

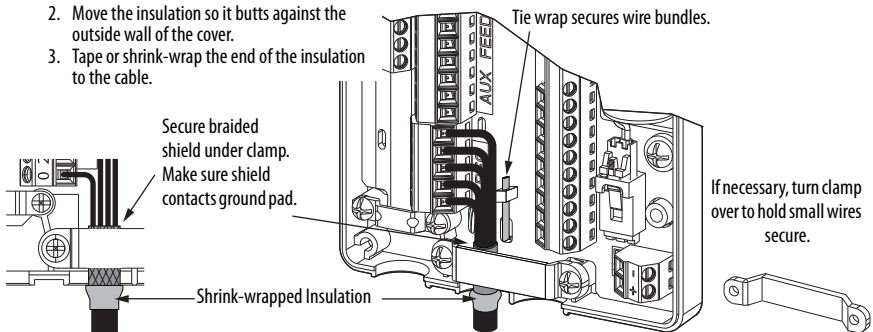
Low-profile Connector Kit for I/O and Feedback Signals

Catalog Numbers 2090-K2CK-COMBO, 2090-DA-BAT2

Install the Low-profile Connector Kit

Follow these steps to form a compact connection.

1. Push the insulation down-and-over itself.
2. Move the insulation so it butts against the outside wall of the cover.
3. Tape or shrink-wrap the end of the insulation to the cable.



2090-K2CK-COMBO Connector Kit Specifications

Attribute	Value
Current rating	1.0 A max
Screw terminal wire size	
Single	0.06...1.31 mm ² (30...16 AWG)
Dual	0.14...0.20 mm ² (26...24 AWG) ⁽¹⁾
Recommended wire strip length	5 mm (0.2 in.) single conductor

(1) Two conductors can connect to a single terminal providing the conductors are the same cross section and the construction of both is stranded. Terminals 22 and 27 (24VCOM_REG and 24V_REG), 28 and 38 (24VCOM and 24VPWR), and 39 and 44 (24VCOM and 24VPWR) can require connection of dual conductors.



ATTENTION: This connector kit contains electrostatic discharge (ESD) sensitive parts that can be damaged if you do not follow ESD control procedures. If you are unfamiliar with ESD control procedures, refer to Guarding Against Electrostatic Damage, publication [8000-4.5.2](#), or any other applicable ESD protection handbook.

I/O, Auxiliary Feedback, and Registration Connector Data

Input/Output (I/O)

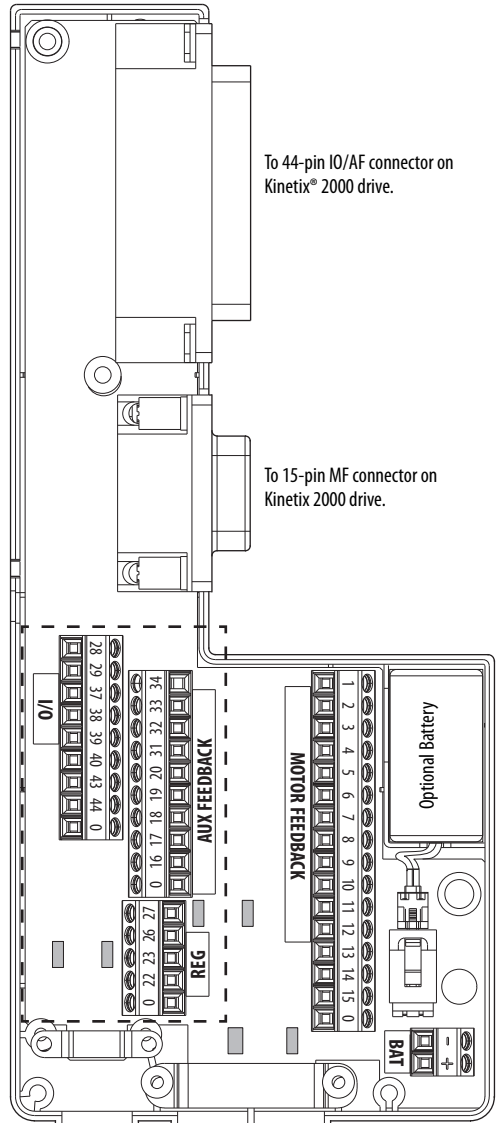
Terminal	Signal ⁽¹⁾
28	24VCOM
29	OT-
37	OT+
38	24VPWR
39	24VCOM
40	HOME
43	ENABLE
44	24VPWR
0	SHIELD

Auxiliary Feedback (AF)

Terminal	Signal ⁽¹⁾
16	Data- / I-
17	Data+ / I+
18	EPWR_5V ⁽²⁾
19	ECOM ⁽²⁾
20	EPWR_9V ⁽²⁾
31	COSINE- / B-
32	COSINE+ / B+
33	SINE- / A-
34	SINE+ / A+
0	SHIELD

Registration

Terminal	Signal ⁽¹⁾
22	24V COM_REG
23	REG2
26	REG1
27	24V_REG
0	SHIELD



(1) Terminal, pin, and signal are arranged to mate with the IO/AF connector on Kinetix 2000 drives. For wiring I/O, AF, and registration connections, refer to the Kinetix 2000 Multi-axis Servo Drives User Manual, publication [2093-UM001](#).

(2) Keep the ECOM, EPWR_9V, and EPWR_5V signals on the auxiliary feedback terminal separate from corresponding motor feedback signals (ECOMM, EPWR_9VM, and EPWR_5VM) at pins 6, 7, and 14 of the motor feedback connector.

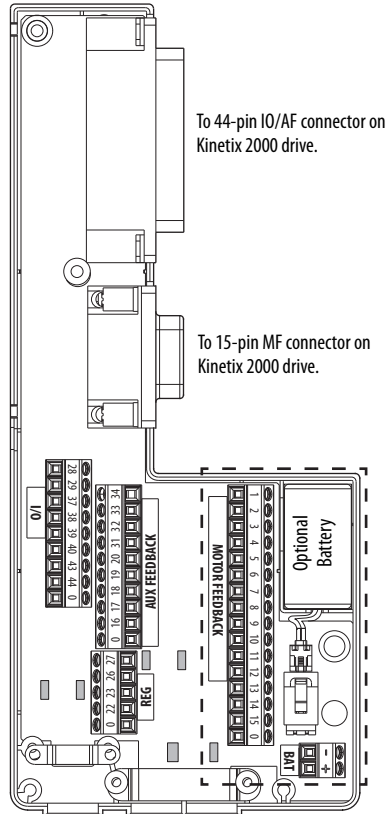
Motor Feedback and Battery Connector Data

Motor Feedback (MF) Connections

Terminal	Signal ⁽¹⁾
1	AM+
2	AM-
3	BM+
4	BM-
5	DATA+ / IM+
6	ECOMM ⁽²⁾
7	EPWR_9VM ⁽²⁾
8	S3
9	E_OT+
10	DATA- / IM-
11	TS
12	S1
13	S2
14	EPRW_5VM ⁽²⁾
15	E_OT-
0	SHIELD

Optional Battery Connections

Terminal	Signal
+	BAT +
-	BAT -



- (1) Terminal, pin, and signal are arranged to mate with the MF connector on Kinetix 2000 drives. For wiring MF connections, refer to the Kinetix 2000 Multi-axis Servo Drives User Manual, publication [2093-UM001](#).
- (2) Keep the ECOMM, EPWR_9V, and EPWR_5V signals on the auxiliary feedback terminal separate from corresponding motor feedback signals (ECOMM, EPWR_9VM, and EPWR_5VM) at pins 6, 7, and 14 of the motor feedback connector.

Battery Specifications

The 2090-DA-BAT2 battery is required for absolute position backup of TL-Series encoders, but is not included with the connector kit.

Battery Catalog Number

Cat. No.	Description
2090-DA-BAT2	3.6V, half-height, non-rechargeable lithium battery with 2-pole mini connector

Battery Life

Drive Power On Time Hours/week	Drive Power Off Time Hours/week	Expected Battery Life Years	Operating Conditions
0	168	1.0	Drive power is never ON
40	128	3.5	Drive power is ON for one 8-hour shift, 5 days/week
56	112	4.0	Drive power is ON for one 8-hour shift, 7 days/week
80	88	5.5	Drive power is ON for two 8-hour shifts, 5 days/week
112	56	7.5	Drive power is ON for two 8-hour shifts, 7 days/week
120	48	8.0	Drive power is ON for three 8-hour shifts, 5 days/week
168	0	10.5	Drive power is never OFF



This product contains a sealed lithium battery which may need to be replaced during the life of the product.

At the end of its life, the battery contained in this product should be collected separately from any unsorted municipal waste.

The collection and recycling of batteries helps protect the environment and contributes to the conservation of natural resources as valuable materials are recovered.

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