

# Hiperface-to-DSL Feedback Converter Kit

Catalog Number 2198-H2DCK

**\*\*ELWOOD MARKUP:**

**CONNECTION OF SX-SERIES HAZARDOUS LOCATION (UL/ATEX/IECEX).  
ELWOOD MARKUP SHOWN IN RED**

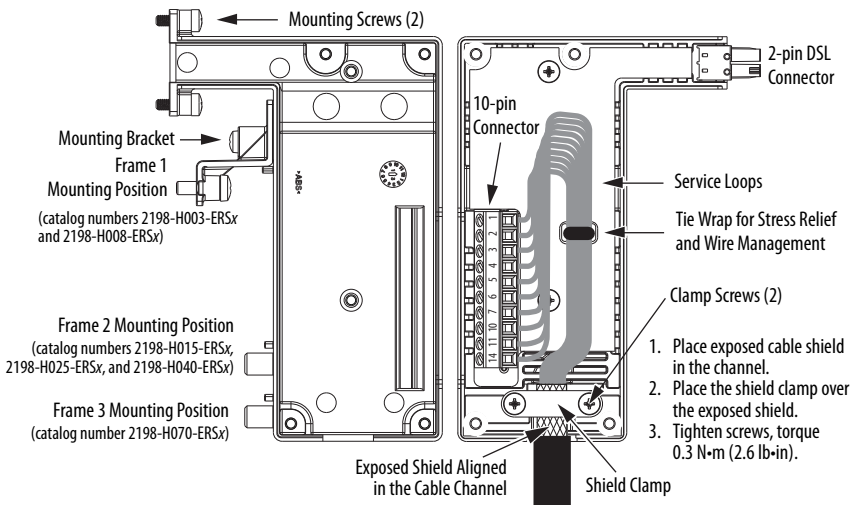
## About the Converter Kit

This kit is designed for use with Allen-Bradley® 2090-Series motor feedback cables and provides wire terminations for Hiperface encoder signals to the motor feedback (MF) connector on Kinetix® 5500 drives with firmware revision 2.002 or later. If needed, the Kinetix 5500 Add-on Profile (AOP) is available for download at the Custom Downloads Add-On Profiles website: <https://download.rockwellautomation.com/esd/download.aspx?downloadid=addonprofiles>. If you have the Studio 5000 Logix Designer™ application, version 21.00, you must install the Kinetix 5500 AOP. If you have version 21.03 or later, you do not need the AOP.

Refer to the Kinetix 5500 Servo Drive User Manual, publication [2198-UM001](#), for more information on installing this kit, preparing the cables, and attaching the shield clamps.

## Install the Converter Kit

A mounting bracket is included to secure the converter kit to the drive. Install the mounting bracket in the mounting position specific to the frame size of your drive.



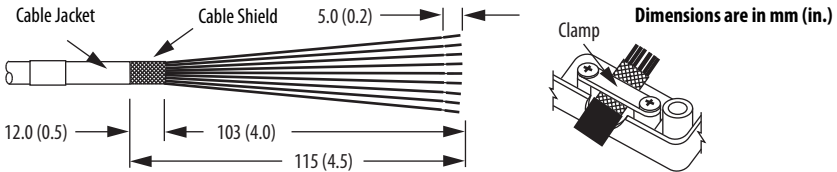
## Prepare the Cables

To prepare your existing Bulletin 2090 cables for use with Kinetix 5500 drives, some preparation is necessary so that the cable shield, conductor lengths, and strip lengths are correct. Make sure your feedback and power/brake cable preparation follows these guidelines:

- Trim the shield flush so that no strands can cause a short to adjacent terminals.
- Measure the conductor lengths so they are long enough to provide a service loop.
- Remove just enough insulation from each conductor to provide the proper strip length.

The feedback cable attaches to the converter kit and is wired to the 10-pin connector. Remove lengths of cable jacket and cable shield as shown. Apply the shield clamp to the 12 mm (0.5 in.) of exposed cable shield to achieve a high-frequency bond between the shield braid and clamp. Attach the tie wrap.

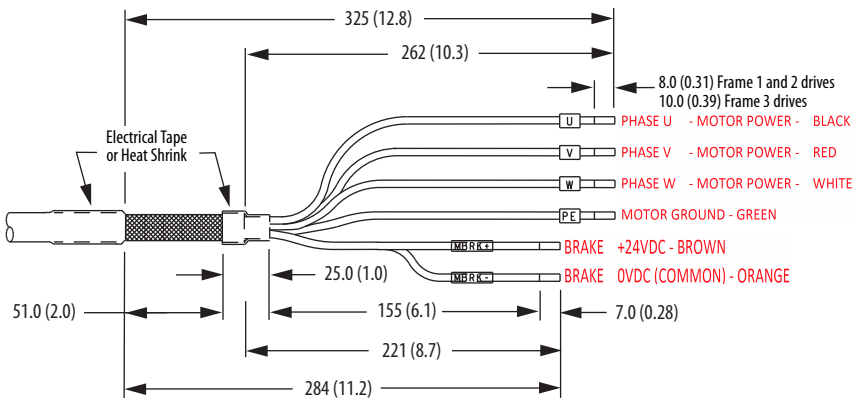
### Feedback Cable



Power cable preparation on existing 16 and 14 AWG cables is sufficient to reuse on Kinetix 5500 frame 1 and 2 drives, except for the brake conductors. Cut the brake conductors back to 163 mm (6.4 in.) and trim the shield braid at the base of the jacket. However, for frame 3 drives with 14 or 10 AWG cables, the overall length of the cable preparation area needs to be increased.

**TIP** For example, you can remove an additional length of cable jacket, exposing more cable shield. After doing so, remove all but 63.5 mm (2.5 in.) of the shield and cover the shield ends with 25.0 mm (1.0 in.) of electrical tape or heat shrink to prevent the cable ends from fraying.

### Power/brake Cable (14 and 10 AWG)



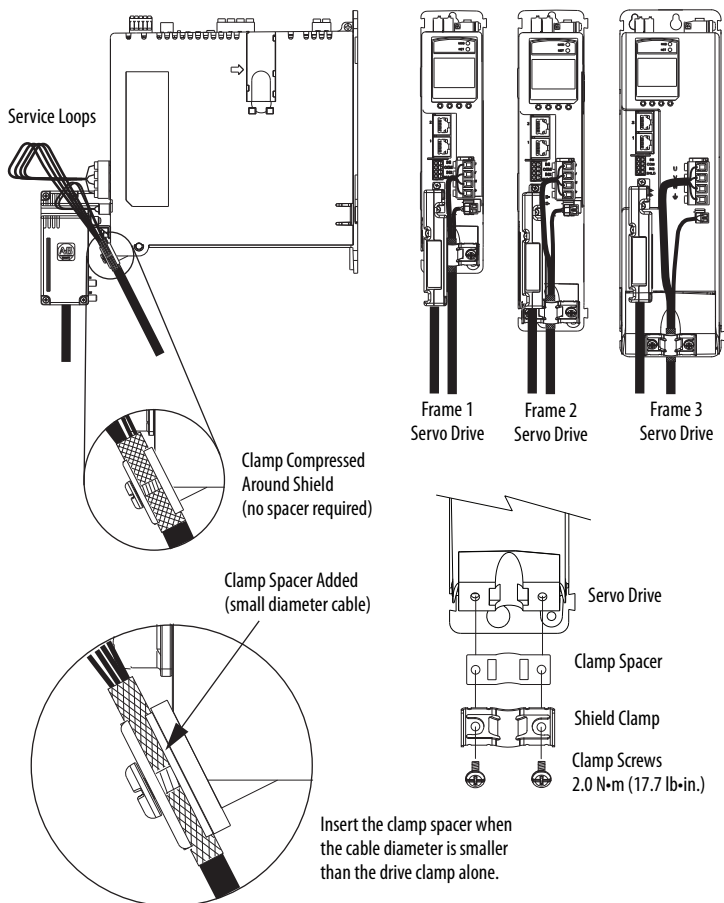
(1) The overall shield braid covering the brake conductors can be removed.

## Install the Drive Cable Clamp

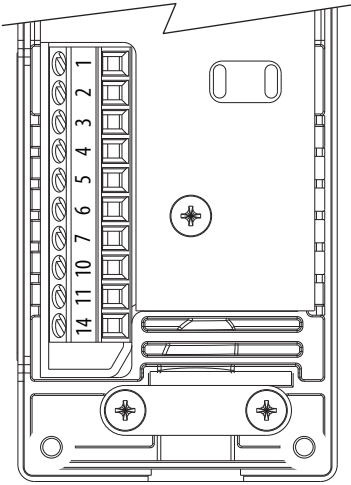
The power/brake cable shield attaches to the drive cable clamp. A clamp spacer is included with the kit for cable diameters that are too small for a tight fit within the drive clamp alone.

- Routing the conductors with service loops provides stress relief to the motor power and brake connections.
- Make sure the cable clamp tightens around the cable shield and provides a good bond between the cable shield and the drive chassis.

### Cable Clamp Attachment



# Connector Data



## Converter Kit Pinout

Terminal	Signal	Wire Color, Elwood SX
1	SIN+	White/Orange
2	SIN-	Orange/White
3	COS+	White/Green
4	COS-	Green/White
5	DATA+	White/Brown
6	ECOM <sup>(1)</sup>	Blue/White & OTL(Blue)
7	EPWR_9V <sup>(2)</sup>	White/Blue
10	DATA-	Brown/White
11	TS+	OTL(Blue)
14	EPWR_5V <sup>(2)</sup>	N/C
<b>Shield Clamp</b>	Cable Shield/Drain	Refer to shield/clamp details on p1 & 2

(1) The ECOM and TS- connections are tied together and connect to the cable shield.

(2) The converter kit generates 5V and 9V from a 12V supply coming from the drive. The 5V supply is used by 5V encoders in 230V motors. The 9V supply is used by 9V encoders in 460V motors.

## Converter Kit Specifications

Attribute	Value
Cable diameter	6.5...11.9 mm (0.26...0.47 in.)
Screw terminal wire size	0.08...1.5 mm <sup>2</sup> (28...16 AWG)
Recommended wire strip length Feedback wires Power and brake wires	5 mm (0.2 in.) single conductor 8.0 mm (0.31 in.), Frame 1 and 2 drives 10.0 mm (0.39 in.), Frame 3 drives
Recommended torque Mounting screw Terminal screws Clamp and cover screws	0.4 N·m (3.5 lb·in) 0.22...0.25 N·m (1.9...2.2 lb·in) 0.3 N·m (2.6 lb·in)
Kit contents	<ul style="list-style-type: none"> <li>• Converter kit, mounting and cover screws</li> <li>• Shield clamp, screws</li> <li>• Mounting bracket, captive screws</li> <li>• Clamp spacer</li> <li>• Tie wrap</li> <li>• Spare screws (2)</li> </ul>

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