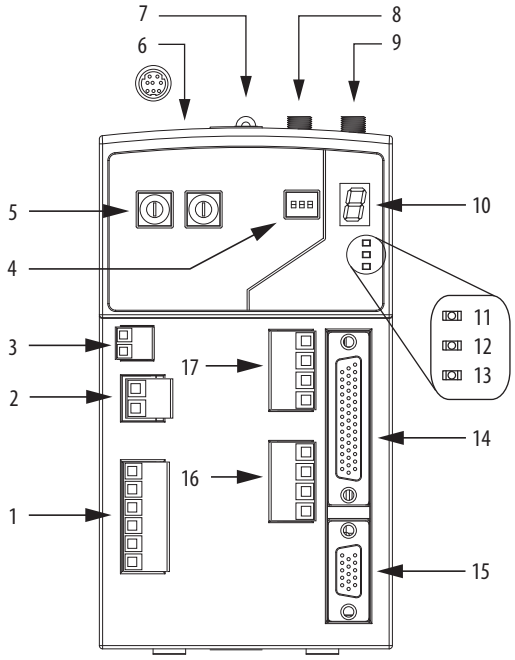
# Kinetix 2000 Multi-axis Servo Drives

Extend the benefits of Kinetix Integrated Motion to low-power motion control applications with the Kinetix 2000 servo drive. This multi-axis servo drive provides simplicity at its best, letting you save time and money from initial wiring and programming to operation and diagnostics. With a continuous output current (rms) from 1.0...9.5 amps, the Kinetix 2000 drive offers the same compact design, exceptional performance, and cost saving features as the Kinetix 6000 drives. The commonality among Kinetix drives lets you learn once and reuse your product knowledge. Paired with the CompactLogix 1768-L*4x* controller, the Kinetix 2000 drive is ideal for small and mid-sized applications looking to improve productivity, quality, and time to market while reducing the total cost of ownership.

The Kinetix 2000 servo drives provide Integrated Motion capability through the sercos interface and are part of the Kinetix Integrated Motion solution.

## Kinetix 2000 Features and Indicators

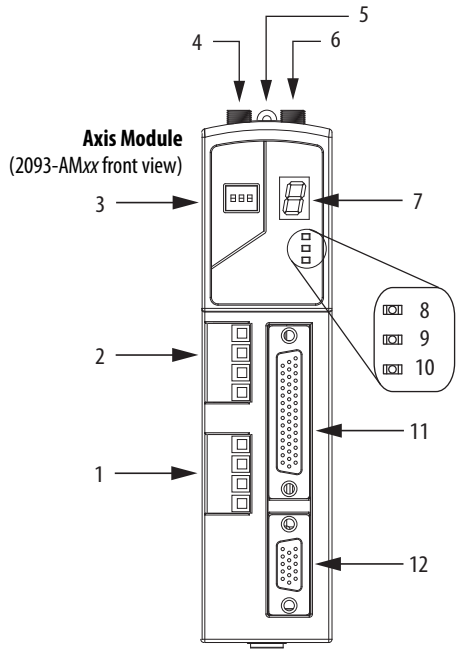
**2093-AC05-MP*x* IAM Features and Indicators**




**Integrated Axis Module**
(2093-AC05-MP*x* front view)

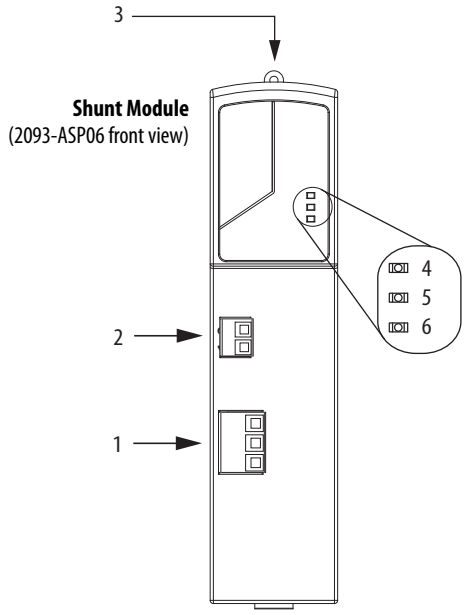
| Item | Description |
|---|---|
| 1 | DC Bus / AC input power (IPD) connector |
| 2 | Control power (CPD) connector |
| 3 | Contactor enable (CED) connector |
| 4 | Sercos communication rate and optical power switches |
| 5 | Sercos node address switch |
| 6 | DPI connector (facing up) |
| 7 | Mounting screw |
| 8 | Sercos receive (Rx) connector |
| 9 | Sercos transmit (Tx) connector |
| 10 | Seven-segment fault status indicator |
| 11 | Drive status indicator |
| 12 | COMM status indicator |
| 13 | Bus status indicator |
| 14 | I/O and auxiliary feedback (IOD/AF) connector |
| 15 | Motor feedback (MF) connector |
| 16 | Motor power (MP) connector |
| 17 | Motor brake (BC) connector |

### 2093-AM*xx* AM Features and Indicators




| Item | Description |
|---|---|
| 1 | Motor power (MP) connector |
| 2 | Motor brake (BC) connector |
| 3 | Sercos communication rate and optical power switches |
| 4 | Sercos receive (Rx) connector |
| 5 | Mounting screw |
| 6 | Sercos transmit (Tx) connector |
| 7 | Seven-segment fault status indicator |
| 8 | Drive status indicator |
| 9 | COMM status indicator |
| 10 | Bus status indicator |
| 11 | I/O and auxiliary feedback (IOD/AF) connector |
| 12 | Motor feedback (MF) connector |

### 2093-ASP06 Shunt Module Features and Indicators




| Item | Description |
|---|---|
| 1 | External shunt resistor (RC) connector |
| 2 | External thermal switch (TS) connector |
| 3 | Mounting screw |
| 4 | Shunt fault status indicator |
| 5 | Over-temp fault status indicator |
| 6 | Bus status indicator |

## Technical Specifications - Kinetix 2000 Multi-axis Servo Drives

The converter section of these modules is identical. Select your IAM module based on the inverter requirements of your application.

**IAM Module (three-phase and single-phase) Power Specifications**

| Attribute | 2093-AC05-MP*x*<br>Three-phase Input (230V nom) | 2093-AC05-MP*x*<br>Single-phase Input (230V nom) |
|---|---|---|
| AC input voltage | 170…264V rms | |
| AC input frequency | 47…63 Hz | |
| Main AC input current (1)<br>Nom (rms)<br>Max inrush (0-pk) | <br>11.66 A<br>34.0 A | <br>10.95 A<br>34.0 A |
| DC input voltage (common bus follower) | 240…375V DC | |
| DC input current (common bus follower) | 9.76 A | 6.42 A |
| Control power AC input voltage | 170…264V rms, single-phase (230V nom) | |
| Control power AC input current<br>Nom (@ 230V AC) rms<br>Max inrush (0-pk) | <br>1.25 A<br>93.0 A (3) | |
| Nominal bus output voltage | 325V DC | |
| Line loss ride through | 20 ms | |
| Continuous output current to bus ($A_{DC}$) | 9.67 A | 6.42 A |
| Peak output current to bus ($A_{DC}$) (2) | 19.34 A | 12.84 A |
| Bus overvoltage | 415V DC | |
| Bus undervoltage | 135.5V DC | |
| Internal shunt<br>Continuous power<br>Peak power | <br>15 W<br>3000 W | |
| Internal shunt resistor | 50 Ω | |
| Shunt on | 405V | |
| Shunt off | 375V | |
| Continuous power output to bus | 3.0 kW | 2.0 kW |
| Peak power output | 6.0 kW | 4.0 kW |
| Efficiency | 95% | |
| Converter inductance | N/A | |
| Converter capacitance | 540 µF | |
| Converter leakage current (max) | 2.0 mA | |

(1) All 2093-AC05 integrated axis modules are limited to 2 contactor cycles per minute (with up to 4 axis modules), or 1 contactor cycle per minute (with 5…8 axis modules).

(2) Peak output current duration equals 250 ms.

(3) Maximum inrush duration is less than 1/2 line cycle.

**Control Power Current Requirements**

| Modules on Power Rail | 220/230V AC Input<br>A | Input VA<br>VA |
|---|---|---|
| IAM only | 0.15 | 50 |
| IAM, 1 AM | 0.30 | 99 |
| IAM, 2 AM | 0.45 | 148 |
| IAM, 3 AM | 0.60 | 197 |
| IAM, 4 AM | 0.75 | 247 |
| IAM, 5 AM | 0.90 | 296 |
| IAM, 6 AM | 1.05 | 345 |
| IAM, 7 AM | 1.20 | 395 |
| IAM, 7 AM, 1 Shunt module | 1.25 | 410 |

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 integrated axis module.

**AM Module Power Specifications**

| Attribute | 2093-AMP1 (2093-AC05-MP1) | 2093-AMP2 (2093-AC05-MP2) | 2093-AMP5 (2093-AC05-MP5) | 2093-AM01 | 2093-AM02 |
|---|---|---|---|---|---|
| Bandwidth [1]<br>Velocity Loop<br>Current Loop | <br>500 Hz<br>1300 Hz | | | | |
| PWM frequency | 8 kHz | | | | |
| Nominal input voltage | 325V DC | | | | |
| Continuous current (rms) | 1.0 A | 2.0 A | 3.0 A | 6.0 A | 9.5 A |
| Continuous current (0-pk) | 1.41 A | 2.83 A | 4.24 A | 8.48 A | 13.4 A |
| Peak current (rms) | 3.0 A | 6.0 A | 9.0 A | 18.0 A | 28.5 A |
| Peak current (0-pk) | 4.20 A | 8.48 A | 12.7 A | 25.5 A | 40.3 A |
| Peak output current time (max) | 3 s from 0% drive utilization (0% soak) | | | | |
| Continuous power out (nom) | 0.3 kW | 0.6 kW | 0.9 kW | 1.9 kW | 3.0 kW |
| Efficiency | 98% | | | | |
| Capacitance | 200 µF | | | 540 µF | |
| Capacitive energy absorption | 7.5 J | | | 20 J | |
| Inverter PCB leakage current | 1 mA | | | | |

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

### *Circuit Breaker/Fuse Specifications*

The following fuse examples and Allen-Bradley circuit breakers are recommended for control power and DC-bus power.

**Control and DC-Bus Circuit-protection Specifications**

| Kinetix 2000 Drives Cat. No. | Control Input Power | | DC Common Bus |
|---|---|---|---|
| | Bussmann Fuse | Bulletin 1492 CB | Mersen Fuse (1) |
| 2093-AC05-MP1 | FNQ-R-10 (10 A) Class CC or LPJ-10SP (10 A) Class J | 1492-SPM2D060 | A50P20-1 |
| 2093-AC05-MP2 | | | |
| 2093-AC05-MP5 | | | |
| 2093-AC05-MP1 | | | A50P20-1 |
| 2093-AC05-MP2 | | | |
| 2093-AC05-MP5 | | | |

(1) Mersen fuses were formerly known as Ferraz Shawmut.

These fuses and Allen-Bradley circuit breakers are recommended for use with 2093-AC*xx*-MP*x* IAM modules when the line interface (LIM) module is not used.

**IMPORTANT** 2094-AL*xx*S and 2094-XL75S-C2 line interface (LIM) modules can provide branch circuit protection to the IAM module. Follow all applicable NEC and local codes.

**Input Power Circuit-protection Specifications**

| Kinetix 2000 Drives | | UL Applications | | | IEC (non-UL) Applications | | |
|---|---|---|---|---|---|---|---|
| Drive Cat. No. | Input Voltage/ Phase | Bussmann Fuse | Miniature CB Cat. No. | Motor Protection CB, Self-protected CMC Cat. No. | Miniature CB Cat. No. | | Motor Protection CB Cat. No. |
| 2093-AC05-MP1 | 170…264 AC three-phase (230V nom) | KTK-R-20 (20 A) | 1489-M3D300 | 140M-F8E-C16 | 1489-M3D300 | 1492-SPM3D300 | 140M-F8E-C16 |
| 2093-AC05-MP2 | | | | | | | |
| 2093-AC05-MP5 | | | | | | | |
| 2093-AC05-MP1 | 170…264 AC single-phase (230V nom) | KTK-R-20 (20 A) | 1489-M3D300 | N/A | 1489-M3D300 | 1492-SPM3D300 | N/A |
| 2093-AC05-MP2 | | | | | | | |
| 2093-AC05-MP5 | | | | | | | |

### *Contactor Ratings*

This table lists the recommended contactor ratings for IAM modules installed without a LIM module.

| IAM Cat. No. | Input Voltage | Contactor |
|---|---|---|
| 2093-AC05-MP1 | 170…264 AC single-phase or three-phase operation | 100-C23x10 (AC coil) 100-C23Zx10 (DC coil) |
| 2093-AC05-MP2 | | |
| 2093-AC05-MP5 | | |

### *Transformer Specifications for Control Power Input*

You can use any general purpose transformer with these ratings.

| Attribute | Value |
|---|---|
| Input volt-amperes | 500VA |
| Output voltage | 200…240V AC |

### *Power Dissipation Specifications*

Use this table to size an enclosure and calculate required ventilation for your Kinetix 2000 drive system.

| Kinetix 2000 Modules | | Usage as % of Rated Power Output (watts) | | | | |
|---|---|---|---|---|---|---|
| | | 20% | 40% | 60% | 80% | 100% |
| Integrated Axis Module (IAM Converter) (1) | | | | | | |
| 2093-AC05-MP1 | Three-phase input | 7.0 | 10.5 | 14.0 | 17.4 | 20.9 |
| 2093-AC05-MP2 | | | | | | |
| 2093-AC05-MP5 | | | | | | |
| 2093-AC05-MP1 | Single-phase input | 5.8 | 8.0 | 10.3 | 12.6 | 14.8 |
| 2093-AC05-MP2 | | | | | | |
| 2093-AC05-MP5 | | | | | | |
| Integrated Axis Module (IAM Inverter) or Axis Module (AM) (1) | | | | | | |
| 2093-AC05-MP1 or 2093-AMP1 | | 31.6 | 33.6 | 35.6 | 37.6 | 39.6 |
| 2093-AC05-MP2 or 2093-AMP2 | | 33.0 | 36.4 | 39.8 | 43.3 | 46.8 |
| 2093-AC05-MP5 or 2093-AMP5 | | 36.2 | 42.9 | 49.8 | 56.8 | 63.9 |
| 2093-AM01 | | 38.3 | 46.7 | 55.3 | 64.1 | 73.1 |
| 2093-AM02 | | 44.3 | 55.6 | 67.3 | 79.2 | 91.4 |
| Shunt Module | | | | | | |
| 2093-ASP06 | | 35.8 | 45.8 | 55.8 | 65.8 | 75.8 |

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

### *Weight Specifications*

| Kinetix 2000 Module | Cat. No. | Weight, approx kg (lb) |
|---|---|---|
| IAM | 2093-AC05-MP1 | 1.32 (2.9) |
| | 2093-AC05-MP2 | |
| | 2093-AC05-MP5 | |
| AM | 2093-AMP1 | 0.67 (1.5) |
| | 2093-AMP2 | |
| | 2093-AMP5 | |
| | 2093-AM01 | 0.95 (2.1) |
| | 2093-AM02 | |
| Shunt module | 2093-ASP06 | 0.59 (1.3) |

| Kinetix 2000 Module | Cat. No. | Weight, approx kg (lb) |
|---|---|---|
| Power Rails (Slim) | 2093-PRS1 | 0.27 (0.6) |
| | 2093-PRS2 | 0.38 (0.8) |
| | 2093-PRS3 | 0.51 (1.1) |
| | 2093-PRS4 | 0.64 (1.4) |
| | 2093-PRS5 | 0.77 (1.7) |
| | 2093-PRS7 | 1.03 (2.3) |
| | 2093-PRS8S | 1.28 (2.8) |
| Slot-filler module | 2093-PRF | 0.15 (0.3) |

## Maximum Feedback Cable Lengths

Although motor feedback cables are available in standard lengths up to 90 m (295.3 ft), the Kinetix 2000 drive maximum feedback cable length is 30 m (98.4 ft). These tables assume the use of recommended cables as shown in the Kinetix Motion Accessories Technical Data, publication KNX-TD004.

**Cable Lengths for Compatible Rotary Motors**

| Motor Cat. No. | Absolute High-resolution (5V) Encoder m (ft) | Incremental/TTL (5V) Encoder m (ft) | Absolute High-resolution (5V) 17-bit Encoder m (ft) |
|---|---|---|---|
| MPL-A3*xxx*…<br>MPL-A5*xxx*-S/M (1) | 30 (98.4) | | |
| MPL-A15*xxx*…<br>MPL-A2*xxx*-E/V | 30 (98.4) | | |
| MPL-A15*xxx*…<br>MPL-A45*xxx*-H | | 30 (98.4) | |
| MPM-A*xxxxx*-S/M | 30 (98.4) | | |
| MPF-A*xxxx*-S/M (1) | 30 (98.4) | | |
| MPS-A*xxxx*-S/M | 30 (98.4) | | |
| TLY-A*xxxx*-B | | | 30 (98.4) |
| TLY-A*xxxx*-H | | 30 (98.4) | |

(1) MPL-A5*xxx* and MPF-A5*xxx* motor encoders are rated for 9V, the remaining Bulletin MPL and MPF (200V-class) motor encoders are rated for 5V.

**Cable Lengths for Compatible Linear Actuators**

| Actuator Cat. No. | Absolute High-resolution (5V) Encoder m (ft) | Incremental/TTL (5V) Encoder m (ft) | Absolute High-resolution (5V) 17-bit Encoder m (ft) |
|---|---|---|---|
| MPMA-A*xxxxx* or MPAS-A*xxxxx*-V (ballscrew) | 30 (98.4) | | |
| MPMA-A*xxxxx* or MPAS-A*xxxxx*-A (direct drive) | | 30 (98.4) | |
| MPAR-A*xxxxx*-V/M | 30 (98.4) | | |
| MPAI-A*xxxxx*M3 | 30 (98.4) | | |
| LDAT-S*xxxxxx*-*x*B*x* | | 30 (98.4) | |

**Cable Lengths for Compatible Linear Motors**

| Motor Cat. No. | Absolute High-resolution (5V) Encoder m (ft) | Incremental/TTL (5V) Encoder m (ft) |
|---|---|---|
| LDC-Series or LDL-Series | 30 (98.4) | 30 (98.4) |

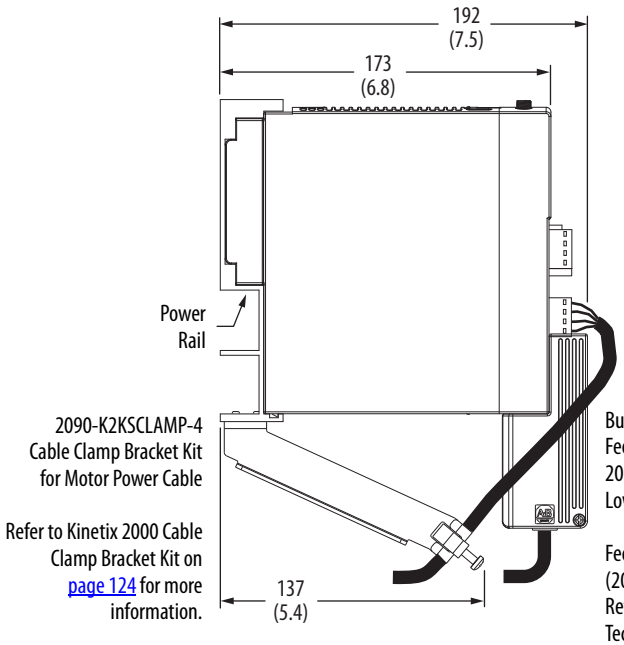
## Maximum Power Cable Length

Although motor power cables are available in standard lengths up to 90 m (295.3 ft) and the Kinetix 2000 power rail is available in sizes up to eight axes, to meet CE requirements and improve system performance the combined motor power length for all axes on the same DC bus must not exceed 160 m (525 ft).

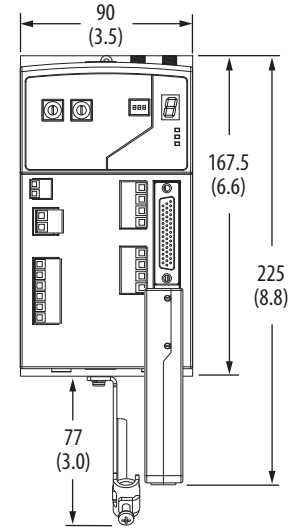
| | |
|---|---|
| **IMPORTANT** | Operating the Kinetix 2000 drive at maximum temperature with maximum cable length can necessitate derating of the drive. |

## Dimensions - Kinetix 2000 Multi-axis Servo Drives

### 2093-AC05-MP1, 2093-AC05-MP2, and 2093-AC05-MP5 Dimensions



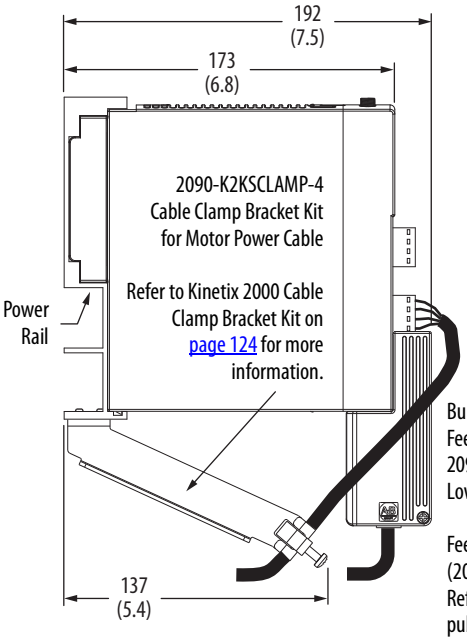

**Dimensions are in mm (in.)**



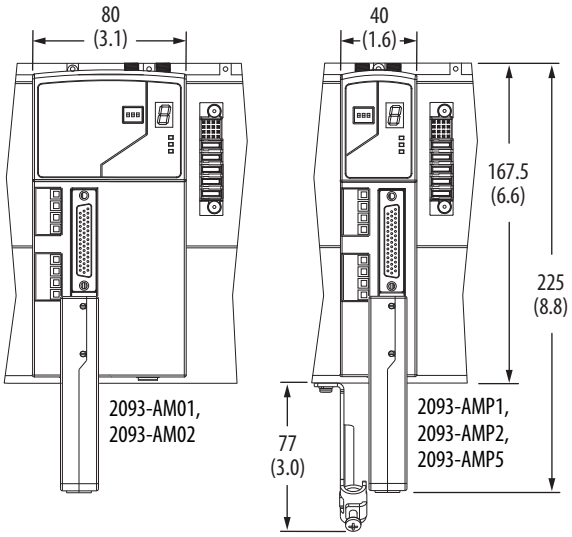

**Important:** Additional clearance below the connectors is necessary to provide the recommended cable bend radius.

Modules are shown mounted to the power rail and the dimensions reflect that in the depth of the module.

### 2093-AMP1, 2093-AMP2, 2093-AMP5, 2093-AM01, and 2093-AM02 Dimensions




**Dimensions are in mm (in.)**




**Important:** Additional clearance below the connectors is necessary to provide the recommended cable bend radius.

Modules are shown mounted to the power rail and the dimensions reflect that in the depth of the module.

## Environmental Specifications - Kinetix 2000 Multi-axis Servo Drives

| Attribute | Operational Range | Storage Range (nonoperating) |
|---|---|---|
| Temperature, ambient | 0…50 °C (32…122 °F) | -40…+85 °C (-40…+185 °F) |
| Relative humidity | 5…95% noncondensing | 5…95% noncondensing |
| Altitude | 1000 m (3281 ft)<br>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) | |

## Certifications - Kinetix 2000 Multi-axis Servo Drives

| Agency Certification (1) | Standards |
|---|---|
| c-UL-us | UL Listed to U.S. and Canadian safety standards (UL 508C File E59272). |
| CE | European Union 2004/108/EC EMC Directive compliant with IEC 61800-3:2004 + A1:2012: Adjustable Speed Electrical Power Drive Systems - Part 3; EMC Product Standard including specific test methods. |
| | European Union 2006/95/EC Low Voltage Directive compliant with IEC 50178:1997 - Electronic Equipment for use in Power Installations. |
| C-Tick | Australian Radiocommunications Act, compliant with:<br>• Radiocommunications Act: 1992<br>• Radiocommunications (Electromagnetic Compatibility) Standard: 1998<br>• Radiocommunications (Compliance Labelling - Incidental Emissions) Notice: 1998<br>• AS/NZS CISPR 11: 2002 (Group 2, Class A) |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with:<br>• Article 58-2 of Radio Waves Act, Clause 3<br>• Registration number: KCC-REM-RAA-2093-AC05-MP5<br>• Registration number: KCC-REM-RAA-2093-ASP06 |

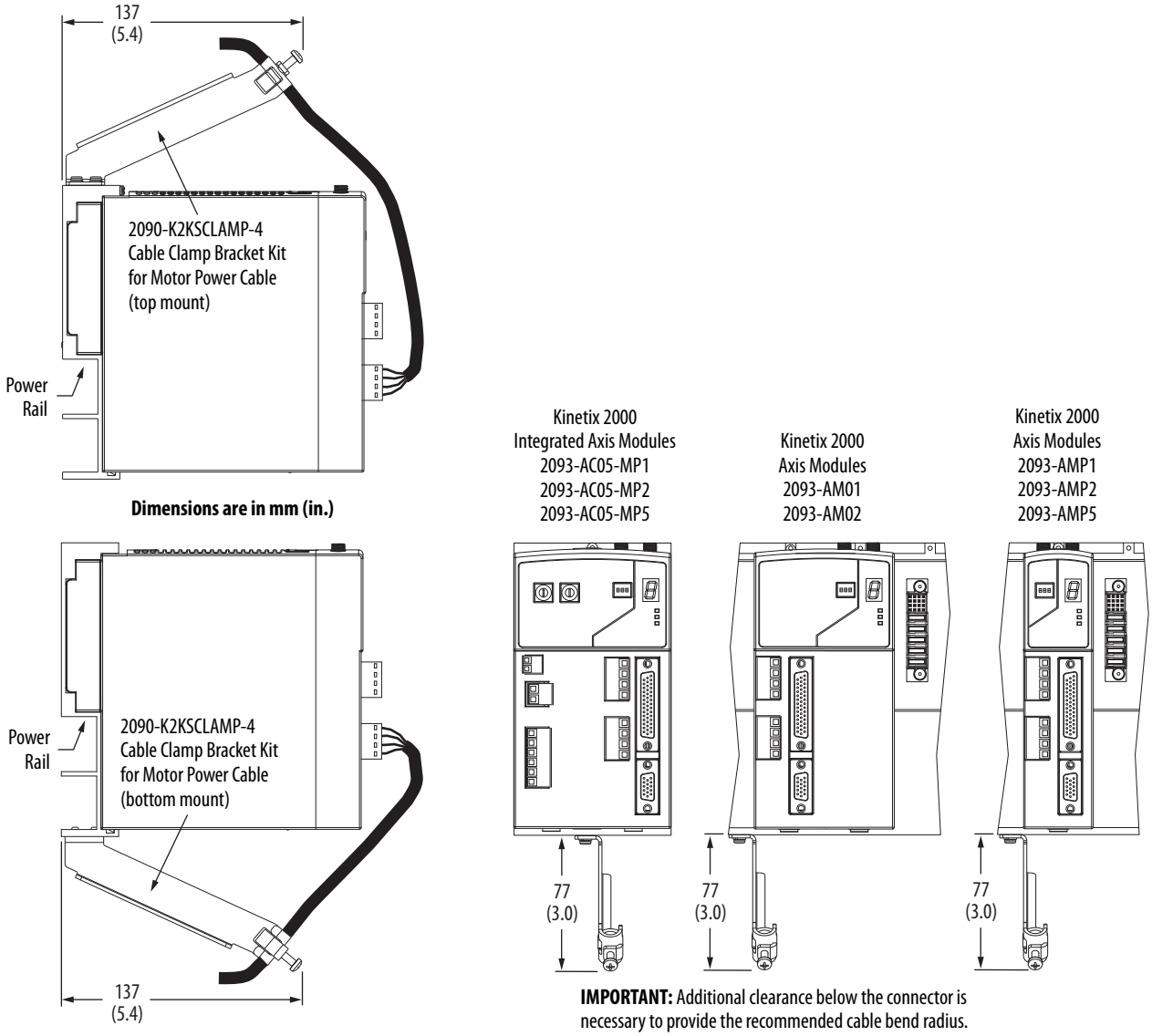
(1) When product is marked, refer to publication 2093-CT002 for the Kinetix 2000 servo drives EU Declaration of Conformity certificate.

## Accessories - Kinetix 2000 Multi-axis Servo Drives

*Kinetix 2000 Cable Clamp Bracket Kit*

The cable clamp bracket kit (catalog number 2090-K2KSCLAMP-4) is designed for use with the Kinetix 2000 IAM and AM drive modules. The clamp mounts to the power rail and provides stress relief for the motor power cable and an electrical path from the cable shield to machine ground. You can mount the bracket to the top or bottom of the power rail, depending on the layout of cables within your panel.

**Cable Clamp Bracket Kit (catalog number 2090-K2KSCLAMP-4)**




**IMPORTANT:** Additional clearance below the connector is necessary to provide the recommended cable bend radius.

*Kinetix 2000 Power Rail*

**Kinetix 2000 IAM, AM, and Shunt Module Slot Requirements**

| IAM Cat. No. | Converter Slot Used | Inverter Slots Used |
|---|---|---|
| 2093-AC05-MP1 | 1 | 1 |
| 2093-AC05-MP2 | | 1 |
| 2093-AC05-MP5 | | 1 |

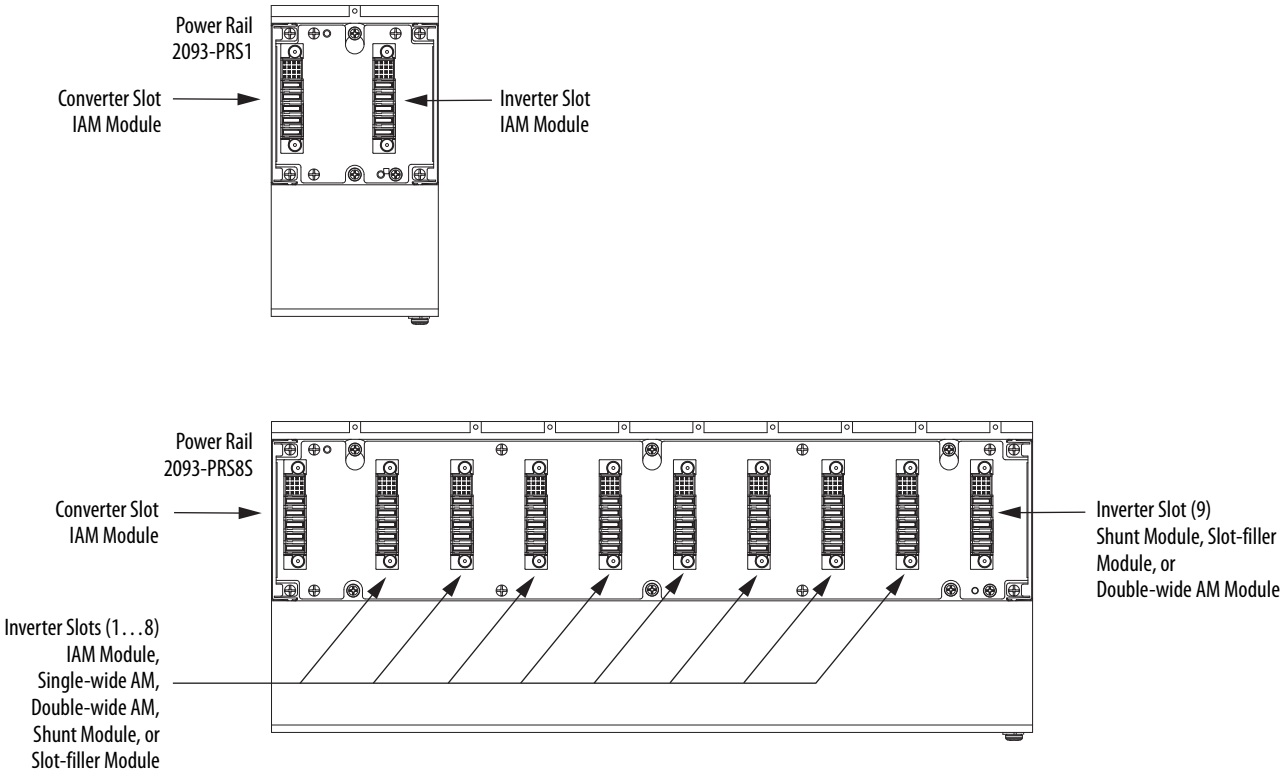
| AM Cat. No. | Converter Slot Used | Inverter Slots Used |
|---|---|---|
| 2093-AMP1 | 0 | 1 |
| 2093-AMP2 | | 1 |
| 2093-AMP5 | | 1 |
| 2093-AM01 | | 2 (1) |
| 2093-AM02 | | 2 |

| Shunt Module Cat. No. | Converter Slot Used | Inverter Slots Used |
|---|---|---|
| 2093-ASP06 | 0 | 1 |

(1) 2093-AM01 and 2093-AM02 axis modules are double-wide modules and require two slots on the power rail.

The far-left slot on each power rail is the converter slot and used by only 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 maximum number axes that each power rail can hold.

**Power Rail Slots**



For example, the 2093-PRS1 power rail contains one inverter slot. This limits the use of this power rail to systems requiring only one inverter slot. Similarly, the 2093-PRS2 power rail contains two inverter slots. This limits the use of this power rail to systems requiring up to two inverter slots. When selecting a power rail, determine the number of inverter slots required by all rail-mounted modules and select one 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 2093-PRF slot-filler module in each unused slot.

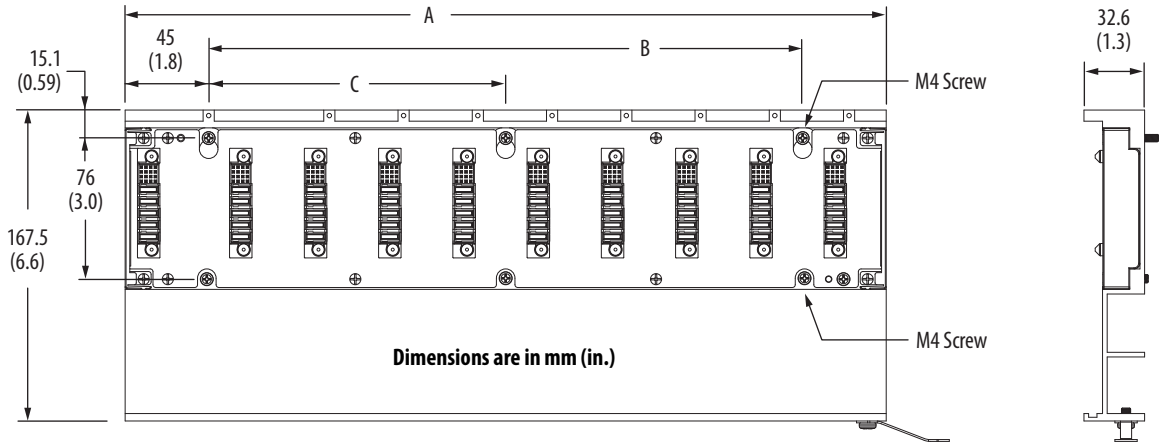
The 2093-PRS8S power rail is unique in that it accommodates eight axes, but has nine inverter slots. The far-right (ninth) inverter slot is reserved for a shunt module, but could also be occupied by a slot-filler module or double-wide axis module. These power rail configurations are supported.

**2093-PRS8S Configurations**

| 8-axis | | 7-axis | | 6-axis | | 5-axis | | |
|---|---|---|---|---|---|---|---|---|
| IAM | IAM | IAM | IAM | IAM | IAM | IAM | IAM | IAM |
| AM | AM | AM (double-wide) | AM (double-wide) | AM (double-wide) | AM (double-wide) | AM (double-wide) | AM (double-wide) | AM (double-wide) |
| AM | AM | | | | | | | |
| AM | AM | AM | AM | AM (double-wide) | AM (double-wide) | AM (double-wide) | AM (double-wide) | AM (double-wide) |
| AM | AM | AM | AM | | | | | |
| AM | AM | AM | AM | AM | AM | AM (double-wide) | AM (double-wide) | AM (double-wide) |
| AM | AM | AM | AM | AM | AM | | | |
| AM | AM | AM | AM | AM | AM | AM (double-wide) | AM | AM |
| Shunt module | Slot-filler module | Shunt module | Slot-filler module | Shunt module | Slot-filler module | | Shunt module | Slot-filler module |

**IMPORTANT** The maximum number of axes supported by the 2093-PRS8S power rail is eight axes. Do not install an axis module (AM) in the far-right (ninth) inverter slot.

**2093-PRS1, 2093-PRS2, 2093-PRS3, 2093-PRS4, 2093-PRS5, 2093-PRS7, and 2093-PRS8S Dimensions**




| Power Rail Cat. No. | Description | Dimension A mm (in.) | Dimension B mm (in.) | Dimension C mm (in.) |
|---|---|---|---|---|
| 2093-PRS1 | 1 axis power rail | 90 (3.54) | N/A | N/A |
| 2093-PRS2 | 2 axis power rail | 130 (5.12) | 40 (1.57) | N/A |
| 2093-PRS3 | 3 axis power rail | 170 (6.69) | 80 (3.15) | N/A |
| 2093-PRS4 | 4 axis power rail | 210 (8.26) | 120 (4.72) | N/A |
| 2093-PRS5 | 5 axis power rail | 250 (9.84) | 160 (6.30) | N/A |
| 2093-PRS7 | 7 axis power rail | 330 (12.99) | 240 (9.45) | 120 (4.72) |
| 2093-PRS8S | 8 axis power rail | 410 (16.14) | 320 (12.60) | 160 (6.30) |

### *Kinetix 2000 Shunt Module*

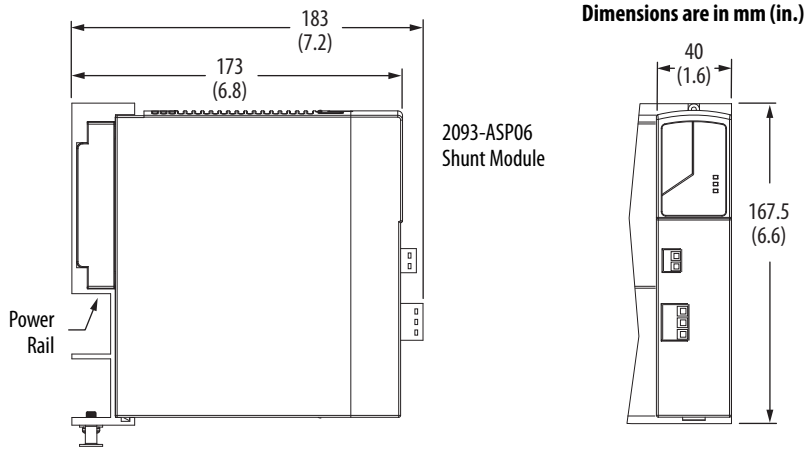
This section contains specifications, mounting dimensions, and catalog numbers for the 2093-ASP06 Shunt Module.

**Shunt Module Power Specifications**

| Drive Cat. No. | Shunt Module Cat. No. | Drive Voltage V AC | Resistance W | Peak Power kW | Peak Current A | Continuous Power W | Capacitance µF | Fuse Replacement |
|---|---|---|---|---|---|---|---|---|
| 2093-AC05-MP1 | 2093-ASP06 | 230 | 15.0 | 10.9 | 27.0 | 50 | 164 | N/A (no internal fuse) |
| 2093-AC05-MP2 | | | | | | | | |
| 2093-AC05-MP5 | | | | | | | | |

For more information on external shunt resistors compatible with the Kinetix 2000 drive, refer to the Kinetix Motion Accessories Technical Data, publication KNX-TD004.

**Shunt Module Dimensions**




Modules are shown mounted to the power rail and the dimensions reflect that.

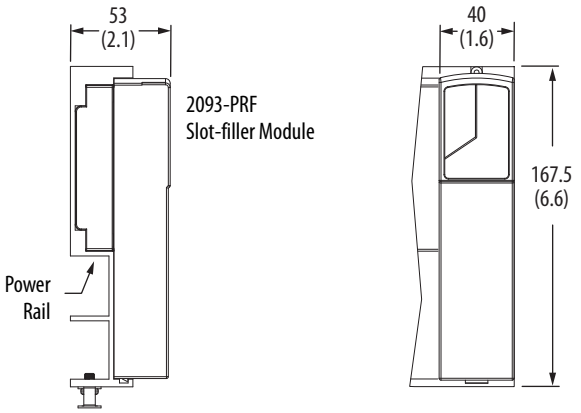
*Kinetix 2000 Slot-filler Module*

This section contains dimensions and catalog numbers for the 2093-PRF slot-filler module.

| IMPORTANT | The Kinetix 2000 slot-filler module (catalog number 2093-PRF) is compatible with all Kinetix 2000 systems. Power rail slots not occupied by an IAM, AM, or shunt module, must have a slot-filler module installed. |
|---|---|

**Slot-filler Module Dimensions**

**Dimensions are in mm (in.)**




## Kinetix 7000 High Power Servo Drives

The Kinetix 7000 high-power servo drive is designed to accommodate the most demanding requirements and extends the benefits of Kinetix Integrated Motion to applications up to 149 kW. The Kinetix 7000 high power drive supports three-phase AC input power (380...480V AC) and DC input for common bus applications. In addition, the safe-off capability integrated into this drive increases productivity by allowing manufacturers and machine builders to implement machine solutions that provide both safety and maximum machine availability.

The Kinetix 7000 servo drives provide Integrated Motion capability through the sercos interface and are part of the Kinetix Integrated Motion solution.