

Kinetix 6200 and Kinetix 6500 Modular Multi-axis Servo Drives



The Kinetix 6500 servo drives provide Integrated Motion capability over the EtherNet/IP network by using CIP Motion and CIP Sync technology from ODVA, all built on the Common Industrial Protocol (CIP).

The Kinetix 6200 servo drives provide Integrated Motion capability through SERCOS interface and compatibility with Kinetix 6000 drives, letting you migrate to the enhanced features exactly when and where you need them.

The Kinetix 6200 and Kinetix 6500 drive families are part of the Kinetix Integrated Motion solution.

These modular safe-speed servo drives help increase productivity and protect personnel with embedded safety features. Modular design and control provides ease of maintenance and greater flexibility as the drive easily transitions from safe torque-off to safe speed.

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Kinetix 6200 and Kinetix 6500 Servo Drive Components

Kinetix 6200 and Kinetix 6500 modular servo drive systems consist of these required components:

- One integrated axis power module (IAM or leader IAM), 2094-BCxx-Mxx-M (460V)
- Up to seven axis power modules (AM), 2094-BMxx-M (460V)
- Up to eight control modules, 2094-SE02F-M00-Sx (SERCOS interface) or 2094-EN02D-M01-Sx (EtherNet/IP network)
- One power rail, 2094-PRS1, 2094-PRS2, 2094-PRS3, 2094-PRS4, 2094-PRS5, 2094-PRS6, 2094-PRS7, or 2094-PRS8

Kinetix 6000 Multi-axis Servo Drives



The Kinetix 6000 multi-axis servo drives provide powerful simplicity to handle even the most demanding applications quickly, easily, and cost-effectively. By providing advanced control capability along with innovative design and installation features, the Kinetix 6000 drives significantly improve system performance while saving time and money. The compact size, simplified wiring, and easy-to-use components make the Kinetix 6000 drives an ideal choice for both OEMs and end-users. Target applications for the Kinetix 6000 drives include packaging, material handling, converting, and assembly.

The Kinetix 6000 multi-axis servo drives are part of the Kinetix Integrated Motion solution.

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Kinetix 6000 Servo Drive Components

Kinetix 6000 servo drive systems consist of these required components:

- One integrated axis module (IAM or leader IAM), 2094-ACxx-Mxx-S (230V) or 2094-BCxx-Mxx-S (460V)
- Up to seven axis modules, 2094-AMxx-S (230V) or 2094-BMxx-S (460V)
- One power rail, 2094-PRS1, 2094-PRS2, 2094-PRS3, 2094-PRS4, 2094-PRS5, 2094-PRS6, 2094-PRS7, or 2094-PRS8
- One to eight MP-Series, TL-Series, LDC-Series, LDL-Series, or RDD-Series rotary servo motors or linear motors/actuators. RDD-Series motors require the 2090-K6CK-KENDAT low-profile feedback module, all others require the 2090-K6CK-D15M low-profile connector kit for flying-lead feedback cables.
- One to eight motor power and feedback cables
- Two to nine SERCOS fiber-optic cables

Weight Specifications

Kinetix 6000 Module	Cat. No.	Weight, approx. kg (lb)
IAM (230V)	2094-AC05-MP5-S	2.23 (4.9)
	2094-AC05-M01-S	2.27 (5.0)
	2094-AC09-M02-S	2.31 (5.1)
	2094-AC16-M03-S	4.71 (10.4)
	2094-AC32-M05-S	7.43 (16.4)
AM (230V)	2094-AMP5-S	1.46 (3.2)
	2094-AM01-S	1.50 (3.3)
	2094-AM02-S	1.54 (3.4)
	2094-AM03-S	3.13 (6.9)
	2094-AM05-S	3.18 (7.0)
Power rails (Slim)	2094-PRS1	1.05 (2.3)
	2094-PRS2	1.59 (3.5)
	2094-PRS3	2.14 (4.7)
	2094-PRS4	2.67 (5.9)
	2094-PRS5	3.11 (6.8)
	2094-PRS6	3.55 (7.8)
	2094-PRS7	3.99 (8.8)
	2094-PRS8	4.43 (9.7)

Kinetix 6000 Module	Cat. No.	Weight, approx. kg (lb)
IAM (460V)	2094-BC01-MP5-S	4.98 (11.0)
	2094-BC01-M01-S	5.03 (11.1)
	2094-BC02-M02-S	5.08 (11.2)
	2094-BC04-M03-S	9.60 (21.1)
	2094-BC07-M05-S	10.1 (22.3)
AM (460V)	2094-BMP5-S	2.44 (5.4)
	2094-BM01-S	2.49 (5.5)
	2094-BM02-S	2.54 (5.6)
	2094-BM03-S	4.58 (10.1)
	2094-BM05-S	4.98 (11.0)
Shunt module	2094-BSP2	3.10 (6.8)
Slot-filler module	2094-PRF	0.45 (1.0)

Maximum Feedback Cable Lengths

Although motor feedback cables are available in standard lengths up to 90 m (295.3 ft), the drive/motor/feedback combination may limit the maximum feedback cable length. These tables assume the use of recommended cables as shown in the Motor/Actuator Cable Selection table on [page 380](#).

Cable Lengths for Compatible Rotary Motors

Motor Cat. No.	Absolute High-resolution (5V) Encoder m (ft)	Absolute High-resolution (9V) Encoder m (ft)	Incremental/TTL (5V) Encoder m (ft)	Resolver m (ft)
MPL-A15xxx... MPL-A2xxx-E/V	30 (98.4)			
MPL-A3xxx... MPL-A5xxx-S/M ⁽¹⁾	30 (98.4)			
MPL-B15xxx... MPL-B2xxx-E/V		90 (295.3)		
MPL-B3xxx... MPL-B5xxx-S/M		90 (295.3)		
MPL-A/B15xxx... MPL-A/B45xxx-H			30 (98.4)	
MPL-Bxxx-R				90 (295.3)
MPM-Axxxxx-S/M	30 (98.4)			

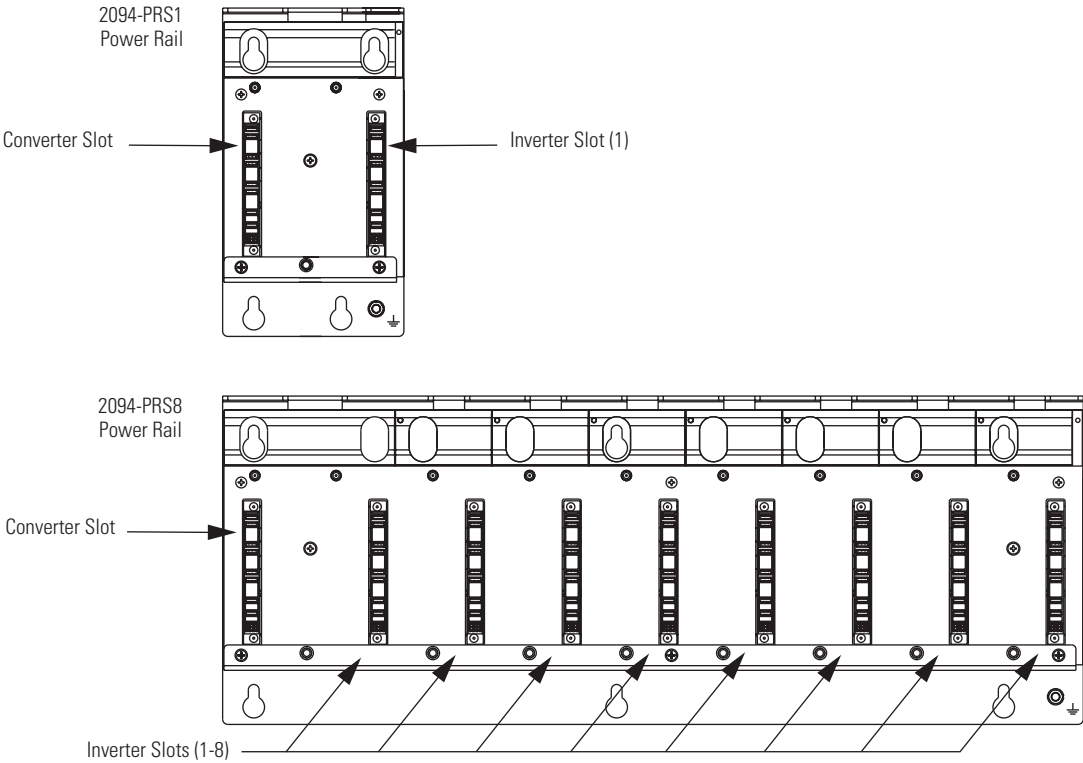
The leftmost slot on each power rail is the converter slot and only used by the IAM. All other slots are inverter slots and are used by the IAM, AM, or shunt module (refer to the figure below). The power rail catalog number indicates the number of available inverter slots.

For example, the 2094-PRS1 power rail contains one inverter slot. This limits the use of this power rail to systems requiring only one inverter slot. Similarly, the 2094-PRS8 power rail contains eight inverter slots. This limits the use of this power rail to systems requiring up to eight inverter slots.

When selecting a power rail, determine the number of inverter slots required by all rail-mounted modules and choose a power rail with that minimum number of inverter slots.

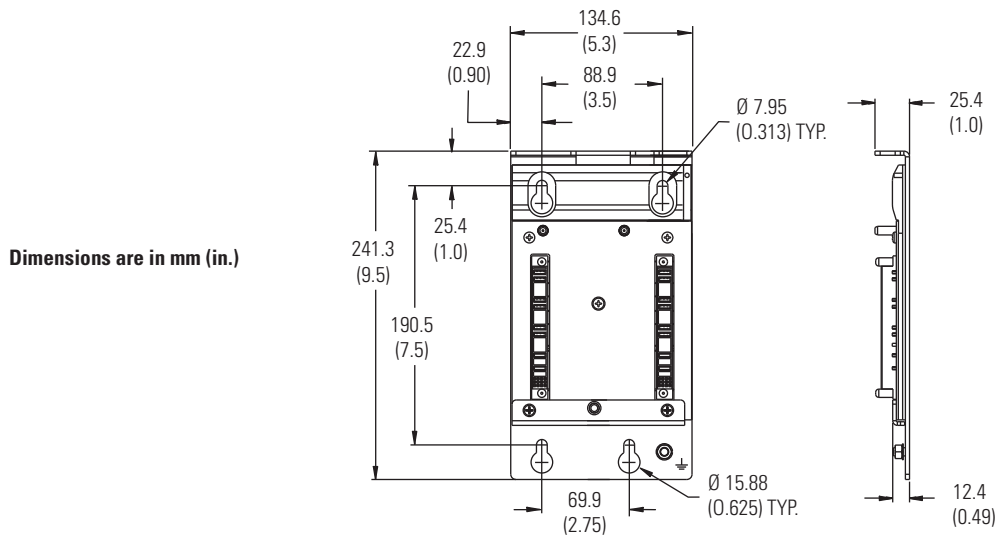
IMPORTANT If you select a power rail with slots exceeding the minimum required for your system, you must install a 2094-PRF slot-filler module in each unused slot.

Power Rail Slots

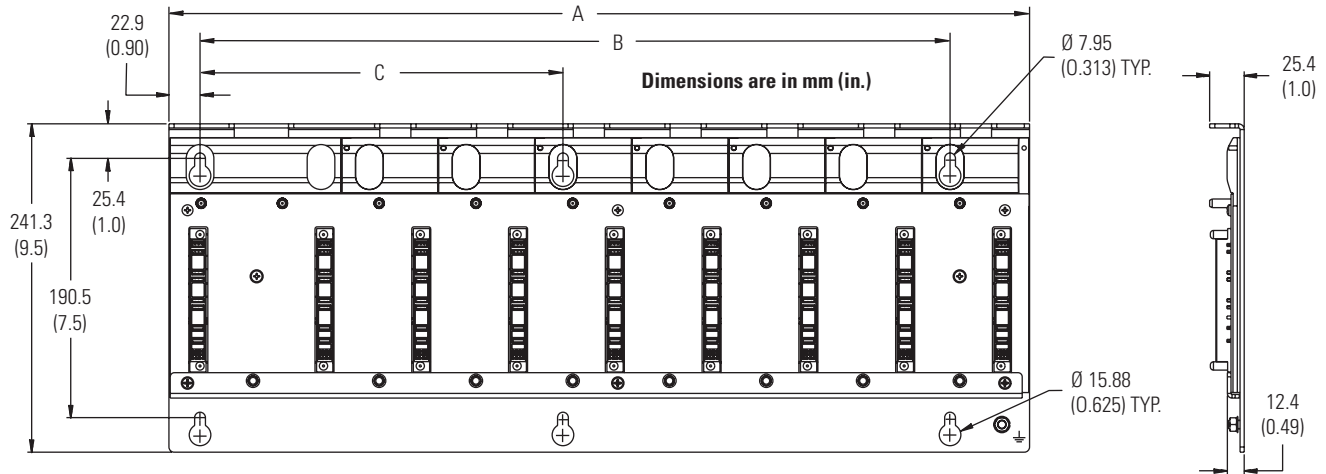


Power Rail Dimensions

Dimensions (catalog number 2094-PRS1)



Dimensions (catalog numbers 2094-PRS2, 2094-PRS3, 2094-PRS4, 2094-PRS5, 2094-PRS6, 2094-PRS7, and 2094-PRS8)

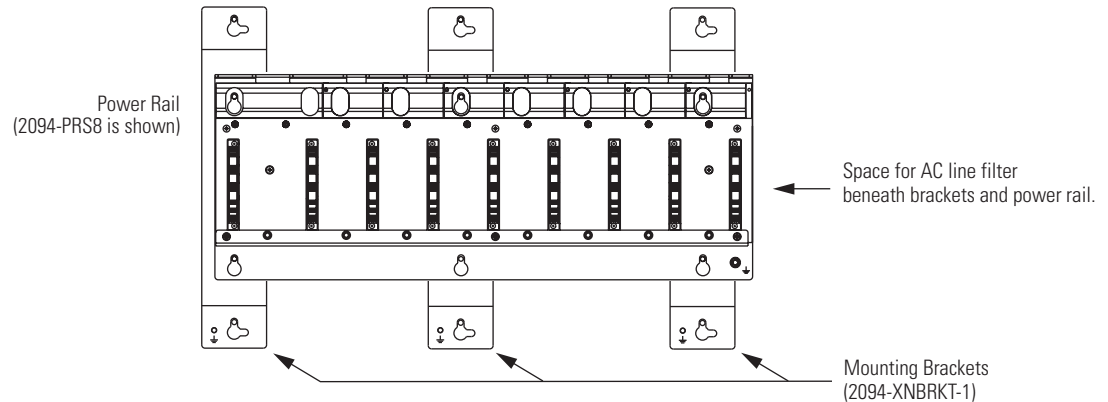


Power Rail Cat. No.	Description	Dimension A mm (in.)	Dimension B mm (in.)	Dimension C mm (in.)
2094-PRS1	Refer to figure on page 434 .			
2094-PRS2	2 axis power rail	205.7 (8.10)	124.5 (4.90)	N/A
2094-PRS3	3 axis power rail	276.9 (10.90)	195.6 (7.70)	N/A
2094-PRS4	4 axis power rail	348.0 (13.70)	266.7 (10.50)	N/A
2094-PRS5	5 axis power rail	419.1 (16.50)	337.8 (13.30)	195.6 (7.70)
2094-PRS6	6 axis power rail	490.2 (19.30)	408.9 (16.10)	195.6 (7.70)
2094-PRS7	7 axis power rail	561.3 (22.10)	480.1 (18.90)	266.7 (10.50)
2094-PRS8	8 axis power rail	632.5 (24.90)	551.2 (21.70)	266.7 (10.50)

Mounting Bracket Configurations

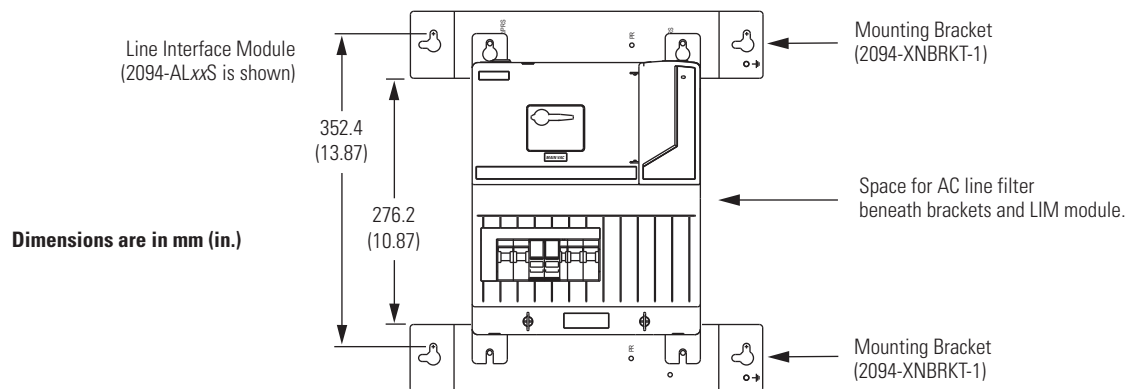
In the figure below, the power rail (catalog number 2094-PRSx) is shown mounted on Bulletin 2094 Mounting Brackets.

Power Rail on 2094 Mounting Brackets



In the figure below, the LIM module (catalog numbers 2094-ALxxS or 2094-XL75S-Cx) is shown mounted on Bulletin 2094 Mounting Brackets.

LIM Module on 2094 Mounting Brackets



IMPORTANT

Only the 2094-ALxxS and 2094-XL75S-Cx Line Interface Modules are compatible with the 2094 Mounting Brackets. The 2094-BLxxS, 2094-AL09, and 2094-BL02 models are not compatible.

Kinetix 7000 DC-DC Converter and Control Board Kits

Cat. No.	Description
2099-K7KCB-1	Control board assembly kit. Replacement control board for 2099-BMxx-S drives.
2099-K7KCP-1	DC-DC converter cassette kit. Replacement DC-DC converter for 2099-BMxx-S drives.