

Accurate.

P R E C I S E .

Reliable.

Our IR-Free Coupon Was Built to *Your* Exacting Specifications.

We listened to you to find out what corrosion and cathodic protection engineers want in a corrosion coupon. You said *accuracy, precision* and *reliability*. You also said you wanted a corrosion coupon that was cost-effective to use.

In development for 10 years, M.C. Miller's IR-Free corrosion coupon accurately measures the integrity of pipeline cathodic protection systems without the need to interrupt all current sources. This revolutionary device is designed for easy installation next to existing test stations. It also withstands harsh field environments and eliminates the effects of stray earth currents, producing accurate measurements every time.



TECNOLOGÍA TOTAL
INGENIERÍA EN INTEGRIDAD Y CORROSIÓN
www.tecnologiatotal.net

Product Features

- Easy installation at existing test stations
- No new test stations required
- No need to interrupt all current sources for IR-free readings

Built for Accuracy...and Precision

Unlike other corrosion coupons, M.C. Miller's IR-free coupon is designed to evaluate cathodic protection systems without interrupting rectifiers, foreign bonds, or sacrificial anodes. The coupon consists of a bare, cold-rolled steel cylinder head and No. 12 stranded wires, which are inserted along side a 2-inch PVC tube. The PVC tube shields the reference electrode from potential gradients, resulting in accurate, precise cathodic protection measurements. These measurements also meet anticipated federal regulations and industry standards for considering IR drop in structure-to-soil potential readings.

Built to Last

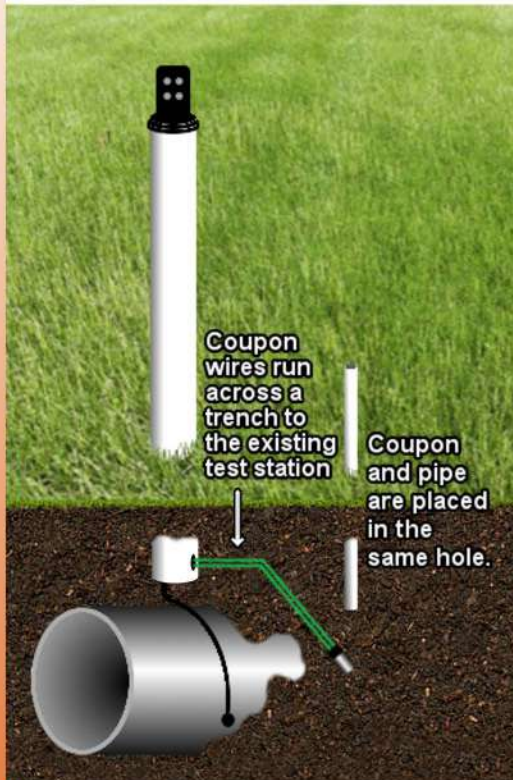
Like all M.C. Miller products, our IR-free corrosion coupon is built to last. The wire-coupon interface is environmentally sealed to keep the steel, copper, and solder components corrosion-free, making the coupon virtually indestructible.



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Instruments and Equipment for the Corrosion Engineer

M.C. Miller's IR-Free Coupon is Simple to Install and Use.



Our IR-free corrosion coupon is designed for easy installation next to existing test stations, as shown here.

Easy Installation

Using an auger, bore a hole to the horizontal center line of the pipeline, about 4 to 12 inches away from the pipeline. Then, lower the coupon into the hole by its wires. Drop native soil in the hole until about 1-1/2" to 2" (inches) of soil is packed over the coupon, so that it will remain outside of the PVC tube.

Install the PVC tube 1-1/2" to 2" (inches) above the coupon, with the wires outside the tube. Then fill the tube with native soil, which should be saturated with water and thoroughly packed to remove excess air. Install the No. 12 color coded wires along the outside of the PVC tube and insert through a hole at the base of the adjacent test station. Drill a hole in the test station just below grade level to accommodate the wire. Then, connect one of the color coded coupon wires to the structure test wire by direct connection or through a jumper bar at the test station box.

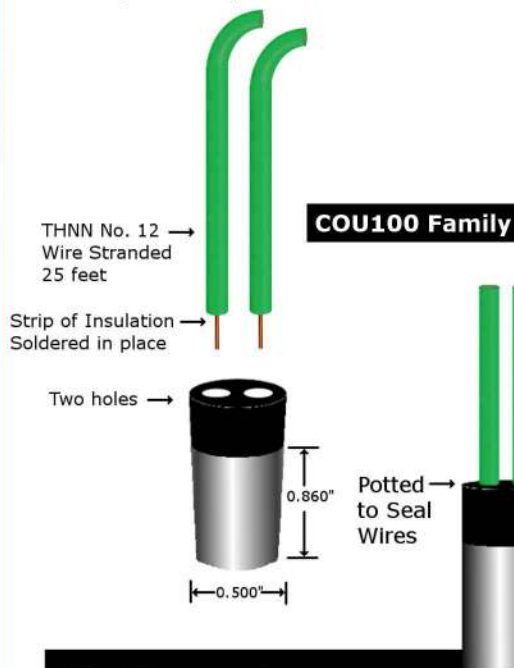
Easy Measurement

After the coupon has been polarized, insert a half-cell into the top of the PVC tube, contacting the compacted soil above the coupon. Connect a LC-4 selectable voltmeter to the color coded coupon wire and the half-cell.

An IR-free potential reading is obtained by breaking the connection between the coupon wire and the structure test wire, usually through the jumper bar, interrupting cathodic protection to the coupon. Take a potential measurement one to two seconds after breaking the coupon connection.



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IR-Free Coupon

Coupon Specifications*

- THHN No. 12 stranded wire
- 3M potting compound

*Coupons can be customized to your specifications. Optional alloy and surface area designs are encouraged.

Carbon Steel	
Part #	Surface Area
COU075	0.155 sq in (1cm ²)
COU100	1.55 sq in (10cm ²)
COU170	1.353 sq in (8.73cm ²)
COU220	1.55 sq in (10cm ²)
COU425	15.5 sq in (100cm ²)

Ductile Iron	
Part #	Surface Area
COU200	1.55 sq in (10cm ²)

Aluminum	
Part #	Surface Area
COU300	1.55 sq in (10cm ²)

Stainless Steel	
Part #	Surface Area
COU350	1.55 sq in (10cm ²)

