

Kinetix 6200 and Kinetix 6500 Axis Modules

This section contains power specifications, mounting dimensions, and catalog numbers for the modular Bulletin 2094 (460V) axis modules (AM). Choose your AM power module based on the inverter power requirements of your application.

Axis Module (inverter) Power Specifications

These specifications apply to the axis module specified in the column heading by catalog number and the same axis module (inverter section) that resides within an IAM power module.

AM Module (inverter) 460V Power Specifications

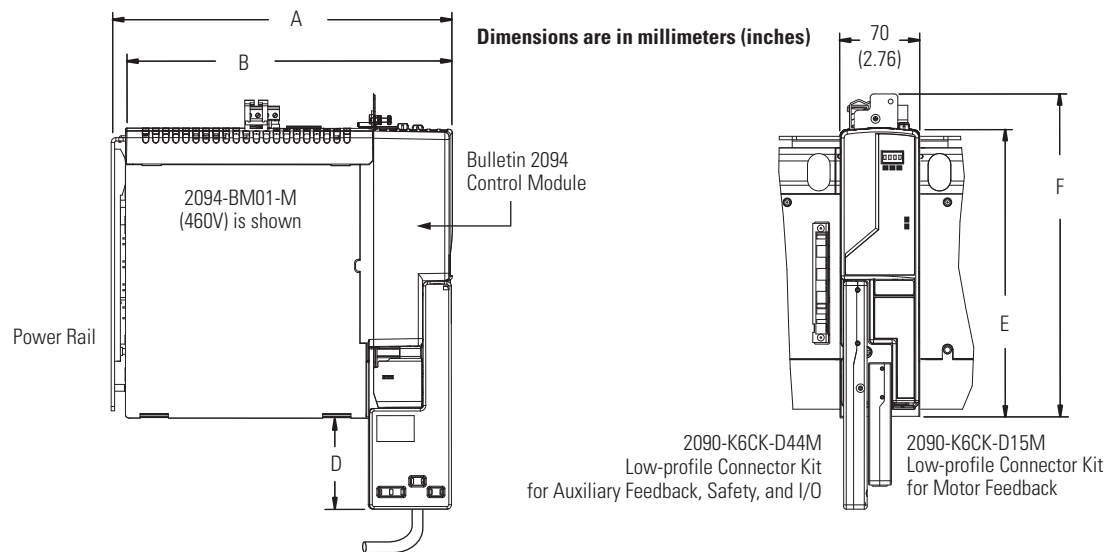
Attribute	2094-BMP5-M (2094-BC01-MP5-M)	2094-BM01-M (2094-BC01-M01-M)	2094-BM02-M (2094-BC02-M02-M)	2094-BM03-M (2094-BC04-M03-M)	2094-BM05-M (2094-BC07-M05-M)
Bandwidth ⁽¹⁾ Velocity loop Current loop	500 Hz 1300 Hz			Contact your Rockwell Automation sales representative for the availability of this AM power module.	Contact your Rockwell Automation sales representative for the availability of this AM power module.
PWM frequency	8 kHz		4 kHz		
Nominal input voltage	650V DC				
Continuous current (rms)	2.8 A	6.1 A	10.3 A		
Continuous current (sine) 0-pk	4.0 A	8.6 A	14.6 A		
Peak current (rms) ⁽²⁾	7.0 A	15.3 A	25.8 A		
Peak current (0-pk) ⁽²⁾	9.9 A	21.6 A	36.4 A		
Continuous power out (nom)	1.8 kW	3.9 kW	6.6 kW		
Internal shunt Continuous power Peak power	50 W 5.6 kW				
Internal shunt resistor	115 Ω				
Shunt on	805V DC				
Shunt off	765V DC				
Efficiency	98%				
Capacitance	75 μF	150 μF	270 μF		
Capacitive energy absorption	10 J	19 J	35 J		
Short circuit current rating	200,000 A (rms) symmetrical				

(1) Bandwidth values vary based on tuning parameters and mechanical components.

(2) Refer to the Kinetix 6200 and Kinetix 6500 Modular Multi-axis Servo Drives User Manual, publication [2094-UM002](#), for duty cycle capability information.

Axis Module Dimensions

2094-BMP5-M, 2094-BM01-M, and 2094-BM02-M AM Modules



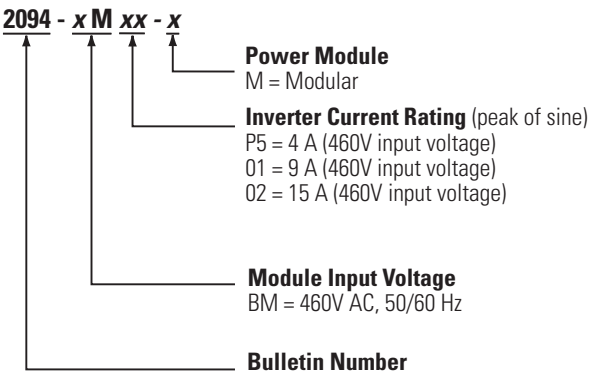
The AM power module is shown mounted to the power rail with the control module attached.

AM Power Module Dimensions

AM Power Module Cat. No.	A mm (in.)	B mm (in.)	D mm (in.)	E mm (in.)	F mm (in.)
2094-BMP5-M	302 (11.9)	290 (11.4)	80.0 (3.2)	260 (10.25)	290 (11.4)
2094-BM01-M					
2094-BM02-M					

Axis Module Catalog Numbers

Catalog numbers consist of various characters, each of which identifies a specific option for that component. Use the catalog numbering table chart below to understand the configuration of your module. For questions regarding product availability, contact your Allen-Bradley distributor.



Kinetix 6200 and Kinetix 6500 General System Specifications

This section contains environmental, weight, power dissipation, circuit breaker/fuse, transformer, and contactor specifications.

Environmental Specifications

Attribute	Operational Range	Storage Range (nonoperating)
Ambient temperature	0...50 °C (32...122 °F)	-40...70 °C (-40...158 °F)
Relative humidity	5...95% noncondensing	5...95% noncondensing
Altitude	1000 m (3281 ft) 3000 m (9843 ft) with derating	3000 m (9843 ft) during transport
Vibration	5...55 Hz @ 0.35 mm (0.014 in.) double amplitude, continuous displacement; 55...500 Hz @ 2.0 g peak constant acceleration (10 sweeps in each of 3 mutually perpendicular directions)	
Shock	15 g, 11 ms half-sine pulse (3 pulses in each direction of 3 mutually perpendicular directions)	

Weight Specifications

IAM Power Module	Cat. No.	Weight, approx. kg (lb)
IAM (460V)	2094-BC01-MP5-M	5.67 (12.5)
	2094-BC01-M01-M	5.67 (12.5)
	2094-BC02-M02-M	5.90 (13.0)

Kinetix 6200 Control Module	Cat. No.	Weight, approx. kg (lb)
SERCOS interface	2094-SE02F-M00-S0	0.68 (1.5)
	2094-SE02F-M00-S1	

AM Power Module	Cat. No.	Weight, approx. kg (lb)
AM (460V)	2094-BMP5-M	3.18 (7.0)
	2094-BM01-M	3.18 (7.0)
	2094-BM02-M	3.40 (7.5)

Kinetix 6500 Control Module	Cat. No.	Weight, approx. kg (lb)
EtherNet/IP network	2094-EN02D-M01-S0	0.68 (1.5)
	2094-EN02D-M01-S1	

Power Dissipation Specifications

Use this table to size an enclosure and calculate required ventilation for your Kinetix 6200 and Kinetix 6500 drive system.

Kinetix 6200 and Kinetix 6500 ⁽¹⁾ Drive Modules	Usage as % of Rated Power Output (watts)				
	20%	40%	60%	80%	100%
IAM (converter) module ⁽²⁾					
2094-BC01-MP5-M	18	21	25	29	34
2094-BC01-M01-M					
2094-BC02-M02-M	36	44	54	64	75
IAM (inverter) module or AM module ⁽²⁾					
2094-BC01-MP5-M or 2094-BMP5-M	46	54	61	69	77
2094-BC01-M01-M or 2094-BM01-M	57	73	90	108	126
2094-BC02-M02-M or 2094-BM02-M	53	72	93	116	142
Shunt module					
2094-BSP2	68	121	174	227	280

(1) Power dissipation for the Bulletin 2094 control modules, catalog numbers 2094-SE02F-M00-Sx and 2094-EN02D-M01-Sx, is included in the IAM and AM power module specifications.

(2) Internal shunt power is not included in the calculations and must be added based on utilization.

Power dissipation specifications are based on these calculations. For example:

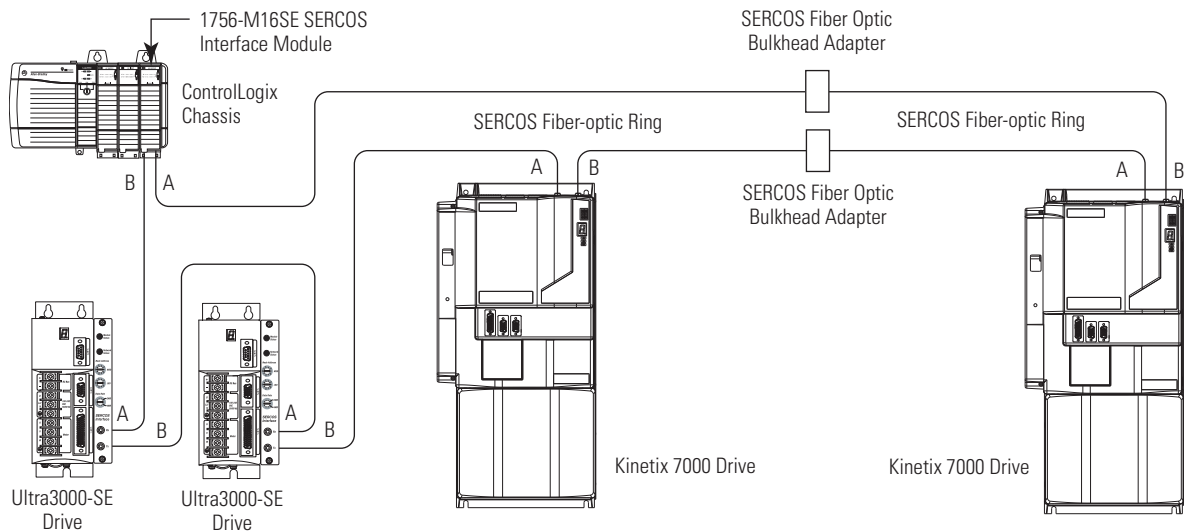
2094-BC02-M02-M with 4.52 A_{dc} (=20%) converter DC current and 10.3 A_{rms} (=100%) inverter output current.

Converter loss (36 W) + Inverter loss (142 W) = 178 W total power dissipation.

Fiber-optic Cable Connection Examples

The length of each transmission section (point A to B) can be up to 32 m (105 ft) for plastic cable and 50...200 m (164.2...656.7 ft) for glass cable. In this example, the second Kinetix 7000 drive is located in a separate cabinet and connected with bulkhead adapters.

Fiber-optic Cable Example for Single-axis Connections



IMPORTANT

To avoid signal loss, do not use bulkhead adapters to connect glass cables. Use bulkhead adapters for making plastic-to-plastic cable connections only.

Multi-axis servo drives with SERCOS interface have specific cable lengths for making drive-to-drive connections for single-wide and double-wide modules.

Drive-to-Drive Cable Length for Multi-axis Drive Families

IAM Module	Adjacent AM Module		Cable Cat. No.	Cable Length
Kinetix 2000	2093-AMP1, 2093-AMP2, or 2093-AMP5	Single-wide	2090-SCEP0-1	0.1 m (5.1 in.)
	2093-AM01 or 2093-AM02	Double-wide	2090-SCEP0-2	0.2 m (7.0 in.)
Kinetix 6000	2094-AMxx-S, 2094-BMP5-S, 2094-BM01-S, or 2094-BM02-S	Single-wide	2090-SCEP0-1	0.1 m (5.1 in.)
	2094-BMP5-M, 2094-BM01-M, or 2094-BM02-M		2090-SCEP0-2	0.2 m (7.0 in.)
	2094-BM03-S and 2094-BM05-S	Double-wide		
Kinetix 6200	2094-BMP5-M, 2094-BM01-M, or 2094-BM02-M	Single-wide	2090-SCEP0-2	0.2 m (7.0 in.)
	2094-AMxx-S, 2094-BMP5-S, 2094-BM01-S, or 2094-BM02-S		2090-SCEP0-1	0.1 m (5.1 in.)