Allen-Bradley

Kinetix 6200 and Kinetix 6500 Control Modules

Catalog Numbers
2094-SE02F-M00-S0, 2094-SE02F-M00-S1, 2094-EN02D-M01-S0, 2094-EN02D-M01-S1

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About the Control Modules

Each integrated axis (IAM) power module and axis (AM) power module requires one control module. Each control module provides user I/O, safety, auxiliary feedback, and motor feedback connections. Kinetix® 6200 control modules use sercos interface to communicate with the Logix5000™ controller and EtherNet/IP to access the safety configuration tool. Kinetix 6500 control modules use EtherNet/IP for programming the Logix5000 controller and safety configuration tool. In addition, the Kinetix 6200 and Kinetix 6500 control modules are available with either safe torque-off or safe speed monitoring functionality.

Refer to Additional Resources on page 12 for user documentation supporting installation and wiring, integration with ControlLogix®, CompactLogix™, or SoftLogix™ controller platforms, troubleshooting, and safety functions.

Catalog Number Explanation

This publication applies to the Kinetix 6200 and Kinetix 6500 control modules.

Kinetix 6200 Sercos Control Modules

Cat. No.	Description
2094-SE02F-M00-S1	Kinetix 6200 control module, sercos fiber optic, safe speed monitoring
2094-SE02F-M00-S0	Kinetix 6200 control module, sercos fiber optic, safe torque-off

Kinetix 6500 EtherNet/IP Control Modules

Cat. No.	Description
2094-EN02D-M01-S1	Kinetix 6500 control module, EtherNet/IP, safe speed monitoring
2094-EN02D-M01-S0	Kinetix 6500 control module, EtherNet/IP, safe torque-off

Before You Begin

Remove all packing material, wedges, and braces from within and around the components. After unpacking, check the item nameplate catalog number against the purchase order.

Each 2094-SE02F-M00-S0 and 2094-EN02D-M01-S0 safe torque-off control module ships with one motion-allowed plug for the IOD connector. Install the 44-pin motion-allowed plug on the IOD connector when the safe torque-off functionality is not used and no other I/O connections are required for your application.

TIP Connector kits for user I/O, safety, and auxiliary feedback (catalog numbers 2090-K6CK-D44M or 2090-K6CK-D44S0) and motor feedback (catalog number 2090-K6CK-D15M), are not provided. Refer to the Kinetix Motion Accessories Technical Data, publication GMC-TD004, for more information.

This procedure assumes you have prepared your panel, mounted your Bulletin 2094 power rail, and Bulletin 2094 power modules. For installation instructions regarding equipment and accessories not included here, refer to the instructions that came with those products.



ATTENTION: Plan the installation of your system so that you can perform all cutting, drilling, tapping, and welding with the system removed from the enclosure. Because the system is of the open type construction, be careful to keep any metal debris from falling into it. Metal debris or other foreign matter can become lodged in the circuitry and result in damage to components.

Module Compatibility

Kinetix 6000 IAM/AM modules and Bulletin 2094 power modules with Kinetix 6200 control modules are completely compatible and can be used together on the same Bulletin 2094 power rail.

IMPORTANT Kinetix 6200 (sercos) and Kinetix 6500 (EtherNet/IP) control modules are not compatible and cannot be used on the same Bulletin 2094 power rail.

Drive/Control Module Compatibility

IAM Module/ Control Module	IAM Power Module	2094-*x*M*xx*-S Kinetix 6000 AM Module	2094-BM*xx*-M AM Power Modules	
			Kinetix 6200 Control Module	Kinetix 6500 Control Module
2094-*x*C*xx*-M*xx*-S Kinetix 6000 (sercos)	N/A	Fully compatible	Fully compatible	Not compatible
2094-SE02F-M00-S*x* Kinetix 6200 (sercos)	2094-BC*xx*-M*xx*-M			
2094-EN02D-M01-S*x* Kinetix 6500 (EtherNet/IP)		Not compatible	Not compatible	Fully compatible

This is the IOD connector pinout for the safe torque off (-S0) control modules.

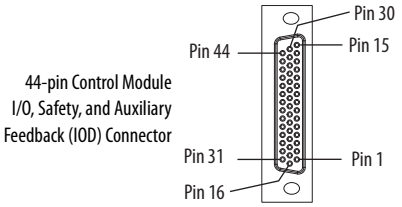
2094-SE02F-M00-S0 and 2094-EN02D-M01-S0 Control Modules

IOD Pin	Signal	IOD Pin	Signal	IOD Pin	Signal	IOD Pin	Signal
0	–	12	–	23	SS_IN_CH2	33	–
1	AUX_SIN+ AUX_A+	13	–			34	–
2	AUX_SIN- AUX_A-	14	24VPWR	24	SS_IN_CH3	35	–
3	AUX_COS+ AUX_B+	15	24VCOM	25	RESET_REF	36	–
4	AUX_COS- AUX_B-	16	–	26	RESET_IN	37	–
5	AUX_DATA+ AUX_I+	17	SPWR	27	TEST_OUT_0	38	–
6	AUX_DATA- AUX_I-	18	SCOM	28	TEST_OUT_1	39	24VPWR (1)
7	AUX_CLK+	19	SS_IN_CH0	29	–	40	24VCOM (1)
8	AUX_CLK-	20	SS_IN_CH1	30	–	41	INPUT1
9	EPWR_5V	21	SS_OUT_CH0	31	–	42	INPUT2
10	ECOM	22	SS_OUT_CH1	32	–	43	INPUT3
11	EPWR_9V				–	44	INPUT4

(1) Signals 24VPWR and 24VCOM (IOD-39 and IOD-40) are a 24V DC source you can use to operate the digital inputs (50 mA maximum per input).

Refer to the Kinetix 6200 and Kinetix 6500 Safe Torque-off Safety Reference Manual, publication 2094-RM002, for signal descriptions and more information on safe torque-off safety functions.

IOD Connector Pin Orientation



Feedback Connector Pinouts

MF Pin	Description	Signal
1	Sine differential input + A differential input +	MTR_SIN+ MTR_A+
2	Sine differential input - A differential input -	MTR_SIN- MTR_A-
3	Cosine differential input + B differential input +	MTR_COS+ MTR_B+
4	Cosine differential input - B differential input -	MTR_COS- MTR_B-
5	Data differential input/output + Index differential input +	MTR_DATA+ MTR_I+
6	Encoder common	MTR_ECOM
7	Encoder 9V power output	MTR_EPWR9V
8	Hall commutation S3 input	MTR_S3
9	Clock output +	MTR_CLK+
10	Data differential input/output - Index differential input -	MTR_DATA- MTR_I-
11	Motor thermostat (normally closed) (1)	MTR_TS+
12	Hall commutation S1 input	MTR_S1
13	Hall commutation S2 input	MTR_S2
14	Encoder 5V power output	MTR_EPWR5V
15	Clock output -	MTR_CLK-

(1) Not applicable unless motor has integrated thermal protection.

IMPORTANT Drive-to-motor power cables must not exceed 90 m (295.5 ft). Additional limitations apply. Refer to the Kinetix 6200 and Kinetix 6500 Modular Servo Drive User Manual, publication 2094-UM002, for more information.

MF Connector Pin Orientation

