

# Low Cost PMDC - Round Sided



## 42.2mm Series

### Applications

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|---------------------|-----------------------|
| * Vacuum Cleaner    | * Radio Control Car   |
| * Fuel Pump         | * Massager            |
| * Grinding Machine  | * Air Pump            |
| * Hand Scrw Driver  | * Vaccum Cleaner      |
| * Paper Shredder    | * Shoes Brush         |
| * Mincer            | * Coffee Bean Grinder |
| * Electric Drill    | * Car Seat Adjustor   |
| * Electric Saw      | * Window Lifter       |
| * Portable Massager | * Game Steering Wheel |



### Specification

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS3-12-1230F	6.0~12.0	12.0	22500	2.8	19300	14.2	620.00	123	72.2	4359
PL42RS3-12-1230FD	6.0~15.0	12.0	16800	2	15300	7	400.00	62.8	74.8	4494
PL42RS3-12-1230FD	6.0~15.0	12.0	18200	2.3	16400	10	500.00	84.2	70.2	5050
PL42RS3-12-1230FD	6.0~15.0	12.0	20000	2.5	17300	13	580.00	102	65.3	4296
PL42RS3-12-1230F	6.0~18.0	12.0	8200	0.6	7000	2.4	250.00	17.9	62.2	1708
PL42RS3-12-1230F	6.0~18.0	2.0	10000	0.8	8000	4.5	450.00	36.9	68.0	2250
PL42RS3-12-1230DF	6.0~18.0	12.0	10000	0.78	8000	4.2	450.00	36.9	73.7	2250
PL42RS3-12-1230VDC	12.0~24.0	24.0	8200	0.39	6740	1.78	460.00	31.8	74.4	2584

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS3-6-484NF	6.0~10.0	6.0	13340	3.3	11800	12	400.00	48.4	67.2	3464
PL42RS3-10-1113F	4.5~12.0	9.6	18500	2.9	16200	17.3	670.00	111.3	67.0	5389
PL42RS3-12-1480F	6.0~12.0	12.0	21300	3	19200	16.2	750.00	148	76.0	7607
PL42RS3-12-1240F	6.0~14.0	12.0	18320	2.4	16080	14.5	750.00	124	71.3	6134
PL42RS3-14-1127F	6.0~14.4	14.4	18500	2	16400	11	670.00	112.7	71.1	5900
PL42RS3-15-1140F	6.0~15.1	15.1	18100	1.98	16600	9.3	670.00	114	81.0	8084
PL42RS3-18-812NFC	6.0~18.0	18.0	14800	1.4	13200	6	600.00	81.2	75.2	5550
PL42RS3-24-79	12.0~36	24.0	2920	0.11	2570	0.43	300.00	7.9	76.5	2502

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS5-24-115VC	12.0~30.0	24.0	3600	0.15	2800	0.7	400.00	11.5	68.0	1800
PL42RS5-24-115VC	12.0~24.0	24.0	4000	0.17	2850	1.15	650.00	19	69.0	2260
PL42RS5-24-477	12.0~24.0	24.0	11000	0.5	9300	2.6	500.00	47.7	76.4	3236
PL42RS5-24-88	20.0~36.0	24.0	3600	0.16	2870	0.58	300.00	8.83	63.4	1480
PL42RS5-48-115C	24.0~48.0	48.0	3650	0.07	2800	0.37	400.00	11.5	65.0	1718
PL42RS5-48-87	30.0~60.0	48.0	3600	0.08	2820	0.3	300.00	8.67	60.2	1384

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS5-12-265NF	6.0~18.0	12.0	4340	0.5	3230	2.9	800.00	26.5	76.1	3127
PL42RS5-12-463F	9.0~24.0	12.0	8300	0.9	6950	5.2	650.00	46.3	74.3	3998
PL42RS5-14-833F	7.2~16.0	14.4	16400	1.6	14000	9.5	580.00	83.3	61.0	3960
PL42RS5-24-383C	12.0~24.0	24.0	10100	0.6	9100	2.1	410.00	38.3	75.9	4141
PL42RS5-24-582	12.0~24.0	24.0	9550	0.5	8100	2.8	700.00	58.2	86.5	4610
PL42RS5-24-395	12.0~24.0	24.0	12000	0.7	11000	2.2	350.00	39.5	74.8	4375
PL42RS5-24-291	12.0~24.0	24.0	8000	0.42	7100	1.6	400.00	29.1	75.8	3555
PL42RS5-35-443	24.0~40.0	35.0	9550	0.32	8300	1.65	520.00	44.3	76.7	4000

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS12-100-580	80~120	100.0	13500	0.19	12500	0.68	450.00	58	71.0	6075
PL42RS12-100-523FD	80~120	100.0	19800	0.27	17000	0.85	300.00	52.3	54.4	2127
PL42RS12-100-501FD	80~120	100.0	19000	0.28	16300	0.75	300.00	50.1	55.0	2112
PL42RS12-120-530FD	80~150	120.0	14000	0.14	11500	0.5	450.00	53	68.0	5056
PL42RS12-120-728	60~180	120.0	10000	0.09	7100	0.6	1000.00	72.8	82.0	2448

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS12-100-723NFD	60~120	100.0	14000	0.19	12800	0.75	550.00	72.3	75.9	6417
PL42RS12-100-706NF	80~120	100.0	14000	0.19	12500	0.75	550.00	70.6	74.1	5135
PL42RS12-100-590NDF	60~120	100.0	18100	0.25	14480	0.76	400.00	59	70.0	2000
PL42RS12-100-495FD	60~100	100.0	18840	0.26	16070	0.64	300.00	49.5	77.4	2040
PL42RS12-100-551FD	60~100	100.0	21300	0.27	17910	0.76	300.00	55.1	72.5	1885
PL42RS12-120-728	60~180	120.0	10000	0.09	7100	0.6	1000.00	72.8	82.0	3448
PL42RS12-120-489	80~130	120.0	9500	0.09	6800	0.6	700.00	48.9	57.4	2463
PL42RS12-230-430NFC	100~240	230.0	13400	0.07	10500	0.24	400.00	43	78.0	1848

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS12(24)-220-510FD	120~230	220.0	20000	0.14	16600	0.32	300.00	51	62.3	1765
PL42RS12(24)-220-257F	110~240	220.0	15000	0.1	12550	0.18	200.00	25.7	65.0	1226
PL42RS12(24)-230-531F	120~250	230.0	18000	0.11	14800	0.36	350.00	53.1	64.0	2000
PL42RS12(24)-240-196F	120~280	240.0	12000	0.08	9550	0.12	200.00	19.6	68.0	980
PL42RS12(24)-240-556NFC	100~240	240.0	19100	0.11	15500	0.32	350.00	55.6	72.3	1856

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS3-12-1440FD	6.0~12.0	12.0	16000	2.3	14100	14.5	1000.00	144	82.7	8474
PL42RS3-12-1800F	6.0~12.0	12.0	28270	5.7	25100	24.2	700.00	180	62.0	6242
PL42RS3-12-1680F	6.0~12.0	12.0	18200	3.2	16320	18.6	1000.00	168	75.3	9680
PL42RS3-12-1615F	6.0~12.0	12.0	20100	3.5	17500	19	900.00	161.5	70.8	6957
PL42RS3-12-1264NFC	6.0~15.0	12.0	17730	2.4	15400	15	800.00	126.4	70.0	6088
PL42RS3-12-2170F	6.0~18.0	12.0	20500	2.9	17600	24.2	1200.00	217	74.7	8483
PL42RS3-24-1070	12.0~24.0	24.0	13500	0.75	10500	6	1000.00	107	74.3	4545
PL42RS3-24-1660D	12.0~24.0	24.0	18200	1.4	16200	9.5	1000.00	166	72.8	9100

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS3-6-944F	3.0~8.0	6.0	10500	2.5	9200	21	1000.00	94.4	75.0	8100
PL42RS3-6-540	3.0~8.0	6.0	8000	1.8	7100	10.6	700.00	54	80.0	6200
PL42RS3-12-894F	8.0~15.0	12.0	12000	2	10900	9.5	800.00	89.4	78.5	9100
PL42RS3-12-1640F	6.0~12.0	12.0	21000	3.5	20000	17	800.00	164	80.0	17020

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS5-12-122	8.0~15.0	12.0	3000	0.3	2380	1.5	500.00	12.2	68.0	2432
PL42RS5-12-257	8.0~15.0	12.0	5000	0.5	4180	2.7	600.00	25.7	79.0	3687
PL42RS5-24-361F	12.0~24.0	24.0	5500	0.2	4300	1.85	820.00	36.1	81.3	3900
PL42RS5-24-361F	12.0~24.0	24.0	3000	0.11	2750	0.4	200.00	5.6	58.0	2450

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS5-12-1210NF	6.0~12.0	12.0	18200	2.4	15800	13.8	750.00	121	73.0	5769
PL42RS5-12-76	6.0~24.0	12.0	2230	0.23	1950	0.86	380.00	7.6	74.5	3040
PL42RS5-12-471F	6.0~24.0	12.0	6500	0.65	5400	4.8	850.00	47.1	81.7	5000
PL42RS5-12-124	6.2~24.0	12.0	3210	0.29	2690	1.5	450.00	12.4	68.9	2812
PL42RS5-12-1220NF	6.0~15.0	12.0	18700	2.5	16700	13.9	710.00	122	72.9	6638
PL42RS5-14-1600NF	6.2~14.4	14.4	21000	3	19500	15	800.00	160	74.1	11428
PL42RS5-14-1850F	6.2~14.4	14.4	24500	3.5	22600	17	800.00	185	75.5	10389

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS5-12-2310F	6.0~12.0	12.0	21000	3.5	18000	25	1250.00	231	76.9	8802
PL42RS5-12-1230F	6.0~12.0	12.0	11600	1	10000	13	1200.00	123	78.8	8700
PL42RS5-12-218	6.0~24.0	12.0	4200	0.47	3800	2.3	600.00	21.8	79.0	6300
PL42RS5-12-257	6.0~24.0	12.0	3435	0.37	2900	2.4	869.00	25.7	89.2	5580
PL42RS5-18-2410F	12.0~18.0	18.0	25000	3.8	23500	17.5	1000.00	241	76.5	16666
PL42RS5-24-503	12.0~24.0	24.0	6000	0.35	4900	2.8	1000.00	50.3	74.7	5263
PL42RS5-36-471	12.0~48.0	36.0	6300	0.2	5400	1.7	850.00	47.1	76.9	5952

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS12-110-326	80~120	110.0	12800	0.18	10600	0.45	300.00	32.6	65.9	1745
PL42RS12-115-153	100~140	115.0	4050	0.05	3000	0.18	500.00	15.3	62.0	1928
PL42RS12-120-800F	100~150	120.0	19000	0.21	15500	0.95	500.00	80	55.0	2700
PL42RS12-220-386	110~240	220.0	12280	0.07	9410	0.23	400.00	38.6	76.3	1711
PL42RS12-220-255	100~230	220.0	10400	0.06	8590	0.17	290.00	25.5	68.3	1666
PL42RS12-230-297C	200~240	230.0	11870	0.06	9650	0.16	300.00	29.7	80.7	1604
PL42RS12-230-430NF	110~230	230.0	15300	0.12	12000	0.32	350.00	43	58.8	1623
PL42RS12-230-299	110~240	230.0	11300	0.09	9100	0.19	320.00	29.9	68.3	1643

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS12-100-603DNF	60~120	100	12000	0.15	9800	0.75	600	60.3	69	3273
PL42RS12-100-820DNF	60~120	100	16200	0.2	13340	0.83	600	82	84	3398
PL42RS12-110-610FB	60~120	110	14000	0.16	11100	0.77	533	61	71.7	2573
PL42RS12-115-400N	80~145	115	4830	0.06	3860	0.44	1000	40	79	4980
PL42RS12-120-22	100~150	120.0	1620	0.014	1110	0.038	200.00	2.26	50.8	623
PL42RS12-220-90D	200~240	220.0	5500	0.03	4600	0.06	190.00	9	67.4	1161
PL42RS12-220-905F	200~240	220.0	18000	0.12	14700	0.48	600.00	90.5	85.7	3272
PL42RS12-230-1050D	100~300	230.0	8400	0.04	6000	0.49	1700.00	105	74.0	5950

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS12(24)-110-744F	80~120	110	18400	0.23	14500	0.9	500	74.4	75.2	2359
PL42RS12(24)-115-687NF	80~120	115	16200	0.14	13400	0.75	500	68.7	79.8	2893
PL42RS12(24)-220-615FD	100~220	220	14500	0.12	11250	0.38	533	61.5	73.6	2370
PL42RS12(24)-220-787FD	100~220	220	19150	0.16	15340	0.48	500	78.7	74.5	2513
PL42RS12(24)-220-905F	200~240	220	18000	0.12	14700	0.48	600	90.5	85.7	3272
PL42RS12(24)-230-972F	110~230	230	18700	0.12	15800	0.5	600	97.2	84.5	3870
PL42RS12(24)-230-420F	120~230	230	10000	0.042	8200	0.193	500	42	72.8	2777
PL42RS12(24)-230-667F	180~240	230	16000	0.09	13000	0.35	500	66.7	82.9	2666

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL42RS12-110-1040F	80~120	110.0	16200	0.23	12700	1.05	800.00	104	70.0	3800
PL42RS12-110-890F	100~120	110.0	17140	0.25	14500	1	600.00	89	70.0	3895
PL42RS12-120-1860NF	80~130	120.0	14200	0.18	12100	1.9	1500.00	186	81.6	10143
PL42RS12-120-164NFD	80~160	120.0	3700	0.04	3200	0.18	500.00	16.4	76.0	3700
PL42RS12-230-1620F	120~230	230.0	14200	0.08	10500	0.95	1500.00	162	74.0	5757
PL42RS12-230-900F	110~230	230.0	17140	0.1	14600	0.45	600.00	90	74.1	4049
PL42RS12-230-1660NF	120~230	230.0	14600	0.08	10800	0.9	1500.00	166	66.0	5763
PL42RS12-230-1560F	120~230	230.0	18300	0.11	15200	0.68	1000.00	156	83.7	6310

## Outline Drawing

