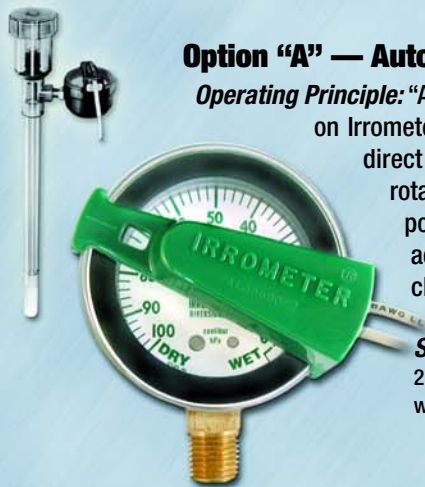


# IRROMETER

## Automation and Output Options

### Option "A" — Automatic Irrrometer

**Operating Principle:** "A" Series Automatic Gauges are designed for use on Irrrometers to indicate soil moisture levels and provide direct switching capabilities. The switch can be rotated on the gauge face to adjust the moisture set point. Readings above the moisture set point activate the switch to signal a solenoid, time clock or warning device.



#### Specifications:

2" (50 mm) diameter gauge face with Polycarbonate inner window, Butyrate outer window and Neoprene cover.

Range: 0-100 centibars (kPa) for R, S, SR & TG Irrrometers

0-40 centibars (kPa) for LT Irrrometers

Operating temperature: 32° to 150° F (0° to 66° C)

Bronze mechanism with 1/4" NPT brass bottom connection (R, S, SR, LT, TG)

Switch rating is 30 volt AC/DC, .4 amp maximum

Includes 16 inch (40 cm) AWG 18 cables

Compatible with any 24 Volt AC valve system and DC controllers with a sensor circuit

#### Features

- Automates Irrrometers to activate switch at moisture set point
- Available for AC or DC circuits
- Available with switch open or closed past setting
- Hermetically sealed to prevent contamination from dirt and moisture
- Neoprene cover with integral diaphragm compensates for variations in temperature and barometric pressure

The Automatic Irrrometer provides direct switching capabilities thereby allowing the user to control irrigation events. The switch can control a single valve, a group of valves, or the entire irrigation controller. Ideal for managing irrigation based on soil moisture depletion.

#### Specification Information:

The Automatic Irrrometer gauge shall read in centibars (kPa) of soil water tension and be hermetically sealed from moisture and dirt. Gauge shall have direct switching capabilities in order to initiate an irrigation event, interrupt an irrigation event, or activate a warning system.

### Option "E" — Electronic Irrrometer

**Operating Principle:** "E" Series Electronic Gauges are designed for use on Irrrometers to indicate soil moisture levels both electronically as well as visually. An analog magnetic degree sensor provides a voltage output proportional to the needle reading on the gauge.



#### Specifications:

2" (50 mm) diameter gauge face with Polycarbonate inner window, Butyrate outer window and Neoprene cover (R, S, SR, TG, LT).

Operating temperature: 32° to 150° F (0° to 66° C)

Bronze mechanism with 1/4" NPT brass bottom connection (R, S, SR, LT, TG)

Bronze mechanism with 1/8" NPT brass bottom connection (MLT)

4.25 – 1.25 volts  $\pm$  .010 (.03 volt per centibars, linear for 100 kPa gauges) (calibrated horizontally)

4.25 – 1.25 volts  $\pm$  .010 (.075 volt per centibars, linear for 40 kPa gauges) (calibrated horizontally)

Supply Current: 8-12 mA (9 mA typical)

Supply Voltage: 2.7 min – 5.5 max (ratio metric)

Includes 36 inch (90 cm) 3 conductor AWG 22 cable

Compatible with IRRROMETER Monitor models 900 (requires adapter) and 950, and other brands of data loggers that read a voltage signal.

**Coming Soon** – 1-1/2" (38 mm) diameter gauge face with Polycarbonate window (MLT).

#### Features

- Visible gauge face is easy to read for field interpretation
- Voltage output signal can be read by most brands and types of data logging equipment
- Available in 0-100 kPa (R, S, SR, TG.) or 0-40 kPa (LT, MLT)
- Hermetically sealed to prevent contamination from dirt and moisture
- Neoprene cover with integral diaphragm compensates for variations in temperature and barometric pressure

The Electronic Irrrometer allows users to view the gauge reading in the field as well as record the soil moisture trend electronically using a data logger. This option is ideal for anyone who desires the well established method of direct soil moisture measurement and also wants to use a data logger to monitor soil moisture trends.

#### Specification Information:

The Electronic Irrrometer gauge shall read in centibars (kPa) of soil water tension and be hermetically sealed from moisture and dirt. Gauge face shall be visible for manual reading and contain an analog magnetic degree sensor with linear voltage output.

# IRROMETER Automation and Output Options

## Option "RSU" — Remote Sensing Unit (Transducer Irrrometer)

**Operating Principle:** "RSU" Series Remote Sensing Units are designed for use on Irrrometers to indicate soil moisture levels by converting the reading to a 4-20 mA loop current signal. The signal can be read by a data logging device or an A/D card designed to read voltage.



### Specifications:

Dimensions: 1-1/2" high x 1-1/4" wide x 3/4" deep (38 mm high x 32 mm wide x 20 mm deep)

Calibrations: 0-16 kPa: (LT, MLT) (1 mA/kPa)

0-32 kPa: (LT, MLT) (.5 mA/kPa)

0-93 kPa: (R, S, SR, TG) (.172 mA/kPa)

Operating temperature: 32° to 150° F (0° to 66° C)

Connection: Brass 1/4" NPT back connection (R, S, SR, LT, TG)

Brass 1/8" NPT back connection (MLT)

ABS Plastic case with weatherproof potted electronics.

4-20mA loop current signal

Power Requirement: 12-24 VDC excitation current

Includes 36 inch (90 cm) 2 conductor AWG 20 cable

### Features

- Pressure transducer and electronics are sealed in potted weatherproof housing
- Available in three calibrations for varying soil types and Irrrometer models

The Remote Sensing Unit (Transducer Irrrometer) provides a 4-20 mA signal for those desiring to use data loggers and other scientific equipment.

### Specification Information:

The Remote Sensing Unit shall output soil water tension values by a 4-20 mA loop current signal and be sealed in a potted waterproof housing for use in harsh outdoor conditions. Readings shall be converted to centibars (kPa) of soil water tension by a data logging device or computer fitted with an A/D card.

Part numbering nomenclature for ordering:

Irrrometer Model

- 1 = R
- 2 = SR
- 3 = TG
- 5 = LT
- 200 = S
- MLT = MLT

Body Length

- 6" (15 cm)
- 12" (30 cm)
- 18" (45 cm)
- 24" (60 cm)
- 36" (90 cm)
- 48" (120 cm)

Output Option

**-A — Automatic Gauge**

For Models R, S, SR, TG, LT

**-AAS** w/AC switch closed past setting

**-AAR** w/AC switch open past setting

**-ADS** w/DC switch closed past setting

**-ADR** w/DC switch open past setting

**-E — Electronic Gauge**

For Models R, S, SR, TG, LT, MLT

**-RSU — Remote Sensing Unit**

-RSU-93 ..... (0-93 kPa) Models R, S, SR, TG

-RSU-32 ..... (0-32 kPa) Models LT, MLT

-RSU-16 ..... (0-16 kPa) Models LT, MLT

**206 -E**

For example a 206-E is 6" Irrrometer with a replaceable tip and electronic gauge.

# IRRROMETER

Optimizing Irrigation... Maximizing Conservation... Worldwide... Since 1951

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