

Black Max® PMAC 3-Phase Permanent Magnet Motors

Permanent Magnet AC motors are designed to be used only with a PMAC compatible VFD. They provide a small footprint and high efficiency at lower speeds/partial loads to save space, power, and money.

Features

- Operation with a PMAC compatible VFD only. Applicable AutomationDirect drive series are [GS20](#), [ACN](#), or [CFW500](#)
- 230/460 VAC
- 6 pole, Interior Permanent Magnet (IPM) construction, base speed is 1800 or 1200 RPM, as noted.
- 25% - 40% Efficiency improvement vs standard induction motor.
- Maintains high efficiency under partial load
- 56 Frame-Premium Efficiency (IE3) ; 182 & larger frames-Super Premium Efficiency (IE4)
- "Performance Matched" to all leading brands of PWM drives guaranteeing years of trouble free operation
- TENV/TEFC - Operational to 20:1 constant torque open-loop
- Constant torque from 0 to base speed.
- Lower operating temperature for higher reliability
- Superior low speed torque and excellent torque linearity
- Wide voltage/frequency range meeting global requirements
- High power density (small footprint), low weight design
- Three year warranty
- UL recognized.
- CSA and CE as noted.

Motor Shipping Schedule *

Same or one day *	Up to 7 days	Up to 10 days
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Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL.

Check our website for current shipping method constraints by part number.

Applications

Typical uses in industrial and commercial pump, fan, or conveyor VFD applications that require high efficiency at various speeds.

Motor Specifications – 3-Phase

Part Number*	Price	HP	Base RPM*	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Frame Material	Weight (lb)	Drawing Links
C-Face with Rigid Base											
SY067		5	1800	230/460 VAC	1.0	TEFC	N/A	184TC	Rolled Steel	130	PDF
SY068		7 1/2						213TC		125	PDF
SY069		10						215TC		139	PDF

*Base RPM at 90Hz for 1800RPM and 60Hz for 1200RPM motors.



Performance Data - 3-Phase

Part Number	HP	F.L. RPM	Max RPM	Current @ 230V/460V (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Resistance Main	Rotor Inertia (lb-fft2)	"Ohms/Ph - Equiv. Wye Circuit (460 VAC) (at rated operating temp. in 40° C ambient)"					
				No Load 460V	Full Load 230/460V	Locked Rotor	Full Load	Locked Rotor	Break-down					R1	R2	Ld1	Ld2	Lq1	Lq2
				C-Face with Rigid Base															
SY067	5	1800	2250	0.45	11.6/5.8	N/A*	14.6	N/A*	N/A*	93.9	85.7	0	0.46	0.8	0.2	17.2	4.3	34.6	8.7
SY068	7 1/2	1800	2250	0.4	17.2/8.6		21.87			94.1	88	1.34	0.58	0.67	0.16	17.3	3.8	37.2	7.1
SY069	10	1800	2250	2	24.7/12.3		29.18			94.5	85	0	1.1	0.397	0.1	10.8	2.7	20.4	5.1

* Data not applicable for a PMAC motor