

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!

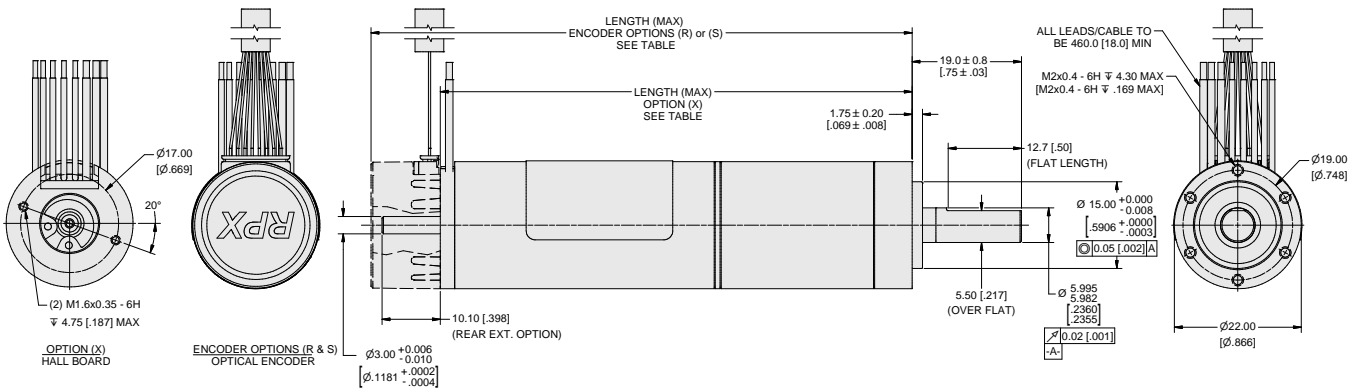
Features:

- 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.

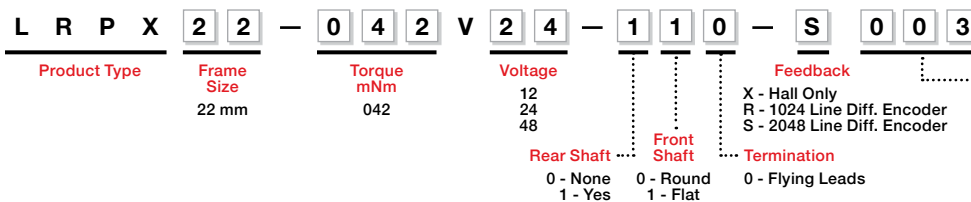


LRPX22 BRUSHLESS DC MOTOR	
Size:	22mm (0.87 in) diameter
Peak Torque:	3.0 Nm (424.8 oz.in)
Continuous Stall Torque:	2.5 Nm (354 oz.in)
Speed:	to 2286 RPM

All measurements in mm [inches]



LRPX Model Number



Ratio		Ratio	
003	3.500:1	094	93.92:1
004	4.333:1	116	116.3:1
008	7.667:1	144	144.0:1
012	12.25:1	186	185.8:1
015	15.17:1	230	230.0:1
019	18.78:1	285	284.8:1
027	26.83:1	329	328.7:1
033	33.22:1	353	352.6:1
053	53.08:2	407	407.0:1
066	65.72:1	504	503.9:1
081	81.37:1	624	623.8:1

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

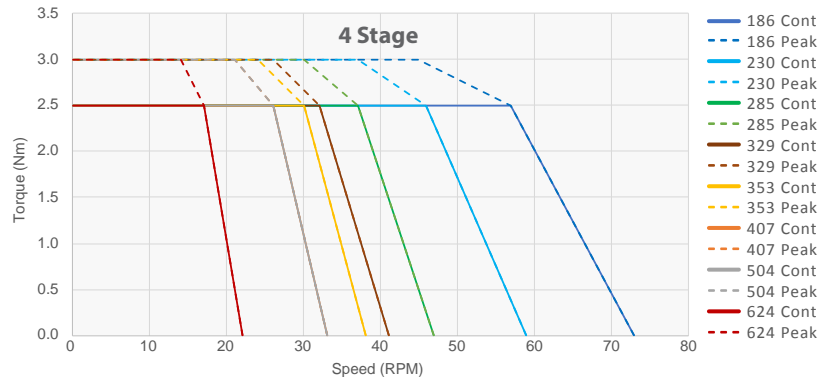
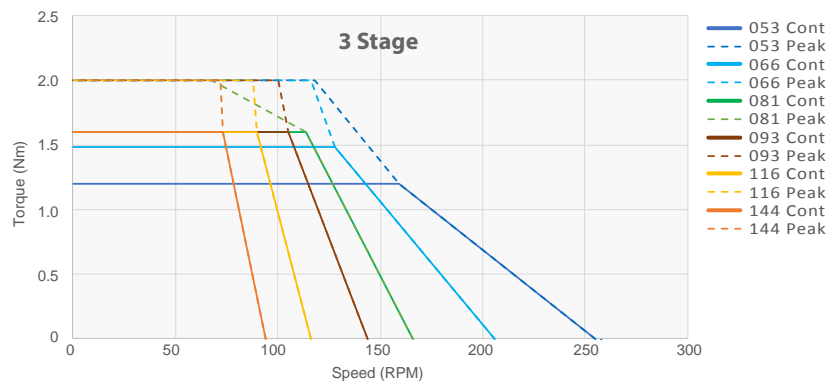
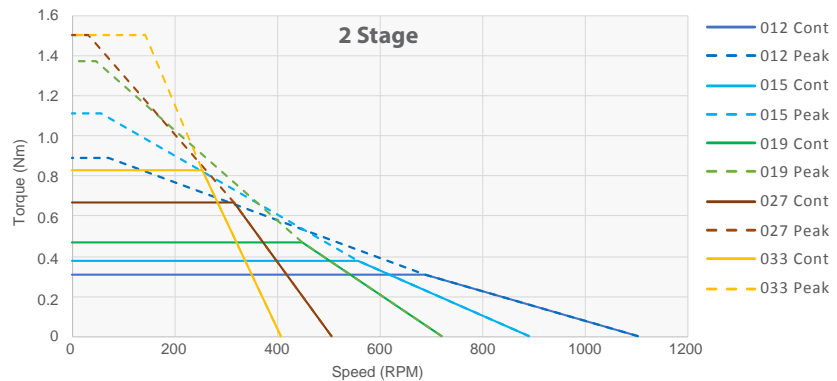
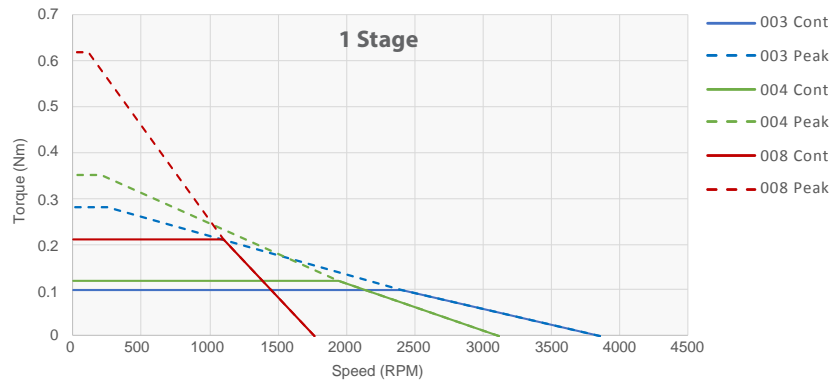
- Gyro Stabilization Systems
- Steering Pumps

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

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	0.008	0.80	0.04	9000	5.0	0.09	1700	10.8
LRPX22-42V24	24	2.39	0.90	8	0.017	2.35	0.015	1.60	0.04	9000	2.5	0.09	1700	5.5
LRPX22-42V48	48	9.72	3.60	8	0.032	4.53	0.032	3.30	0.04	9000	1.3	0.09	1700	2.8

One Stage Gearbox

LRPX22-042V12-___-003	12	0.6	0.22	8	0.029	4.16	0.033	3.42	0.09	2408	3.87	0.28	249	10.34
LRPX22-042V24-___-003	24	2.39	0.90	8	0.059	8.33	0.065	6.84	0.09	2408	1.93	0.28	249	5.17
LRPX22-042V48-___-003	48	9.72	3.60	8	0.118	16.66	0.131	13.69	0.09	2408	0.97	0.28	249	2.585
LRPX22-042V12-___-004	12	0.56	0.22	8	0.036	5.16	0.040	4.24	0.12	1945	3.87	0.35	201	10.34
LRPX22-042V24-___-004	24	2.39	0.90	8	0.073	10.31	0.081	8.47	0.12	1945	1.93	0.35	201	5.17
LRPX22-042V48-___-004	48	9.72	3.60	8	0.146	20.62	0.162	16.94	0.12	1945	0.97	0.35	201	2.585
LRPX22-042V12-___-008	12	0.56	0.22	8	0.064	9.12	0.072	7.50	0.21	1099	3.87	0.62	114	10.34
LRPX22-042V24-___-008	24	2.39	0.90	8	0.129	18.25	0.143	14.99	0.21	1099	1.93	0.62	114	5.17
LRPX22-042V48-___-008	48	9.72	3.60	8	0.258	36.49	0.286	29.98	0.21	1099	0.97	0.62	114	2.585

Two Stage Gearbox

LRPX22-042V12-___-012	12	0.6	0.22	8	0.093	13.1	0.127	13.3	0.31	688	3.87	0.893	71	10.34
LRPX22-042V24-___-012	24	2.4	0.90	8	0.185	26.2	0.254	26.6	0.31	688	1.93	0.893	71	5.17
LRPX22-042V48-___-012	48	9.7	3.60	8	0.371	52.5	0.508	53.2	0.31	688	0.97	0.893	71	2.585
LRPX22-042V12-___-015	12	0.6	0.22	8	0.115	16.2	0.157	16.5	0.38	556	3.87	1.106	57	10.34
LRPX22-042V24-___-015	24	2.4	0.90	8	0.229	32.5	0.315	33.0	0.38	556	1.93	1.106	57	5.17
LRPX22-042V48-___-015	48	9.7	3.60	8	0.459	65.0	0.630	65.9	0.38	556	0.97	1.106	57	2.585
LRPX22-042V12-___-019	12	0.6	0.22	8	0.142	20.1	0.195	20.4	0.47	449	3.87	1.369	46	10.34
LRPX22-042V24-___-019	24	2.4	0.90	8	0.284	40.2	0.390	40.8	0.47	449	1.93	1.369	46	5.17
LRPX22-042V48-___-019	48	9.7	3.60	8	0.568	80.4	0.779	81.6	0.47	449	0.97	1.369	46	2.585
LRPX22-042V12-___-027	12	0.6	0.22	8	0.203	28.7	0.278	29.1	0.67	314	3.87	1.50	142	9.5
LRPX22-042V24-___-027	24	2.4	0.90	8	0.406	57.5	0.557	58.3	0.67	314	1.93	1.50	142	4.8
LRPX22-042V48-___-027	48	9.7	3.60	8	0.812	114.9	1.113	116.6	0.67	314	0.97	1.50	142	2.4
LRPX22-042V12-___-033	12	0.6	0.22	8	0.251	35.6	0.345	36.1	0.83	254	3.87	1.50	171	8.1
LRPX22-042V24-___-033	24	2.4	0.90	8	0.502	71.1	0.689	72.2	0.83	254	1.93	1.50	171	4.1
LRPX22-042V48-___-033	48	9.7	3.60	8	1.005	142.3	1.379	144.3	0.83	254	0.97	1.50	171	2.0

Three Stage Gearbox

LRPX22-042V12-___-053	12	0.6	0.22	8	0.361	51.2	0.496	51.9	1.20	159	3.87	2.00	118	6.1
LRPX22-042V24-___-053	24	2.4	0.90	8	0.723	102.3	0.991	103.8	1.20	159	1.93	2.00	118	3.0
LRPX22-042V48-___-053	48	9.7	3.60	8	1.445	204.6	1.982	207.6	1.20	159	0.97	2.00	118	1.5
LRPX22-042V12-___-066	12	0.6	0.22	8	0.447	63.3	0.614	64.3	1.49	128	3.87	2.00	116	5.0
LRPX22-042V24-___-066	24	2.4	0.90	8	0.895	126.7	1.227	128.5	1.49	128	1.93	2.00	116	2.5
LRPX22-042V48-___-066	48	9.7	3.60	8	1.789	253.4	2.454	257.0	1.49	128	0.97	2.00	116	1.3
LRPX22-042V12-___-081	12	0.6	0.22	8	0.554	78.4	0.760	79.6	1.60	120	3.42	2.00	108	4.1
LRPX22-042V24-___-081	24	2.4	0.90	8	1.108	156.8	1.519	159.1	1.60	120	1.71	2.00	108	2.1
LRPX22-042V48-___-081	48	9.7	3.60	8	2.215	313.7	3.039	318.2	1.60	120	0.86	2.00	108	1.0
LRPX22-042V12-___-094	12	0.6	0.22	8	0.639	90.5	0.877	91.8	1.60	109	3.04	2.00	100	3.7
LRPX22-042V24-___-094	24	2.4	0.90	8	1.279	181.0	1.754	183.6	1.60	109	1.52	2.00	100	1.8
LRPX22-042V48-___-094	48	9.7	3.60	8	2.557	362.1	3.508	367.3	1.60	109	0.76	2.00	100	0.9
LRPX22-042V12-___-116	12	0.6	0.22	8	0.792	112.1	1.086	113.7	1.60	93	2.56	2.00	88	3.1
LRPX22-042V24-___-116	24	2.4	0.90	8	1.583	224.2	2.172	227.4	1.60	93	1.28	2.00	88	1.5
LRPX22-042V48-___-116	48	9.7	3.60	8	3.166	448.4	4.343	454.8	1.60	93	0.64	2.00	88	0.8
LRPX22-042V12-___-144	12	0.6	0.22	8	0.980	138.8	1.344	140.8	1.60	79	2.17	2.00	73	2.6
LRPX22-042V24-___-144	24	2.4	0.90	8	1.960	277.6	2.689	281.6	1.60	79	1.08	2.00	73	1.3
LRPX22-042V48-___-144	48	9.7	3.60	8	3.921	555.1	5.378	563.1	1.60	79	0.54	2.00	73	0.6



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	0.6	0.22	8	1.14	161.2	1.73	181.7	2.50	57	2.73	3.00	45	3.2
LRPX22-042V24-___-186	24	2.4	0.90	8	2.28	322.3	3.47	363.3	2.50	57	1.37	3.00	45	1.6
LRPX22-042V48-___-186	48	9.7	3.60	8	4.55	644.7	6.94	726.6	2.50	57	0.68	3.00	45	0.8
LRPX22-042V12-___-230	12	0.6	0.22	8	1.41	199.5	2.15	224.9	2.50	46	2.31	3.00	37	2.7
LRPX22-042V24-___-230	24	2.4	0.90	8	2.82	399.0	4.29	449.7	2.50	46	1.15	3.00	37	1.3
LRPX22-042V48-___-230	48	9.7	3.60	8	5.64	798.0	8.59	899.5	2.50	46	0.58	3.00	37	0.7
LRPX22-042V12-___-285	12	0.6	0.22	8	1.74	247.0	2.66	278.4	2.50	37	1.97	3.00	30	2.3
LRPX22-042V24-___-285	24	2.4	0.90	8	3.49	494.1	5.32	556.9	2.50	37	.98	3.00	30	1.1
LRPX22-042V48-___-285	48	9.7	3.60	8	6.89	988.2	10.64	1113.8	2.50	37	0.49	3.00	30	0.6
LRPX22-042V12-___-329	12	0.6	0.22	8	2.01	285.1	3.07	321.4	2.50	32	1.78	3.00	26	2.0
LRPX22-042V24-___-329	24	2.4	0.90	8	4.03	570.2	6.14	642.7	2.50	32	0.89	3.00	26	1.0
LRPX22-042V48-___-329	48	9.7	3.60	8	8.05	1140.5	12.28	1285.4	2.50	32	0.44	3.00	26	0.5
LRPX22-042V12-___-353	12	0.6	0.22	8	2.16	305.9	3.29	344.7	2.50	30	1.69	3.00	24	1.9
LRPX22-042V24-___-353	24	2.4	0.90	8	4.32	611.7	6.58	689.5	2.50	30	0.85	3.00	24	1.0
LRPX22-042V48-___-353	48	9.7	3.60	8	8.64	1223.4	13.12	1378.9	2.50	30	0.42	3.00	24	0.5
LRPX22-042V12-___-407	12	0.6	0.22	8	2.49	353.0	3.80	397.9	2.50	26	1.54	3.00	21	1.7
LRPX22-042V24-___-407	24	2.4	0.90	8	4.99	706.1	7.60	795.8	2.50	26	0.77	3.00	21	0.9
LRPX22-042V48-___-407	48	9.7	3.60	8	9.97	1520	15.20	1591.6	2.50	26	0.38	3.00	21	0.4
LRPX22-042V12-___-504	12	0.6	0.22	8	3.09	470	4.70	492.6	2.50	21	1.35	3.00	17	1.5
LRPX22-042V24-___-504	24	2.4	0.90	8	6.17	941	9.41	985.3	2.50	21	0.67	3.00	17	0.8
LRPX22-042V48-___-504	48	9.7	3.60	8	12.35	1882	18.82	1970.6	2.50	21	0.34	3.00	17	0.4
LRPX22-042V12-___-624	12	0.6	0.22	8	3.82	582	5.82	609.9	2.50	17	1.19	3.00	14	1.3
LRPX22-042V24-___-624	24	2.4	0.90	8	7.64	1165	11.65	1219.7	2.50	17	0.59	3.00	14	0.7
LRPX22-042V48-___-624	48	9.7	3.60	8	15.29	2330	23.30	2439.5	2.50	17	0.30	3.00	14	0.3

General Specifications

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

LRPX22-042V___-003	3.50	7 / 2	0.9	77.2	136.4	-40 °C to +100 °C
LRPX22-042V___-004	4.33	13 / 3	0.9	77.2	136.4	-40 °C to +100 °C
LRPX22-042V___-008	7.67	23 / 3	0.7	77.2	136.4	-40 °C to +100 °C

Two Stage Gearbox

LRPX22-042V___-012	12.25	49 / 4	1.1	82.9	148.1	-40 °C to +100 °C
LRPX22-042V___-015	15.17	91 / 6	1.1	82.9	148.1	-40 °C to +100 °C
LRPX22-042V___-019	18.78	169 / 9	1.2	82.9	148.1	-40 °C to +100 °C
LRPX22-042V___-027	26.83	161 / 6	1.1	82.9	148.1	-40 °C to +100 °C
LRPX22-042V___-033	33.22	299 / 9	1.1	82.9	148.1	-40 °C to +100 °C

Three Stage Gearbox

LRPX22-042V___-053	53.08	637 / 12	1.2	88.2	159.8	-40 °C to +100 °C
LRPX22-042V___-066	65.72	1183 / 18	1.2	88.2	159.8	-40 °C to +100 °C
LRPX22-042V___-081	81.37	2197 / 27	1.2	88.2	159.8	-40 °C to +100 °C
LRPX22-042V___-094	93.92	1127 / 12	1.2	88.2	159.8	-40 °C to +100 °C
LRPX22-042V___-116	116.28	2093 / 18	1.2	88.2	159.8	-40 °C to +100 °C
LRPX22-042V___-144	143.96	3887 / 27	1.2	88.2	159.8	-40 °C to +100 °C

Four Stage Gearbox

LRPX22-042V___-186	185.79	4459 / 24	1.2	93.6	171.5	-40 °C to +100 °C
LRPX22-042V___-230	230.03	8281 / 36	1.2	93.6	171.5	-40 °C to +100 °C
LRPX22-042V___-285	284.80	15379 / 54	1.2	93.6	171.5	-40 °C to +100 °C
LRPX22-042V___-329	328.71	7889 / 24	1.2	93.6	171.5	-40 °C to +100 °C
LRPX22-042V___-353	352.60	28561 / 81	1.2	93.6	171.5	-40 °C to +100 °C
LRPX22-042V___-407	406.97	14651 / 36	1.2	93.6	171.5	-40 °C to +100 °C
LRPX22-042V___-504	503.87	27209 / 54	1.2	93.6	171.5	-40 °C to +100 °C
LRPX22-042V___-624	623.84	50531 / 81	1.2	93.6	171.5	-40 °C to +100 °C



Your Genius. Our Drive.

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