



PML Series

4Q PWM Chassis Adjustable Speed Drive with Isolation for Trapezoidal-Wound Brushless Motors

The PML Series is a general purpose drive for a wide variety of trapezoidal-wound brushless motors. With either a 115 VAC or 230 VAC line source, our drive can control motors that vary in the 90 to 280 VDC range, up to 5 amps or 1.5 HP. With the use of on-board trim pots, you can quickly set the maximum and minimum speeds, acceleration and deceleration rates, motoring and regening current limits, and the proportional and integral feedback gains. Each drive is designed for feedback from 120° hall effect sensors, and can be commanded with a wide range of analog inputs with our built-in isolation. The drive is a 4Q PWM controller, allowing the unit to be used as a unidirectional or bidirectional controller. The microprocessor-based design means it can be modified to fit OEM specific applications.

Part Number	Enclosure	Max. Current (ADC)	Input Voltage (VDC)	Output Voltage (VDC)	Power Range		Reversing	Isolation	Feedback
					HP	kW			
PML703-3	Chassis	3.6*	115	0 - 140	1/20 - 1/3	.04 - .25	Regenerative	0 ± 5, 0 ± 10 VDC; 4-20 mA	Hall Effect Sensors
				0 - 240	1/10 - 3/4	.08 - .60			
			230	0 - 180	1/20 - 1/3	.04 - .25			
				0 - 240	1/10 - 3/4	.08 - .60			
PML703-5	Chassis	5.0**	115	0 - 140	1/20 - 3/4	.04 - .60	Regenerative	0 ± 5, 0 ± 10 VDC; 4-20 mA	Hall Effect Sensor
				0 - 280	1/10 - 1 1/2	.08 - 1.1			
			230	0 - 140	1/20 - 3/4	.04 - .60			
				0 - 280	1/10 - 1 1/2	.08 - 1.1			

* When mounted parallel with the wall / perpendicular to the ground. De-rate to 2.5 amps when mounted in any other configuration.

** When mounted to allow upwards air flow through the heat sink fins. De-rate to 4.0 amps when mounted in any other configuration.

SPECIFICATIONS

AC Line Voltage..... 115 / 230 VAC, ± 10%, 50/60 Hz, 1Ø
 Form Factor1.05
 Acceleration Time Range
 (0-4000 RPM / 4-pole Motor) 0.5-12 seconds
 Deceleration Time Range
 (0-4000 RPM / 4-pole motor) 0.5-12 seconds
 Analog Input Voltage Range (S1 to S2)..... 0 ± 5, 0 ± 10 VDC
 Analog Input Current Range (S1 to S2) 4 - 20 mA
 Input Impedance (S1 to S2) >50K ohms
 Load Regulation 1% base speed or better
 Speed Range 100:1
 Vibration (0 - 50 Hz)..... 0.5G maximum
 (>50 Hz) 0.1G maximum
 Ambient Temperature Range..... 10 °C - 40 °C
 Hall Effect Sensors..... 1200, 5 VDC, 75 mA combined

TRIM POTS

Acceleration	Maximum Speed
Accelerating / Motoring Torque	Minimum Speed
Deceleration	Proportional Gain
Decelerating / Regenerative Torque	Zero Adjust
Integral Gain	

FEATURES

Microprocessor-based: Allows custom programming for OEMs (1 Analog, 8 Digital)
Auto Ranging Input: No input voltage switches to set
 Accepts AC or DC Input: Can accept 80-340 VDC or 90-240 VAC input
Doubler Mode: Drive can double the internal voltage to allow for a 240 VDC output with only a 115 VAC input.
Stopping Modes: Enable (N.C.) can be set for coast or brake. Can be used for rapid starting and stopping.
Thermally Protects: Drive recognizes when overheated as a result of frequent overload. It first flashes a warning code and will trip if condition persists.
4Q Reversing: Regenerative / 4-Quadrant drives have the ability to perform quick and contactorless braking and/or reversing-on-the-fly
Diagnostic LEDs: Power, Status (Undervoltage, Overvoltage, Short Circuit / Current Trip, Overheat Warning, Overheat Trip)

ACCESSORIES

KTP-0146: Potentiometer kit