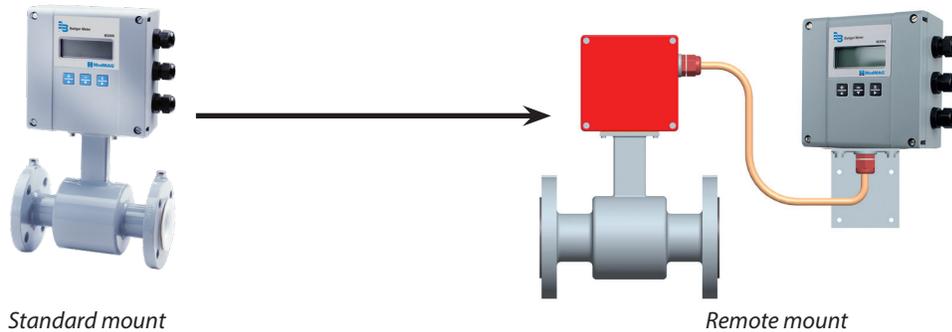


## Electromagnetic Flow Meters

### M2000 Converting a Standard Mount to a Remote Mount



Standard mount

Remote mount

### Description

These instructions explain how to convert a standard mount M2000 meter to a remote mount using the Remote Junction Box Kit, PN 63384-035. Contents of the kit are:

- Remote junction box, red aluminium, 122 × 120 × 80 mm with metal cable gland and 4 copper screws, qty. 1
- Remote junction box PCB, qty. 1
- Remote mounting bracket, qty. 1
- Socket head cap screws, M5 × 16, qty. 4
- Stat-O-Seal washers M5, qty. 4
- Gland nut, M20 × 1.5, plastic, qty. 1
- Gasket, rectangular, 75 × 45 mm, qty. 1

### ⚠ CAUTION

**CONTAINS PARTS AND ASSEMBLIES SUSCEPTIBLE TO DAMAGE BY ELECTROSTATIC DISCHARGE (ESD). BEFORE PICKING UP AN ESD-SENSITIVE ELECTRONIC COMPONENT, DISCHARGE YOURSELF BY TOUCHING A GROUNDED BARE METAL SURFACE OR APPROVED ANTI-STATIC MAT.**

### ⚠ WARNING

**TURN OFF POWER BEFORE PERFORMING ANY WORK ON THE M2000 METER.**

See "[Wiring Reference for Remote Configuration](#)" on page 3 for the wiring overview.

### Tools Required

- Flathead screwdriver
- 4 mm or 5/32 in. bit
- Electric driver
- Torque screwdriver 4.7 Nm
- Torque wrench 5.2 Nm

### Junction Box Assembly

1. Attach the PCB to the inside of the junction box with four (4) copper screws.
2. Feed one end of the connector cable (signal cable) into the junction box. Hold the wires in place and tighten the cable gland nut. Torque the nut to 5.2 Nm.

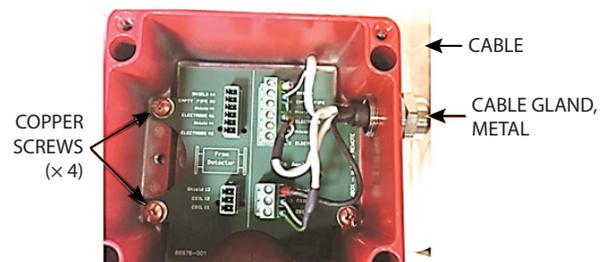


Figure 1: M2000 junction box

3. Connect the cable wires in the junction box. See [Figure 2 on page 2](#). **DO NOT ROUTE THE WIRES UNDER THE JUNCTION BOARD.**

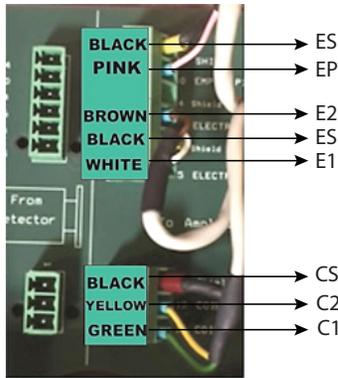


Figure 2: M2000 connector cable wires

4. Disconnect the *electrode* and *coil* connectors in the amplifier housing. See [Figure 3](#).
5. Using the 4 mm or 5/32 in. bit and electric driver, remove the bottom four bolts and washers from the amplifier and slide the detector away from the amplifier making sure the gasket is not lost. See [Figure 3](#).

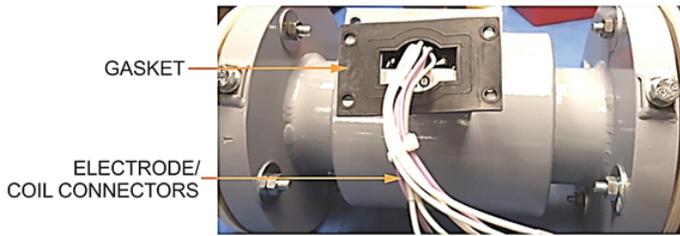


Figure 3: M2000 amplifier housing

6. Thread the *electrode* and *coil* connectors into the junction box. See [Figure 4](#).

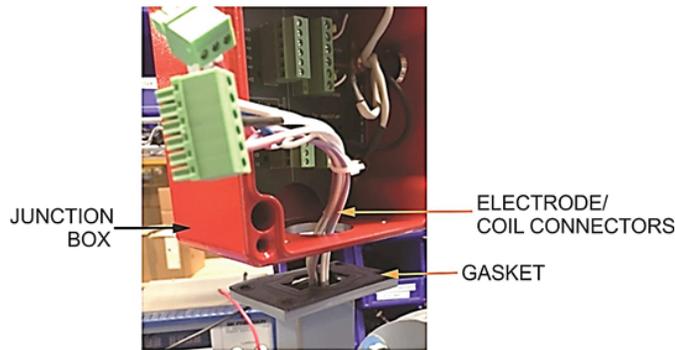


Figure 4: M2000 electrode and coil connectors

7. Using the 4 mm or 5/32 in. bit and electric driver, attach the junction box to the detector with the gasket in between. See [Figure 4](#). Use the same bolts that were removed when the amplifier and detector were disassembled. Torque the bolts to 4.7 Nm.
8. Connect the *electrode* and *coil* connectors from the detector to the junction box PCB.

## Amplifier Assembly

Using the components from junction box kit:

1. Place four (4) M5 Stat-O-Seal washers on four (4) M5 × 16 socket head cap screws.
2. Set the *gasket* on the amplifier box. See [Figure 5](#).
3. Lay the *wall bracket* on the gasket. See [Figure 5](#).
4. Thread the four (4) screws with washers into the wall bracket. See [Figure 5](#).



Figure 5: M2000 gasket on amplifier

5. Attach the gland nut, M20 plastic, to the amplifier housing/bracket assembly and torque the nut to 5.2 Nm. See [Figure 6](#).
6. Slide the other cable end into the amplifier box. Hold the wires in place and tighten the plastic connector. See [Figure 6](#).

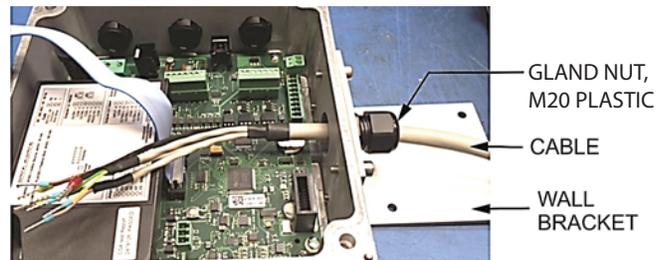


Figure 6: M2000 connector to amplifier housing/bracket assembly

7. Connect the wires inside the amplifier box according to [Figure 7](#). Check that all connections are secure.

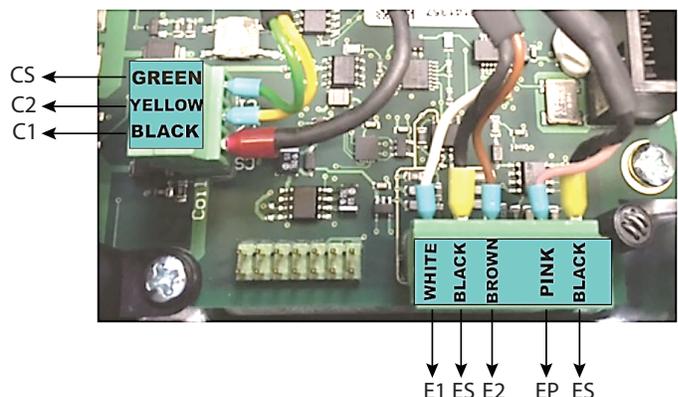


Figure 7: M2000 connector to amplifier housing/bracket assembly

## Wiring Reference for Remote Configuration

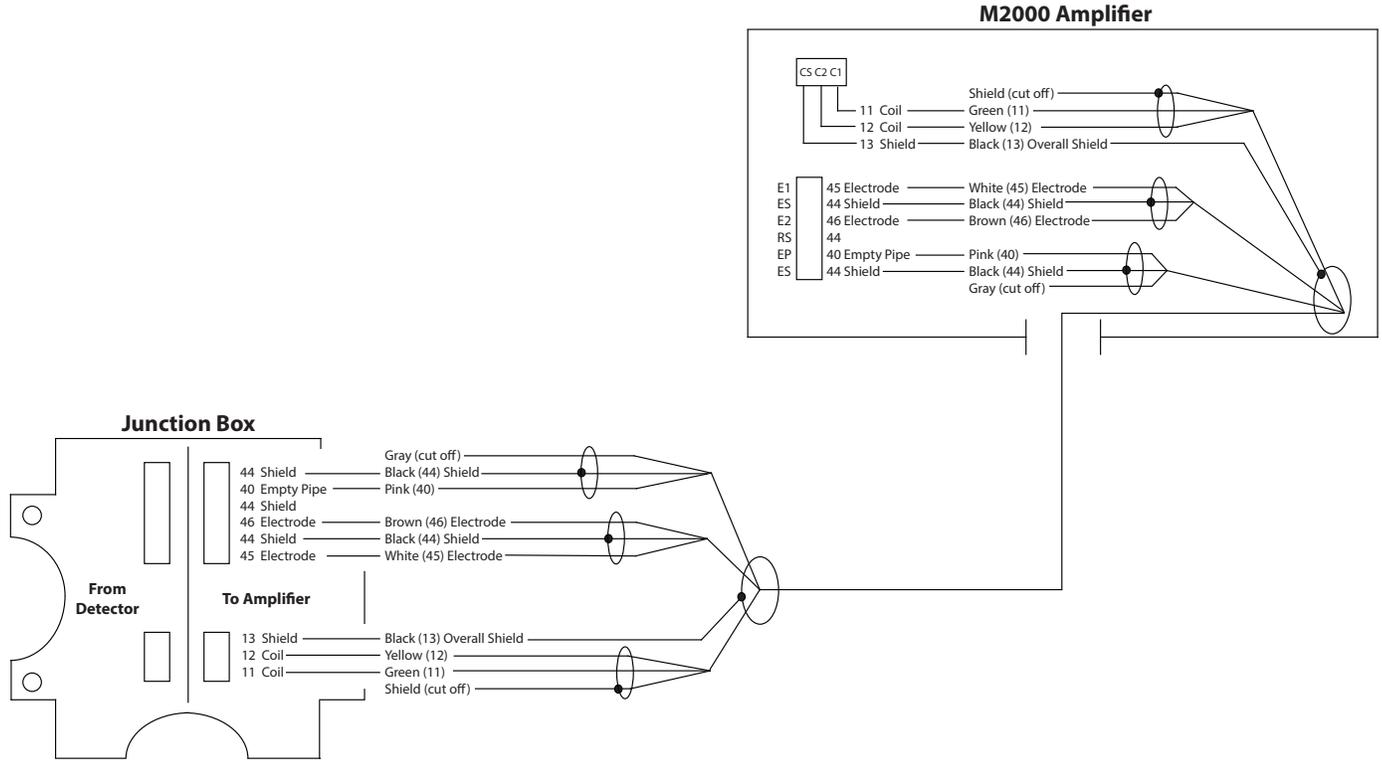


Figure 8: Wiring for remote configuration

Remote style M2000 amplifier models can be ordered with standard cables measuring 15, 30, 50, 100 and 150 feet. In addition, cables up to 500 feet are available.

From Junction Box			To M2000 Amplifier
Connection No.	Description	Wire Color	Connection Label
11	Coil	Green	C1
12	Coil	Yellow	C2
13	Main Shield	Black (Red Ferrule)	CS
45	Electrode	White	E1
44*	Electrode Shield	Black	ES
46	Electrode	Brown	E2
40	<b>Empty Pipe</b>	Pink	EP
44*	<b>Empty Pipe Shield</b>	Black	ES

\*Connections with the No. 44 are lying on the same potential.

### Empty Pipe Detection Considerations

Take into account the following cable length and conductivity requirements, if you will be using empty pipe detection.

Cable Length (Feet)	Minimum Conductivity Required ( $\mu\text{S}/\text{cm}$ )
100	20
500	100

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