



FIELD-IQ ISOBUS

INPUT CONTROL SYSTEM

CABLING GUIDE

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Revision D
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Release Notice

This is the March 2022 release (Revision D) of the Field-IQ ISOBUS Input Control System Cabling Guide.

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Introduction

- ▶ System Architecture
- ▶ ISO licenses
- ▶ Service cables

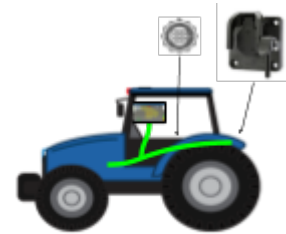
This cabling guide describes various installation scenarios for the Field-IQ ISOBUS control system, using the GFX-750™/XCN-1050 and TMX-2050/XCN-2050 displays.

System Architecture

The Trimble Field IQ ISO Control system is broken into three main components:

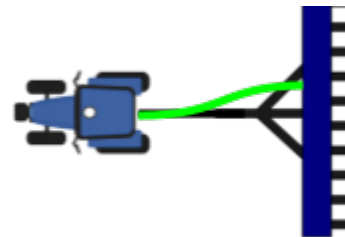
Vehicle/Cab Harnessing

All cables needed to interface with an OE installed ISOBUS harnessing or to add CAN and power connections at the vehicle hitch.



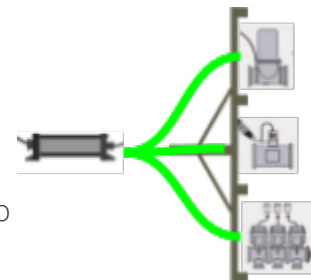
Implement Hitch Harnessing

Any extension harnessing needed to connect from the vehicle hitch to the control ECU.



Implement Control Components

Harnessing needed to interface the ISO ECU to the various control components on the vehicle. Implement harnessing is typically tailored to the specific application. Harnessing used in one application may not be compatible with another.



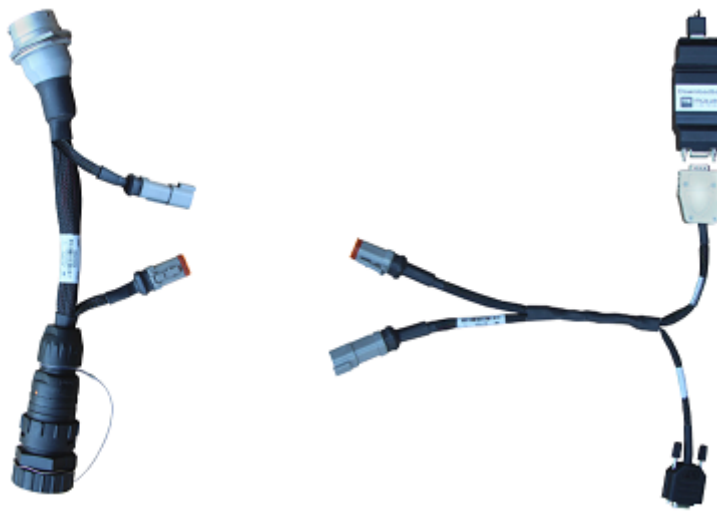
- Interface cables connect directly to the ECU and are designed to adapt to existing raven harnessing or generic breakout.
- Rate adapters connect from the generic breakout to the control valve.
- Feedback adapters connect from the generic breakout to the flowmeter.
- Section adapters connect from the generic breakout to the boom/ section valves.
- Master/Dump valve adapters connect the generic breakout harness to an auxiliary valve. These are most common on bypass control systems or implements with no section control.

ISO licenses

| Licenses | Description | Notes |
|----------|-----------------------|-------|
| 96553-10 | Task Controller | |
| 96553-07 | Prescriptions | |
| 96553-13 | Multi Product Control | |

Service cables

| Part Number | Description | Notes |
|--------------|------------------------------|---|
| ME3032259206 | Download box kit | Required to Update ECU. Recommended one per technician. Tees to 4-pin Deutsch DT |
| ME0501009 | Diagnostics T adapter | Tees to 9-pin HD10 series Deutsch |
| ME0501005 | IBIC ISO diagnostics adapter | Tees to Powell Connector |



To use the P-CAN Dongle to update the ECUs in place of the Downloadbox, please refer to the [P-CAN Dongle QRC](#).

Additional help

If you still cannot find the information that you need, contact your Trimble reseller.

Cabling Diagrams

- ▶ Vehicle/Cab Harnessing
- ▶ Hitch Power/CAN Cables
- ▶ Electronic Control module (ECU)
- ▶ Liquid Control
- ▶ Spreader
- ▶ Seeder/Fert Cart
- ▶ Accessories

Vehicle/Cab Harnessing

Cab harnessing is available for the Trimble TMX-2050™ and GFX-750™ displays. Harnessing requirements are dependent on the vehicle.

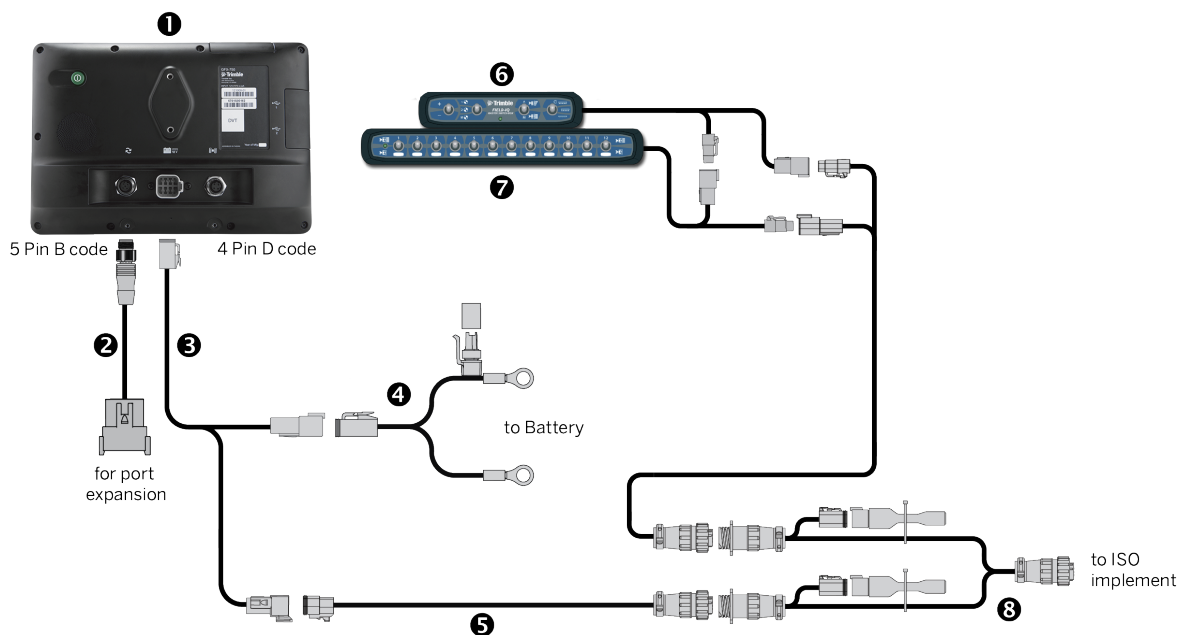
- In CAB ISO: For vehicles with a 9-pin (CPC) ISO connector
- Full ISO harness: For vehicles with no factory ISO harnessing. These kits include all harnessing to route battery power and CAN communications from the cab to the hitch.

NOTE – *Third-party display harnessing must be sourced from the console manufacturer.*

In-Cab ISO Connections

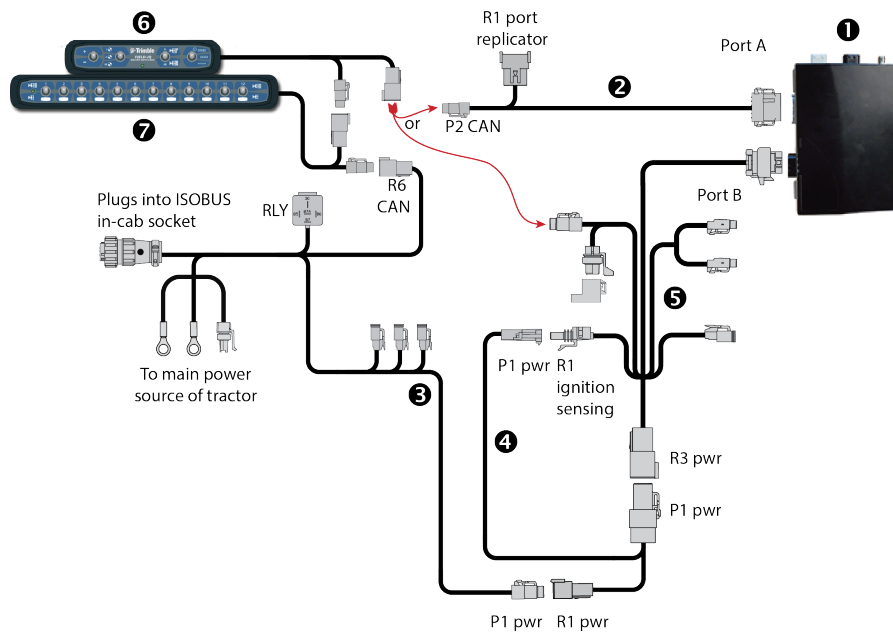
| P/N | Description | Notes |
|------------|-------------------------------|---|
| 89285-02 | Cable, TMX-2050 to In Cab ISO | For 9-pin, in-cab CPC ISO connection |
| 110553 | Cable, GFX-750 to In Cab ISO | For 9-pin, in-cab CPC ISO connection |
| 97256 | CPC Y adapter | Converts single CPC to two CPC connectors |
| 97260 | 4 pin DTM to CPC | Adds CPS/converts from 4 pin DTM to CPC |
| 3032258607 | Joystick in cab CPC | For connection to in cab CPC |

GFX-750/XCN-1050



| Item | Description | P/N |
|------|--|----------|
| 1 | GFX-750/XCN-1050 display, with PIQ App | |
| 2 | Cable Assy, GFX-750/XCN-1050, Expansion Port Basic, RS232, Dig I/O, 2.5m | 110545 |
| 3 | Cable Assy, GFX-750/XCN-1050, Power to display, CAN, 2.5 m | 110551 |
| 4 | Cable Assy, GFX-750/CFX-750/FM-750/XCN-1050/FmX/FM-1000 Basic Power, 4 m | 67258 |
| 5 | Cable Assy, GFX-750/XCN-1050, ISO connector, CAN, power, 2.5 m | 110553 |
| 3 | Cable Assy, GFX-750/XCN-1050 to NAV-900, Power/Ethernet (BRR), 5 m | 110540 |
| 4 | Cable Assy, GFX-750/XCN-1050 to NAV-900, Power/Ethernet (BRR) Extension, 2.5 m. Optional extension for large vehicles. | 112082 |
| 5 | Cable Assy, Field-IQ ISO, In-Cab ISO Connector adapter | 119627 |
| 6 | Master Switch Box - ISOBUS Aux-N - Universal - Optional Accessory | 75050-03 |
| 7 | 12 Switch Box - ISOBUS Aux-N - Universal - Optional Accessory | 75060-02 |
| 8 | Cbl Assy, In-Cab Y Adapter, ISOBUS - Required when used with 75050-03 or 75060-03 | 97256 |

TMX-2050/XCN-2050



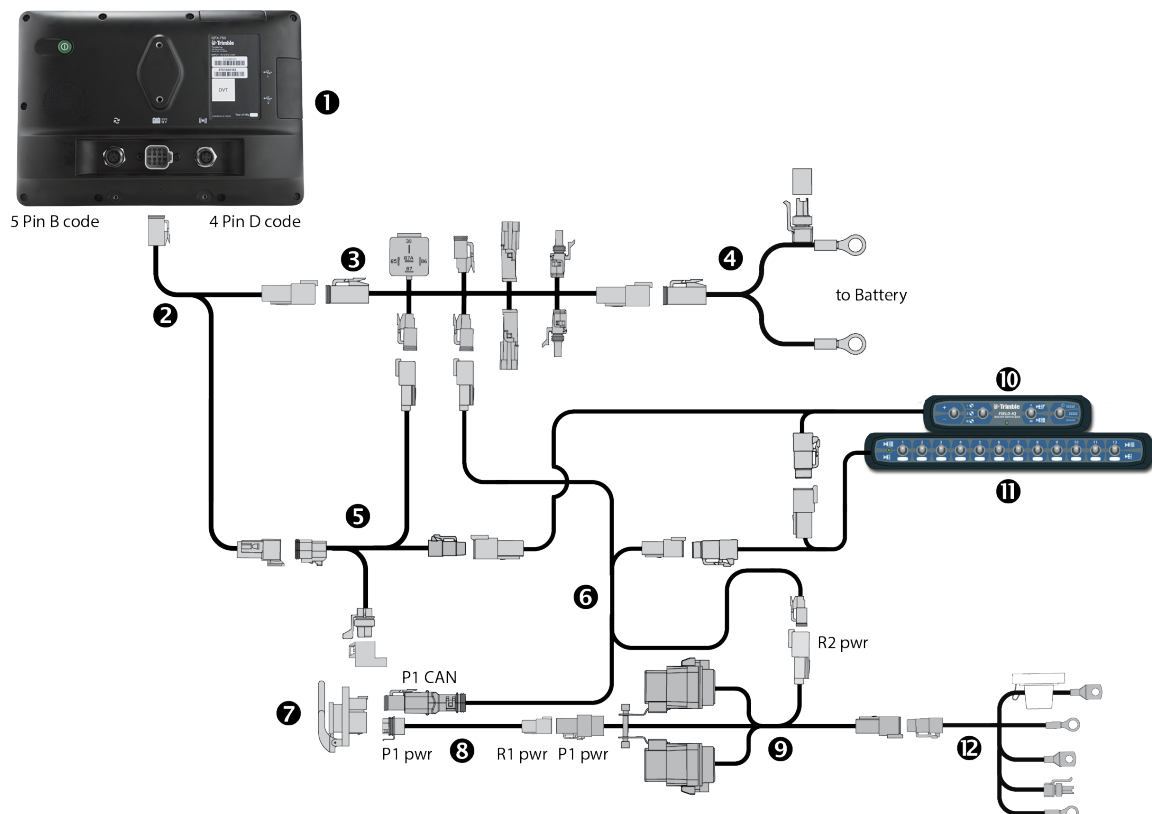
| Item | Description | P/N |
|------|---|----------|
| 1 | TM-200 Module | 95060-00 |
| 2 | Cable, ISOBUS CAN | 75407 |
| 3 | Cable, ISO TM-200 in-cab | 92752 |
| 4 | TM-200 Module power adapter cable | 95918 |
| 5 | Cable, TM-200 Module power and input/output | 92676 |
| 6 | Master Switch Box - ISOBUS Aux-N - Universal - Optional Accessory | 75050-03 |
| 7 | 12 Switch Box - ISOBUS Aux-N - Universal - Optional Accessory | 75060-02 |

Full ISO Harness Connections

(For vehicles with no in-cab ISOBUS connection)

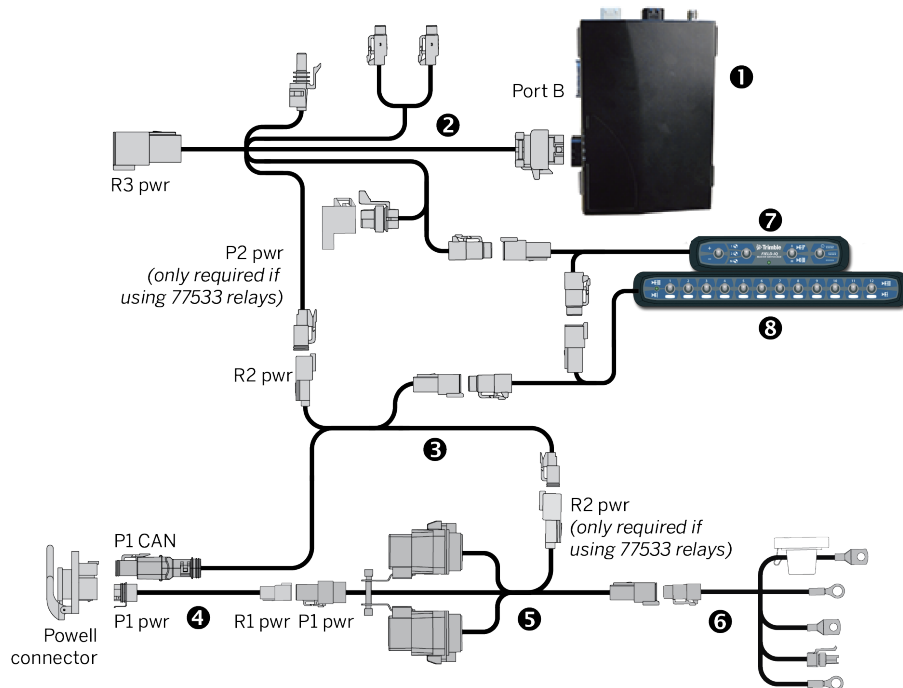
| P/N | Description | Notes |
|----------|--|--|
| 89285-00 | Cable kit, TMX-2050 Full Harness ISO | |
| 89285-03 | Cable kit, GFX-750, Full harness ISO | This kit requires a power bus. If you do not have a power bus already installed, order 96902 |
| 77413 | Powell Quick Disconnect (Tractor side) | <ul style="list-style-type: none"> Optional with 75528-xx extensions Must be used with ME0502001-xx hitch extensions |
| 77533 | Dual Relay Power Cutoff | Recommended for full harness installations, ECU power switched with display. |

GFX-750/XCN-1050



| Item | Description | P/N |
|------|---|----------|
| 1 | GFX-750/XCN-1050 display, with PIQ App | |
| 2 | Cable Assy, GFX-750/XCN-1050, Power to display, CAN, 2.5 m | 110551 |
| 3 | Cable Assy, GFX-750/CFX-750/FM-750/XCN-1050/FmX/FM-1000 Power with Relay and Switch (Acc) | 67259 |
| 4 | Cable Assy, GFX-750/CFX-750/FM-750/XCN-1050/FmX/FM-1000 Basic Power, 4 m | 67258 |
| 5 | Cable Assy, GFX-750/XCN-1050, Field IQ, Active CAN terminator | 111083 |
| 6 | Cable Assy, Field IQ, CAN CAB to Hitch | 77368 |
| 7 | Cable Assy, Powell Quick Disconnect - Tractor Side | 77413 |
| 8 | Cable Assy, Dual Relay Pwr Cutoff, Field IQ | 77533 |
| 9 | Cable Assy, PWR To Cab, Field IQ | 76941 |
| 10 | Master Switch Box - ISOBUS Aux-N - Universal - Optional Accessory | 75050-03 |
| 11 | 12 Switch Box - ISOBUS Aux-N - Universal - Optional Accessory | 75060-02 |
| 12 | Cable Assy, PWR To Cab, Field IQ | 76941 |

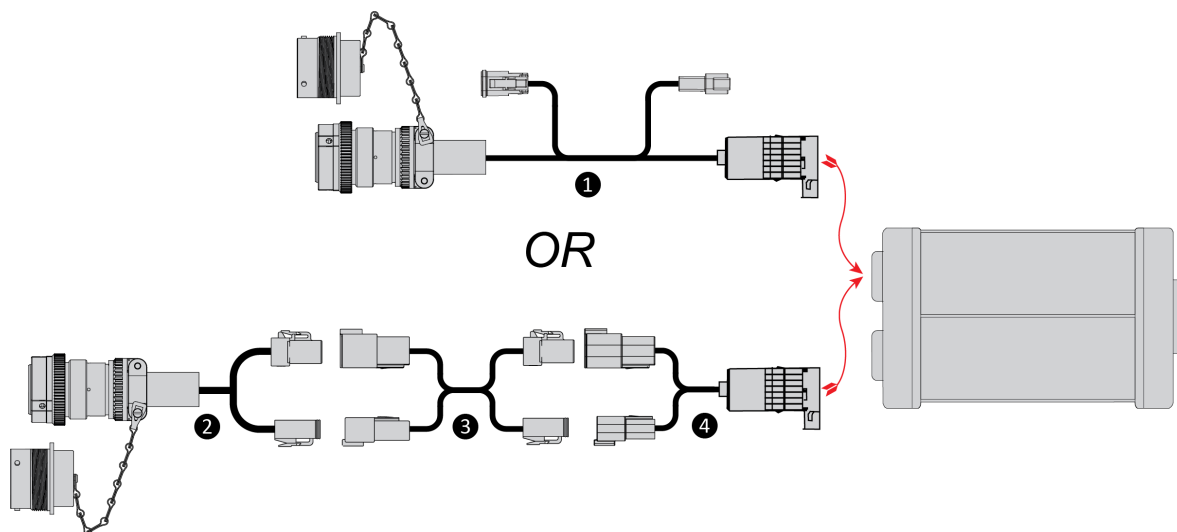
TMX-2050/XCN-2050



| Item | Description | P/N |
|------|---|----------|
| 1 | TM-200 Module | 95069-00 |
| 2 | Cable, TM-200 Module power and input/output | 92676 |
| 3 | Cable Assy, Field IQ, CAN CAB to Hitch | 77368 |
| 4 | Cable Assy, Powell Quick Disconnect - Tractor Side | 77413 |
| 5 | Cable Assy, Dual Relay Pwr Cutoff, Field IQ | 77533 |
| 6 | Cable Assy, PWR To Cab, Field IQ | 76941 |
| 7 | Master Switch Box - ISOBUS Aux-N - Universal - Optional Accessory | 75050-03 |
| 8 | 12 Switch Box - ISOBUS Aux-N - Universal - Optional Accessory | 75060-02 |

Hitch Power/CAN Cables

Hitch cables are used to supply power and CAN communication from the hitch to the ECU.



| Item | Description | P/N |
|------|--|--------------|
| 1 | ISO harness | ME0502001-XX |
| 2 | Powell Quick Disconnect (Implement side) | 77611-01 |
| 3 | CAN-PWR Extension | 75528-XX |
| 4 | CAN-PWR Extension to ECU adapter | ME0502036 |

Hitch CAN/Power Extensions

- 75528-XX
 - Multiples of these cables can be used in combination to best fit the implement.
 - ME0502036 is required to adapt 75528-xx to the ECU.
 - Does not support external ECU master switch. Can also be used to extend CAN and power from cab kit to the hitch on articulated vehicles.

NOTE – Do not extend the CAN bus more than 130 feet (40 meters) from the display to ECU.

- ME0502001-XX
 - These cables cannot be chained together.
 - ME0502063 ECU adapter is not required.
 - Required for use with external ECU master switch.

| P/N | Description | Notes |
|--------------|--|---|
| 77611-01 | Powell Quick Disconnect (Implement side) | For use with 75528-XX CAN/PWR extensions and 77413 powell connector |
| ME0502036 | CAN-PWR Extension to ECU adapter | Required with 75528-XX CAN/PWR extensions |
| 75528-02 | CAN-PWR Extension 2 ft | Requires ME0502036 to Connect to ECU 77611-01 optional when used with Full Install harnessing |
| 75528-02 | CAN-PWR Extension 2 ft | |
| 75528-05 | CAN-PWR Extension 5 ft | |
| 75528-10 | CAN-PWR Extension 10 ft | |
| 75528-20 | CAN-PWR Extension 20 ft | |
| 75528-30 | CAN-PWR Extension 30 ft | |
| 75528-40 | CAN-PWR Extension 40 ft | |
| 75528-50 | CAN-PWR Extension 50 ft | |
| ME0502001-03 | ISO harness 3 ft | Hitch (Powell) connection to ECU. No adapters required. |
| ME0502001-08 | ISO harness 8 ft | |
| ME0502001-13 | ISO harness 13 ft | |
| ME0502001-21 | ISO harness 21 ft | |
| ME0502001-28 | ISO harness 28 ft | |
| ME0502001-36 | ISO harness 36 ft | |
| ME0502001-43 | ISO harness 43 ft | |

Electronic Control module (ECU)

A: Electronic Control module

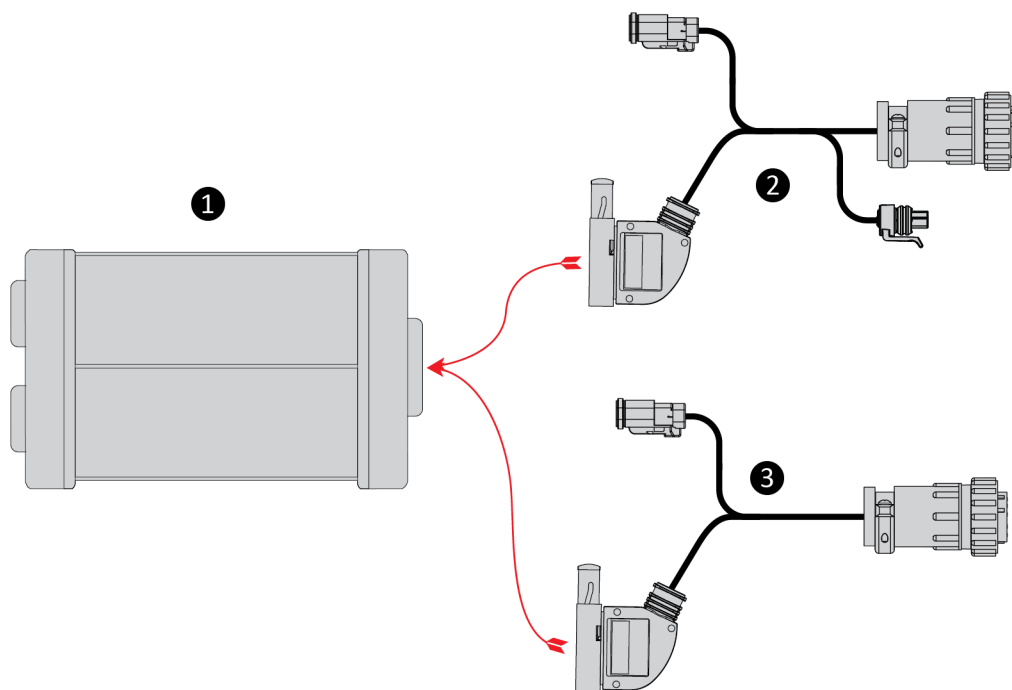
| P/N | Description | Notes |
|----------|------------------|-------|
| 75774-20 | Field IQ ISO ECU | |

Liquid Control

Liquid and NH₃: Raven Replacement

Liquid control ECU for all pull-type sprayers, fertilizer bars or NH₃ applicators.

| P/N | Description | Notes |
|-----------|----------------------------------|-------------------------------|
| ME0512008 | ECU to Raven 4X0 16 pin adapter | Connects to implement harness |
| ME0512009 | ECU to Raven 4XX0 37 pin adapter | Connects to implement harness |

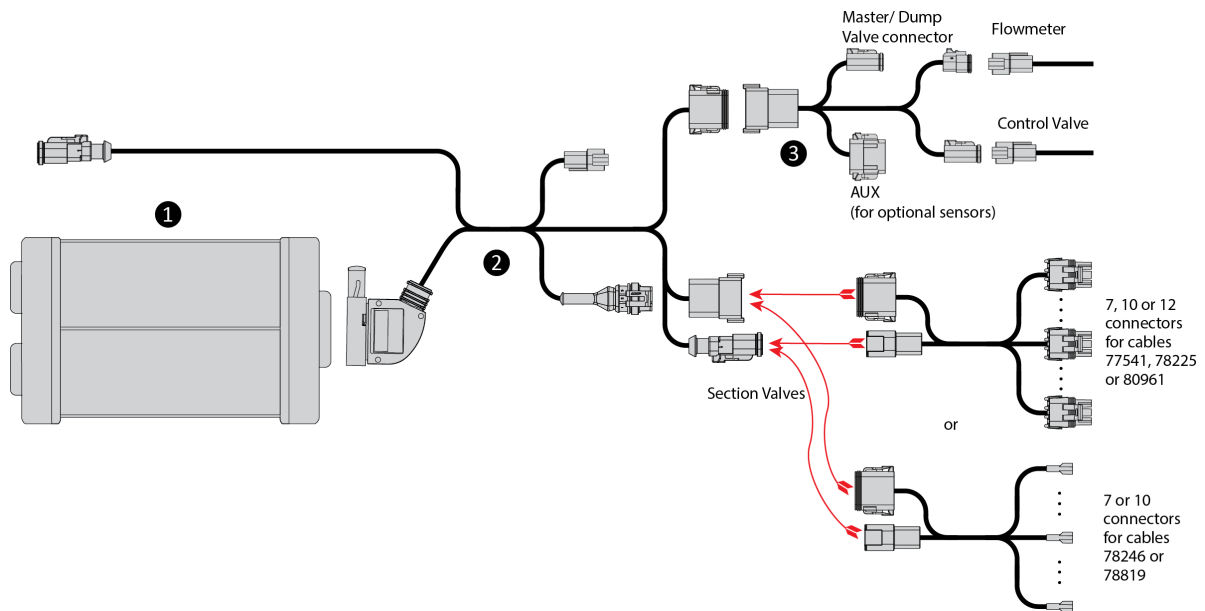


| Item | Description | P/N |
|------|--------------------|-----------|
| 1 | ISO ECU | 75774-20 |
| 2 | Liquid ECU to 4X0 | ME0512008 |
| 3 | Liquid ECU to 4XX0 | ME0512009 |

Liquid and NH₃: Full Install

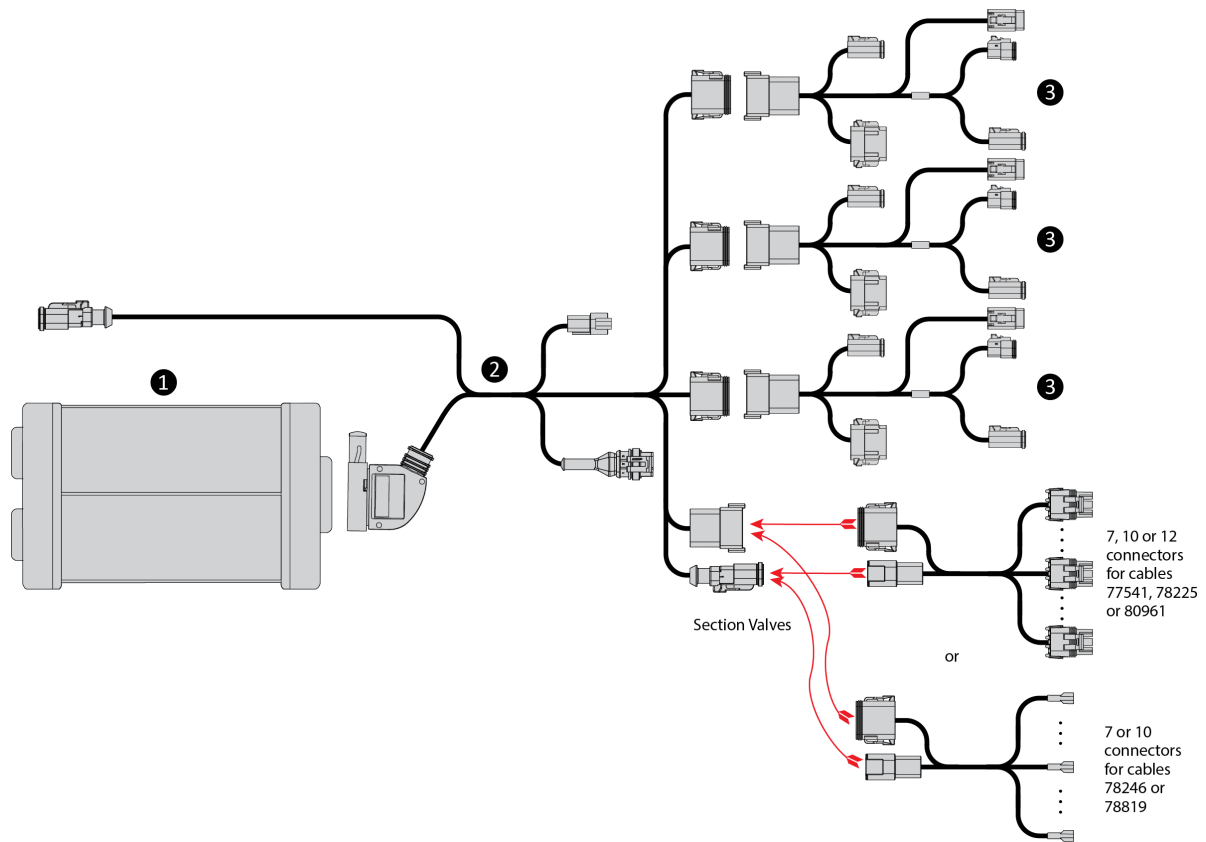
Liquid control ECU for all pull-type sprayers, fertilizer bars or NH₃ applicators.

Single product



| Item | Description | P/N |
|------|---|-----------|
| 1 | ISO ECU | 75774-20 |
| 2 | 1-Product Generic Harness (Liquid breakout Harness 1 channel) | ME0502050 |
| 3 | Generic Liquid Rate Breakout | ME0502052 |

Multi product



NOTE – Channel 3 is not used currently.

| Item | Description | P/N |
|------|---|-----------|
| 1 | ISO ECU | 75774-20 |
| 2 | 3-Product Generic Harness (Generic Liquid breakout Harness 2 channel) | ME0502049 |
| 3 | Field-IQ Liquid Rate Breakout adapter | ME0502052 |
| 4 | Harness, Sure Fire Injection | ME0512009 |

System details

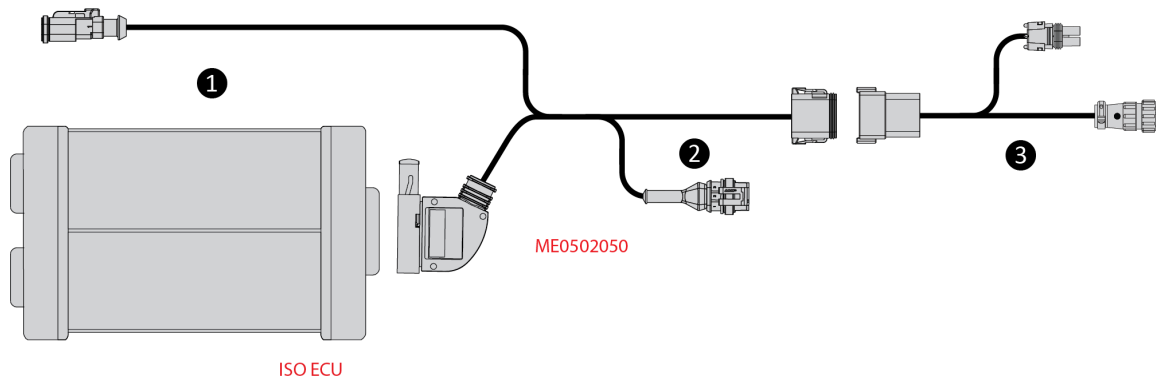
| P/N | Description | Notes |
|--|---|--|
| Interface Cables | | |
| ME0502050 | 1-Product Generic Harness (Generic Liquid breakout Harness 1 channel) | For generic installs, 1 product |
| ME0502049 | 3-Product Generic Harness (Generic Liquid breakout Harness 2 channel) | For generic installs, 2 product |
| ME0502052 | Field-IQ Liquid Rate Breakout | For use with ME0502050 or ME0502049 |
| ME0502016 | Harness, Sure Fire Injection | For use with ME0502049 |
| Section Control Adapters (For use with ME0502049 or ME0502050, Generic Liquid Breakout harness) | | |
| 77541 | 7 section | For 3 wire boom valves. 3 pin weather pack connector |
| 78225 | 10 section | |
| 80961 | 12 section | For 3 wire boom valves. 6 sections for 2 products |
| 78246 | 7 section solenoid | For 2 wire solenoid valves 2-pin weather pack connector |
| 78819 | 10 section solenoid | (does not support reverse polarity valves) |
| Feedback Adapters (For use with ME0502052, Field-IQ Breakout harness) | | |
| 80584 | Raven Flowmeter Adapter | |
| 80539 | Dickey John Encoder/ Flowmeter | |
| 82192 | Hiniker Flowmeter | |
| Master/Dump Valve Adapters (For use with ME0502052, Field-IQ Breakout harness) | | |
| 81552 | Raven (old style) | Spade connection |
| 81553 | Raven (new style connection) | |
| Rate Control Adapters (For use with ME0502052, Field-IQ Breakout harness) | | |

| P/N | Description | Notes |
|-------|--------------------------------|-------|
| 80586 | Raven 2 wire servo (old style) | |
| 80534 | Raven 4 wire servo (new style) | |
| 80531 | Dickey John servo | |
| 80960 | Dickey John PWM | |
| 81614 | KZ servo | |
| 81554 | Raven 4 wire servo (old Style) | |
| 81970 | Raven 2 wire servo (new style) | |

Spreader



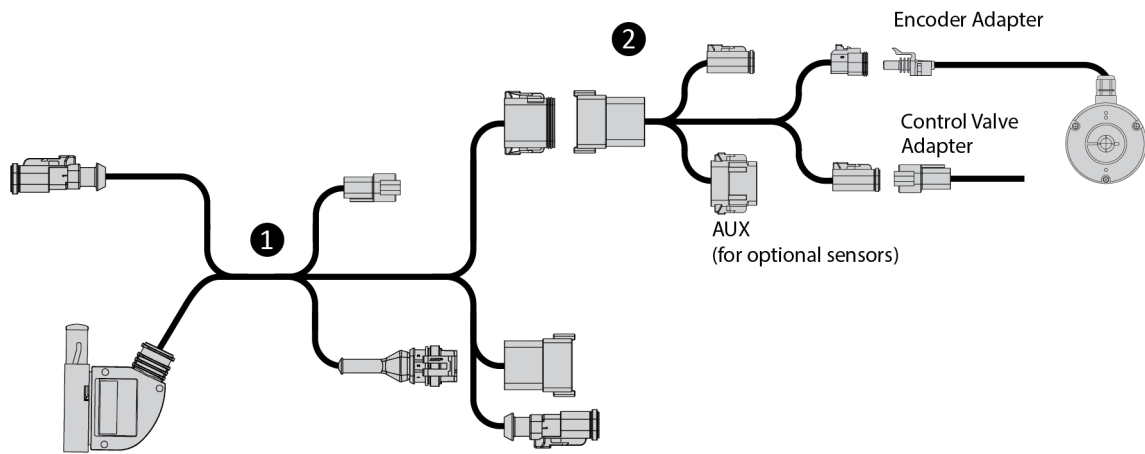
Spreader: Raven harness interface



| Item | P/N | Description | Notes |
|------|------------|--|---|
| 1 | ME0502050 | 1-Product Generic Harness (Spreader ECU Harness) | Single bin |
| 2 | ME05011005 | Raven 4XX0 spreader harness | Connects to implement harness. Does not support spinner speed control |
| 3 | ME0502014 | Spreader harness to Raven (660) 22-pin | |

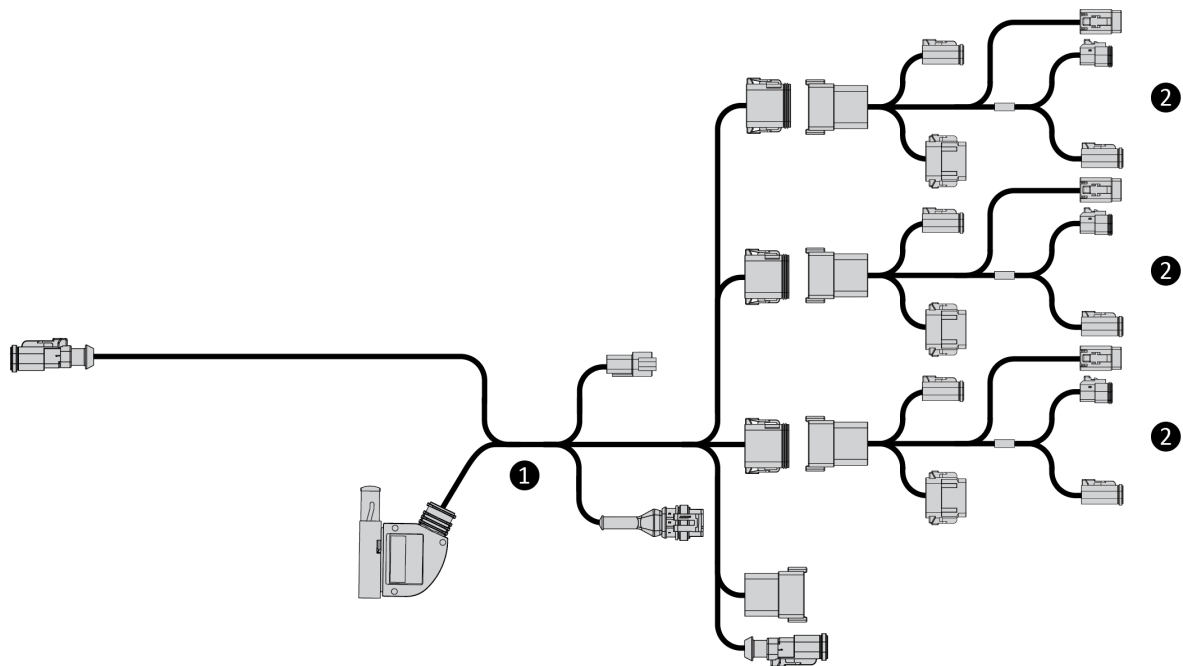
Spreader: Full harness solutions

Single bin



| Item | Description | P/N |
|------|--|-----------|
| 1 | 1-Product Generic Harness (Generic breakout Harness 1 channel) | ME0502050 |
| 2 | Field-IQ Rate Breakout | ME0502052 |

Multi bin



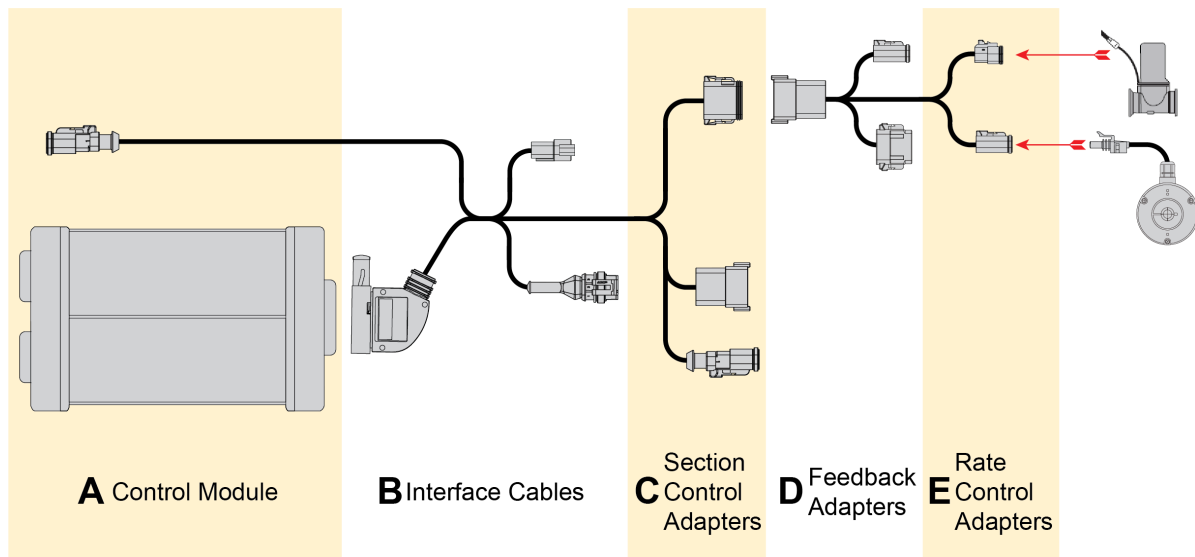
| Item | Description | P/N |
|------|--|-----------|
| 1 | 3-Product Generic Harness (Generic breakout Harness 3 channel) | ME0502049 |
| 2 | Field-IQ Rate Breakout | ME0502052 |

System Details

| P/N | Description | Notes |
|---|---|-------------------------------------|
| Interface Cables | | |
| ME0502050 | 1-Product Generic Harness (Spreader ECU Harness) | Single bin with spinner control |
| ME0502049 | 3-Product Generic Harness (Spreader 3 products harness) | Up to 3 bins with spinner control |
| ME0502052 | Field-IQ to ECU harness | For use with ME0502050 or ME0502049 |
| Rate Control Adapters (For use with ME0502052) | | |
| 80586 | Raven 2 wire servo (old style) | |
| 80534 | Raven 4 wire servo (new style) | |
| 80531 | Dickey John servo | |
| 80960 | Dickey John PWM | |
| 81614 | KZ servo | |
| 81554 | Raven 4 wire servo (old Style) | |
| 81970 | Raven 2 wire servo (new style) | |
| Feedback Adapters (Rate Encoders/ Adapters and Spinner RPM) (For use with ME0502052) | | |
| Cables: | | |
| 80584 | Raven Encoder Adapter | |
| 80539 | Dickey John Encoder | |
| Encoder/ Shaft Adapters: | | |

| P/N | Description | Notes |
|--|--|-------------------|
| 86585 | Sealed, Hollow Shaft Encoder (360 pul/rev) | Use 80539 adapter |
| 82442 | Sensor Hall-Effect, RPM (Threaded) with cable | |
| 89188 | Adapter, Shaft, Encoder, 16 mm (5/8") | |
| 90426 | Adapter, Shaft, Encoder, 20 mm | |
| 90489 | Adapter, Shaft, Encoder, 19 mm (3/4") | |
| Master/Dump Valve Adapters (For use with ME0502052) | | |
| 81552 | Raven (old style) | Spade connection |
| 81553 | Raven (new style connection) | |
| Scale Adapter | | |
| ME0514013 | DigiStar SL1 and SL2 scale interface cable | |

Spreader: Full harness solutions

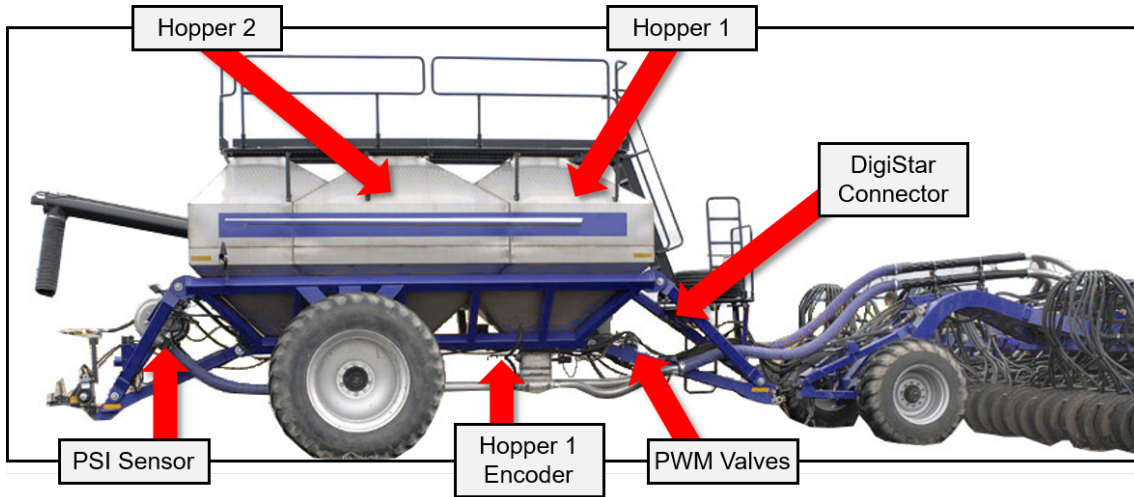


| P/N | Description | Notes |
|--|--------------------------------|------------------------------|
| C: Rate Control Adapters (For use with ME0502052) | | |
| 80586 | Raven 2 wire servo (old style) | |
| 80534 | Raven 4 wire servo (new style) | |
| 80531 | Dickey John servo | |
| 80961 | Dickey John PWM | |
| 81614 | KZ servo | |
| 81554 | Raven 4 wire servo (old Style) | |
| 81970 | Raven 2 wire servo (new style) | |
| D: Feedback Adapters (For use with ME0502052) | | |
| 80584 | Raven Encoder Adapter | |
| 80539 | Dickey John Encoder | |
| E: Section Control Adapters: (For use with ME0502025) | | |
| 77541 | 7 section | For 3-wire boom valves. |
| 78225 | 10 section | 3-pin weather pack connector |

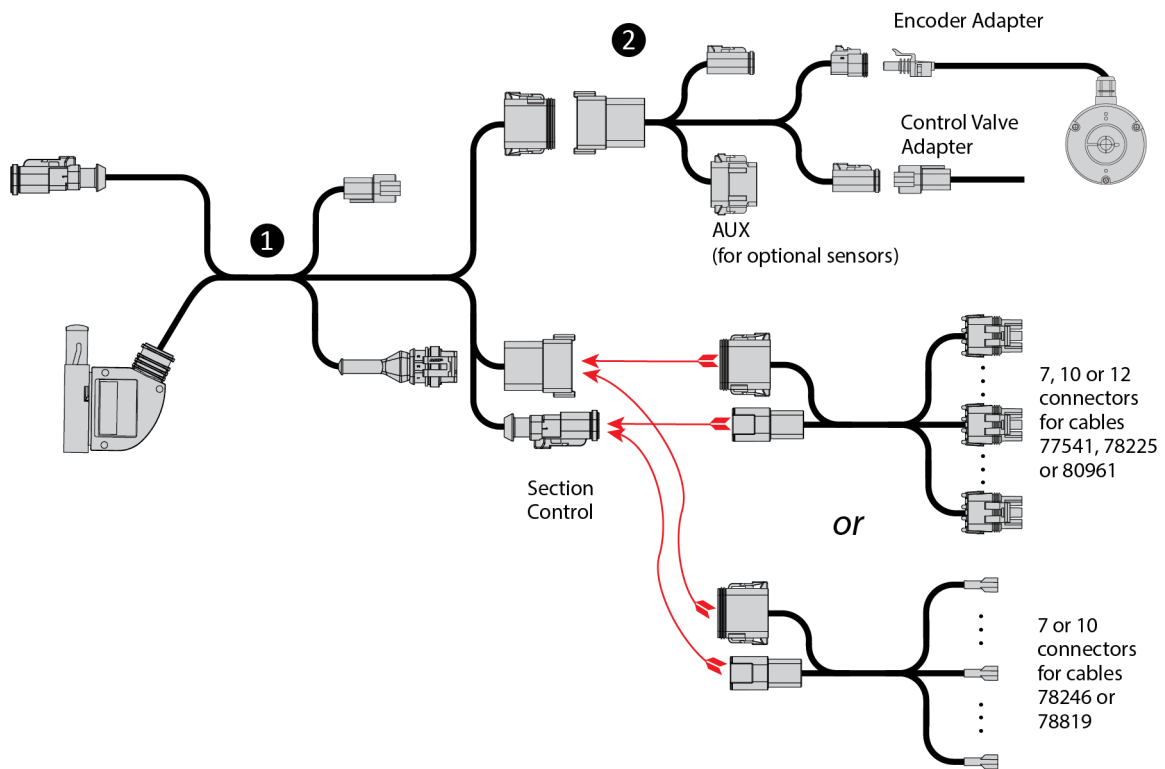
| P/N | Description | Notes |
|--|------------------------------|--|
| 77541 | 7 section solenoid | For 2-wire solenoid valves 2-pin weather pack connector |
| 78225 | 10 section solenoid | (does not support reverse polarity valves) |
| Master/Dump Valve Adapters (For use with ME0502025) | | |
| 81552 | Raven (old style) | Spade connection |
| 81553 | Raven (new style connection) | |

Seeder/Fert Cart

Seeder/Fert Cart: Full Install, up to 3 bins PWM Only

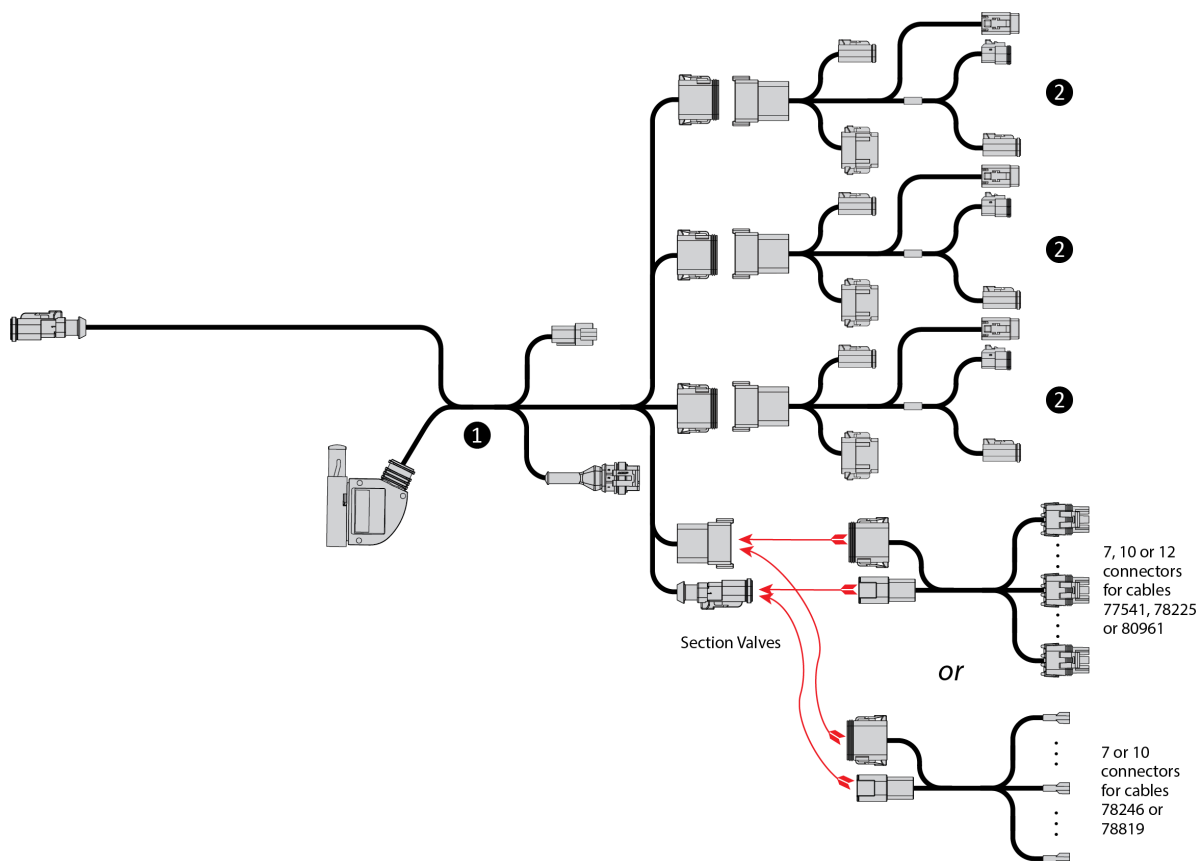


Single bin



| Item | Description | P/N |
|------|--|-----------|
| 1 | 1-Product Generic Harness (Generic breakout Harness 1 channel) | ME0502050 |
| 2 | Field-IQ Rate Breakout | ME0502052 |

Multi bin



| Item | Description | P/N |
|------|---|-----------|
| 1 | 3-Product Generic Harness (Generic Liquid breakout Harness 2 channel) | ME0502049 |
| 2 | Field-IQ Rate Breakout | ME0502052 |

System Details

| P/N | Description | Notes |
|--|--|-------------------|
| Interface Cables | | |
| ME0502050 | 1-Product Generic Harness (Single bin) | |
| ME0502049 | 3-Product Generic Harness (Generic breakout Harness 3 channel) | |
| ME0502052 | Field-IQ Breakout Adapter | |
| Rate Control Adapters (For use with ME0502052) | | |
| 86289 | Montag Gen 1 PWM valve adapter | |
| 80960 | DJ PWM, control valve adapter | |
| 83958 | Case Air Seeder Electric Motor | |
| Feedback Adapters (Rate Encoders/ Adapters and Blower RPM) (For use with ME0502052) | | |
| Adapters for carts with existing encoders: | | |
| 80584 | Raven Encoder Adapter | |
| 80539 | Dickey John Encoder | |
| 83955 | Case IH/ Flexicoil seed meter sensor | |
| Encoder/ Shaft Adapters for carts without existing encoder: | | |
| 86585 | Sealed, Hollow Shaft Encoder (360 pul/rev) | Use 80539 adapter |
| 82442 | Sensor Hall-Effect, RPM (Threaded) with cable | |
| 89188 | Adapter, Shaft, Encoder, 16 mm (5/8") | |
| 90426 | Adapter, Shaft, Encoder, 20 mm | |
| 90489 | Adapter, Shaft, Encoder, 19 mm (3/4") | |

| P/N | Description | Notes |
|---|--|-------|
| Blower RPM adapters: Use hall effect sensor to add if needed | | |
| 83957 | Cable Assy, Field-IQ to Case IH Air Seeder Fan RPM | |
| Bin Level Adapters | | |
| 83959 | Case/flexicoil bin level | |
| Blockage and Scale Adapters | | |
| ME0514021 | Dickey John Daisly Chain blockage system adapter | |
| ME0514013 | DigiStar SL1 and SL2 scale interface cable | |
| ME0514024 | Agtron Blockage System adapter | |

Basic Planter

The system consists of an ECU that is mounted on the Planter and controls the operation. The following diagram shows how the Planter is structured.



If you are using Field-IQ with the 16_Row_Basic Profile, then you will need to add a harness adapter to the complete harness (ME0515005). Connect the adapter to the rate connector on the complete harness. Additional harnessing options are available for Rate Control capabilities, and are outlined below.

Plug in the Aux I/O, rate control, encoder, and spinner control to the existing connectors on your bar.

ISO ECU to Planter Harnessing

John Deere Planter - ISOBUS Cabling Guide

| Item | Description | Part Number |
|------|---|--|
| 1 | JD to ISOBUS Harness | ME0502045 |
| 2 | ISOBUS to ECU Harness (XX= Length in feet) | ME0502001-03 ME0502001-08 ME0502001-13 ME0502001-21 ME0502001-28 ME0502001-36 ME0502001-43 |
| 3 | Planter ECU | ME30481140 |

ME0502045 Harness Layout

| Item | Description |
|------|--------------------|
| 1 | CAN |
| 2 | High Current Power |
| 3 | ECU Power |
| 4 | High Current Power |
| 5 | ECU Power |

| Item | Description |
|------|-----------------|
| 6 | Remote Master |
| 7 | IBIC Connection |

John Deere Planter (1770NT) - ME0502045 Harnessing

CCS series planters have not been tested for compatibility.

The ME0502045 harness will plug in behind the tank at the center of the planter.

1. Unplug the High Current Power connector.
2. Unplugged connector:
3. Unplug the 12-Pin ECU Power connector.
4. Plug the ME0502045 High Current and ECU Power Connectors into the tractor connectors that were just unplugged.
5. Next plug the other ME0502045 High Current and ECU Power connectors into the other end of the previously disconnected connectors on the tractor.
6. Unplug the terminator and replace it with the ME0502045 6 pin connector.
7. The IBIC connector can then be mounted wherever is most convenient for the user.

Case IH 1200 - ISOBUS Cabling Guide

| Item | Description | Part Number |
|------|----------------------------|-------------|
| 1 | CIH 1200 to ISOBUS Harness | ME0515008 |

| Item | Description | Part Number |
|------|---|--------------|
| 2 | ISOBUS to ECU Harness (XX= Length in feet) | ME0502001-03 |
| | | ME0502001-08 |
| | | ME0502001-13 |
| | | ME0502001-21 |
| | | ME0502001-28 |
| | | ME0502001-36 |
| | | ME0502001-43 |
| 3 | Planter ECU | ME30481140 |

ME0515008 Harness Layout

| Item | Description |
|------|--------------------|
| 1 | CAN |
| 2 | IBIC Connection |
| 3 | High Current Power |
| 4 | High Current Power |

Case IH 1200 - ME0515008 Harnessing

The ME0515008 harness will plug in at the center of the planter.

The following image shows how the factory harnessing should appear.

1. Unplug these connectors.

Unplugged connectors:

2. Plug the ME0515008 High Current Power connector into the previously disconnected harness connector.

3. Then plug the next ME0515008 High Current Power connector into the other end of the previously disconnected harness connector.
4. Next, locate the Terminator connection.
5. Unplug the Terminator.
6. Plug the terminator into the ME0515008 CAN connection.
7. The IBIC connector can then be mounted wherever is most convenient for the user.

Case IH 2100 - ISOBUS Cabling Guide

| Item | Description | Part Number |
|------|---|--|
| 1 | CIH 2100 to ISOBUS Harness | ME0515009 |
| 2 | ISOBUS to ECU Harness (XX= Length in feet) | ME0502001-03 ME0502001-08 ME0502001-13 ME0502001-21 ME0502001-28 ME0502001-36 ME0502001-43 |
| 3 | Planter ECU | ME30481140 |

ME0515009 Harness Layout

| Item | Description |
|------|--------------------|
| 1 | High Current Power |
| 2 | High Current Power |
| 3 | Electronic |
| 4 | Electronic |
| 5 | CAN |
| 6 | IBIC Connection |

Case IH 2100 - ME0515009 Harnessing

The ME0515009 harness will plug in at the center of the planter.

1. Remove the metal cover on the right side of the planter before beginning the harness installation.

Components under the Metal Cover:

The following images show how the **factory** harnessing should appear.

2. Unplug the green CAN 4 connector shown above, and replace it with the ME0515009 green connector.
3. Plug the green CAN 4 connector that was just unplugged into the other ME0515009 green connector.

NOTE – The 2 round connectors above the CAN4 connection may need to be removed to complete this installation. Be sure to reconnect these connectors at the completion of the installation.

4. Remove the black plug in the CAN 3 connection and replace it with the ME0515009 black connector.
5. Plug the black plug that was just unplugged into the other ME0515009 black connector.

6. On the inside of the panel, unplug the terminator and replace it with the ME0515009 6 pin connector.
7. The IBIC connector can then be mounted wherever is most convenient for the user.

Complete Harness with Field-IQ

If you are using Field-IQ, then you will need to add a harness adapter to the complete harness. Connect the adapter to the rate connector on the complete harness.

Plug in the Aux. I/O, rate control, encoder, and spinner control to the existing connectors on your bar.

Use the following implement harnesses to connect and install the ECU.

NOTE – *The Basic Field-IQ ISOBUS Seed Monitoring System is wired for a Dickey-John sensor. If you are using a John Deere Computer Trac, it is essential that you use the ME0515135 Basic Planter Adapter harness. Failure to use this harness may result in seed sensor damage.*

Field-IQ ISOBUS Harness

The 8 volt regulator comes with the Basic Planter Harness, but can also be bought separately as well.

NOTE – *This harness is **required** when using a John Deere Computer Trac system.*

Field-IQ ISOBUS Harness

| Part Number | Description | Notes |
|--------------|---------------------------------------|---|
| ME0515005 | Basic Planter Harness | Used to connect Field IQ ECU PM style seed harnesses |
| ME0515010 | Basic Planter Section Control Adapter | Used in combination with ME0515005 to control up to 16 sections of planter clutches |
| ME0515135-16 | Basic Planter to CT style converter | Adapts Basic Planter harness to planters equipped with CT style seed harness |
| ME0315000 | Voltage Regulator (8 V) | |

Basic Field-IQ ISOBUS 2 ECU Diagram


The 37 pin connectors going to the 'Planter Section/Seed Sensor Harnessing' allow for 16 sections and 16 seed sensors. The user will need to use 2 16-pin seed monitor harnesses

individually to each set. If the user has a planter with more than 16 rows with a single 37 pin overlay harness connector on the planter, they will need to source a "Y" harness adapter to adapt from the 37 pin connector to the two connectors on the ME0515005 harnesses.

Single ECU Field-IQ ISOBUS Rate Control Diagram

CAUTION: The 8V regulator (ME0315000) MUST be ordered separately from this harness to run seed sensors. If not used, damage to seed sensors may occur.

The R4 PWR/Sensor Jumper plugs directly into the John Deere OR Dickey John Sensor PWR connector (shown above)

 **CAUTION** – Ensure to plug this into the correct connector for your setup or damage may occur!

2 ECU Planter Rate Control Complete Cabling Diagram

| | Part Number | Part Number Description |
|---|--------------|---|
| A | ME0502001-XX | ISOBUS Tractor to ECU Harness (3, 8, 13, 21, 28, 36, & 43 foot options) |
| B | ME30481140 | Planter Master ECU |
| C | ME0502053-15 | 16 Pin ECU Extension Harness (15 ft.) |
| | ME0502053-02 | 16 Pin ECU Extension Harness (20 in.) |
| D | ME30481140 | Planter Slave ECU |
| E | ME0515011 | Harness, Planter w/ Rate Control Outputs |
| F | ME0515012 | Planter Y Harness |

NOTE – The Planter Y Harness gives the user the ability to accommodate for 24 row seed sensors with the 2 ECU Master/Slave set up configuration. Only one 8V regulator is needed for the 2 ECU configuration with this harness.

Field-IQ ISOBUS Rate Control 2 ECU Cabling Diagram

⚠ CAUTION – Ensure to Plug the R4 PWR/Sensor Jumper into the correct connector for your setup. Plugging into the DJ Sensor PWR connector with a JD setup may cause damage! Note that this connector must be plugged into the R4 connector on the Rate Control harness connected to the Slave ECU for proper performance.

NOTE – User can also use 2 16-pin seed monitor harnesses in place of the Planter Y Harness, if desired. (This would require two 8V Regulators)

NOTE – The R4 connection depends on the style of supported sensor: either CT or PM style

| Item | Description | Part Number | Part Number Description |
|------|--|-------------|---|
| 1 | 3-Pin DTM Pressure Sensor 1 Adaptor | 80575 | Cable Assy, Field-IQ to DJ Pressure Sensor Adapter |
| | | 80583 | Cable Assy, Field-IQ to Raven Pressure Sensor Adptr |
| | | 84248 | Cable Assy, Trimble, Pressure Sensor Adapter |
| | | 82744 | Cable Assy, Field-IQ to John Deere Vac Sensor |
| 2 | Fill Level 1 & 2, Ground Speed Input | 80507 | Spreader Gate Height/Spinner Speed Adapter (Adaptions will need to be made from these connections) |
| | | 82920 | Case IH Bin Level Sensor |
| | | 82789 | John Deere Bin Level Sensor |
| | | 82928 | Dickey John Bin Level Sensor |
| 3 | 3-Pin Weather Pack Implement Switch Connection | 109828 | Implement Switch, White |
| | | 82924 | Kinze Implement Switch |
| | | 83956 | Case IH Air Seeder Implement Switch |

| Item | Description | Part Number | Part Number Description |
|------|---------------------------|-------------|-------------------------|
| 4 | 2-Pin DT 8-Volt Regulator | ME0315000 | Harness, 8V Regulator |
| 5 | Connections | | |
| 6 | JD or DJ Connection Plugs | | |
| 7 | in #8 | | |
| 8 | Power Connection Plugs | | |
| | into either #6 or #7 | | |

| Item | Description | Part Number | Part Number Description |
|------|-------------|--------------|---|
| 9 | *Single ECU | ME0515012 | Planter Y Harness (37 Pin Connection) |
| | | ME0515134-1 | Seed Monitor- Adaptor 3-wire AMP to WP* |
| | | ME0515129-12 | 12 Row Generic - DJ* |
| | | ME0515128-11 | 11 Row Generic - DJ* |
| | | ME0515127-10 | 10 Row Generic - DJ* |
| | | ME0515126-9 | 9 Row Generic - DJ* |
| | | ME0515125-8 | 8 Row Generic - DJ* |
| | | ME0515124-7 | 7 Row Generic - DJ* |
| | | ME0515123-6 | 6 Row Generic - DJ* |
| | | ME0515122-5 | 5 Row Generic - DJ* |
| | | ME0515121-4 | 4 Row Generic - DJ* |
| | | ME0515120-2 | 2 Row Generic - DJ* |
| | | ME0515118-12 | 12 Row White 8700 Stack Fold* |
| | | ME0515116-12 | 12 Row White 8200 Wing Fold* |
| | | ME0515114-12 | 12 Row White 8100 All Fold* |
| | | ME0515113-12 | 12 Row White 6100 Vertical Fold* |
| | | ME0515111-12 | 12 Row Kinze 3600 Pivot Fold* |
| | | ME0515109-08 | 8 Row JD 7200 Front Fold* |
| | | ME0515107-12 | 12 Row JD 1770 Front Fold* |
| | | ME0515105-12 | 12 Row JD 1720 Stack Fold* |
| | | ME0515102-12 | 12 Row Case IH 1230 Stack Fold* |
| | | ME0515101-12 | 12 Row Case IH 1250 Front Fold* |
| | | ME0515100-12 | 12 Row Case IH 1200 Stack Fold* |

| Item | Description | Part Number | Part Number Description |
|----------------|--|-------------|---|
| | | 84621 | Cable Assy, 8 Row Seed Monitoring |
| | | 82950 | Cable Assy, Case IH 1250-24 Row Seed Monitoring |
| | | 82537 | Cable Assy, Field-IQ to 24 Row Seed Sensor DJ Style |
| | | 82536 | Cable Assy, Field-IQ to 24 Row Seed Sensor JD Style |
| 10 11 | Section Control Adapters (If 24 row planter) | 81693 | Cable Assy, Field-IQ to Tru Count Break-Out Adapter |
| | | 82670 | John Deere Row Command Clutch Adapter |
| | | 84243 | Cable Assy, Clutch Adapter, John Deere, 2011 |
| | | 83348 | Cable Assy, Field-IQ to TruCount Electric Clutch |
| | | 117025 | Cable Assy, Section Control, Electric Clutch |
| | | 69018 | 15' Extension, Air Clutch System Valve Module |
| | | 68893 | Cable Assy, Valve, 50' |
| 12 14 16 | 4 Pin DT Control Valve Adapters | 82706 | Cable Assy, Field-IQ to KZ 2-wire/JD PWM |
| | | 82919 | Cable Assy, Field-IQ to Case IH/Kinze PWM |
| | | 88559 | Cable Assy, Field-IQ to Krohne Flowmeter |
| | | 80960 | Cable Assy, DJ PWM, Control Valve Adapter |

| Item | Description | Part Number | Part Number Description |
|------|-------------------|-------------|---|
| 13 | 3 Pin DT | 80584 | Cable Assy, Field-IQ Raven |
| 15 | Flowmeter/Encoder | | Flowmeter Adapter |
| 17 | Adapters | 82192 | Cable Assy, Field-IQ Hiniker Flowmeter Adapter |
| | | 80539 | Cable Assy, Field-IQ to Dickey- john Encoder/Flowmeter |
| | | 82921 | Cable Assy, Field-IQ to Case IH App Rate |

John Deere PWM Drive and Sensor Adapter Kit (80510-60)

| Part Number | Part Number Description |
|-------------|---|
| 82706 | Cable Assy, Field-IQ to KZ 2-wire/JD PWM |
| 80539 | Cable Assy, Field-IQ to Dickey-john Encoder/Flowmeter |
| 82744 | Cable Assy, Field-IQ to John Deere Vac Sensor |
| 82789 | Cable Assy, Field-IQ to John Deere Bin Level Sensor |

Case IH PWM Drive and Sensor Adapter Kit (80510-61)

| Part Number | Part Number Description |
|-------------|--|
| 82919 | Cable Assy, Field-IQ to Case IH/Kinze PWM |
| 82921 | Cable Assy, Field-IQ to Case IH App Rate |
| 83521 | Cable Assy, Field-IQ to Case IH PWM & Bin Phantoms |
| 82920 | Cable Assy, Field-IQ to Case IH Bin Level Sensor |

Kinze PWM Drive and Sensor Adapter Kit (80510-62)

| Part Number | Part Number Description |
|-------------|---|
| 82919 | Cable Assy, Field-IQ to Case IH/Kinze PWM |
| 80539 | Cable Assy, Field-IQ to Dickey-john Encoder/Flowmeter |

AGCO/White PWM Drive and Sensor Adapter Kit (80510-63)

| Part Number | Part Number Description |
|-------------|---|
| 80960 | Cable Assy, DJ PWM, control valve adapter |
| 80539 | Cable Assy, Field-IQ to Dickey-john Encoder/Flowmeter |
| 82928 | Cable Assy, Field-IQ to Dickey-john Bin Level Sensor |

Additional Planter Cabling

| Part Number | Description |
|-------------|---|
| 82744 | Cable Assy, Field-IQ to John Deere Vac Sensor |
| 82919 | Cable Assy, Field-IQ to Case IH/Kinze PWM |
| 83955 | Cable Assy, Field-IQ to Case IH Seed Meter Sensor |
| 82789 | Cable Assy, Field-IQ to John Deere Bin Level Sensor |
| 82920 | Cable Assy, Field-IQ to Case IH Bin Level Sensor |
| 83957 | Cable Assy, Field-IQ to Case IH Air Seeder Fan RPM |
| 82922 | Cable Assy, Field-IQ to Case IH Implement Switch |
| 82924 | Cable Assy, Field-IQ to Kinze Implement Switch |
| 84248 | Cable Assy, Trimble, Pressure Sensor Adapter |
| 82928 | White Bin/Hopper Level Sensor Adapter |
| 82743 | Field-IQ to John Deere implement lift switch |
| 77543 | 10' Implement Switch Extension Cable |
| 77636 | Whisker Switch |
| 81693 | Cable Assy, Field-IQ to Tru Count Break-Out Adapter |
| 117025 | Cable Assy, Section Control, Electric Clutch |
| 82670 | John Deere Row Command Clutch Adapter |
| 69018 | 15 ft. Extension, Air Clutch System Valve Module |
| 68893 | Cable Assy, Valve, 50 ft. |
| 118995 | Cable Assy, 2 Pin DTM Extension |
| 84243 | Cable Assy, Clutch Adapter, John Deere, 2011 |

| Part Number | Description |
|-------------|--|
| 80507 | Cable Assy, Field-IQ, Spreader Gate Height & Spinner Speed Adapter |

Seed Monitoring Overlay Harnesses

Seed Monitoring Overlay Harnesses Cabling Description

| Planter | Number of Rows | Overlay Harness Part Number |
|----------------------------|----------------|--|
| Case 1200 Front Fold | 12 | ME0515100-12 |
| Case 1250 Front Fold | 12 | ME0515101-12 |
| | 16 | ME0515103-16 Harness, Seed Monitor CASE 1250 Front Fold 16 Row |
| Case 1250 Stack Fold | 12 | ME0515102-12 Harness, Seed Monitor CASE 1250 Stack Fold 12 Row |
| | 16 | ME0515104-16 |
| John Deere 1720 Stack fold | 12 | ME0515105-12 |
| | 16 | ME0515106-16 Harness, Seed Monitor JD 1720 Stack Fold 16 Row |
| John Deere 1770 Front fold | 12 | ME0515107-12 |
| | 16 | ME0515108-16 |
| John Deere 7200 Front fold | 8 | ME0515109-08 Harness, Seed Monitor JD 7200 Front Fold 8 Row |
| | 16 | ME0515110-16 |
| Kinze 3600 | 12 | ME0515111-12 |
| | 16 | ME0515112-16 |
| White 6100 | 12 | ME0515113-12 Harness, Seed Monitor White 6100 12 Row |

| Planter | Number of Rows | Overlay Harness Part Number |
|--------------------------|----------------|--|
| White 8100 | 12 | ME0515114-12 |
| | 16 | ME0515115-16 |
| White 8200 | 12 | ME0515116-12 Harness, Seed Monitor White 8200 12 Row |
| White 8200 Black Machine | 6/13 | ME0515117-13 Harness, Seed Monitor White 8300 Blk Machine 6/13 Row |
| White 8700 | 12 | ME0515118-12 |
| White 8800 | 16 | ME0515119-16 |

| Planter | Number of Rows | Overlay Harness Part Number |
|-----------------|---|---|
| Generic | 2 | ME0515120-02 Harness, Seed Monitor Generic Machine 2 Row |
| | 4 | ME0515121-04 Harness, Seed Monitor Generic Machine 4 Row |
| | 5 | ME0515122-05 Harness, Seed Monitor Generic Machine 5 Row |
| | 6 | ME0515123-06 Harness, Seed Monitor Generic Machine 6 Row |
| | 7 | ME0515124-07 Harness, Seed Monitor Generic Machine 7 Row |
| | 8 | ME0515125-08 Harness, Seed Monitor Generic Machine 8 Row |
| | 9 | ME0515126-09 Harness, Seed Monitor Generic Machine 9 Row |
| | 10 | ME0515127-10 Harness, Seed Monitor Generic Machine 10 Row |
| | 11 | ME0515128-11 Harness, Seed Monitor Generic Machine 11 Row |
| | 12 | ME0515129-12 Harness, Seed Monitor Generic Machine 12 Row |
| | 13 | ME0515130-13 Harness, Seed Monitor Generic Machine 13 Row |
| | 14 | ME0515131-14 Harness, Seed Monitor Generic Machine 14 Row |
| | 15 | ME0515132-15 Harness, Seed Monitor Generic Machine 15 Row |
| 16 | ME0515133-16 Harness, Seed Monitor Generic Machine 16 Row | |
| John Deere 1760 | 12 | 82931 Cable Assy, John Deere 1760 12 Row Seed Monitoring |

| Planter | Number of Rows | Overlay Harness Part Number |
|-----------------|---------------------------------|--|
| John Deere 7300 | 12 | 82937 Cable Assy, John Deere 7300 12 Row Seed Monitoring |
| White 8523 | 12/23 | 83548 Cable Assy, White 8523 12/23 R Seed Monitoring |
| White 8831 | 16 (<i>31 not applicable</i>) | 83551 Cable Assy, White 8831 16/31 R Seed Monitoring |
| White | 12 | 83552 Cable Assy, White 12 Row 30" Seed Monitoring |
| Kinze 3600 | 16 (<i>31 not applicable</i>) | 83555 Cable Assy, Kinze 3600 16/31 Row Seed Monitoring |
| Kinze 3600 | 12/23 | 83556 Cable Assy, Kinze 3600 12/23 Row Seed Monitoring |

Seed Sensor Adapter

| Part Number | Description | Notes |
|--------------|------------------------------------|--|
| ME0515134-1 | 3 wire AMP to Weather pack adapter | Allows sensors with 3 pin AMP connector to be adapted to weather pack style overlay harness. |
| ME0515135-16 | 37 pin CT to PM adapter (16 row) | |

Accessories

| P/N | Description | Notes |
|-----------|---|--|
| ME0520000 | Foot pedal, remote master | |
| ME0520001 | Foot pedal 15' extension | For connection to ME0502001-XX ECU harness |
| 75774-50 | Weather Station | Connects to CAN BUS with 4-pin DT "Tee". Use downloadbox adapters for adaption to CPC or powell connectors . |
| 77636 | Switch, Whisker with 3-pin Weather pack | |
| 77543 | Cable Assy, Implement SW, 10 FT Extension | |
| 77542 | Cable Assy, Implement SW, 25 FT Extension | |

Sensors and sensor adapters

- ▶ Flowmeters and Flowmeter Adapters
- ▶ Hitch Power/CAN Cables
- ▶ Pressure Sensors and Adapters
- ▶ Bin level Sensors

Flowmeters and Flowmeter Adapters

| P/N | Description | Notes |
|-------|--------------------------------|-------------------------------------|
| 82431 | Flowmeter 1/2" poly | .79 - 7.9 gpm 3-30 L/min |
| 82430 | Flowmeter 3/4" poly | 1.85 gpm - 18.5 gpm 7-70 L/min |
| 82429 | Flowmeter 1" poly | 2.64 gpm - 26.4 gpm 10-100 L/min |
| 82428 | Flowmeter 1.5" poly | 9.25 gpm - 92.5 gpm 35-350 L/min |
| 82427 | Flowmeter 2" poly | 19 gpm - 198 gpm 75-750 L/min |
| 80584 | Raven Flowmeter Adapter | |
| 80539 | Dickey John Encoder/ Flowmeter | |
| 82192 | Hiniker Flowmeter | |

Encoder/RPM Sensors and Adapters

| P/N | Description | Notes |
|-------|---|--------------------------|
| 86585 | Sealed, Hollow Shaft Encoder (360 pul/rev) | |
| 82442 | Sensor Hall-Effect, RPM (Threaded) with cable | |
| 89188 | Adapter, Shaft, Encoder, 16 mm (5/8") | For hollow shaft encoder |
| 90426 | Adapter, Shaft, Encoder, 20 mm | |
| 90489 | Adapter, Shaft, Encoder, 19 mm (3/4") | |
| 90705 | Adapter, Shaft, Encoder, Gason | |

Pressure Sensors and Adapters

| P/N | Description | Notes |
|-------|-----------------------------------|---------|
| 82161 | Pressure Sensor 0-200 PSI | 1/4 NPT |
| 80575 | Adapter Cable to DJ PSI sensor | |
| 80583 | Adapter Cable to Raven PSI sensor | |

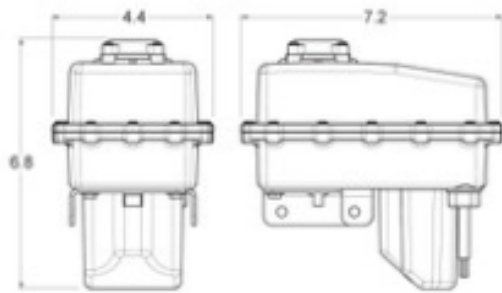
Bin level Sensors

| P/N | Description | Notes |
|-------|----------------------------------|-------|
| 90427 | Sensor, Bin Level W/ bracket | |
| 86853 | Sensor, Bin Level, W/out bracket | |
| 87772 | Cable Assy, Adapter, Bin Sensor | |

Drives and Valves

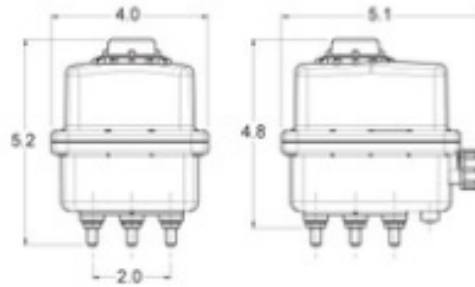
- ▶ Servo/Boom Valves
- ▶ PWM

Servo/Boom Valves



EH2 ACTUATOR

- Valve sizes 3/4" to 3"
- 12/24 volt DC and 24 volt AC
- Weight 4 lbs.



EH3 ACTUATOR

- Valve sizes 1/4" to 1"
- 12/24 volt DC and 24 volt AC
- Weight 2 lbs.

| P/N | Description | Notes |
|-------|---|-------|
| 82436 | Servo 1" poly w/ 2" SP flange 2 way EH3 actuator | |
| 82437 | Servo 1" stainless w/ vent 2 way EH2 actuator | |
| 82438 | Servo 3/4" poly w/ 1" SP flange 2 way EH3 actuator | |
| 82439 | Servo 1/2" stainless non-vented 2 way EH3 actuator | |
| 82440 | Servo 3/8" stainless non-vented 2 way EH3 actuator | |
| 83433 | Single shut off | |
| 82433 | Triple bank shut off (add 83433 for more) | |
| 82432 | On/ off valve NH3 3/4" stainless w/ vent EH2 actuator | |

PWM

| P/N | Description | Notes |
|--------|--------------------|-------|
| 115181 | PWM valve 22.5 GPM | |
| 115180 | PWM valve 10.6 GPM | |
| 115179 | PWM valve 6.6 GPM | |

| P/N | Description | Notes |
|-------|-----------------------|-------|
| 82441 | PWM Motor/valve 8 GPM | |

