C to +100 °C	8.0
LRPX32-090V___-060	59.61	151875	/	2548	1.2	96.3	342	-40 °C to +100 °C	8.0
LRPX32-090V___-076	76.39	68445	/	896	1.0	96.3	342	-40 °C to +100 °C	8.0
LRPX32-090V___-090	90.40	10125	/	112	0.9	96.3	342	-40 °C to +100 °C	8.0
LRPX32-090V___-107	106.98	253125	/	2366	0.9	96.3	342	-40 °C to +100 °C	8.0
LRPX32-090V___-116	115.86	59319	/	512	1.2	96.3	342	-40 °C to +100 °C	8.0
LRPX32-090V___-137	137.11	8775	/	64	1.2	96.3	342	-40 °C to +100 °C	8.0
LRPX32-090V___-162	162.26	16875	/	104	1.1	96.3	342	-40 °C to +100 °C	8.0
LRPX32-090V___-192	192.02	421875	/	2197	1.2	96.3	342	-40 °C to +100 °C	8.0
Four Stage Gearbox									
LRPX32-090V___-246	245.54	3080025	/	12544	1.4	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-291	290.58	455625	/	1568	1.4	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-344	343.88	11390625	/	33124	1.3	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-372	372.40	2669355	/	7168	1.2	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-441	440.71	394875	/	896	1.1	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-522	521.55	759375	/	1456	1.1	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-565	564.80	2313441	/	4096	1.4	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-617	617.22	18984375	/	30758	1.0	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-668	668.41	342225	/	512	1.4	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-791	791.02	50625	/	64	1.3	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-936	936.11	1265625	/	1352	1.3	102.8	374	-40 °C to +100 °C	8.0
LRPX32-090V___-999	1107.83	31640625	/	28561	1.3	102.8	374	-40 °C to +100 °C	8.0



The **LRPX** carefully integrates the unique RPX series motor with a custom planetary gearbox. The result is a small form factor BLDC motor that can produce high torque at low RPM and offer strong, smooth operation with low noise!

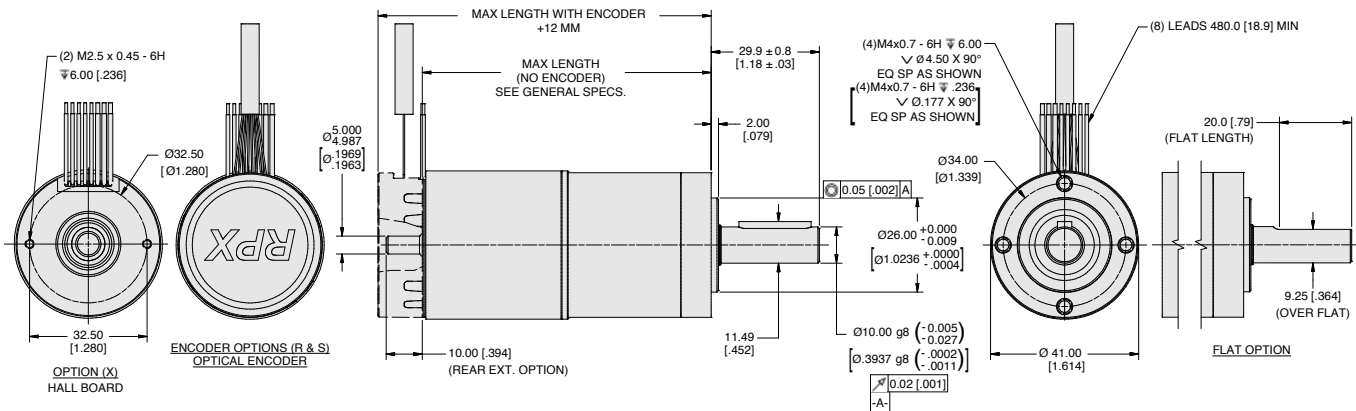
Features:

- High torque density delivers class- leading torque from compact frame size.
- 14 pole motor; high torque at low speeds.
- High load capacity.
- Low heat generation.
- Low noise & High efficiency compared to similar gearmotors.
- Up to IP65.

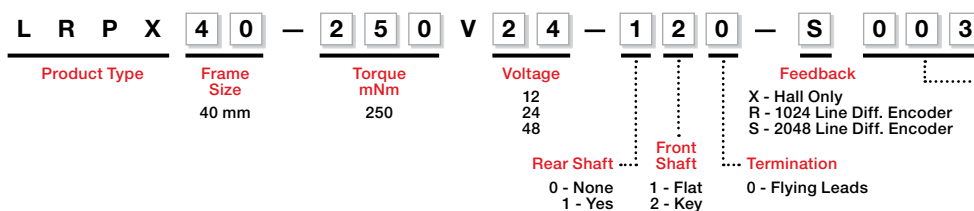


LRPX40 BRUSHLESS DC MOTOR	
Size:	41mm (1.6 in) diameter
Peak Torque:	Up to 22.5 Nm (3,186 oz.in)
Continuous Stall Torque:	Up to 15.0 Nm (2124 oz.in)
Speed:	Up to 1213 RPM

All measurements in mm [inches]



LRPX Model Number



Ratio		Ratio	
003	3.36:1	103	103.07:1
004	4.11:1	126	125.93:1
006	5.54:1	170	169.89:1
011	11.29:1	190	190.27:1
014	13.79:1	210	210.09:1
017	16.85:1	232	232.47:1
019	18.61:1	257	256.69:1
023	22.74:1	284	284.03:1
031	30.67:1	314	313.62:1
038	37.93:1	346	346.30:1
046	46.35:1	383	383.19:1
057	56.63:1	423	423.12:1
063	62.53:1	517	516.96:1
069	69.19:1	571	570.83:1
076	76.40:1	697	697.44:1
093	93.34:1	941	940.93:1

LRPX40

BRUSHLESS DC GEAR MOTOR

High torque density - high performance.



Applications:

Medical Science Automated Equipment

- Fluid Pumps
- Air / Ventilation Pumps
- Blood Transfusers
- Diagnostic and Imaging Systems

Surgical Robots and Robotic Assistants

- Traction Motors for Mobile Systems
- Arm/Gripper Positioning and Force Control

Lab Automation Equipment

- Dispensing Systems
- Sample Handling Systems
- Analysis Systems
- Centrifuges

Robotics

- Traction Motors for Mobile Applications
- Steering Systems for Mobile Applications
- Arm/Gripper Positioning and Force Control

Industrial Automation

- Industrial Machinery
- Material Handling and Conveyor Equipment
- Automated Guided Vehicles (AGVs)
- Sorting and Packing Systems
- Dispensing Machines

Electronics / Semiconductor Manufacturing

- Wafer Handling and Processing Systems
- Assembly, Test and Packaging Systems

Transportation

Automotive & Commercial Vehicles

- Power Seats
- Fan & Pump Motors
- Emission Control Systems
- Drive by Wire and Driver Assist Systems
- Autonomous Vehicle Camera & Sensor Controls

Aerospace

- Flight Control Systems
- Commercial UAV Flight Motors
- Pumps / Actuators

Marine & Shipbuilding

- Gyro Stabilization Systems
- Steering Pumps

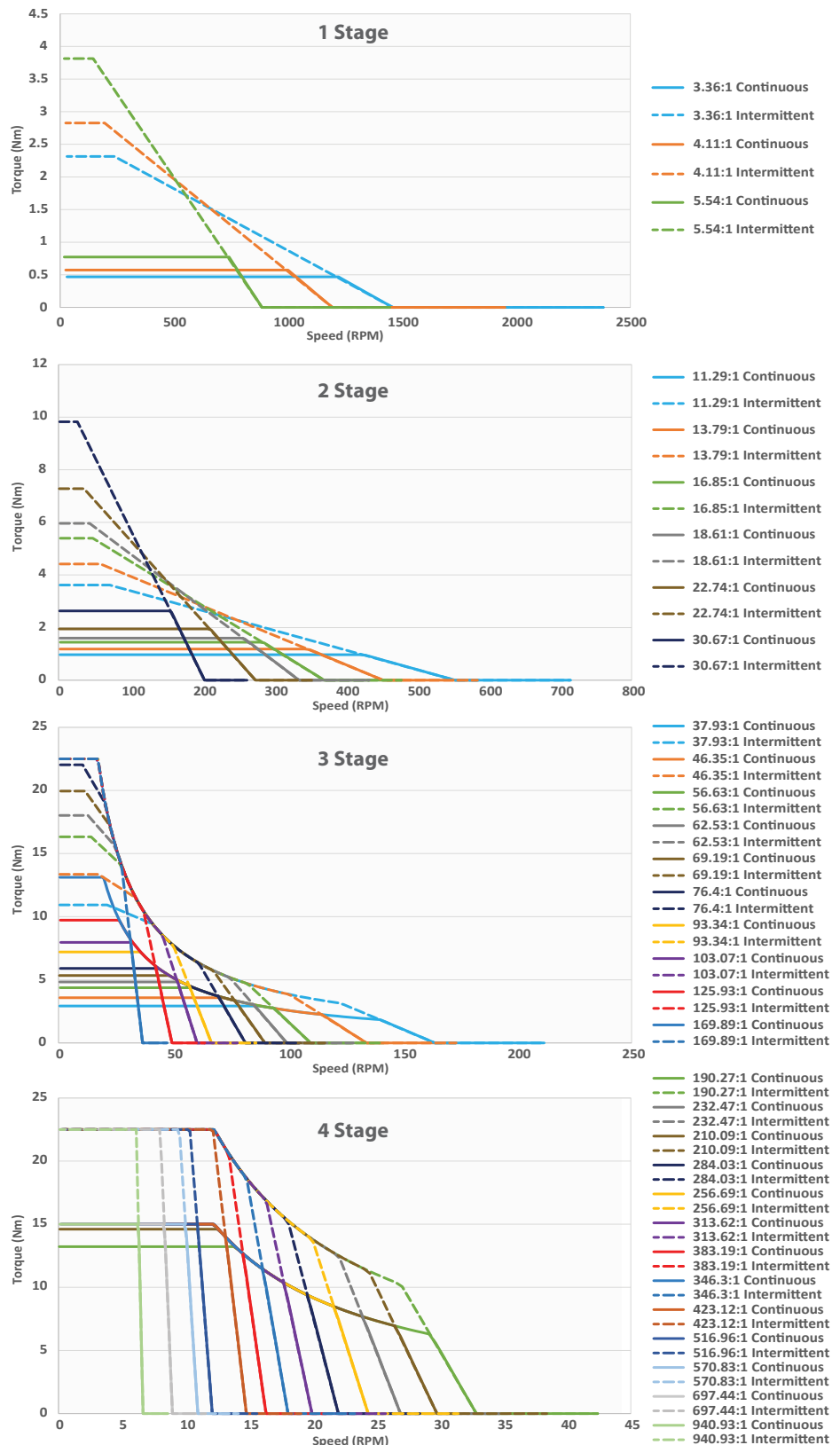
Military/Defense

- Military Robots
- Mobile Radar and Communication Systems
- Flight Control Systems
- Military UAV Flight Motors
- Guidance Systems

Agriculture

- Automated Planting Equipment
- Automated Harvesting Equipment
- Farm Machinery Control Systems
- Agricultural Robots

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Winding Specifications (cont.)

Part Number	Voltage	Resistance	Inductance	Number of Poles	Torque Constant		Voltage Constant		Continuous Running			Peak		
	Units	Volts	Ohms	mH		N-m/A	oz-in/A	V-sec/rad	V/kRPM	Torque (Nm)	RPM	Current (A)	Torque (Nm)	RPM

Four Stage Gearbox

LRPX40-250V12-___-156	12	0.26	27.8	14	2.340	331.33	3.569	373.74	4.57	26	2.0	22.50	5	9.6
LRPX40-250V24-___-156	24	1.1	125.4	14	4.679	662.66	7.138	747.48	4.57	26	1.0	22.50	5	4.8
LRPX40-250V48-___-156	48	4.5	501.4	14	9.349	1323.88	14.276	1494.96	4.57	26	0.5	22.50	5	2.4
LRPX40-250V12-___-190	12	0.26	27.8	14	2.859	404.82	4.361	456.64	5.58	21	2.0	22.50	4	7.9
LRPX40-250V24-___-190	24	1.1	125.4	14	5.717	809.65	8.721	913.28	5.58	21	1.0	22.50	4	3.9
LRPX40-250V48-___-190	48	4.5	501.4	14	11.422	1617.52	17.442	1826.55	5.58	21	0.5	22.50	4	2.0
LRPX40-250V12-___-210	12	0.26	27.8	14	3.157	447.00	4.815	504.22	6.16	19	2.0	22.50	3	7.1
LRPX40-250V24-___-210	24	1.1	125.4	14	6.313	894.01	9.630	1008.44	6.16	19	1.0	22.50	3	3.6
LRPX40-250V48-___-210	48	4.5	501.4	14	12.612	1786.06	19.260	2016.87	6.16	19	0.5	22.50	3	1.8
LRPX40-250V12-___-232	12	0.26	27.8	14	3.493	494.61	5.328	557.92	6.82	18	2.0	22.50	3	6.4
LRPX40-250V24-___-232	24	1.1	125.4	14	6.986	989.23	10.656	1115.84	6.82	18	1.0	22.50	3	3.2
LRPX40-250V48-___-232	48	4.5	501.4	14	13.956	1976.30	21.311	2231.69	6.82	18	0.5	22.50	3	1.6
LRPX40-250V12-___-257	12	0.26	27.8	14	3.857	546.15	5.883	616.06	7.53	16	2.0	22.50	3	5.8
LRPX40-250V24-___-257	24	1.1	125.4	14	7.713	1092.30	11.766	1232.11	7.53	16	1.0	22.50	3	2.9
LRPX40-250V48-___-257	48	4.5	501.4	14	15.410	2182.22	23.532	2464.22	7.53	16	0.5	22.50	3	1.5
LRPX40-250V12-___-284	12	0.26	27.8	14	4.267	604.32	6.509	681.67	8.33	14	2.0	22.50	3	5.3
LRPX40-250V24-___-284	24	1.1	125.4	14	8.535	1208.64	13.019	1363.34	8.33	14	1.0	22.50	3	2.6
LRPX40-250V48-___-284	48	4.5	501.4	14	17.051	2414.65	26.038	2726.69	8.33	14	0.5	22.50	3	1.3
LRPX40-250V12-___-314	12	0.26	27.8	14	4.712	667.29	7.188	752.70	9.20	13	2.0	22.50	2	4.8
LRPX40-250V24-___-314	24	1.1	125.4	14	9.424	1334.58	14.376	1505.40	9.20	13	1.0	22.50	2	2.4
LRPX40-250V48-___-314	48	4.5	501.4	14	18.828	2666.25	28.751	3010.80	9.20	13	0.5	22.50	2	1.2
LRPX40-250V12-___-346	12	0.26	27.8	14	5.203	736.82	7.937	831.13	10.16	12	2.0	22.50	2	4.3
LRPX40-250V24-___-346	24	1.1	125.4	14	10.406	1473.64	15.873	1662.26	10.16	12	1.0	22.50	2	2.2
LRPX40-250V48-___-346	48	4.5	501.4	14	20.790	2944.06	31.747	3324.51	10.16	12	0.5	22.50	2	1.1
LRPX40-250V12-___-383	12	0.26	27.8	14	5.757	815.30	8.782	919.65	11.24	11	2.0	22.50	2	3.9
LRPX40-250V24-___-383	24	1.1	125.4	14	11.515	1630.60	17.564	1839.30	11.24	11	1.0	22.50	2	2.0
LRPX40-250V48-___-383	48	4.5	501.4	14	23.004	3257.63	35.128	3678.61	11.24	11	0.5	22.50	2	1.0
LRPX40-250V12-___-423	12	0.26	27.8	14	6.357	900.25	9.697	1015.48	12.41	10	2.0	22.50	2	3.5
LRPX40-250V24-___-423	24	1.1	125.4	14	12.714	1800.50	19.394	2030.95	12.41	10	1.0	22.50	2	1.8
LRPX40-250V48-___-423	48	4.5	501.4	14	25.401	3597.07	38.788	4061.91	12.41	10	0.5	22.50	2	0.9
LRPX40-250V12-___-517	12	0.26	27.8	14	7.767	1099.93	11.848	1240.71	15.00	8	1.9	22.50	1	2.9
LRPX40-250V24-___-517	24	1.1	125.4	14	15.534	2199.86	23.696	2481.43	15.00	8	1.0	22.50	1	1.4
LRPX40-250V48-___-517	48	4.5	501.4	14	31.035	4394.91	47.392	4962.85	15.00	8	0.5	22.50	1	0.7
LRPX40-250V12-___-571	12	0.26	27.8	14	8.577	1214.54	13.082	1369.99	15.00	7	1.7	22.50	1	2.6
LRPX40-250V24-___-571	24	1.1	125.4	14	17.153	2429.08	26.165	2739.98	15.00	7	0.9	22.50	1	1.3
LRPX40-250V48-___-571	48	4.5	501.4	14	34.269	4852.85	52.330	5479.97	15.00	7	0.4	22.50	1	0.7
LRPX40-250V12-___-697	12	0.26	27.8	14	10.479	1483.93	15.984	1673.86	15.00	6	1.4	22.50	1	2.1
LRPX40-250V24-___-697	24	1.1	125.4	14	20.958	2967.86	31.968	3347.72	15.00	6	0.7	22.50	1	1.1
LRPX40-250V48-___-697	48	4.5	501.4	14	41.870	5929.23	63.937	6695.45	15.00	6	0.4	22.50	1	0.5
LRPX40-250V12-___-941	12	0.26	27.8	14	14.137	2001.99	21.564	2258.23	15.00	4	1.1	22.50	1	1.6
LRPX40-250V24-___-941	24	1.1	125.4	14	28.274	4003.97	43.129	4516.46	15.00	4	0.5	22.50	1	0.8
LRPX40-250V48-___-941	48	4.5	501.4	14	56.487	7999.20	86.258	9032.91	15.00	4	0.3	22.50	1	0.4



General Spec. Table

Part Number	Ratio (approx.)	Ratio (Exact)			Backlash (avg) (Degrees)	Length (Motor + Gearhead) (mm)	Weight (g)	Temperature Range (°C)	System Inertia (g.cm ²)
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One Stage Gearbox

LRPX40-250V_--_003	3.36	84	/	25	0.8	79.73	527	-40 °C to +100 °C	31.7
LRPX40-250V_--_004	4.11	78	/	19	0.7	79.73	527	-40 °C to +100 °C	28.7
LRPX40-250V_--_006	5.54	72	/	13	0.7	79.73	527	-40 °C to +100 °C	25.1

Two Stage Gearbox

LRPX40-250V_--_011	11.29	7056	/	625	1.0	97.28	602	-40 °C to +100 °C	20.0
LRPX40-250V_--_014	13.79	6552	/	475	1.0	97.28	602	-40 °C to +100 °C	19.1
LRPX40-250V_--_017	16.85	6084	/	361	0.8	97.28	602	-40 °C to +100 °C	18.3
LRPX40-250V_--_019	18.61	6048	/	325	1.0	97.28	602	-40 °C to +100 °C	18.0
LRPX40-250V_--_023	22.74	432	/	19	0.8	97.28	602	-40 °C to +100 °C	17.5
LRPX40-250V_--_031	30.67	5184	/	169	0.8	97.28	602	-40 °C to +100 °C	16.8

Three Stage Gearbox

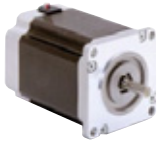
LRPX40-250V_--_038	37.93	592704	/	15625	1.1	109.13	665	-40 °C to +100 °C	16.5
LRPX40-250V_--_046	46.35	550368	/	11875	1.1	109.13	665	-40 °C to +100 °C	16.2
LRPX40-250V_--_057	56.63	511056	/	9025	1.0	109.13	665	-40 °C to +100 °C	16.0
LRPX40-250V_--_063	62.53	508032	/	8125	1.1	109.13	665	-40 °C to +100 °C	15.9
LRPX40-250V_--_069	69.19	474552	/	6859	0.9	109.13	665	-40 °C to +100 °C	15.8
LRPX40-250V_--_076	76.40	36288	/	475	1.0	109.13	665	-40 °C to +100 °C	15.7
LRPX40-250V_--_093	93.34	33696	/	361	0.9	109.13	665	-40 °C to +100 °C	15.6
LRPX40-250V_--_103	103.07	435456	/	4225	1.0	109.13	665	-40 °C to +100 °C	15.5
LRPX40-250V_--_126	125.93	31104	/	247	0.9	109.13	665	-40 °C to +100 °C	15.4
LRPX40-250V_--_170	169.89	373248	/	2197	0.8	109.13	665	-40 °C to +100 °C	15.3

Four Stage Gearbox

LRPX40-250V_--_127	127.46	49787136	/	390625	1.1	120.98	727	-40 °C to +100 °C	15.4
LRPX40-250V_--_156	155.73	46230912	/	296875	1.1	120.98	727	-40 °C to +100 °C	15.4
LRPX40-250V_--_190	190.27	42928704	/	225625	1.1	120.98	727	-40 °C to +100 °C	15.3
LRPX40-250V_--_210	210.09	42674688	/	203125	1.1	120.98	727	-40 °C to +100 °C	15.3
LRPX40-250V_--_232	232.47	39862368	/	171475	1.0	120.98	727	-40 °C to +100 °C	15.2
LRPX40-250V_--_257	256.69	3048192	/	11875	1.1	120.98	727	-40 °C to +100 °C	15.2
LRPX40-250V_--_284	284.03	37015056	/	130321	0.9	120.98	727	-40 °C to +100 °C	15.2
LRPX40-250V_--_314	313.62	2830464	/	9025	1.0	120.98	727	-40 °C to +100 °C	15.2
LRPX40-250V_--_346	346.30	36578304	/	105625	1.1	120.98	727	-40 °C to +100 °C	15.2
LRPX40-250V_--_383	383.19	2628288	/	6859	0.9	120.98	727	-40 °C to +100 °C	15.1
LRPX40-250V_--_423	423.12	2612736	/	6175	1.0	120.98	727	-40 °C to +100 °C	15.1
LRPX40-250V_--_517	516.96	186624	/	361	0.9	120.98	727	-40 °C to +100 °C	15.1
LRPX40-250V_--_571	570.83	31352832	/	54925	1.0	120.98	727	-40 °C to +100 °C	15.1
LRPX40-250V_--_697	697.44	2239488	/	3211	0.9	120.98	727	-40 °C to +100 °C	15.1
LRPX40-250V_--_941	940.93	26873856	/	28561	0.8	120.98	727	-40 °C to +100 °C	15.1



Major Product Lines



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Cable / Harness Solutions



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AC Motors



Integrated Motor Drives



Mobility Gearmotors



AC Synchronous



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PMAC Synchronous



Stepper Gear Motors



Rotary Actuators

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