



**230 Series**

**AMPLIFIER**

**MAS-230**  
80-260 VAC  
45-65Hz

**Multi-Axis Amplifiers include the features of the MPA family with these additional offerings.**

- Economical and Space Saving Design
- Convenient Front Panel Switch Settings
- Simplified set-up

**Encoder Line Count**

50, 1000, 1024, and 2000

**Fault Indicators**

Bus  
Thermal  
Soft Start  
Motor  
Feedback  
Bridge

**Status Indicators**

Power  
Ready  
Reset  
Disable/Enable  
Current  
Velocity  
Marker

**Input/Output Interface Analog Signals**

- Velocity/Torque Command Input:  
Differential Input 0 to ± 10 Vdc (15 Vdc Maximum)
- Auxiliary Input:  
Differential Input 0 to ± 10 VDC (15 Vdc Maximum)
- Velocity Output: (Switch Selectable)  
2.07 Volts Per 1000 rpm
- Current Output  
± 10 Volts = ± Peak Current

**Input/ Output Interface 24 Volt Logic:**

**Inputs**

- RES (Reset)
- ENABLE (Enable)
- V/T (Velocity/ Torque) Select

**Output**

- Fault (Open Collector)
- Ready (Open Collector)

**Switch Configurations**

- Pole Setting
- Tach Gradient
- Encoder Line Count
- Filtering

**Adjustments**

- BAL (Balance)
- CUR (0-Peak Current Limit)
- RSP (Response)
- LD (Lead)
- COM (Command)
- AUX (Auxiliary)

**Options**

- External Shunts
- Brushless Tachometer Input
- Separate Logic Supply

**Amplifier Modules**

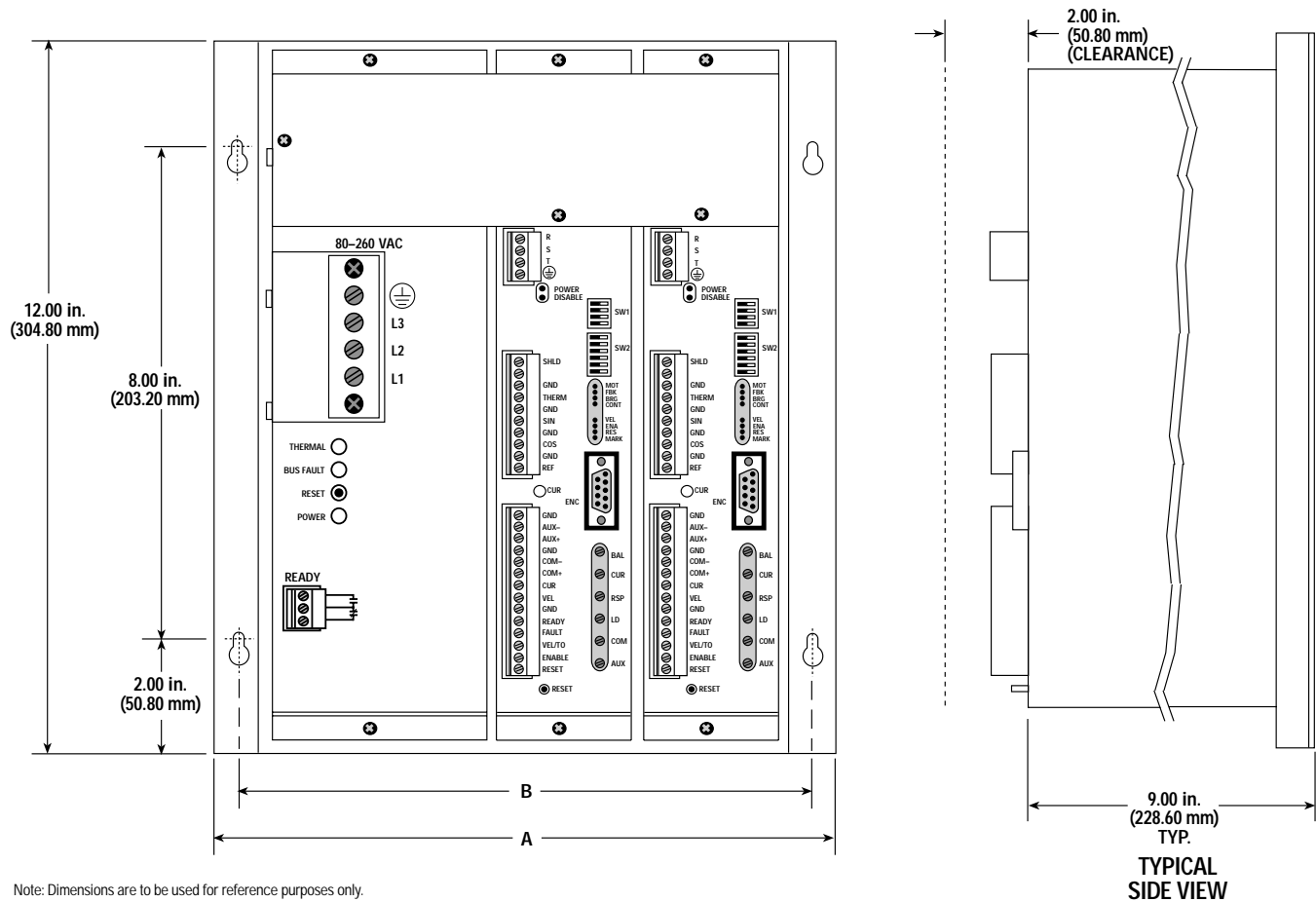
Model	Continuous Output Current	Peak Output Current*	PWM Frequency	Weight
AC-03	3 amps	6 amps	18KHz	4.0 lbs.[1.8Kg]
AC-07	7 amps	14 amps	18KHz	4.0 lbs.[1.8Kg]
AC-10	10 amps	20 amps	18KHz	4.0 lbs.[1.8Kg]
AC-15 (-335)	12.5 amps	30 amps	18KHz	4.0 lbs.[1.8Kg]
AC-15	15 amps	30 amps	18KHz	4.2 lbs.[1.9Kg]

\*Peak Current ≥ 1 second.

**Power Supply Modules**

Model	AC Input 1 ø Line Current	AC Input 3 ø Line Current	Amps	Shunt Capacity Internal	Shunt Capacity External	Weight
PS015	18 amps	11 amps	15	16 amps peak, 300 Watts, 85°C	N/A	5.0 lbs.[2.3Kg]
PS030	36 amps	22 amps	30	32 amps peak, 300 Watts, 85°C	N/A	7.2 lbs.[32.0Kg]
PS060	72 amps	44 amps	60	32 amps peak, 300 Watts, 85°C	64 amps peak, 600 Watts, 85°C	17.0 lbs.[7.7Kg]

### Mechanical Footprints



Note: Dimensions are to be used for reference purposes only.

### Multi-Axis Baseplate Dimensions

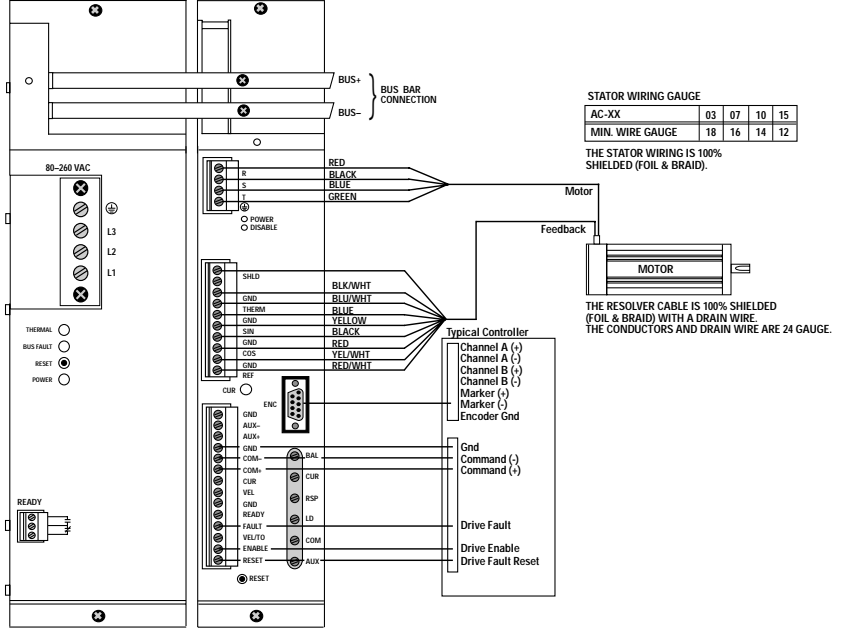
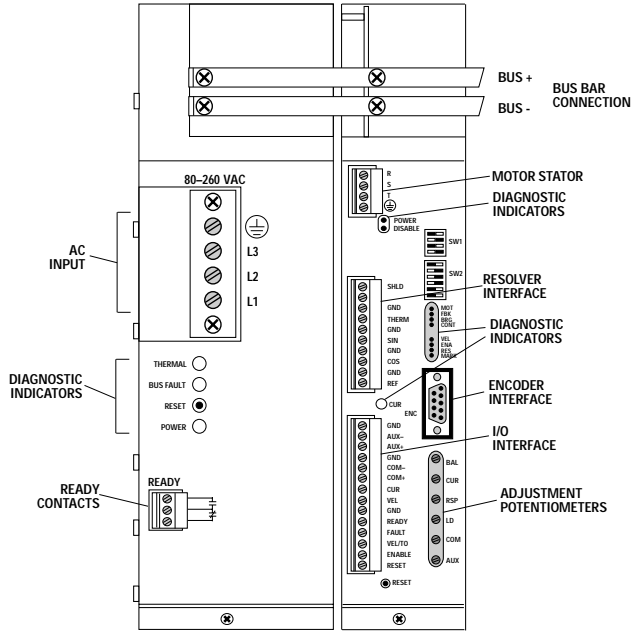
Model	A in.[mm]	B in.[mm]
MAS02/	10.05[255.27]	9.25[234.95]
MAS03/	12.30[312.42]	11.50[292.10]
MAS04/	14.55[369.57]	13.75[349.25]
MAS05/	16.80[426.72]	16.00[406.40]
MAS06/	19.05[483.87]	18.25[463.55]
MAS07/	21.90[556.26]	20.70[525.78]
MAS08/	24.15[613.41]	22.95[582.93]
MAS09/	26.40[670.56]	25.20[640.08]
MAS10/	28.65[727.71]	27.45[697.23]

### Multi-Axis Systems will include:

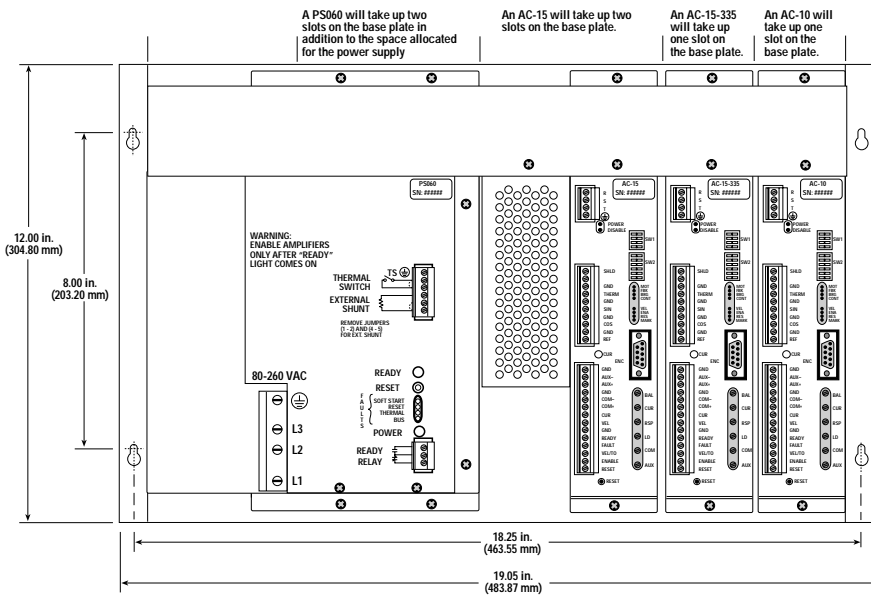
- Power Supply
- Baseplate
- Amplifier modules
- Bus Bar
- Bus Cover
- Hardware screws, etc.
- System Label

### Wiring Diagram

### Connection Diagram



### Example of a Multi-Axis System



### Slot Requirements

Model	Slot*
PS015	0
PS030	0
PS060	2
AC-03/07/10	1
AC-15 (-335)	1
AC-15	2

\* Number of slots in addition to the base power supply.

This example demonstrates how a three-axis system could require an MAS06/base plate.

### Ordering Chart for Power Supplies

Example MAS02/015-XXXX\*

Multi-Axis System	Available Slots	/	Available Power Supply	-	XXXX*
MAS	02 = 2 slot		015 = 15 amp		4 Digit number will specify the number and kind of module, bus bars & hardware. All systems will have a dash number.**
	03 = 3 slot		030 = 30 amp		
	04 = 4 slot		060 = 60 amp		
	05 = 5 slot		15A = 15 amp/separate supply (120VAC)		
	06 = 6 slot		30A = 30 amp/separate supply (120VAC)		
	07 = 7 slot		60A = 60 amp/separate supply (120VAC)		
	08 = 8 slot		15D = 15 amp/separate supply (24VDC)		
	09 = 9 slot		30D = 30 amp/separate supply (24VDC)		
	10 = 10 slot		60D = 60 amp/separate supply (24VDC)		
			30E = 30 amp/separate supply (120VAC) external shunts		

\* Please contact engineering department for exact part number after system is specified and order is placed.

\*\* Largest modules need to be placed closest to power supply.

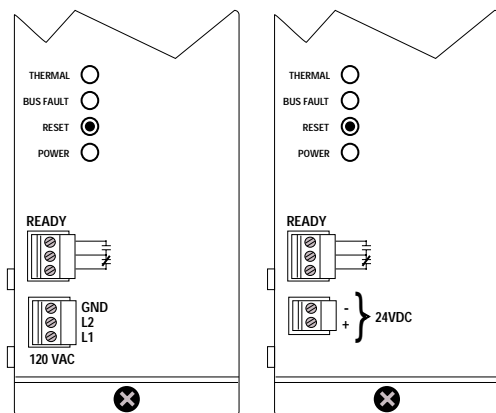
### Ordering Chart for Amplifier Modules

Example AC-03-T1

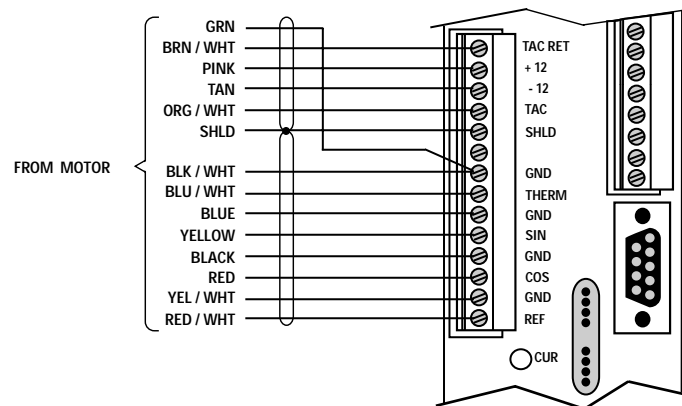
Modules	-	Amps	-	Options
AC		03-3 amps		T1-Bushless Tach Option
		07-7 amps		S-Separate Logic Supply, 120 VAC
		10-10 amps		
		15-12.5 amps (-335)		24VS-Separate Logic Supply, 24 VDC
		15-15 amps		

Note 1: Expansion options are available-Consult Factory.

#### Separate Supply Options



#### Tach Option



Separate Supply Option – This option keeps the logic supply powered to retain current position.

Tach Option – Allows an analog tachometer feedback to be used with the drive. The input is fed directly into the velocity feedback loop for better performance. When this option is required, the feedback wiring is extended to facilitate the additional signals.