Model IR - Immersion Reference

Typical Applications:

- Elevated water tanks
- Standpipes
- Ground storage tanks
- Clarifiers
- Traveling screens
- Trash racks
- Submerged pipelines
- Locks
- Dams
- Dock structures

The Immersion Reference Electrode, **Model IR**, is designed for long term installation in an aqueous environment. Typical applications include elevated water tanks, standpipes, ground storage tanks, clarifiers, traveling screens, trash racks, submerged pipelines, locks, dams, and dock structures. The electrode can be directly suspended by its lead wire, cemented directly to 3/4 inch PVC conduit using the optional socket end termination, or securely attached to a steel structure with the optional magnetic mount (**Model IRM**). Antifreeze protection is also available for those situations where the electrode may be exposed to temperatures down to -30°F (-34°C). However, antifreeze may shift the reference potential by up to 12 mV.

The **Model IR** has a twenty-five year design life and uses #12 AWG RHW/USE lead wire. This electrode can be fitted with a concentric cathodic protection coupon which minimizes voltage drop error in potential measurements (**Model IRC**). Another option is a copper sleeve which will reduce bio-fouling when the electrode is exposed for extended times in natural seawater (**Model IRF**). Potable water applications requiring NSF61 certification should use **Model IRW**.

Model IR can be used in all aqueous environments. For clean full strength seawater applications, our **Model IP-AGD** Immersion Reference may be a more economical alternative.

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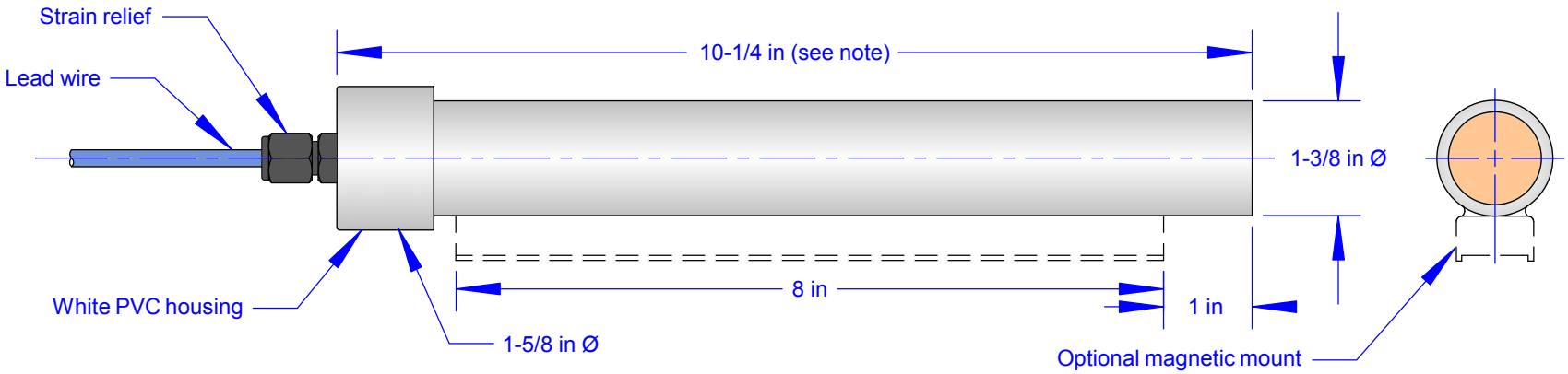
I Series
Immersion Reference Electrodes



Specify as EDI Model IRzz-xxx-yy where

zz = option codes: M, A, S, F or C
xxx = element type: AGG or CUG
yy = termination: LWnnn or CWnnn

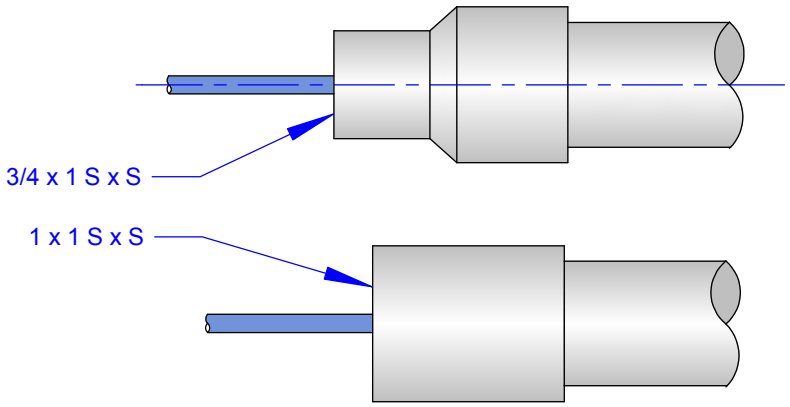
Option Codes

M = Magnetic mount
A - Antifreeze protection to -30F (-35C)
S7 = 3/4 in. IPS socket end
S10 = 1 in. IPS socket end
F = Fouling resistant copper sleeve
C = Integral CP coupon

F and C options are shown on drawing IRASY-4

Optional Socket End

Note: socket end allows PVC pipe or conduit to be directly cemented to reference electrode.



Element Types

AGG = Saturated gelled silver/silver chloride
CUG = Saturated gelled copper/copper sulfate

Termination Types

LWnnn = nnn ft #12 AWG RHW/USE lead wire
CWnnn = nnn ft custom wire as specified by customer

Note: Model IR has a design life of 25 years. An extended life version, Model IR40 with a 40 yr design life is available on special order. The overall length of the IR40 is 14-1/4 inches. All other dimensions and features remain the same as the Model IR.

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Permanent Immersion Reference

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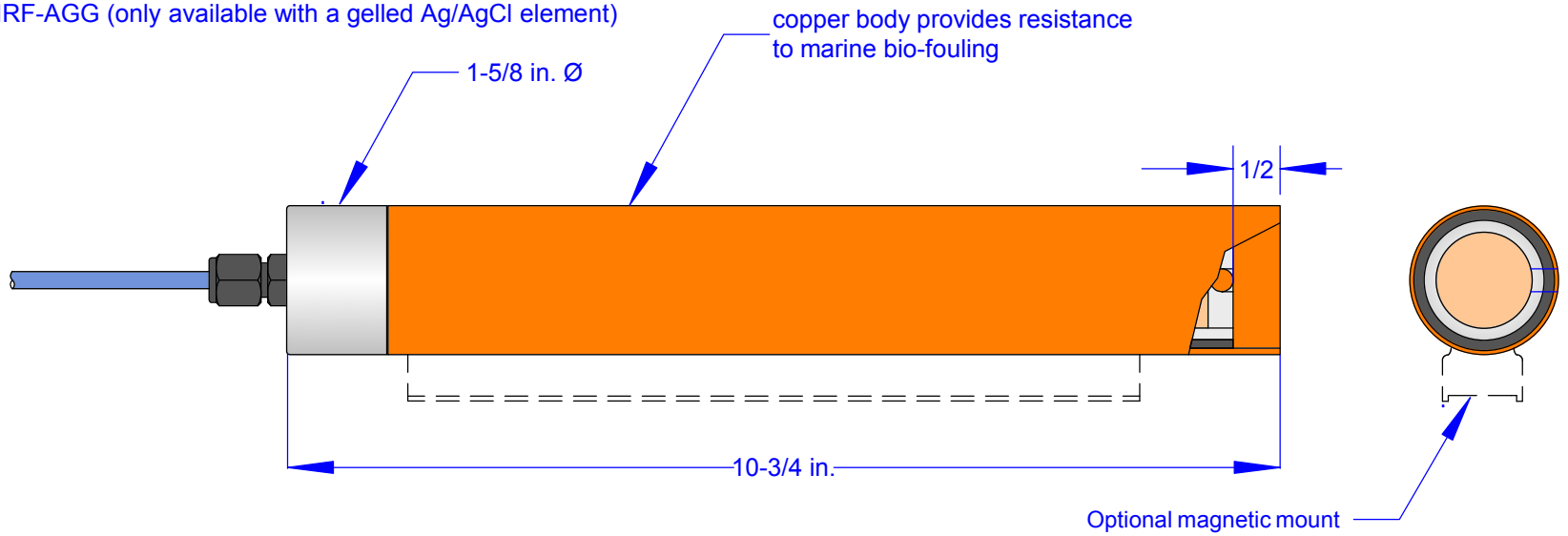
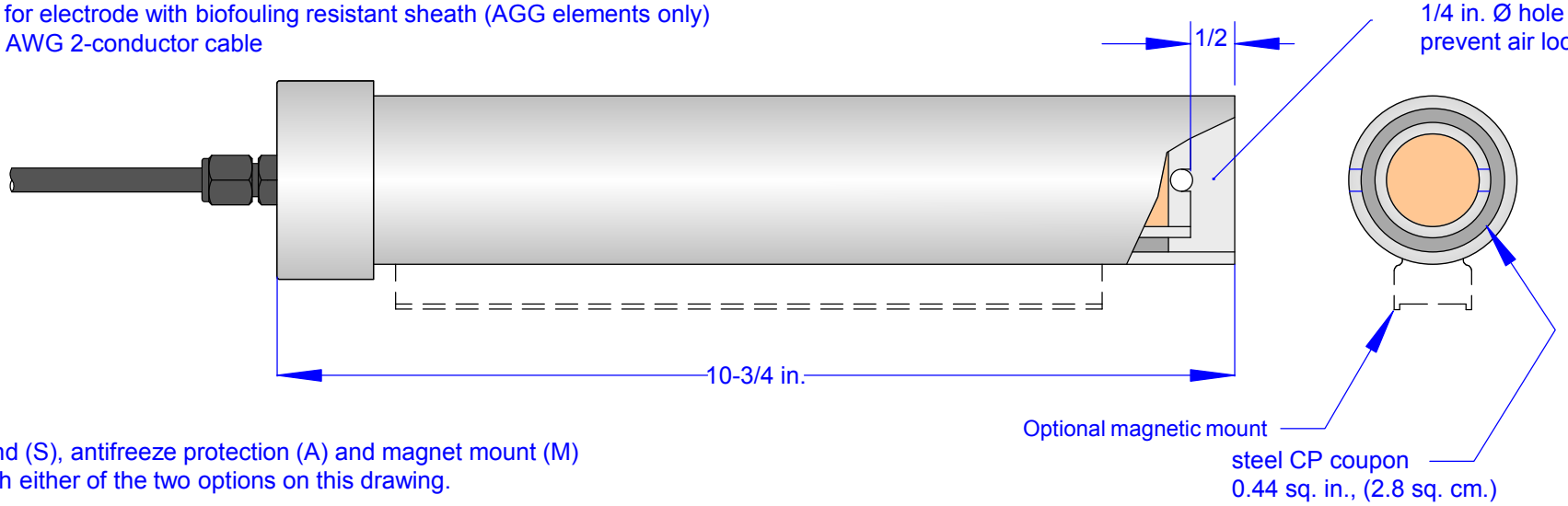
Immersion reference with biofouling resistant sheath

Specify as IRF-AGG (only available with a gelled Ag/AgCl element)



Immersion reference with integral CP coupon

Specify as IRC for electrode as shown (AGG or CUG element)
Specify as IRCF for electrode with biofouling resistant sheath (AGG elements only)
Lead wire is #16 AWG 2-conductor cable



Note: socket end (S), antifreeze protection (A) and magnet mount (M) are available with either of the two options on this drawing.

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Immersion Reference Electrode Options

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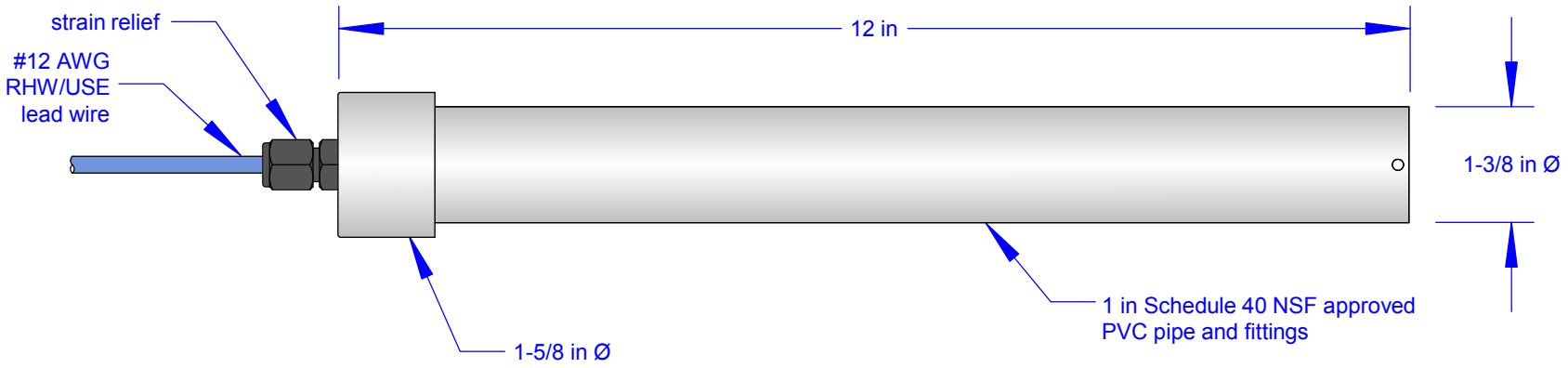

Specify as EDI Model IRW-CUG-LWnnn where
nnn = lead wire length in feet

Note: Model IRW is a copper/copper sulfate immersion reference electrode approved by NSF for potable water service. No variations in materials or design are allowed. For applications not requiring NSF61 certification, see EDI Model IR immersion reference electrode.

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NSF Certified Immersion Reference Electrode

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1/2	FJA	15 MAY 2013	IR - 6