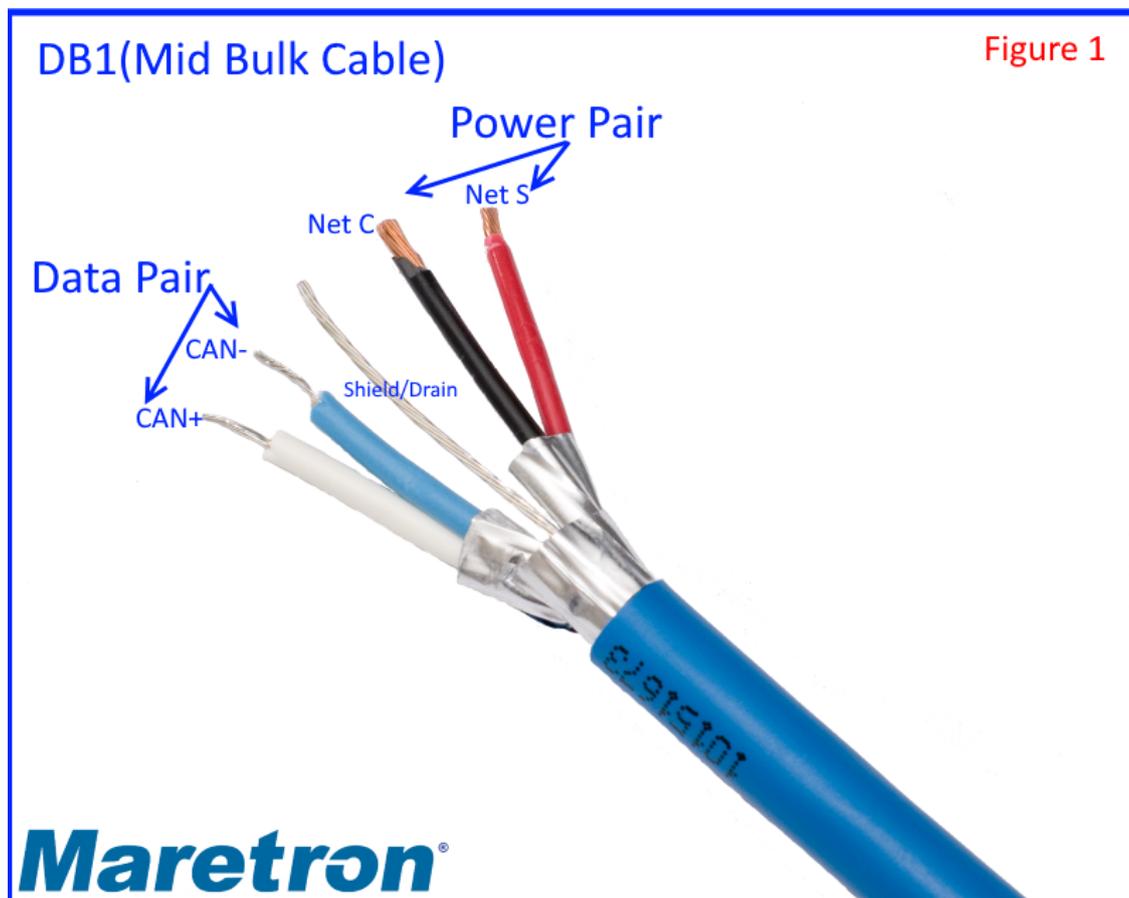


How do I connect a Maretron Field Makable Connector or Field Attachable to an NMEA2000 Cable?

The heart of the NMEA2000 system is the cabling infrastructure and it is vital that field connections are made correct to avoid damage to sensors or non-intelligent components such as tees, multi-ports, power-taps. Maretron offers four types of Field Makable connector for Micro and Mid sized cable. Notice that in Figure 1 an NMEA2000 cable consist of four colored wires and one bare. Groups of wire may be surrounded by foil or wire braid for the purpose of shielding. Correctly made connections is vital to the operation and long-term life of an NMEA2000 system.



Each colored wires provides an instant reference for technicians to define the

conductors purpose. Red for DC+ positive/source, Black for DC- negative/minus, Blue represents CAN- negative/low, and white represents CAN+ positive/Hi. Finally the Bare non-jacketed wire represents the cabling shield.

Here is a step by step process to make a field connection:

Select from the following part number(s) to determine the type of connection you will need:

Part numbers and descriptions of Maretron's Micro/Mid field attachable connectors:

- FA-CM-ST: Micro/Mid Field Attachable Connector (Straight Male)
- FA-CM-90: Micro/Mid Field Attachable Connector (90° Male)
- FA-CF-ST: Micro/Mid Field Attachable Connector (Straight Female)
- FA-CF-90: Micro/Mid Field Attachable Connector (90° Female)

Here is a list of tools that one may use(Figure 2):

- Manual or automatic wire stripper tool
- heat shrink tube or liquid electrical tape (recommended)
- precision slotted or "flat-blade" screwdriver

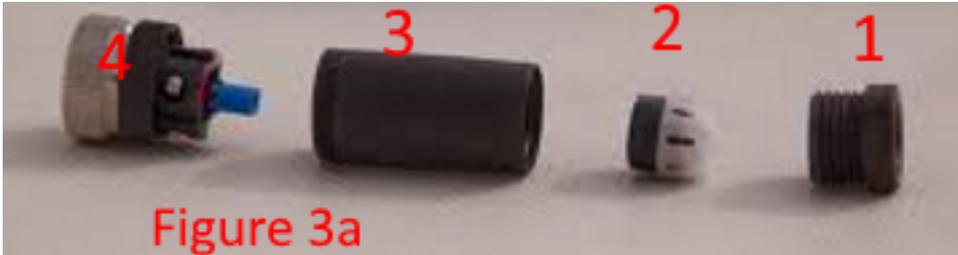


Figure 2

Steps to follow:

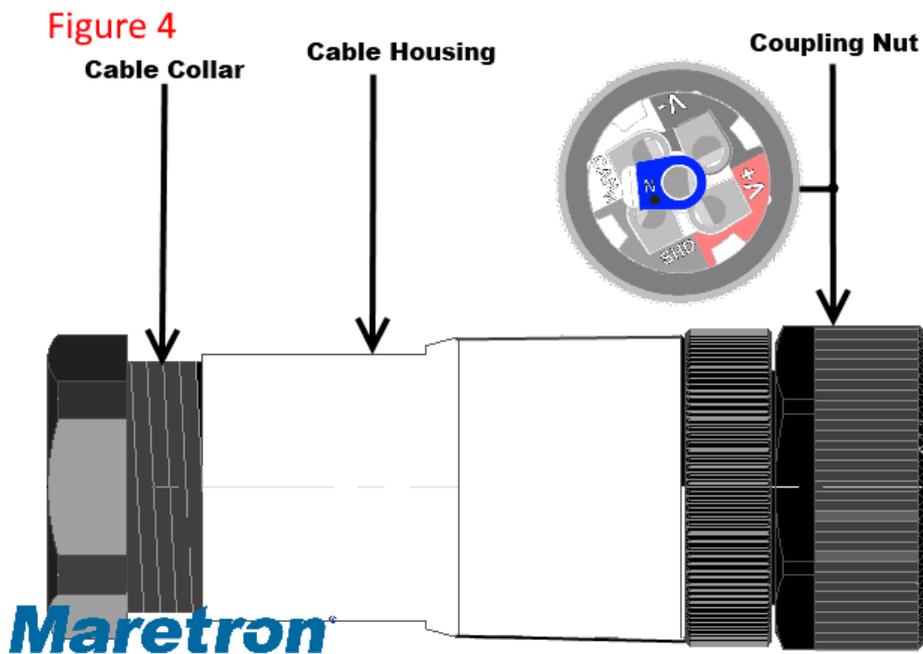
1. Prepare the wire receiving the Field Makeable Connector by carefully removing 20mm of outer cable coating. Carefully remove outer foil or wire braid surrounding the wires. Next, proceed to remove 5mm on each coated conductor except the n-insulated stranded wire. see Figure 3.

Slide each piece of the field makeable connector onto the cable starting with the cable collar, cable gland, cable housing. Refer to Figure 3a which provides a numbered sequence.



2. Connect the bare (shield) wire first before the uninsulated stranded wire becomes separated. Maretron does recommend to use shrink tube or liquid tape to further isolate the bare shield wire to avoid possible contact with power or data conductors within the Field Makeable connector. Shown in Figure 7

3. Connect all wires to the correct terminals as marked and colored on the Field Makeable Connector, Leave the center blue wire for last. Shown in Figure 4.



4. Slide the strain relief parts shown in Figure 3a (parts shown as steps 2 and

1) back towards the connectors coupling nut and secure with a counter clockwise rotation of the threaded coupling nut.

5. Finally secure the Cable collar to secure the cable from movement inside the Field Makeable Connector.

See in figures 5-7 properly made Field-Makeable with NMEA2000 cable assemblies.

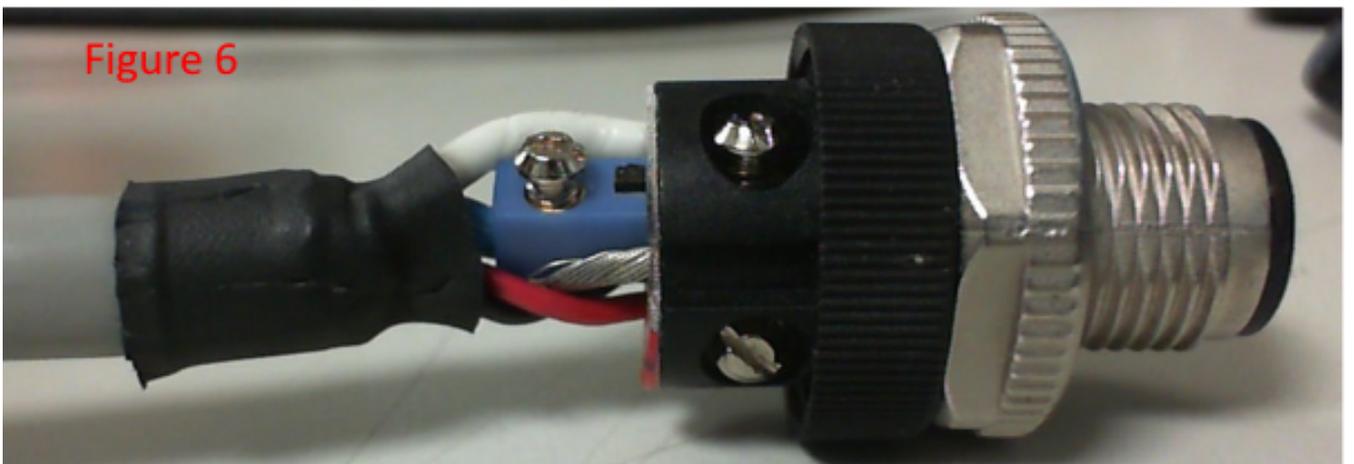
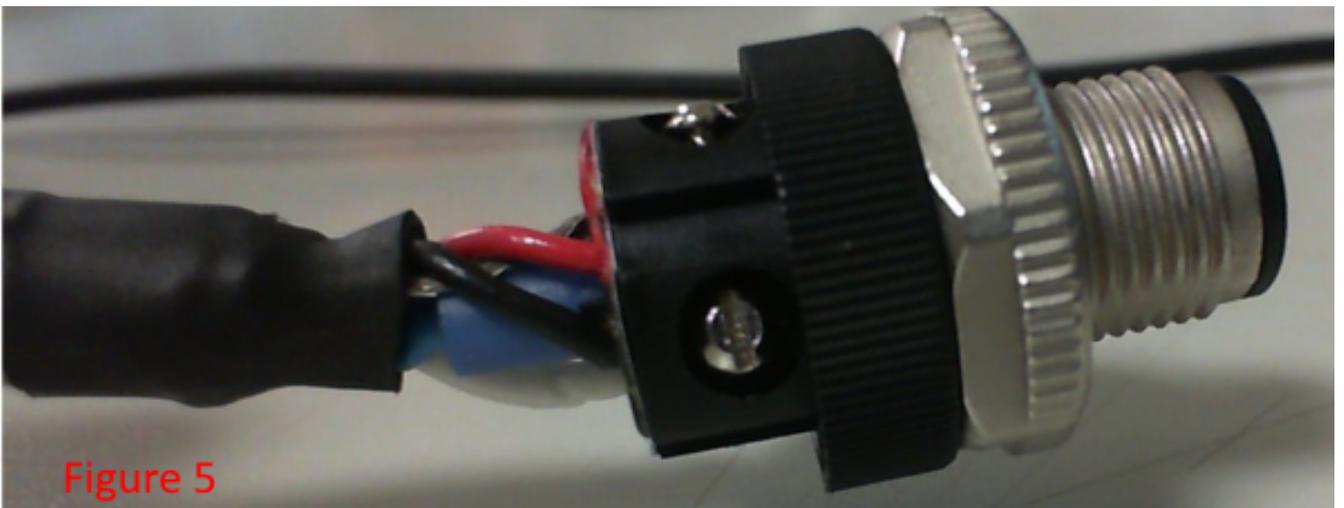


Figure 7 shows added precaution to isolate the bare shield wire from any other conductors which helps extend life to your connection in a high moisture

environment.



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