

# Low Cost PMDC - Round Sided



## 27.7mm Series

### Applications

- |                   |                        |
|-------------------|------------------------|
| * Hair Dryer      | * Water Pump           |
| * Water Sprayer   | * Washer Pump          |
| * Electric Drill  | * Electric Screwdriver |
| * Linear Actuator | * Popcorn Machine      |
| * Flush Device    | * Ice Sharpener        |



### Specification

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque gf.cm
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL28RS3-4-17	2.0~8.0	3.6	5000	0.2	4150	0.8	40.00	1.7	58.0	235
PL28RS3-5-99	3.2~4.8	4.8	15600	0.7	13030	3.2	74.00	9.9	64.4	449
PL28RS3-12-13VNC	9.0~12.0	12.0	4900	0.07	3722	0.22	33.60	1.3	49.3	140
PL28RS3-12-78	9.0~24.0	12.0	12900	0.22	10585	1	72.00	7.8	65.1	400
PL28RS3-24-27N	12.0~24.0	24.0	7000	0.06	5900	0.19	45.00	2.72	59.7	286
PL28RS3-24-56N	12.0~30.0	24.0	9700	0.11	7840	0.41	70.00	5.6	57.2	365
PL28RS3-24-88N	16.0~28.0	24.0	13000	0.1	10740	0.5	80.00	8.81	73.0	460
PL28RS3-24-26(B)	12.0~30.0	24.0	6800	0.06	5640	0.23	44.50	2.6	46.6	260

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque gf.cm
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL28RS3-2-67D	1.2~3.6	2.4	11700	1.1	9300	4.3	70.00	6.68	65.0	341
PL28RS3-2-48	1.2~2.4	2.4	11250	0.9	8500	3.4	55.00	4.8	58.8	225
PL28RS3-4-112	2.4~3.8	3.6	13500	0.8	11000	4.52	100.00	11.2	68.8	540
PL28RS3-5-110	3.0~6.0	4.8	15700	0.6	13100	3.2	80.00	11	71.0	483
PL28RS3-5-110	3.0~6.0	4.8	16000	0.7	13650	3.3	80.00	11	69.0	545
PL28RS3-7-56	3.0~9.0	7.2	12500	0.4	11000	1.25	50.00	5.64	62.6	420
PL28RS3-7-81	5.0~9.0	7.2	10000	0.38	7900	1.6	100.00	8.1	70.3	476
PL28RS3-12-29	6.0~12.0	12.0	14300	0.24	13300	0.56	21.60	2.9	43.1	308

Model No.	Voltage		No-Load		At Maximum Efficiency					Stall Torque gf.cm
	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL28RS5-6-20	4.0~12.0	6.0	7435	0.32	6370	0.7	30.00	1.96	47.0	21
PL28RS5-8-00	8.0~18.0	8.0	1170	0.02	980	0.03	2.80	0.028	11.6	18
PL28RS5-9-84	60.~12.0	9.0	19200	0.43	16400	1.5	50.00	8.4	62.3	34
PL28RS5-12-270N	6.0~12.0	12.0	26500	0.5	21600	3.5	120.00	26.6	63.3	660
PL28RS5-12-34	6.0~24.0	12.0	8836	0.15	6620	0.5	50.00	3.4	56.7	200
PL28RS5-24-168	6.0~30.0	24.0	28500	0.32	23500	1.2	70.00	16.8	58.3	399
PL28RS5-24-53	12.0~34.0	24.0	14600	0.13	11300	0.45	46.00	5.3	49.0	200
PL28RS5-24-38NC	18.0~30.0	24.0	10200	0.07	8040	0.25	46.00	3.8	63.2	217

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	%	
PL28RS5-12-39	8.0~12.0	12.0	9180	0.14	7520	0.48	50.00	3.86	67.0	277
PL28RS5-12-04V	6.0~24.0	12.0	2530	0.03	1720	0.08	20.00	0.35	36.4	63
PL28RS5-12-07VC	6.0~18.0	12.0	4300	0.08	3450	0.17	20.00	0.7	34.3	100
PL28RS5-15-85	6.0~18.0	15.0	16200	0.18	13900	0.82	60.00	8.5	69.1	428
PL28RS5-18-122	6.0~18.0	18.0	19200	0.23	16500	0.95	72.20	12.2	71.0	515
PL28RS5-18-161	12.0~20.0	18.0	20600	0.26	15700	1.66	100.00	16.1	53.9	420
PL28RS5-24-07VC	12.0~28.0	24.0	4300	0.05	3650	0.09	20.00	0.73	33.8	117
PL28RS5-24-43N	12.0~24.0	24.0	10500	0.1	8450	0.35	50.00	4.3	51.2	256

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	%	
PL28RS5-12-83	6.0~18.0	12.0	14625	0.3	12500	1	65.00	8.3	69.4	447
PL28RS5-13-203D	4.5~13.0	13.0	26800	0.6	22000	2.6	90.00	20.3	60.0	502
PL28RS5-13-213D	6.0~13.0	13.0	28000	0.64	23100	2.9	90.00	21.3	56.6	514
PL28RS5-17-128	6.0~17.0	17.0	19350	0.35	15550	1.32	80.00	12.8	56.9	407
PL28RS5-18-60	6.0~24.0	18.0	11000	0.13	8400	0.55	70.00	6.03	60.9	296
PL28RS5-18-117C	123.0~26.0	18.0	17500	0.25	14424	1.21	79.10	11.7	55.6	450
PL28RS5-24-136	12.0~24.0	24.0	21800	0.25	19000	0.9	70.00	13.6	62.9	546
PL28RS5-24-187	12.0~24.0	24.0	26400	0.3	22800	1.42	80.00	18.7	54.8	588

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	%	
PL28RS3-5-82C	3.0~9.6	4.8	10500	0.5	8830	2.6	90.00	8.15	65.3	566
PL28RS3-5-35D	3.6~6.0	5.2	5100	0.18	4300	0.9	80.00	3.53	75.0	424
PL28RS3-6-60	3.0~12.0	6.0	9200	0.26	7800	1.4	75.00	6	71.4	493
PL28RS3-12-246N	6.0~12.0	12.0	26000	0.5	20000	3.2	120.00	24.6	64.0	520
PL28RS3-12-265N	6.0~12.0	12.0	26000	0.6	21500	3	120.00	26.5	73.5	696
PL28RS3-12-96	6.0~18.0	12.0	13400	0.25	11000	1.25	85.00	9.6	64.0	475
PL28RS3-24-22	12.0~28.0	24.0	5300	0.03	4300	0.14	50.00	2.2	65.4	265
PL28RS3-24-39	12.0~28.0	24.0	7400	0.06	6000	0.27	64.00	3.9	60.0	338

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	%	
PL28RS3-6-154C	4.0~8.0	6.0	17000	0.7	15000	4	100.00	15.4	64.1	850
PL28RS3-7-197	3.6~7.2	7.2	18500	0.57	16000	3.9	120.00	19.7	70.0	888
PL28RS3-7-259	6.0~9.0	7.2	22000	0.74	18700	4.7	135.00	25.9	76.5	900
PL28RS3-7-158	3.0~12.0	7.2	16200	0.65	14000	3.3	110.00	15.8	66.5	810
PL28RS3-12-138VD	6.0~12.0	12.0	16000	0.35	13500	1.64	100.00	13.8	70.0	640
PL28RS3-12-262N	6.0~12.0	12.0	20500	0.38	17000	3.2	150.00	26.2	68.2	882
PL28RS3-18-297VD	12.0~24.0	18.0	23500	0.32	19300	2.1	150.00	29.7	78.6	804
PL28RS3-24-45VN	12.0~24.0	24.0	6800	0.05	5500	0.26	80.00	4.5	72.0	421

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	%	
PL28RS3-2-89	1.2~3.2	2.4	14500	1.4	12500	6	70.00	8.9	61.8	255
PL28RS3-2-139N	1.5~4.8	2.4	15500	1.85	12300	9.5	110.00	13.9	61.0	523
PL28RS3-4-118	2.0~6.0	3.6	13800	0.95	11700	4.87	98.00	11.8	67.0	644
PL28RS3-6-158	4.0~7.0	6.0	16800	0.8	15500	3.8	100.00	15.8	69.0	1298
PL28RS3-6-154	4.0~7.0	6.0	16500	0.7	15000	3.5	100.00	15.4	73.0	1110
PL28RS3-6-147	4.0~7.0	6.0	16500	0.58	14400	3.3	100.00	14.7	74.7	790
PL28RS3-7-160	4.5~9.0	7.2	16800	0.52	14470	3.3	108.00	16	67.0	390
PL28RS3-24-109N	12.0~24.0	24.0	8400	0.08	5300	0.8	200.00	10.9	56.7	540

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	%	
PL28RS3-4-200N	2.4~6.0	3.6	16400	1.3	13950	8	140.00	20	69.7	1000
PL28RS3-12-29D	6.0~18.0	12.0	4360	0.08	3560	0.38	80.00	2.9	63.8	440
PL28RS3-24-86C	18.0~30.0	24.0	7000	0.06	5580	0.5	150.00	8.6	72.0	750
PL28RS3-24-155C	12.0~30.0	24.0	8000	0.07	6030	0.82	250.00	15.5	78.7	1000
PL28RS3-40-23VN	30.0~148.0	40.0	4550	0.03	3950	0.1	55.00	2.3	57.5	417
PL28RS3-100-88GC	80.0~100.0	100.0	12000	0.02	10750	0.1	80.00	8.8	69.8	800
PL28RS3-100-63GC	80.0~100.0	100.0	10000	0.018	8820	0.075	70.00	6.3	66.6	593
PL28RS3-100-127GC	80.0~110.0	100.0	14100	0.03	12400	0.13	100.00	12.7	77.5	829

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	%	
PL28RS3-4-194	2.4~3.6	3.6	18740	1.5	15740	7.6	120.00	19.4	70.8	750
PL28RS3-5-287N	2.4~4.8	4.8	22500	1.5	18700	8.7	150.00	28.7	68.7	887
PL28RS3-6-235N	4.0~8.0	6.0	19100	0.9	16400	5.15	140.00	23.54	76.0	990
PL28RS3-6-159	4.0~8.0	6.0	16800	0.8	15500	3.44	100.00	15.9	77.0	1292
PL28RS3-7-178C	3.0~9.0	7.2	16500	0.55	14500	3.3	120.00	17.8	74.9	990
PL28RS3-7-144	3.0~10.0	7.2	14800	0.48	12800	2.7	110.00	14.4	74.0	810
PL28RS3-12-282N	6.0~12.0	12.0	20500	0.44	17200	3.2	160.00	28.2	73.4	1000
PL28RS3-12-86	1.0~18.0	12.0	8100	0.18	6430	1.2	130.00	8.6	59.5	631

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	%	
PL28RS3-7-190C	3.0~9.0	7.2	17000	0.85	15400	4.3	120.00	19	61.5	1200
PL28RS3-7-209C	3.0~9.0	7.2	19000	0.72	17000	3.5	120.00	20.9	83.0	1142
PL28RS3-7-202C	3.0~9.0	7.2	18400	0.67	16400	3.65	120.00	20.2	77.0	1104
PL28RS3-7-184C	4.8~7.2	7.2	16900	0.7	15000	3.8	120.00	18.4	67.2	1070
PL28RS3-7-194C	3.0~9.0	7.2	17800	0.7	15800	3.8	120.00	19.4	70.9	1068
PL28RS3-24-179	12.0~24.0	24.0	15000	0.2	12950	1.15	135.00	17.9	65.0	990

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	%	
PL28RS5-12-134N	6.0~15.0	12.0	16000	0.34	13800	1.5	95.00	13.4	74.0	693
PL28RS5-12-155N	6.0~18.0	12.0	18000	0.35	15200	1.8	100.00	15.5	71.7	642
PL28RS5-12-72N	6.0~18.0	12.0	12070	0.23	10000	0.9	70.00	7.2	66.6	410
PL28RS5-12-04V	9.0~12.0	12.0	2150	0.03	1600	0.08	25.00	0.41	42.9	100
PL28RS5-12-11V	6.0~24.0	12.0	3400	0.09	2760	0.21	40.00	1.13	44.9	212
PL28RS5-12-15V	12.0~24.0	12.0	4400	0.05	3710	0.19	40.00	1.52	67.0	255
PL28RS5-24-22V	12.0~24.0	24.0	6600	0.07	5450	0.18	40.00	2.2	51.0	250
PL28RS5-24-29	12.0~28.0	24.0	5700	0.04	4400	0.19	65.00	2.9	63.5	285

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	%	
PL28RS5-12-06C	6.0~18.0	12.0	2500	0.04	1940	0.11	30.00	0.59	44.7	136
PL28RS5-12-14C	6.0~18.0	12.0	4000	0.05	3320	0.18	40.00	1.36	62.8	235
PL28RS5-20-82	12.0~24.0	20.0	9900	0.1	8000	0.54	100.00	8.2	75.9	526
PL28RS5-24-158	9.0~24.0	24.0	15200	0.15	12870	0.92	120.00	15.8	71.6	783
PL28RS5-24-23V	12.0~18.0	24.0	6600	0.07	5500	0.18	40.00	2.3	53.2	240
PL28RS5-24-228N	12.0~24.0	24.0	20000	0.23	17100	1.38	130.00	22.8	68.8	896
PL28RS5-24-143NC	12.0~30.0	24.0	13000	0.11	10000	0.95	140.00	14.3	63.0	600
PL28RS5-24-46NC	12.0~30.0	24.0	9430	0.07	8150	0.3	55.00	4.6	64.0	405

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	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL28RS5-12-91V	6.0~15.0	12.0	10700	0.2	8900	1.05	100.00	9.1	76.0	594
PL28RS5-12-65	6.0~18.0	12.0	10000	0.16	8500	0.78	75.00	6.5	69.4	500
PL28RS5-12-82N	8.0~16.0	12.0	10000	0.17	8400	0.98	95.00	8.18	70.0	297
PL28RS5-24-34V	12.0~30.0	24.0	6600	0.07	5500	0.21	60.00	3.4	57.0	360
PL28RS5-24-82V	12.0~30.0	24.0	8350	0.12	6630	0.5	120.00	8.2	68.0	583
PL28RS5-24-49VN	12.0~30.0	24.0	10300	0.1	8800	0.36	55.00	4.9	56.7	379
PL28RS5-24-02VN	12.0~30.0	24.0	1750	0.02	1370	0.03	15.00	0.21	30.2	69
PL28RS5-24-40C	12.0~30.0	24.0	6800	0.08	5580	0.28	70.00	4	59.6	390

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	%	
PL28RS5-6-22VD	3.0~12.0	6.0	4040	0.17	3370	0.6	64.00	2.2	61.0	385
PL28RS5-6-22V	6.0~12.0	6.0	4040	0.15	3370	0.6	68.00	2.2	61.0	394
PL28RS5-12-55C	6.0~18.0	12.0	7000	0.13	5700	0.65	95.00	5.5	70.0	520
PL28RS5-12-24VD	6.0~24.0	12.0	4040	0.11	3370	0.33	70.00	2.4	61.0	422
PL28RS5-12-32C	6.0~24.0	12.0	5100	0.1	4400	0.38	70.00	3.2	70.0	510
PL28RS5-12-12C	12.0~24.0	12.0	2750	0.07	2270	0.19	52.50	1.2	53.6	301
PL28RS5-24-52C	12.0~24.0	24.0	6000	0.09	5060	0.36	100.00	5.2	60.0	640
PL28RS5-24-31	12.0~24.0	24.0	6920	0.05	5840	0.19	52.00	3.1	68.3	333

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	%	
PL28RS5-6-16	3.0~9.0	6.0	4100	0.15	3130	0.49	50.00	1.6	54.6	211
PL28RS5-12-82N	6.0~18.0	12.0	9800	0.17	8400	0.92	95.00	8.19	74.2	669
PL28RS5-12-138N	6.0~18.0	12.0	15900	0.33	13500	1.7	100.00	13.8	68.0	663
PL28RS5-12-92V	8.0~18.0	12.0	10700	0.25	9000	1.2	100.00	9.23	64.1	629
PL28RS5-20-08	12.0~20.0	20.0	2790	0.035	2180	0.09	35.00	0.78	43.3	160
PL28RS5-24-49C	6.0~30.0	24.0	7600	0.09	6000	0.34	80.00	4.9	60.3	370
PL28RS5-24-90C	12.0~30.0	24.0	10000	0.12	8740	0.53	100.00	9	70.7	793
PL28RS5-24-85C	18.0~30.0	24.0	9700	0.11	8260	0.46	100.00	8.47	76.0	674

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	Operating Range	Nominal	Speed	Current	Speed	Current	Torque	Output	Efficiency	
	V	V	RPM	A	RPM	A	gf.cm	W	%	
PL28RS5-12-30C	6.0~18.0	12.0	5100	0.08	4200	0.36	70.00	3.02	69.8	396
PL28RS5-12-246C	6.0~18.0	12.0	15800	0.58	13300	3.2	180.00	24.6	63.9	1138
PL28RS5-24-89C	12.0~24.0	24.0	10000	0.11	8700	0.54	100.00	8.92	68.0	769
PL28RS5-24-85C	18.0~30.0	24.0	9700	0.11	8260	0.46	100.00	8.47	76.0	674

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	%	
PL28RS3-100-125	80~100	100.0	14000	0.035	12200	0.16	100.00	12.5	62.0	778
PL28RS3-100-249B	80~100	100.0	19400	0.07	16200	0.32	150.00	24.9	61.0	909
PL28RS3-100-39	80~120	100.0	6700	0.024	4800	0.07	80.00	3.9	53.6	282
PL28RS3-100-118F	80~120	100.0	14000	0.05	11500	0.17	100.00	11.8	69.4	560
PL28RS3-110-44	80~120	110.0	6800	0.019	5800	0.05	70.00	4.4	61.6	476
PL28RS3-126-130	100~130	126.0	14300	0.045	12700	0.16	100.00	13	64.5	894
PL28RS3-220-139	180~240	220.0	16500	0.025	13600	0.08	100.00	13.9	79.0	568

## Outline Drawing

