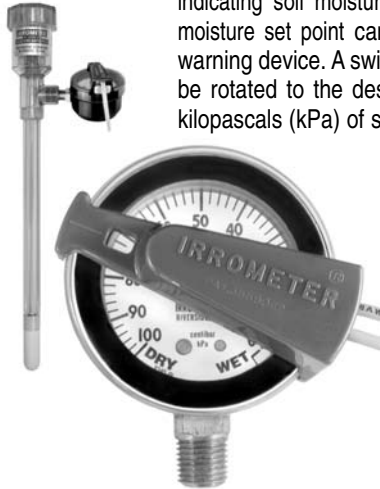


# IRROMETER®

## Option "A" — Automatic IRROMETER

**Operating Principle:** "A" Series Automatic Gauges are designed for use on IRROMETER instruments and provide direct switching capabilities in addition to indicating soil moisture status. Soil water tension readings greater than the moisture set point can activate an irrigation valve solenoid, time clock or warning device. A switch mechanism is mounted on the gauge face and can be rotated to the desired set point. The gauge reads in centibars (cb) or kilopascals (kPa) of soil water tension.



### Specifications:

2 in. (50 mm) diameter gauge face with polycarbonate inner window, butyrate outer window and neoprene cover.

WEIGHT: .375 lb. (.170 kg)

RANGE: 0-100 cb (kPa) for Models R, S, SR & TG  
0-40 cb (kPa) for Model LT

OPERATING TEMPERATURE: 32° to 150° F (0° to 66° C)

MECHANISM: Bronze Bourdon tube

CONNECTION: 1/4 in. NPT brass bottom  
for Models R, S, SR, LT, TG

SWITCH RATING: 30 volt AC/DC, .4 amp maximum  
Includes 16 in. (40 cm) AWG 18 wire leads (2)

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

### Features

- Automates IRROMETER instruments 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 IRROMETER 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 IRROMETER shall read in centibars (cb) or kilopascals (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. It shall be the Automatic IRROMETER as manufactured by The IRROMETER Company, Inc. of Riverside, California.

## Option "E" — Electronic IRROMETER

**Operating Principle:** "E" Series Electronic Gauges are designed for use on IRROMETER instruments to indicate soil moisture status electronically as well as visually. The voltage output can be easily read by most brands of data loggers such as the WATERMARK Monitor. An analog magnetic degree sensor provides a voltage output proportional to the needle reading on the gauge. The gauge reads in centibars (cb) or kilopascals (kPa) of soil water tension.



### Specifications:

2 in. (50 mm) diameter gauge face with polycarbonate inner window, butyrate outer window and neoprene cover for Models R, S, SR, LT, TG. (calibrated horizontally)

WEIGHT: .375 lb. (.170 kg)

OPERATING TEMPERATURE: 32° to 150° F (0° to 66° C)

MECHANISM: Bronze Bourdon tube

CONNECTION: 1/4 in. NPT brass bottom  
for Models R, S, SR, LT, TG

4.25 – 1.305 volts ± .010 [29.44 mV per cb (kPa) @ 5 volts, linear for 100 cb (kPa) gauges] (ratiometric)

4.25 – 1.305 volts ± .010 [73.6 mV per cb (kPa) @ 5 volts, linear for 40 cb (kPa) gauges] (ratiometric)

SUPPLY CURRENT: 8-12 mA (9 mA typical)

SUPPLY VOLTAGE: 2.7 min – 5.5 max

Includes 36 in. (90 cm) 3 conductor AWG 22 cable

Compatible with IRROMETER Monitor Models 900 (requires adapter) and 950, and other brands of dataloggers that read a voltage signal.

### Features

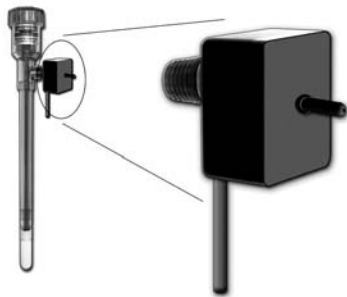
- Visible gauge face is easy to read for field interpretation
- Voltage output signal can be read by most brands and types of data logging equipment
- Available in 0-100 cb (kPa) for Models R, S, SR, TG, or 0-40 cb (kPa) for Model LT
- Hermetically sealed to prevent contamination from dirt and moisture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

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

### Specification Information:

The Electronic IRROMETER shall read in centibars (cb) or kilopascals (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. It shall be the Electronic IRROMETER as manufactured by The IRROMETER Company, Inc. of Riverside, California.

# AUTOMATION and OUTPUT OPTIONS



## Option "RSU" — Remote Sensing Unit

(Transducer IRROMETER)

**Operating Principle:** "RSU" Series Remote Sensing Units are designed for use on IRROMETER instruments 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. The value is expressed in centibars (cb) or kilopascals (kPa) of soil water tension by the reading device.

### Specifications:

DIMENSIONS: 1-1/2 in. high x 1-1/4 in. wide x 3/4 in. deep  
(38 mm high x 32 mm wide x 20 mm deep)

WEIGHT: .175 lb. (79.4 g)

CALIBRATIONS: 0-34 cb (kPa): (LT, MLT) (.4706 mA/cb [kPa])

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

OPERATING TEMPERATURE: 32° to 150° F (0° to 66° C)

CONNECTION: 1/4 in. NPT brass back for Models R, S, SR, LT, TG

1/8 in. NPT brass back for Model MLT

ABS Plastic case with weatherproof potted electronics

4-20mA loop current signal

POWER REQUIREMENT: 12-24 VDC excitation current

Includes 36 in. (90 cm) 2 conductor AWG 20 cable

### Features

- Pressure transducer and electronics are sealed in potted weatherproof housing
- Available in two calibrations for varying soil types and IRROMETER models
- Temperature compensated

The Remote Sensing Unit (Transducer IRROMETER) provides a 4-20 mA signal for those desiring to use dataloggers 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 (cb) or kilopascals (kPa) of soil water tension by a datalogging device or computer fitted with an A/D card. It shall be the Remote Sensing Unit IRROMETER as manufactured by The IRROMETER Company, Inc. of Riverside, California.

Part numbering nomenclature for ordering:

#### IRROMETER Model

R = 1	___	<b>Body Length</b>	<b>06"</b> (15 cm)
SR = 2	___		<b>12"</b> (30 cm)
TG = 3	___		<b>18"</b> (45 cm)
LT = 5	___		<b>24"</b> (60 cm)
*S = 200			<b>36"</b> (90 cm)
**MLT = MLT			<b>48"</b> (120 cm)

\*The Model 200 uses its own unique interchangeable extension tips — available in lengths from 6" (15 cm) to 48" (120 cm).

\*\*The Model MLT is available in 6" (15 cm) length only.

**206 - E**

**206-E example**

This is a Model SR with a 6" body and an optional Electronic Gauge.

#### Output Option

##### 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

##### ELECTRONIC GAUGE

-E ... Models R, S, SR, TG, LT

##### REMOTE SENSING UNIT

- RSU-93 ... [0-93 cb (kPa)] ..... Models R, S, SR, TG
- RSU-34 ... [0-34 cb (kPa)] ..... Models LT, MLT

**IRROMETER®**

**THE IRROMETER COMPANY, INC.**

P.O. Box 2424, Riverside, CA 92516

(951) 689-1701 PHONE

(951) 689-3706 FAX

www.IRROMETER.com

sales@IRROMETER.com

