Installation Instructions

Original Instructions

Kinetix 5100 Auxiliary Feedback Connector Kit

Catalog Number 2198-AUXKIT

This kit is designed to provide wire terminations for encoder signals to the auxiliary feedback (AUX) connector on the Kinetix® 5100 servo drives. The feedback cable that you supply must meet the requirements in Feedback Cable Requirements on page 4.

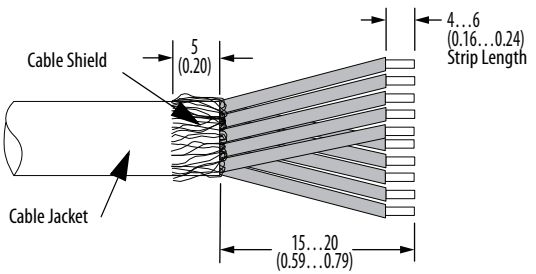
See the Kinetix 5100 Single-axis EtherNet/IP Servo Drives Users Manual, publication 2198-UM004, for more information on compatible 2090-Series feedback cables and wiring this kit.

Prepare the Feedback Cable

To prepare your feedback cable for use with the auxiliary feedback connector kit, make sure that the cable shield, conductor, and strip lengths are correct for your cable. Use the following guidelines and diagram for the feedback cable preparation.

- Fold the shield back on to the cable jacket and trim the shield so that no strands protrude past the outer shell during final assembly. Wrap the cable shield with one layer of conductive tape.
- Measure the conductor lengths so they are long enough to connect to the terminals.
- Remove enough insulation from each conductor to provide the proper strip length.
- Twist and pre-solder the conductor ends.

Dimensions are in mm (in.)



Prepare Connector

To make the final assembly easier and help prevent solder drips, pre-solder the connector contacts.

IMPORTANT To help prevent connector damage, complete each solder within 3…5 seconds.

Assemble the Connector Kit

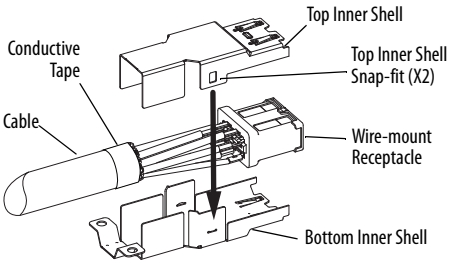
Follow these steps to assemble the connector kit.

1. Slip 10...20 mm (0.4...0.78 in.) insulation tube over each cable conductor.
2. Route the conductors to the proper terminals and solder in place.

   See Connector Data on page 3, for the 10-pin terminal pinout.
   Set the solder iron temperature to 390 °C (734 °F).

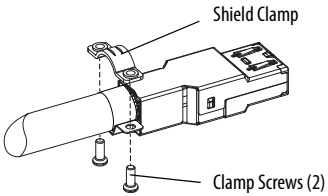
   IMPORTANT To help prevent damage, make each solder connection within 10 seconds and use minimal force on terminals.

3. Place the cable and the wire-mount receptacle assembly in bottom of the inner shell.
4. Align the top inner shell snap-fits to the bottom inner shell and push together.



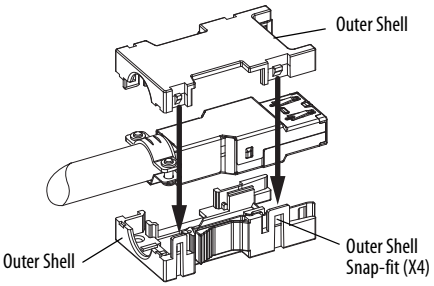
5. To achieve a high-frequency bond between the shield braid and the clamp, apply the shield clamp to the 5 mm (0.20 in.) of conductive-tape wrapped cable shield.

   Tighten the clamp screws by using a Phillips screwdriver to achieve 0.34 N•m (3.0 lb•in), maximum torque.

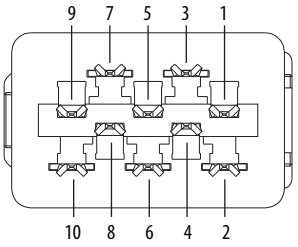


IMPORTANT To achieve proper ground and improve the system performance, it is critical that the conductive-tape wrapped cable shield be clamped under the shield clamp.

6. Align the outer shell snap-fits and push together.



Connector Data



Pin	Signal	Description
1	AM+	Channel A Differential Input +
2	AM-	Channel A Differential Input -
3	BM+	Channel B Differential Input +
4	BM-	Channel B Differential Input -
5	IM+	Channel Index Differential Input +
6	IM-	Channel Index Differential Input -
7	ECOM	Encoder Common
8	EPWR5V	Encoder 5V Power Output
9	Reserved	Reserved
10	Reserved	Reserved

Connector Kit Specifications

Attribute	Value
Cable diameter	7.0…9.0 mm (0.28…0.35 in.)
Solder terminal wire size	0.05…0.75 mm^2 (30…18 AWG)
Recommended wire strip length	4…6 mm (0.16…0.24 in.) single conductor
Kit contents	• Wire mount receptacle • Shell kit for wire mount receptacle – Includes outer body (2 pieces) – Inner shell (top and bottom) • Cable clamp • Screws (x2) • Latches (x2)

Feedback Cable Requirements

- Shielded twisted-pair cable.
- Eight conductors minimum with four twisted pairs. One pair of 0.82 mm^2 (18 AWG) for EPWR5V and ECOM signals and three pairs of 0.051...0.82 mm^2 (30...18 AWG).
- 7...9 mm (0.27...0.35 in.) in diameter.
- Maximum of 30 m (98.4 ft) in length.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Kinetix Servo Drives Specifications Technical Data, publication KNX-TD003	Provides product specifications for the Kinetix Integrated Motion over EtherNet/IP network, Integrated Motion over Sercos interface, EtherNet/IP networking, and component servo drive families.
Kinetix Motion Accessories Specifications Technical Data, publication KNX-TD004	Provides product specifications for Bulletin 2090 motor and interface cables, low-profile connector kits, drive power components, and other servo drive accessory items.
Kinetix 5100 Single-axis EtherNet/IP Servo Drives Users Manual, publication 2198-UM004	Information on how to install, configure, start, and troubleshoot your Kinetix 5100 servo drive system.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at http://www.rockwellautomation.com/global/literature-library/overview.page.

Rockwell Automation Support

For technical support, visit http://www.rockwellautomation.com/support/overview.page.

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