



DC Permanent Magnet



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ABB's Baldor-Reliance DC permanent magnet motors offer high efficiency, compact design and strong low-speed torque. They provide precise speed control, low maintenance and exceptional responsiveness for frequent start/stop cycles. Ideal for robotics, packaging machinery and various industrial applications.



Fractional SCR Drive,
permanent magnet



Explosion Proof, SCR DC
motor, permanent magnet



Washdown SCR, permanent
magnet DC motor



Paint Free, DC SCR drive,
permanent magnet



Metric Flange SCR,
permanent magnet



Low voltage, permanent
magnet motor

Product line		DC PM	XP DC PM	Washdown DC PM
Frame sizes		56C - 1810ATC	56C - 1810ATC	56C - 1810ATC
Electrical features	Reduced VOC emission resins and paints for a green environment	S	S	S
	Extensive full load testing to ensure delivered reliability/performance	S	S	S
	Low rotating assembly inertia for high dynamic performance	S	S	S
	Explosion proof products for hazardous duty environments	-	S	-
	Motors suitable for IEEE 45 shipboard applications	-	-	S
	Wide voltage ranges - 12 volts DC to 600 volts DC	S	S	S
Mechanical features	Washdown products for food industry applications	-	-	S
	Permanent magnet DC products with built in feedback devices	S	-	-
	Versatile foot mounting for retrofitting non Baldor-Reliance® products	S	S	S

S = Standard A = Available through Mod Express® or as custom

Fractional SCR Drive, permanent magnet 1/4 thru 5 Hp

Features

- NEMA C-Face with removable base
- Tachometer adaptable
- Class F insulation
- Double sealed bearings
- 20:1 constant torque speed range
- UL and CSA recognized

Applications

- Conveyors
- Mixers
- Packaging machinery

Fractional SCR PM Motors



Hp	Base Speed	Frame	Encl.	VDC Arm.	Full Load Amps - Arm.	Catalog Number	Disc. Sym.	Aprx. Wt. (lb)	Notes
1/4	1750	56C	TENV	90	2.5	CDP3310	PMS	24	60
		56C	TENV	180	1.3	CDP3306	PMS	23	60
1/3	1750	56C	TENV	90	3.2	CDP3320	PMS	27	60
		56C	TENV	180	1.6	CDP3316	PMS	27	60
1/2	1750	56C	TENV	90	4.8	CDP3330	PMS	32	60
		56C	TENV	180	2.5	CDP3326	PMS	31	60
	2500	56C	TENV	90	5.0	CDP3335	PMS	26	60
3/4	1750	56C	TEFC	90	7.6	CDP3440	PMS	38	
		56C	TEFC	180	3.7	CDP3436	PMS	38	
	2400	56C	TEFC	90	7.5	CDP3443	PMS	36	
1	1750	56C	TEFC	90	10.0	CDP3445	PMS	44	
		56C	TEFC	180	5.0	CDP3455	PMS	44	
	2400	56C	TEFC	90	9.7	CDP3450	PMS	38	
		56C	TEFC	180	4.9	CDP3460	PMS	38	
1 1/2	1750	145TC	TEFC	180	7.7	CDP3575	PMS	65	
	2500	145TC	TEFC	180	7.0	CDP3580	PMS	60	
2	1750	145TC	TEFC	180	9.6	CDP3585	PMS	74	
	2400	145TC	TEFC	180	10.0	CDP3590	PMS	66	8
3	1750	184TC	TEFC	180	14.0	CDP3603	PMS	112	
		184C	TEFC	180	14.0	CDP3604	PMS	112	
5	1750	1810ATC	TEFC	180	21.6	CDP3605	PMS	161	

Metric Flange SCR, permanent magnet

0.18 thru 5 kW, 0.25 thru 3.7 Hp

Features

- Metric flange or C-Face per IEC 60072-1 standards
- Bolt on non-metric base
- Class F insulation
- Tachometer adaptable (except 0.15 kW)
- 20:1 constant torque speed range
- Conforms to IEC 30034-1

Applications

- Metric SCR drive motor replacement

Metric Flange SCR PM



kW/Hp	Base Speed	Frame	Encl.	VDC Arm.	Full Load Amps - Arm.	Catalog Number	Disc. Sym.	Aprx. Wt. (lb)	Notes
.18/.25	1750	D71D	TENV	180	1.3	VP3311D	PMS	22	60
		D71C	TEFC	180	1.4	VP3411-14	PMS	30	
.25/.33	1750	D71D	TENV	180	1.6	VP3316D	PMS	26	60
		D71C	TEFC	180	1.7	VP3416-14	PMS	31	
.37/.50	1750	D71C	TEFC	180	2.5	VP3426-14	PMS	36	
		D71D	TEFC	180	2.5	VP3428D	PMS	32	
	3000	D71C	TEFC	180	2.5	VP3428-14	PMS	31	
		D71D	TENV	180	2.5	VP3326D	PMS	31	60
.37/.5	1750	D71D	TENV	180	2.5	VP3326D	PMS	31	60
.56/.75	3000	D80C	TEFC	180	3.6	VP3439-14	PMS	35	
.57/.75	3000	D80D	TEFC	180	3.6	VP3439D	PMS	37	
.75/1	3000	D80C	TEFC	180	5.1	VP3458-14	PMS	39	
		D80D	TEFC	180	5.1	VP3458D	PMS	41	
.56/.75	1750	D80C	TEFC	180	3.7	VP3436-14	PMS	40	
.57/.75	1750	D80D	TEFC	180	3.7	VP3436D	PMS	40	
.75/1	1750	D80C	TEFC	180	5.0	VP3455-14	PMS	45	
		D80D	TEFC	180	5.0	VP3455D	PMS	46	
1.1/1.5	3000	D80C	TEFC	180	7.7	VP3468-14	PMS	43	
		D90D	TEFC	180	7.7	VP3468D	PMS	46	
	1750	D90C	TEFC	180	7.7	VP3575-14	PMS	84	
		D90D	TEFC	180	7.7	VP3575D	PMS	67	
1.5/2	3000	D90C	TEFC	180	10.0	VP3588-14	PMS	70	
		D90D	TEFC	180	10.0	VP3588D	PMS	67	
	1750	D90C	TEFC	180	9.6	VP3585-14	PMS	80	
		D90D	TEFC	180	9.6	VP3585D	PMS	75	
2.2/3	1750	D112D	TEFC	180	14.0	VP3603D	PMS	122	
3.7/5	1750	D112D	TEFC	180	24.5	VP3605D	PMS	65	

Low voltage, permanent magnet motor 1/4 thru 1 Hp

Features

- NEMA C-Face
- Class F insulation
- Double sealed ball bearings
- Top-mounted terminal studs for power connection on ratings 40-amps and up
- connection on ratings 40-amps and up

Applications

- Battery operation for portable pumps
- Fans
- Augers
- Winches
- Lifts

Low voltage permanent magnet motors



Hp	Base Speed	Frame	Encl.	VDC Arm.	Full Load Amps - Arm.	Catalog Number	Disc. Sym.	Aprx. Wt. (lb)	Notes
1/4	1800	56C	TENV	12	22.5	CDP3410-V12	PMS	23	60
		56C	TENV	24	10.6	CDP3410-V24	PMS	23	60
1/3	1800	56C	TENV	12	28.6	CDP3420-V12	PMS	31	60
		56C	TENV	24	13.6	CDP3420-V24	PMS	31	60
1/2	1800	56C	TENV	12	40.0	CDP3430-V12	PMS	37	60
		56C	TENV	24	19.6	CDP3430-V24	PMS	35	60
3/4	1800	56C	TEFC	12	66.0	CDP3440-V12	PMS	42	
		56C	TEFC	24	29.4	CDP3440-V24	PMS	41	
1	1800	56C	TEFC	12	85.6	CDP3445-V12	PMS	43	
		56C	TEFC	24	40.9	CDP3445-V24	PMS	43	

Catalog notes

1. Class F insulated motor with 1.15 service factor or higher that operates within Class "B" temperature limits at rated horsepower.
2. 1.00 service factor
3. Capacitor start, induction run
4. UL Recognized thermal protection
5. Belted duty only, roller bearing
6. F-2 mounting
7. Copper bar rotor
8. Class "H" Insulated
9. Metric frame dimensions
10. Non-stock, built on demand.
11. F-3 mounting
12. 1.25 service factor
13. 1.35 service factor
14. 1.00 service factor, Class F rise
15. Small Motor Rule compliant. Average efficiency.
16. Motor can no longer be produced as of June 1, 2016. The Integral Horsepower Rule allows for existing inventory of this motor built prior to June 1, 2016 to be sold until inventory is depleted.
17. Capable of 100% thrust in either direction.
18. Motors are rated for Division 2, Class I, Groups C&D only.
19. 60/50 Hertz motor. 60 Hertz data shown, contact your local sales office for 50 Hertz data.
20. Class F insulation
21. Stage 3 EU MEPS
22. Non-encapsulated winding
23. Not rated for Division 2
24. Part winding start or DOL
25. Wye start, delta run or DOL
26. G-Series motor design. Has F3 Lead outlet in frame and an arm mounted conduit box for F1 & F2 Lead Location. Dual Frame mounting holes in 445/447 and 447/449 frames.
27. Motors have ball bearing suitable for coupled loads. If load is belted, a roller bearing may be required, contact your local sales office.
28. Suitable for sinewave operation
29. V-dimension is 2.5"
30. Usable at 208 volts
31. Design D
32. Uses HS25 encoder, 1024 PPR
33. Voltage @ 60 Hz
34. Motor has thermostat and provisions for adding adapter mounted tach.
35. Design A, exceeds Design B inrush limits.
36. Can mount as NEMA 56, 143T & 145T frames with NEMA 56 frame shaft dimensions.
37. Can mount as NEMA 56, 143T & 145T frames with NEMA 143T-145T frame shaft dimensions.
38. Motor not suitable for inverter use.
39. One size smaller flange and shaft
40. Brake motors may be mounted for vertical mounting with brake below motor.
41. Brake motors may be mounted for vertical mounting with brake above or below motor.
42. Brake motors must be modified for vertical mounting. Springs included with brake.
43. Foot mounted only. These stock models include VPI insulation on L440 only, insulated ODE bearing, shaft ground brush, and stator RTD's.
44. Cannot be operated at full nameplate rating on 50Hz rectified power supply.
45. Horizontal mount, no C-Face. May be converted to C-Face in Mod Express® or built as custom motors.
46. Includes 1024 ppr encoder
47. BA dimension does not meet NEMA standards.
48. Includes phase insulation. Suitable for use on inverter.
49. Foot mounted only
50. Voltage @ 50 Hz, usable on 460 Volt 60 Hz
51. Full Load Amps @ 400 Volt nominal - 50 Hz
52. IP55 enclosure
53. Tungsten carbide outer seal
54. Foot mounted and 180TC face
55. Foot mounted and 210TC face

56. Legacy Reliance® E-Line motor design. Has F1 side mounted conduit box. Single frame mounting holes in 447 & 449 frame sizes.
57. Can mount as NEMA 145T frame with 145T frame shaft dimensions.
58. Foot mounted and 250TC face
59. Suitable for operation @ 415V, 50 Hz
60. Totally-enclosed, non-ventilated, continuous duty.
61. Force vent with blower, cannot run full nameplate on 50 Hz rectified power, thermostats and tach provisions.
62. Force vent with blower on drive end filter, thermostats and tach provisions.
63. Foot also drilled for 447T frame mounting.
64. Motors include 100 ohm platinum winding RTDs and space heaters.
65. Capacitor start, capacitor run (two value capacitor)
66. Resilient mount single phase motors with moderate starting torque for fan applications
67. NEMA 48 Base Mount, not swivel mount
68. 3 lead
69. 6 lead suitable for part winding start on 200 volts
70. Constant velocity fan: 230/460 volts, three phase
71. Nominal efficiency is based at the 1800 RPM (High RPM) and low speed efficiency is available just not published.
72. Blower on drive end
73. SCR motors with a 3:1 constant torque speed range.
74. V-dimension is 3".
75. Force vent with blower and filter. Full nameplate rating on 50 Hz rectified power, AC supply voltage must be same as 60 Hz supply.
76. Force vent with blower, full nameplate rating on 50 Hz rectified power. AC supply voltage must be same as 60 Hz supply, thermostats and tach provisions.
77. Inverter duty.
78. Furnished without conduit box. (Order kit BK2400)
79. Cooling fan on each end
80. Motor has thermostat and provisions for adding flange mounted tach.
81. 230/460V 3-phase motor, 200/400V 3-phase motor or 115/230V 1-phase motor connected for voltage shown. Can be reconnected for other voltage
82. Single voltage motor. Cannot reconnect.
83. May be operated on 50Hz rectified power supply with full nameplate rating. AC supply voltage must be same as 60Hz supply; i.e., either 230 or 460 volts. Motor nameplate is stamped D-50/60. Motor mounted blower may be added to DPG enclosure.
84. May be operated on 50Hz rectified power supply with full nameplate rating only when motor is force ventilated with motor mounted blower. AC supply voltage must be same as 60Hz supply.
85. Cannot be operated at full nameplate rating on 50Hz rectified power supply.
87. Motor has thermostat and provisions for adding adapter mounted tach.
 - a. Supplied with 36 & 60 grit wheels.
 - b. Supplied with 36 grit and 0.014 wire wheel.
 - c. Stamp steel tool rests.
 - d. Cast iron tool rests.
 - e. Deluxe model includes water pot, tool tray and lighted eyeshields.
 - f. Non-exhaust type wheel guards.
 - g. Factory connected for 115 volts, power cord supplied.
 - h. Factory connected for 208-230 volts, no power cord.
 - i. 575 volt, 50//60 Hz
 - j. Factory connected for 115 volts, no power cord.
 - k. Factory connected for 230, manual starter, specify voltage when ordering.
 - l. Supplied with 8"x1"x3/4" 36 grit wheel and 80 grit belt.
 - m. Factory connected for 230, magnetic starter must be changed for other voltages.
 - n. Supplied with 0.014 wire wheel and 36" x 2" 100 grit belt.