

OAKTON®

INSTRUMENTS

...setting the standard again and again®



2011/12 Catalog

Electrochemistry

pH/Ion

Conductivity/TDS

Dissolved Oxygen

Multiparameter

Turbidity

Colorimetry



Thermometry

Thermocouple

RTD

Thermistor

Infrared



Dear Valued Customers and Marketing Partners:

Welcome to the 2011/12 Oakton Instruments Catalog!

For more than 20 years, Oakton Instruments has set the standard for innovation, value, and quality in electrochemical and temperature measurement instrumentation.

Innovation. Oakton's contributions to the industry began in 1991 with the introduction of the world's first microprocessor-based, pocket-sized pH meter. From there, Oakton's innovations expanded. From a wide range of handheld water analysis and thermometry meters to a new line of full-featured 700 and 2700 benchtop meters, Oakton has met or exceeded our customers' expectations. Our latest technological breakthroughs include the double-junction electrode (available on all pHTestrs®), wireless connectivity on our waterproof 600 meters, and dynamic reading stability indication on our new 2700-series meters.

Value. While giving customers an enhanced range of offerings, Oakton continues to provide easy-to-use products with outstanding value. In this catalog, you will find the instrumentation, probes, and consumables you need to measure electrochemistry parameters like pH, ions, conductivity, TDS, and dissolved oxygen. In addition, we've included our line of thermocouple, RTD, thermistor, and infrared thermometers along with our offering of temperature probes.

Quality. All Oakton meters are designed and manufactured at an ISO 9001 facility, and meet CE requirements for EMF. Our commitment to deliver accuracy, quality, and reliability at a competitive price makes Oakton an industry leader.

Take a look inside to find the high-performance instruments that deliver the results you need.

Sincerely,

The Oakton Instruments Team

P.S. If you like what you see here, be sure to visit www.4oakton.com. You'll find our complete selection of products and have the option to request additional Oakton catalogs.

...setting the standard again and again®

Visit us online:

Log on to www.4oakton.com for product pricing, technical data, and customer assistance:

- **Access** detailed information on new Oakton products as soon as they become available
- **Download** operating manuals and product specifications for every Oakton instrument
- **Search** our technical library for application tips based on our most frequently asked questions
- **Navigate** quickly to the information you need with our enhanced Search function
- **Find e-mail links** to the Oakton team for fast technical assistance
- **Access MSDS sheets** for Oakton solutions



Table of Contents

Electrochemistry

pH/Ion

Testers

Selection guide.....	2-3
EcoTestr™ pH 2.....	4
pHTestrs® 10, 20, 30.....	5
pH Spear.....	6
pHTestr® 10 BNC.....	7
ORPTestr® 10 and 10 BNC.....	8
Multiparameter 35-Series Testrs™.....	9

Handheld Meters

Selection guide.....	10
New pH 5+ and 6+.....	11
New Ion 6+.....	12
pH 11.....	13
pH 110.....	14
pH 300 and 310.....	15
pH 600 and 610.....	16
pH 620.....	17

Benchtop Meters

New Selection guide.....	18
New pH 700.....	19
New Ion 700.....	20
New pH 2700.....	21
New Ion 2700.....	22

Electrodes

Selection guide.....	23
Laboratory and field.....	24-27
Ion-selective.....	28-29
Solutions and accessories.....	30

Conductivity

Testers

Selection guide.....	31
EcoTestr™ TDS, EC, and Salt.....	32
TDSTestr® 11 and 11+.....	33
ECTestr® 11 and 11+.....	34
SaltTestr™ 11.....	35

Handheld Meters

Selection guide.....	36
New CON 6+.....	37
New TDS 6+ and SALT 6+.....	38
CON 11.....	39
CON 110.....	40
CON 400.....	41
CON 600 and 610.....	42

Benchtop Meters

New CON 700.....	43
New CON 2700.....	44
Probes and solutions.....	45

Dissolved Oxygen

Handheld Meters

Selection guide.....	46
New DO 6+.....	47
DO 110.....	48
DO 300.....	49
DO 600.....	50

Benchtop Meters

New DO 700.....	51
New DO 2700.....	52
Probes, solutions, and accessories.....	53

Multiparameter

Handheld Meters

pH/CON 10.....	54
pH/CON 300.....	55
pH/DO 300.....	56
PC 650.....	57
PD 650.....	58
CD 650.....	59
PCD 650.....	60

Benchtop Meters

New PC 700.....	61
New PC 2700.....	62

Optical

Introduction/Reagents and accessories.....	63
Turbidimeter.....	64
Colorimeters.....	65

Temperature

Introduction to Oakton Temperature.....	66-67
---	-------

Thermocouple Meters

Temp 10 Single-Input.....	68
Temp 300 Datalogging.....	69
Acorn® Basic K.....	70
Acorn® Temp JKT.....	71
Probes.....	72-77

RTD Meters

Selection guide.....	78
Temp 16.....	79
Temp 360 Datalogging.....	80
Acorn® Temp 6.....	81
Probes.....	82

Thermistor Meters

Selection guide.....	83
Temp 14.....	84
Temp 340 Datalogging.....	85
Acorn® Temp 4/5.....	86
Probes.....	87

Infrared Thermometers

Mini Temp Testr®.....	88
TempTestr®.....	88
InfraPro®.....	89
Mini-InfraPro™.....	90
Food TempTestr® I.....	90
Food TempTestr® II.....	91
Food Safety.....	91

Calibration	92-93
--------------------------	-------

Index	94-95
--------------------	-------

Additional Products	96-97
----------------------------------	-------

pH Measurement

What is pH measurement? The most commonly measured chemical parameter in aqueous solutions, pH is a measure of a liquid's acidity and alkalinity. It is a critical parameter in water and wastewater treatment in municipal and industrial applications, chemical production, agriculture research, and production. It is also critical in environmental monitoring, chemical and life sciences research, biochemical and pharmaceutical research, electronics production, and many more applications.



Meter Selection. Oakton offers a large selection of pH measurement instruments and kits. From pocket-sized pHTestrs®, to rugged handheld portable meters, to laboratory benchtop meters, Oakton has an instrument for practically any pH application.

Electrodes. Proper pH electrode selection is important to maximize electrode life and ensure the best possible accuracy for your application. Oakton offers a complete selection guide with applications and specifications for pH range, temperature, and diameter for each electrode (see pages 23–29).







Calibration Buffers. All pH measurement requires calibration solutions to ensure that the readings are traceable to a standard. Oakton calibration buffers do this—and more—since they are standardized against NIST-traceable references. Always choose a pH 7 buffer plus at least one other pH value close to your expected measurement range. Storage and cleaning solutions should also be used to ensure fast, reliable results from your electrodes.

Expert Advice to Ensure the Best Results. Feel free to contact your Oakton distributor to help you choose your Oakton pH measurement products. Oakton distributors are dedicated to helping you purchase the Oakton instrument that will give you the best results.



Waterproof Testrs™ Selection Guide

Use this chart to find the best Testr for your application

Meter	EcoTestr™ pH 2	pHTestrs® 10, 20, 30	pHTestr® 10 BNC	pH Spear	ORPTestr® 10 and 10 BNC	Multiparameter 35-Series Testrs™
						
See page	4	5	7	6	8	9
Parameters	pH	pH and temperature	pH	pH	ORP	pH, conductivity, TDS, salt
Electrode	Permanently fixed, single junction	Replaceable double-junction module	Not included—use any electrode with BNC connector	Replaceable double-junction spear tip probe	Choose from replaceable module or BNC model	Combined replaceable pH and conductivity module
Resolution	0.1	Up to 0.01	Up to 0.01	Up to 0.01	1 mV	Up to 0.01 pH
Accuracy	±0.1	Up to ±0.01	Up to ±0.01	Up to ±0.01	±2 mV	Up to ±0.01 pH
Display	One-line LCD	Two-line LCD	Two-line LCD	Two-line LCD	Two-line LCD	Two-line LCD
Calibration	3 points; US buffers	3 points; US or NIST buffers	3 points; US or NIST buffers	3 points; US or NIST buffers	±150 mV offset	Up to 5 points pH; up to 3 points EC/TDS

This is what makes our pocket meters better

Main Features

- User-replaceable sensor
- Valox® durable plastic casing
- IP67 waterproof
- Easy to use
- Quick, stable, and accurate results
- 1-year meter warranty;
6-month electrode warranty



Battery Compartment

- Waterproof by silicone O-ring
- Uses common button cells
- Encloses calibration buttons (for EC/TDS models)



Customized LCD

- Large and easy to read
- Clear display with unit of measurement
- Self-diagnostic messages
- Temperature readout (select models)



Waterproof to IP67 Rating

- Rugged, waterproof, and so light, it floats!
- Unique antiroll ribbed design ensures firm grip



User-Replaceable Sensor Module

- Use tester body over and over again
- Easy plug-in/plug-out connection
- Electrode modules for pH, EC/TDS, ORP, and pH/EC/TDS



pH/ORP Sensor Module

- Glass bulb of special material; tough with fast response
- PVDF reference junction minimizes contamination
- Double-junction design prolongs sensor life
- Valox® plastic for improved chemical and physical durability



EC/TDS Sensor Module

- Two-pin stainless steel
- Minimal bubble entrapment
- Easy to clean



EC/TDS+ Series Sensor Module

- Cup-type design for scooping samples
- Requires minimal sample volume



pH/EC/TDS Sensor Module

- Combines pH and conductivity
- For Multiparameter 35-Series Testers™



Top Battery Cover

- Easy to remove (no wires attached)
- Eyelet for lanyard attachment

Strong Plastic Housing

- Chemical resistant
- Physical durability

ASIC Microprocessor

- Precise and accurate calibrations
- Fast and reliable readings
- Sophisticated features

Push-Button Operations

- Simple, quick, and accurate
- Hassle-free calibration procedures

Double Silicone O-Ring

- Waterproof by silicone O-ring
- Allows easy replacement of electrode module

Protective Cap

- Reduces contamination
- Protects sensor

EcoTestr™ pH 2

Simplicity with Oakton reliability

Simple single-line display – Large upright display is easy to read

±0.1% pH full-scale accuracy – Suitable for many applications

Transparent protective cap – Doubles up as a container for sensor conditioning or on-site calibration

Waterproof, dustproof housing – Meets IP67 rating, plus it floats!

Long-lasting sensor with PVDF reference junction – Large volume of polymer gel reference gives long, clog-free, sensor lifespan

Click-lock battery compartment – Simply lift and remove cover to replace batteries; no additional tools required

Push-button calibration – Calibrate more precisely than trimpot adjustment; no screwdrivers necessary

Automatic temperature compensation (ATC) – Gives you accurate readings even with fluctuating temperatures

Hold function – Freezes reading until you can record it

Auto shutoff – Extends the life of the batteries



35423-10
EcoTestr pH 2



Transparent protective cap keeps sensor moist when stored upright.



Convenient pocket/belt clip



Convenient, soft vinyl, belt-loop carrying case 35624-45 keeps tester handy.



Hydroponics



Education



Swimming Pools

Specifications

ISO9001:2000
CERTIFIED SUPPLIER

CE 1 year warranty meter only

Model	EcoTestr pH 2
Range	0.0 to 14.0 pH
Resolution	0.1 pH
Accuracy	±0.1 pH
Calibration	Three-point, automatic (4.0, 7.0, or 10.0)

Temperature compensation:

automatic (ATC), from 0 to 50°C (32 to 122°F)

Operating temperature:

0 to 50°C (32 to 122°F)
Power: four 1.5 V alkaline batteries (included), 250 hrs continuous use: Eveready® A76 or LR44 equivalent replacement

Dimensions

Unit only: 1¼" x 1½" x 6½" (3.2 x 3.8 x 16.8 cm)

Boxed: 1½" x 5¼" x 9¾" (3.8 x 13.6 x 24.8 cm)

Weight

Unit only: 3.25 oz (90 g); Boxed: 6 oz (170 g)

Ordering Information

Catalog number	Description	Included
WD-35423-10	EcoTestr pH 2	Tester, integral sensor, and batteries

Accessories

WD-35624-45 Belt-loop waterproof carrying case; holds one waterproof tester (order separately). Snap lock fastens case around your belt; hook-and-loop seal secures tester. Pictured above. 5½"L x 2"W x 7¾"H (14 x 5 x 20 cm).

WD-35624-70 Calibration kit includes calibration buffer pouches (two each of pH 4.01, 7.00, 10.00, and rinse water), sample jar, and hard carrying case. (Tester not included)

WD-09377-16 Replacement batteries, 1.5 V. Pack of 6

pHTestrs® 10, 20, and 30

Our most popular pHTestr® offers a larger display, with more information to make measurement easier

Unique double-junction electrode design – For significantly longer electrode life, especially in harsh applications like wastewater, plating baths, life science, and food

Waterproof, dustproof housing – IP67 rated, maintains the integrity of your tester even in dirty or damp field conditions. Plus, it floats!

Replaceable electrode module – Reuse the same meter body for cost savings

Push-button calibration with auto-buffer recognition

Automatic temperature compensation (ATC) – Gives you accurate readings even with fluctuating temperatures

Hold function – Freezes reading so that you can record it

Self-diagnostic error messages – Make troubleshooting easier

Auto shutoff – Extends the life of the batteries

pHTestr 10 features – Three-point calibration, ± 0.1 pH accuracy

pHTestr 20 features – Three-point calibration, ± 0.01 pH accuracy

pHTestr 30 features – Three-point calibration, ± 0.01 pH accuracy, and simultaneous temperature display



All Oakton® waterproof pHTestrs float!



Large LCD display



35634-30
Waterproof
double-junction
pHTestr 30

ISO9001:2000
CERTIFIED SUPPLIER



1 year
warranty
meter only

Specifications

Model	pHTestr 10	pHTestr 20	pHTestr 30
Range	–1.0 to 15.0 pH	–1.00 to 15.00 pH	–1.00 to 15.00 pH
Resolution	0.1 pH	0.01 pH	0.01 pH
Accuracy	± 0.1 pH	± 0.01 pH	± 0.01 pH
Temperature display	—	—	0 to 50°C (32 to 122°F)
Calibration	Three point at either pH 4.0, 6.86/7.0, or 9.18/10.0		

Temperature compensation: automatic (ATC), from 0 to 50°C (32 to 122°F)

Operating temperature: 0 to 50°C (32 to 122°F)

Special functions: On/Off or Auto-Off after 8.5 minutes; Hold; Calibrate and Confirm

Power: four 1.5 V alkaline batteries (included), >500 hours continuous use; Eveready® A76 or LR44 equivalent replacement

Dimensions

Unit only: 6½" x 1½" dia (16.5 x 3.8 cm)

Boxed: 7¼" x 2½" x 2" (18.4 x 6.4 x 5.0 cm)

Weight

Unit only: 3.25 oz (90 g); **Boxed:** 4.5 oz (125 g)

Ordering Information

Catalog number	Description	Included
WD-35634-10	pHTestr 10	Tester, detachable electrode sensor, and batteries
WD-35634-20	pHTestr 20	Tester, detachable electrode sensor, and batteries
WD-35634-30	pHTestr 30	Tester, electrode, detachable electrode sensor, calibration buffer pouches, and batteries

WD-35624-38 Replacement electrode sensor for pHTestr 10, 20, and 30

WD-35634-70 pHTestr 10 calibration kit includes Testr, calibration buffer pouches (two each of pH 4.01, 7.00, 10.00 and rinse water), sample jar, and sturdy carrying case

WD-35634-80 pHTestr 20 calibration kit includes Testr, calibration buffer pouches (two each of pH 4.01, 7.00, 10.00 and rinse water), sample jar, and sturdy carrying case

WD-35634-90 pHTestr 30 calibration kit includes Testr, calibration buffer pouches (two each of pH 4.01, 7.00, 10.00 and rinse water), sample jar, and sturdy carrying case



Water Treatment



Laboratory



Industrial



Food

pH Spear

Great for food applications!

Rugged spear tip electrode – Easily penetrates soft solids and semisolids

Slender housing and electrode fit into test tubes and microtubes – Less expensive than a micro pH electrode

Unique open-pore double junction electrode design – Resists clogging and contamination

±0.01 pH accuracy with push-button three-point calibration – Calibrate at 4.01, 7.00, and 10.00. Tester automatically provides offset and two slope adjustments

Waterproof, dustproof housing – IP67 rated, so there's no need to worry if you drop your tester into water—it even floats!

Replaceable electrode module – Reuse the same meter body

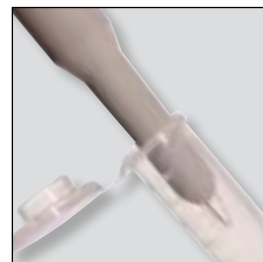
Error messages, Hold function, Auto-off



35634-40
Waterproof
pH Spear



pH Spear is perfect for a variety of food applications.



Fits into microtubes and test tubes.



Food



Laboratory



Pharmaceuticals

Specifications

Model	pH Spear
Range	–1.00 to 15.00 pH
Resolution	0.01 pH
Accuracy	±0.01 pH at normal room temperature; ±0.05 pH at extremes in temperature range
Calibration	Select up to three points (USA: 4.01; 7.00; 10.00 or NIST: 4.01; 6.86; 9.18)

Temperature compensation: fixed at 25°C or manual

Operating temperature: 0 to 50°C (32 to 122°F)

Special functions: On/Off or Auto-Off after 8.5 minutes;
Hold; Calibrate and Confirm

Power: four 1.5 V alkaline batteries (included),
approximately 500 hours use; Eveready® A76 or
LR44 equivalent replacement

Dimensions

Unit only: 6½" x 1½" dia (16.5 x 3.8 cm)

Boxed: 7¼" x 2¾" x 1⅞" (18.4 x 7 x 4.8 cm)

Weight

Unit only: 3.25 oz (90 g); **Boxed:** 6 oz (170 g)

ISO9001:2000
CERTIFIED SUPPLIER



1 year
warranty
meter only

Ordering Information

Catalog number	Description	Included
WD-35634-40	pH Spear	Tester, spear tip electrode, and batteries

WD-35634-50 Replacement electrode for pH Spear

WD-35624-70 Calibration kit includes calibration buffer pouches (two each of pH 4.01, 7.00, 10.00, and rinse water), sample jar, and hard carrying case. (Tester not included)

WD-09377-16 Replacement batteries, 1.5 V. Pack of 6

pHTestr® 10 BNC

Waterproof, dustproof tester connects to any pH electrode with BNC connector

Connects to any electrode with BNC connector

– Use tester in virtually any application, even highly specialized ones

±0.01 pH accuracy – Performs like an advanced handheld meter with pocket-sized convenience

Microprocessor-based functions – For fast, stable readings

Push-button calibration with auto-buffer recognition; three-point calibration – At pH 4.01, 7.00, and 10.00

Waterproof, dustproof housing – IP67-rated housing, maintains the integrity of your tester even in harsh field conditions. Plus, it floats, so you won't lose your tester by dropping it into a tank or pond.

Hold function – Freezes reading so that you can record it

Self-diagnostic error messages – Make troubleshooting easier

Auto shutoff – Extends the life of the batteries



Use with direct connect or cabled electrodes.



IP67-rated waterproof, dustproof housing floats. Shown with direct current electrode.



35634-14
pHTestr 10 BNC

BNC connection lets you connect a wide variety of electrodes.

ISO9001:2000
CERTIFIED SUPPLIER



1 year
warranty
meter only

Specifications

Model	pHTestr 10 BNC
Range	–1.00 to 15.00 pH
Resolution	0.01 pH
Accuracy	±0.01 pH (meter only, or when calibration and tests are at room temperature [16 to 27°C])
Calibration	Select up to three points (USA: 4.01; 7.00; 10.00 or NIST: 4.01; 6.86; 9.18)

Temperature compensation: fixed at 25°C or manual

Operating temperature: 0 to 50°C (32 to 122°F)

Special functions: On/Off or Auto-Off after 8.5 minutes; Hold; Calibrate and Confirm

Power: four 1.5 V alkaline batteries (included), approximately 250 hours continuous use; Eveready® A76 or LR44 equivalent replacement

Dimensions

Unit: 5 7/8" L x 1 1/2" W x 3/4" H (15 x 4 x 2.5 cm)

Boxed: 7 3/4" L x 2 3/4" W x 1 1/8" H (18.4 x 7 x 4.8 cm)

Weight

Unit: 3.25 oz (90 g); **Boxed:** 6 oz (170 g)

Ordering Information

Catalog number	Description	Included
WD-35634-14	pHTestr 10 BNC	Tester and batteries (Order BNC electrode separately below)

WD-35624-70 Calibration kit includes calibration buffer pouches (two each of pH 4.01, 7.00, 10.00, and rinse water), sample jar, and hard carrying case. (Tester not included)

WD-09377-16 Replacement batteries, 1.5 V. Pack of 6

pH Electrodes

These cable-free electrodes plug directly into tester for easy one-handed operation. Use single-junction electrodes for clean water applications. Use double-junction electrodes for solutions with organics, sulfides, heavy metals, Tris buffers, or high pH. All electrodes feature sealed, epoxy-body construction and BNC connector. For a wider selection of pH electrodes, including electrodes with cables, see pages 23–29.

Catalog number	Description	pH range	Junction	Applications
WD-35804-00	12 mm dia	0 to 12	Single	Clean water, low ionic strength solutions.
WD-35804-10	Flat surface; 12 mm dia	0 to 12	Single	For surface testing such as gels, food, skin, floors, concrete. For small-liquid volumes.
WD-35804-08	12 mm dia	0 to 14	Double	Dirty water, high-strength solutions, has low-sodium error above pH 12.
WD-35804-02	12 mm dia	0 to 12	Double	Dirty water, high-strength solutions, life sciences, Tris buffers.
WD-35804-03	9 mm dia	0 to 12	Double	Small diameter fits test tubes. Dirty water, high-strength solutions.



Environmental
Testing



Cooling Towers



Laboratory

ORPTestr® 10 and ORPTestr 10 BNC

Waterproof, dustproof tester for convenient testing of oxidation-reduction (REDOX) potential

Double-junction electrode design – For significantly longer electrode life, especially in applications with harsh chemicals (ORPTestr 10 only)

Wide mV range – From –999 to +1000 mV for an array of common applications

Offset of ±150 mV – Keypad adjustment to calibration solution or to an established work standard

Microprocessor-based functions – For fast, stable readings

Replaceable electrode module – Reuse the same tester body over and over

Waterproof, dustproof housing – IP67-rated housing protects your tester even in harsh field or plant conditions. And it floats, so you won't lose your tester by dropping it into a tank or pond!

Hold function – Freezes reading so that you can record it

Self-diagnostic error messages – Make troubleshooting easier

Auto shutoff – Extends the life of the batteries



IP67-rated waterproof, dustproof housing floats!



Electrode sensors are easily replaceable without affecting waterproof rating.



Double-junction electrode allows for long electrode life, even in harsh applications.

35650-10

BNC connection lets you connect a wide variety of electrodes.

35650-14



Swimming Pools



Industrial



Wastewater Treatment

Specifications

ISO9001:2000
CERTIFIED SUPPLIER

CE
1 year
warranty
meter only

Model	ORPTestr 10
Range	–999 to +1000 mV
Resolution	1 mV
Accuracy	±2 mV
Calibration	Offset adjustment ±150 mV; brings ORPTestr into agreement with your work standard

Operating temperature: 0 to 50°C (32 to 122°F)

Special functions: On/Off or Auto-Off after 8.5 minutes; Hold; Calibrate and Confirm

Power: four 1.5 V alkaline batteries (included).
Eveready® A76 or LR44 equivalent replacement

Dimensions

Meter: 6½" L x 1½" dia (16.5 x 3.8 cm)

Boxed: 7¼" L x 2¾" W x 1⅞" H (18.4 x 7 x 4.8 cm)

Weight

Meter: 3.25 oz (90 g); **Boxed:** 6 oz (170 g)

Ordering Information

Catalog number	Description	Included
WD-35650-10	ORPTestr 10	Tester, replaceable double-junction electrode sensor, and batteries
WD-35650-14	ORPTestr 10 BNC	Tester with BNC connection and batteries (electrode not included)

Accessories

WD-35624-45 Belt-loop waterproof carrying case; holds one waterproof tester (order separately). Snap lock fastens case around your belt; hook-and-loop seal secures tester. Pictured at right. 5½" L x 2" W x 7⅞" H (14 x 5 x 20 cm).

WD-35650-09 Replacement electrode sensor for ORPTestr 10

WD-35805-13 ORP electrode; single junction, epoxy-body, gel-filled electrode with 3-ft (1-m) cable. For use with ORPTestr 10 BNC

WD-09377-16 Replacement batteries, 1.5 V. Pack of 6



Multiparameter 35-Series Testrs™

Our most versatile Testrs combine up to five measurements in one pocket-sized meter

Determine pH, conductivity, TDS, salinity, and temperature – Great for water, wastewater, laboratory, or plant use

Accuracy up to ± 0.01 for pH; $\pm 1\%$ full-scale for EC/TDS/salt – Ideal for a wide variety of applications

Long-lasting pH sensor with PVDF reference junction – Large volume of polymer gel reference gives long, clog-free sensor lifespan

Stainless steel pin-style conductivity sensors – Durable and compatible with a wide range of samples

Adjustable TDS factor, temperature coefficient, and salinity factor – Provide accurate readings under changing conditions

Push-button calibration – Calibrate more precisely than trimpot adjustment; no screwdrivers necessary

Automatic temperature compensation (ATC) – Gives you accurate readings even with fluctuating temperatures

Waterproof, dustproof housing – Meets IP67 rating, plus it floats!

Hold function – Freezes reading until you can record it

Auto shutoff – Extends the life of batteries



Sensor includes both pH and conductivity/TDS/salt probes.



35425-00

35425-05

35425-10

Ordering Information

Catalog number	Description
WD-35425-00	PCTestr 35 (pH/conductivity)
WD-35425-05	PTTestr 35 (pH/TDS)
WD-35425-10	PCSTestr 35 (pH/conductivity/TDS/salt)

Accessories

WD-35425-50 Replacement pH/conductivity/TDS/salinity sensor module for all 35-series Testrs

Applications

Water quality: Hydroponics/agriculture, research labs, industrial process checks, pools, and spas, drinking water, wastewater, aquaculture.

Specifications

ISO9001:2000
CERTIFIED SUPPLIER



1 year
warranty
meter only

	Model	PCTestr 35	PTTestr 35	PCSTestr 35
Range	pH	0.0 to 14.0 pH	0.0 to 14.0 pH	0.00 to 14.00 pH
	Conductivity	0 to 2000 μ S; 2.00 to 20.00 mS	—	0 to 200 μ S, 201 to 2000 μ S; 2.01 to 20.00 mS
	TDS	—	0 to 1000 ppm; 1.00 to 10.00 ppt	0.0 to 99.9 ppm, 100 to 999 ppm; 1.00 to 10.00 ppt
	Salinity	—	—	0 to 10.00 ppt
	Temperature	0 to 50°C (32 to 122°F)	0 to 50°C (32 to 122°F)	0 to 50°C (32 to 122°F)
Resolution	pH	0.1 pH	0.1 pH	0.01 pH
	Conductivity	10 μ S; 0.1 mS	—	0.1 μ S, 1 μ S; 0.01 mS
	TDS	—	1 ppm; 0.01 ppt	0.1 ppm, 1 ppm; 0.01 ppt
	Salinity	—	—	0.1 ppm, 1 ppm; 0.01 ppt; 0.01%
	Temperature	0.1°	0.1°	0.1°
Accuracy	pH	± 0.1 pH	± 0.1 pH	± 0.01 pH
	Conductivity	$\pm 1\%$ full-scale	—	$\pm 1\%$ full-scale
	TDS	—	$\pm 1\%$ full-scale	$\pm 1\%$ full-scale
	Salinity	—	—	$\pm 1\%$ full-scale
	Temperature	$\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$)	$\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$)	$\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$)
Calibration	pH	3 points	3 points	5 points
	Conductivity	2 points	—	3 points
	TDS	—	2 points	3 points
	Salinity	—	—	1 point
	Temperature	1 point	1 point	1 point

Temperature compensation: automatic (ATC), from 0 to 50°C (32 to 122°F) or manual

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V alkaline batteries (included), approximately 250 hours continuous use; Eveready® A76 or LR44 equivalent replacement

Dimensions

Unit only: 6½" x 1½" dia (16.5 x 3.8 cm)

Boxed: 7¼" x 2½" x 2" (18.4 x 6.4 x 5.0 cm)

Weight

Unit only: 3.25 oz (90 g); **Boxed:** 6 oz (170 g)

Handheld pH/Ion Meter Selection Guide

Oakton® handheld meters offer a wide range of features ideal for portability in the field. These meters are generally available with either a separate pH electrode and temperature probe, or a combination “All-in-One” pH and temperature sensor. Designed for a variety of applications, many of these meters offer special features such as:

- mV readings for ORP measurement
- Ion concentration readings
- Auto-buffer recognition and selectable buffer sets
- Up to 6-point pH calibration
- Auto shutoff, Hold function, and error messages
- Optional AC adapter and built-in table stand for benchtop use
- Data management functions such as memory and RS-232 output
- Calibration kits and multiparameter meters that read pH and conductivity, TDS, or dissolved oxygen are also available



5+/6+ series



Standard series



Waterproof 300 series



Waterproof 600 series

Use this chart to find the best handheld pH or ion meter for your application

Meter	5+/6+ series <i>New</i>	Standard series Models 11/110	Waterproof 300 series Models 300/310	Waterproof 600 series Models 600/610/620
See pages	11–12	13–14	15	16–17
Description	Low cost, rugged compact	Economical, dual-display meter	Handles rough environments	Most powerful, ideal for the field
Display	Single-line LCD	Dual LCD	Dual LCD	Multi-line dot matrix
IP67 rated housing	—	—	Yes	Yes
Memory	—	Up to 100 points	Up to 100 points	Up to 500 points
Communication	—	RS-232 available	—	IrDA
Real-time clock	—	—	Available	Available
pH calibration points	3	5 or 6	5 or 6	5 or 6
Auto buffer recognition	Yes	Yes	Yes	Yes
Selectable buffer sets	Yes	Yes	Yes	Yes
Automatic endpoint	—	—	Yes	Yes
Automatic shutoff	After 17 minutes	After 20 minutes	After 20 minutes	Yes, adjustable
Hold function	Yes	Yes	Yes	Yes
Ready/stability indicator	—	Yes	Yes	Yes
Error messages	Yes	Yes	Yes	Yes
Protective rubber boot	Included	—	—	Optional
Built-in stand	Yes (in boot)	Yes	—	Yes (in boot)
Optional AC power	—	Yes	—	Yes

pH 5+ and 6+ Meters

These rugged, compact meters offer high accuracy at an extremely affordable price!

Simple push-button operation – So fast and easy, anyone can use it

Toggle between pH and temperature in °C with a press of a button

Three-point pH calibration – Choose from standard US, NIST, and pure water; gives you high ± 0.01 pH accuracy

Auto buffer recognition – Automatically identifies the correct pH buffer for rapid calibration

Calibration instructions are printed on back of meter – For quick reference and added convenience

Automatic temperature compensation (ATC) – For the highest accuracy in changing temperature conditions

Hold and Auto-off functions

Built-in stand for benchtop or long-term use

Protective boot – Helps shield your meter from drops and dings

Meter kits available – Contain everything you need for calibration and measurement packaged in a hard carrying case—the best option.

pH 6+ also features

Measurements in pH, mV, and °C – Use for ORP (Redox) measurements

New



Meters include protective rubber boot and a built-in stand.



35613-52

Specifications

Model	pH 5+ and pH 6+ meters		pH 6+ meter only
Mode	pH	Temperature	mV
Range	0.00 to 14.00 pH	0.0 to 100.0°C	± 1000 mV
Resolution	0.01 pH	0.1°C	1 mV
Accuracy	± 0.01 pH	$\pm 0.5^\circ\text{C}$	± 2 mV
Calibration	Up to 3 buffer values: choose from standard US, NIST, and pure water buffer values	Offset 0.1°C increments	± 20 mV

Temperature compensation:

automatic from 0.0 to 100.0°C

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >70 hours continuous use

Dimensions

Meter: 5½"L x 2¾"W x 1¾"H (14 x 7 x 3.5 cm)

Boxed: 9¼"L x 6½"W x 3"H (23.5 x 16.5 x 7.5 cm)

Weight

Meter: 0.9 lb (0.4 kg); **Boxed:** 1 lb (0.5 kg)

Ordering Information

Catalog number	Description	Included
WD-35613-50	pH 5+ meter only	Meter, protective rubber boot, and batteries
WD-35613-20	pH 6+ meter only	
WD-35613-52	pH 5+ meter with probes	Meter; single-junction, epoxy-body pH electrode; temperature probe 35613-05; protective rubber boot; and batteries
WD-35613-22	pH 6+ meter with probes	
WD-35613-54	pH 5+ meter kit	Meter; single-junction, epoxy-body pH electrode; temperature probe 35613-05; pH buffer pouches (pH 4.01, 7.00, 10.00; and rinse water), sample bottles, protective rubber boot; batteries; and hard carrying case
WD-35613-24	pH 6+ meter kit	

Accessories

WD-35804-00 Replacement pH electrode

WD-35613-05 Replacement ATC probe



Water Quality Testing



Lithographic Processes



Education

Ion 6+ Meter

Direct readout of ion concentration at affordable pricing!

Use with pH or most ISE electrodes with BNC connectors – The ± 500 mV range covers the vast majority of ISEs

mV measurement mode – Allows you to check performance and calibration of your ion-selective electrode

Simple to use – Preprogrammed calibration points allow even beginners to take readings in minutes!

pH and temperature ($^{\circ}\text{C}$) readout – With high ± 0.01 pH/ $\pm 0.5^{\circ}\text{C}$ accuracy

Automatic temperature compensation (ATC) for pH – For the highest accuracy in changing temperature conditions

Compact size – Take your Ion 6+ meter anywhere!

All push-button operation – For fast, easy use

Hold and Auto-off functions

Built-in stand for benchtop or long-term use

Protective boot – Helps shield your meter from drops and dings

New



Meter includes protective rubber boot and a built-in stand.



See pages 28–29 for ion-selective electrodes



Drinking Water



Water Treatment



Food Processing

Specifications

Mode	Ion	mV	pH	Temperature
Range	0.01 to 1999 units	-500 to +500 mV	0.00 to 14.00 pH	0.0 to 100.0 $^{\circ}\text{C}$
Resolution	0.01 unit (0.01 to 0.99 units), 0.1 unit (0.1 to 199.9 units), 1 unit (200 to 1999 units)	0.1 mV within ± 199.9 mV, 1 mV beyond ± 200 mV	0.01 pH	0.1 $^{\circ}\text{C}$
Accuracy	$\pm 1\%$ full-scale	± 0.2 mV within ± 199.9 mV, ± 2 mV beyond ± 200 mV	± 0.01 pH	$\pm 0.5^{\circ}\text{C}$
Calibration	2 or 3 points; 0.1, 1, 10, 100 ppm (minimum 2 points)	Not available	Up to 3 buffer values From standard USA or NIST buffer sets, auto-buffer recognition	Offset 0.1 $^{\circ}\text{C}$ increments

Minimum slope during ion calibration: 40 mV/decade for monovalent ions; 20 mV/decade for divalent ions

pH slope range: 80 to 120%

Temperature compensation: manual or automatic from 0.0 to 100.0 $^{\circ}\text{C}$

Operating temperature: 0 to 50 $^{\circ}\text{C}$ (32 to 122 $^{\circ}\text{F}$)

Power: four 1.5 V AAA batteries (included), >200 hours continuous use

Dimensions

Meter: 5 1/2" x 2 3/4" x 1 3/8" (14 x 7 x 3.5 cm)

Boxed: 9 1/4" x 6 1/2" x 3" (23.5 x 16.5 x 7.5 cm)

Weight

Meter only: 0.9 lb (0.4 kg); **Boxed:** 1 lb (0.5 kg)

Ordering Information

Catalog number	Description	Included
WD-35613-80	Ion 6+ meter only	Meter, protective rubber boot, and batteries
WD-35613-82	Ion 6+ meter kit	Meter; single-junction, epoxy-body pH electrode; temperature probe; sample bottles; calibration buffer pouches; carrying case; protective rubber boot; and batteries

Accessories

WD-35804-00 Replacement pH electrode

WD-35613-05 Replacement ATC probe

ISO9001:2000
CERTIFIED SUPPLIER

CE 3 year
warranty
meter only

pH 11 Economy Meter

Economical meter lets you see BOTH pH or mV and temperature at a glance!

Measurements in both pH and mV

Built-in memory function – Stores up to 50 readings

Five-point pH calibration – Choose US or NIST buffer sets

Selectable manual or automatic temperature compensation (ATC) – For the highest accuracy in any situation

Auto buffer recognition – Automatically identifies the correct pH buffer for rapid calibration

Ready indicator – Indicates when reading has stabilized, so you always record the best reading

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter to save batteries

Use with most electrodes with BNC connector

Power with batteries or optional AC adapter – For use in the field or at your benchtop using built-in stand

Available as a kit – Complete with calibration buffers, rinse bottle, and protective carrying case



pH 11 meter kit contains everything you need for calibration and measurement in a hard carrying case.



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Mode	pH	mV	Temperature
Range	–2.00 to 16.00 pH	–199.9 to +199.9 mV, –1999 to +1999 mV	–10.0 to 110.0°C
Resolution	0.01 pH	0.1 mV/1 mV	0.1°C
Accuracy	±0.01 pH	±0.2 mV ±199.9 mV, ±2 mV beyond ±199.9 mV	±0.5°C
Calibration	Up to 5 buffer values: pH 1.68, 4.01, 6.86/7.00, 9.18/10.01, 12.45	—	Offset 0.1°C increments

Temperature compensation: automatic or manual from 0 to 50°C

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >600 hours continuous use; 9 V, 500 mA; AC adapter (optional)

Dimensions

Meter: 7½" L x 3½" W x 1¼" H (19 x 9 x 4.5 cm)

Boxed: 9½" L x 9½" W x 2¾" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 1.4 lb (0.7 kg)

Ordering Information

Catalog number	Description	Included
WD-35614-22	pH 11 meter only	Meter, two electrodes holders, and batteries
WD-35614-20	pH 11 meter with probe	Meter, "All-in-One" pH/temperature probe 35811-71, two electrode holders, and batteries
WD-35614-80	pH 11 meter kit	Meter, "All-in-One" pH/temperature probe 35811-71, calibration buffer pouches, sample bottles, two electrode holders, batteries, and hard carrying case

Accessories

WD-35615-07 AC adapter, 100/240 VAC

WD-35811-72 Double-junction "All-in-One" electrode

WD-09376-00 Replacement batteries, 1.5 V AAA. Pack of 12

WD-35615-75 Portable meter carrying case.

Protects your instrument while still letting you take measurements—case's top and side openings let probe and probe connections remain accessible. (Meter and probes not included).



Laboratory



Ecology Studies



Water Testing

pH 110 Meter

Features RS-232 output and advanced setup mode!

Recall electrode slope, electrode offset value, and previous calibration data

Built-in memory function – Stores up to 100 pH, mV, or relative mV readings, along with temperature data

FREE Oakton® datalog software on a CD-ROM – Helps organize data to import into many popular spreadsheet programs

Five-point pH calibration – Choose from US, NIST or DIN buffer sets

Automatic buffer recognition – For quick pH calibration

Features mV offset – For calibration to ORP standards, zeroing the mV value, and pH electrode diagnostics

Selectable manual or automatic temperature compensation (ATC) – For highest accuracy in any situation

°C/°F selectable

Hold and Auto-off functions; Error messages

Power with batteries or optional AC adapter – Use in the field or at your benchtop using built-in meter stand

Available as a kit – Complete with calibration buffers, sample bottles, and protective carrying case



Download data readings into your computer.



Use an optional printer to create hard copies of your readings.



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Mode	pH	mV	Temperature
Range	-2.00 to 16.00 pH	±2000 mV (same for relative mV)	-10 to 110.0°C (14 to 230°F)
Resolution	0.01 and 0.1 pH (selectable)	0.1 mV ±399.9 mV, 1 mV beyond	0.1°C
Accuracy	±0.01 pH	±0.2 mV ±399.9 mV, 2 mV beyond	±0.5°C
Calibration	Up to 5 buffer values: 1.09, 1.68/3.06, 4.01/4.65, 6.79/6.86/6.97/7.01, 9.18/10.01, 12.45/12.75	Offset to ±2000 mV	Offset 0.1°C increments

Temperature compensation: manual or automatic (selectable) from 0 to 100°C

Operating temperature: 0 to 50°C (32 to 122°F)

Memory: stores up to 100 sets

RS-232 specifications

Baud rate: 2.4; 4.8; 9.6 and 19.2 kbps selectable

Stop bit: 1 or 2 selectable

Parity: odd (1); even (2); or none (0) selectable

RS-232 output connector: 9-pin female

Computer requirements: 386 and above that can run Microsoft Windows® 95 or higher, CD-ROM drive, hard disk with approx. 500 KB free disk space, EGA monitor or above, 9-pin serial port connecting cable, mouse

Power: four 1.5 V AAA batteries (included), >600 hours continuous use; 9 V, 500 mA; AC adapter (optional)

Dimensions

Meter: 7½" x 3½" x 1¼" (19 x 9 x 4.5 cm)

Boxed: 9½" x 9½" x 2¼" (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 1.4 lb (0.6 kg)

Ordering Information

Catalog number	Description	Included
WD-35615-22	pH 110 meter only	Meter, software, two electrode holders, and batteries
WD-35615-20	pH 110 meter with probe	Meter, single-junction "All-in-One" pH/temperature probe 35811-71, two electrode holders, software, and batteries
WD-35615-80	pH 110 meter kit	Meter, "All-in-One" probe 35811-71, pH buffer calibration pouches, sample bottles, software, two electrode holders, batteries, and hard carrying case

Accessories

WD-35615-07 AC adapter, 100/240 VAC

WD-35811-72 "All-in-One" pH/temperature probe, double junction, epoxy body

WD-09376-00 Replacement batteries, 1.5 V AAA. Pack of 12

WD-35615-75 Portable meter carrying case. Protects your instrument while still letting you take measurements

RS-232 Computer/Printer Accessories

WD-35615-09 Computer cable, 9-pin male to 9-pin female connects meter to your PC

WD-35622-00 Portable printer, 110 VAC, rechargeable. Shpg wt 2 lb (0.9 kg)

WD-35622-05 Portable printer, 220 VAC, rechargeable. Shpg wt 2 lb (0.9 kg)

WD-35622-59 Printer cable, 25-pin male to 9-pin male connects meter to your printer



Industrial



Pharmaceuticals



Laboratory

pH 300 and pH 310 Meters

Highly advanced microprocessor-based pH meters with a superior waterproof housing...and they FLOAT!

Durable waterproof and dustproof design with IP67 rating

Ideal for dirty, wet environments or food-related applications

Store and recall pH with temperature readings

Push-button pH calibration at five points – 1.68, 4.01, 7.01, 10.01, and 12.45

Automatic buffer recognition

Selectable manual or automatic temperature compensation (ATC) – For the highest accuracy in any situation

Advanced setup mode – Lets you customize meter to your application

Hold, Ready indicator, and Automatic shutoff functions

Available as a complete field calibration kit, most convenient option

pH 310 also features:

Built-in real-time clock – Stamps stored data and calibration data with date and time—meets standards for GLP (Good Laboratory Practices)

Expanded memory – Stores and recalls up to 50 readings with temperature

°C/°F selection

Automatic endpoint – Automatically freezes reading when stable

Selectable buffer sets for USA, NIST, and DIN buffers



Waterproof meters float if accidentally dropped into water.



ISO9001:2000
CERTIFIED SUPPLIER

3 year
warranty
meter only

Specifications

	Model	pH 300 meter	pH 310 meter
Range	pH	–2.00 to 16.00 pH	–2.00 to 16.00 pH
	mV	±2000 mV	±2000 mV
	Temperature	0.0 to 100.0°C	0.0 to 100.0°C; 32.0 to 212.0°F (selectable)
Resolution	pH	0.01 pH	0.01 pH
	mV	0.1 mV ±199.9 mV, 1 mV beyond ±199.9 mV	0.1 mV ±199.9 mV, mV beyond ±199.9 mV
	Temperature	0.1°C	0.1°C; 0.1°F
Accuracy	pH	±0.01 pH	±0.01 pH
	mV	±0.2 mV ±199.9 mV, ±2 mV beyond ±199.9 mV	±0.2 mV ±199.9 mV, ±2 mV beyond ±199.9 mV
	Temperature	±0.5°C	±0.5°C; ±0.5°F ±2 mV beyond ±199.9 mV
Calibration	pH	Up to 5 buffer values: 1.68, 4.01, 7.01, 10.01, 12.45	Up to 6 buffer values (select from 3 sets): USA: 1.68, 4.01, 7.01, 10.00, 12.45 NIST: 1.68, 4.01, 6.86, 9.18, 12.45 DIN: 1.09, 2.06, 4.65, 6.79, 9.23, 12.75
	mV	Offset up to ±150 mV	Offset up to ±150 mV
	Temperature	Offset 0.1°C increments	Offset 0.1°C or 0.1°F increments
Memory		Up to 16 sets	Up to 50 sets with date and time
Real-time clock		None	Time-and-date stamp on calibration and stored data

Temperature compensation: automatic or manual (selectable) from 0 to 100°C

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >100 hours continuous use

Dimensions

Meter: 7½" L x 3¼" W x 2¼" H (19 x 9.5 x 5.7 cm)

Boxed: 9½" L x 9½" W x 2¼" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35618-02	pH 300 meter only	Meter and batteries
WD-35618-12	pH 310 meter only	Meter and batteries
WD-35618-03	pH 300 meter with probe	Meter, "All-in-One" probe 35808-71, and batteries
WD-35618-13	pH 310 meter with probe	Meter, "All-in-One" probe 35808-71, and batteries
WD-35618-70	pH 300 meter kit	Meter, "All-in-One" probe, pH buffer calibration pouches (five each of 4.01, 7.00, 10.00, and rinse water), sample bottles, two electrode holders, batteries, and hard carrying case
WD-35618-72	pH 310 meter kit	Meter, "All-in-One" probe, pH buffer calibration pouches (five each of 4.01, 7.00, 10.00, and rinse water), sample bottles, two electrode holders, batteries, and hard carrying case

WD-35808-71 Replacement "All-in-One" pH/temperature probe, single junction, epoxy body

WD-35808-72 "All-in-One" pH/temperature probe, double junction, epoxy body

WD-35614-79 Calibration kit includes pH buffer pouches (five each of 4.01, 7.00, 10.00, and rinse water), squeeze bottle, and hard carrying case. (Meter not included)



Aquaculture



Environmental
Testing

pH 600 and pH 610 Meters

Expanded range, resolution, and accuracy—plus increased memory and advanced communications!

Durable waterproof and dustproof design with IP67 rating – Even with no probes attached

Push-button pH calibration at up to six points – Up to 15 buffer options with auto-buffer recognition of USA, NIST, DIN, and PWB standards

Large backlit graphic display – Multi-line display with electrode status indicator, calibration data, and more

User-settable “calibration due” alarm – Out-of-date or unperformed calibrations are now things of the past!

Built-in real-time clock – Time-and-date stamping meets Good Laboratory Practice (GLP) standards

Store up to 500 data sets – Infrared IrDA wireless technology makes PC downloading convenient and easy

Set point alarms – Audible warning when readings are outside set points limit

Research-grade accuracy – Resolution to 0.001 pH and accuracy to ± 0.002 pH on pH 610 model

Electrode status indicator – Calibration data provides electrode diagnostic tool

Password protection – Security for calibration and setup menus

Complete kits are available – Include meter, probe, solutions, and carrying case



35418-12

ISO9001:2000
CERTIFIED SUPPLIER

3 year
warranty
meter only

Specifications

Model	pH 600 meter	pH 610 meter
Range	pH	–2.00 to 19.99
	mV	± 2000 mV
	Temperature	–10.0 to 110.0°C (14.0 to 230.0°F), selectable
Resolution	pH	0.1/0.01 pH
	mV	0.1 mV
	Temperature	0.1°C (0.1°F)
Accuracy	pH	± 0.01 pH
	mV	± 0.2 mV
	Temperature	$\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$)
Calibration	pH	Up to 6 buffer values (select from 4 sets): USA 1.68, 4.01, 7.01, 10.01, 12.45; NIST: 1.68, 4.01, 6.86, 9.18, 12.45; DIN: 1.09, 2.06, 4.65, 6.79, 9.23, 12.75, or custom buffers
	mV	Offset up to ± 150 mV
	Temperature	Offset 0.1°C (0.1°F) increments

Memory: up to 500 sets with GLP date and time

Output: infrared, IrDA

Real-time clock: time-and-date stamp on calibration and stored data

Temperature compensation: automatic or manual (selectable) from 0 to 100°C

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AA batteries (included) or optional universal AC adapter, up to 500 hours continuous use

Dimensions

Meter: 7¼" L x 3¼" W x 2¼" H (18.4 x 8.3 x 5.7 cm)

Boxed: 9½" L x 9½" W x 2¼" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35418-02	pH 600 meter only	Meter and batteries
WD-35418-12	pH 610 meter only	Meter and batteries
WD-35418-00	pH 600 meter with probe	Meter, "All-in-One" probe 35816-71, and batteries
WD-35418-10	pH 610 meter with probe	Meter, "All-in-One" probe 35816-71, and batteries
WD-35418-70	pH 600 meter kit	Meter, "All-in-One" probe 35816-71, pH buffers (60 mL each of 4.01, 7.00, electrode storage solution, and rinse water), two electrode holders, rubber boot, batteries, and hard carrying case
WD-35418-80	pH 610 meter kit	Meter, "All-in-One" probe 35816-71, pH buffers (60 mL each of 4.01, 7.00, electrode storage solution, and rinse water), two electrode holders, rubber boot, batteries, and hard carrying case

WD-35816-71 Replacement "All-in-One" pH/temperature probe, single-junction, epoxy body

WD-35816-72 "All-in-One" pH/temperature probe, double-junction, epoxy body

WD-35418-05 ATC probe. Use for temperature compensation with any pH electrode without built-in ATC

WD-35418-83 Optional adapter, 110/220 VAC

WD-35418-86 Rubber boot for all 600-series meters



Environmental
Testing



Laboratory

Multiparameter
models available.
See pages 57–60.

pH 620 Meter

Research-grade ion-selective performance in a waterproof portable unit

Durable waterproof and dustproof design with IP67 rating – Even with no probes attached

Push-button pH calibration at up to six points – Up to 15 buffer options with auto-buffer recognition of USA, NIST, DIN, and PWB standards

Large backlit graphic display – Multi-line display with electrode status indicator, calibration data, and more

User-settable “calibration due” alarm – Out-of-date or unperformed calibrations are now things of the past!

Built-in real-time clock – Time-and-date stamping meets Good Laboratory Practice (GLP) standards

Store up to 500 data sets – Infrared IrDA wireless technology makes PC downloading convenient and easy

Set point alarms – Audible warning when readings are outside set points limit

Research-grade accuracy – Resolution to 0.001 pH and accuracy to ± 0.002 pH

Electrode status indicator – Calibration data provides electrode diagnostic tool

Password protection – Security for calibration and setup menus



Water Treatment



Pharmaceuticals

Ion-selective electrodes are available for 21 different ions. See pages 28–29.

pH 620 meter shown with rubber boot from 35418-90 kit.



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

	Model	pH 620 meter
Range	pH	–2.000 to 19.999 pH
	Ion	0.001 to 19,900 ppm, molar, or mg/L
	mV	± 2000 mV
	Temperature	–10.0 to 110.0°C (14.0 to 230.0°F), selectable
Resolution	pH	0.1/0.01/0.001 pH
	Ion	2 or 3 digits
	mV	0.1 mV
	Temperature	0.1°C (0.1°F)
Accuracy	pH	± 0.002 pH
	Ion	$\pm 0.5\%$ full-scale (monovalent); $\pm 1\%$ full-scale (divalent)
	mV	± 0.2 mV
	Temperature	$\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$)
Calibration	pH	Up to 6 buffer values (select from 4 sets): USA 1.68, 4.01, 7.01, 10.01, 12.45 NIST: 1.68, 4.01, 6.86, 9.18, 12.45 DIN: 1.09, 2.06, 4.65, 6.79, 9.23, 12.75, or custom buffers
	Ion	Up to 6 points
	mV	Offset up to ± 150 mV
	Temperature	Offset 0.1°C or 0.1°F increments

Memory: up to 500 sets with GLP date and time

Output: infrared, IrDA

Real-time clock: time-and-date stamp on calibration and stored data

Temperature compensation: automatic or manual (selectable) from 0 to 100°C

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AA batteries (included) or optional universal AC adapter, up to 500 hours continuous use

Dimensions

Meter: 7¼" L x 3¼" W x 2¼" H (18.4 x 8.3 x 5.7 cm)

Boxed: 9½" L x 9½" W x 2¾" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35418-22	pH 620 meter only	Meter and batteries
WD-35418-20	pH 620 meter with probe	Meter, "All-in-One" probe 35816-71, and batteries
WD-35418-90	pH 620 meter kit	Meter, "All-in-One" probe 35816-71, pH buffers (60 mL each of 4.01, 7.00, electrode storage solution, and rinse water), two electrode holders, rubber boot, batteries, and hard carrying case

WD-35816-71 Replacement "All-in-One" pH/temperature probe, single-junction, epoxy body

WD-35816-72 "All-in-One" pH/temperature probe, double-junction, epoxy body

WD-35418-05 ATC probe. Use for temperature compensation with any pH electrode without built-in ATC

WD-35418-83 Optional adapter, 110/220 VAC

What's NEW!

Our new benchtop meters are designed for today's crowded and very demanding laboratories



Electrode holder can be mounted to either side



Nonskid footpads

700-series meters offer...

- Space-saving footprint
- Oversized liquid crystal display
- Electrode holder can be mounted to either side
- Splashproof, easy-to-operate keypad
- Nonskid footpads
- Automatic temperature compensation
- Auto buffer recognition
- Electrode diagnostics
- Convenient pull-out quick-reference card

New



Splashproof keypad



Quick-reference card

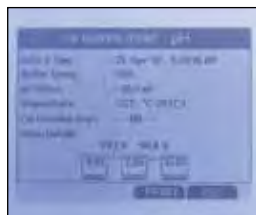
2700-series meters add....

- Oversized graphic display with bright backlight
- Dynamic stability indication tells you when your reading is stable
- 500 data set memory with time/date stamping, RS-232 output, and software
- Up to 6-point calibrations with USA, NIST, DIN, and custom buffer sets
- Calibration reporting and calibration due alarm
- Out-of-range alarms
- Password protection



Stable

Unstable



Calibration reporting



Software

New

Both series are available in models to measure pH, mV, ion, conductivity, TDS, dissolved oxygen, and multi-parameters.

pH 700 Meter

Our most economical benchtop meter—now with a space-saving footprint and easier-to-read display!

Low cost plus high performance – This meter offers laboratory-quality readings for a very economical cost

Compact design uses less benchspace – Meter is 40% smaller to fit into today's crowded laboratories

Oversized display – Dual display shows both pH (or mV) and temperature

Up to five-point pH calibration with auto buffer recognition – Calibrate at 1.68, 4.01, 7.00, 10.01, and 12.45 for high accuracy across the entire measuring range

Selectable buffer sets – Choose from USA or NIST buffer sets

Switch from pH to mV readings with a button press

Features 0.1 mV resolution for ORP measurements

Available with removable electrode holder – Holds electrode firmly in place

Selectable manual or automatic temperature compensation – For high accuracy with or without a temperature sensor

Built-in memory function – Stores up to 100 pH, mV, or relative mV readings with corresponding temperature

Hold function, "Ready" indicator, diagnostic error messages

Slide-out instruction card for quick reference



Education



Laboratory



Shown with electrode holder.

New

35419-12

Specifications

Mode	pH	mV	Temperature
Range	–2.00 to 16.00 pH	±2000 mV	0 to 100.0°C (32 to 212°F)
Resolution	0.01 pH	0.1 mV from ±199.9 mV, 1 mV beyond ±199.9 mV	0.1°C or 0.1°F
Accuracy	±0.01 pH	±0.2 mV from ±199.9 mV, ±2 mV beyond ±199.9 mV	±0.3°C (±0.5°F)
Calibration	Up to 5 points (USA: 4.01; 7.00; 10.01, 12.45 or NIST: 1.68, 4.01, 6.86; 9.18, 12.45); auto-buffer recognition	Offset up to ±150 mV	Offset 0.1°C increments up to ±5°C

Temperature compensation: selectable manual or automatic from 0 to 100°C (32 to 212°F)

Memory: up to 100 sets, pH and temperature

Output: None

Display: 3¼" x 2⅞" (8.3 x 6.2 cm) dual LCD with temperature and mode annunciators

Error messages: diagnose operator error, electrode error, and meter error. Pull-out instruction card decodes message

Operating temperature: 5 to 45°C (41 to 113°F), noncondensing humidity

Power: 100/240 VAC, 50/60 Hz using AC adapters (included). AC adapters are UL and CSA listed.

Dimensions

Meter: 6⅞" x 6⅞" x 2¾" (15.5 x 17.5 x 6.9 cm)

Boxed: 9" x 12¾" x 5" (23 x 35 x 12.5 cm)

Weight

Meter only: 1.4 lb (0.6 kg); **Boxed:** 4 lb (1.8 kg)

ISO9001:2000
CERTIFIED SUPPLIER

CE

3 year
warranty
meter only

Ordering Information

Catalog number	Description	Included
WD-35419-00	pH 700 meter	Meter and AC adapter
WD-35419-03	pH 700 meter with electrode	Meter, single-junction "All-in-One" temperature pH electrode 35811-71, and AC adapter
WD-35419-12	pH 700 meter with electrode holder	Meter, electrode holder, and AC adapter
WD-35419-10	pH 700 meter kit	Meter, double-junction pH electrode 35805-04, temperature probe 35613-13, electrode holder, and AC adapter

Ion 700 Meter

Measure pH, mV, and direct ion concentration without sacrificing your budget, quality or performance!

Small footprint saves bench space – Gives you more working room in the lab

Direct readout of ion concentration in ppm – Resolution to 0.01 ppm

Oversized dual display for easier viewing – LCD shows measured parameter and temperature in pH/mV modes; ion concentration and mV (electrode output) in ion mode

Features 0.1 mV resolution for ORP measurements

Simultaneous display of ppm and mV electrode output in the ion mode – Verify electrode operation while taking measurements

Selectable buffer sets and five-point pH calibration with auto buffer recognition – Choose from USA or NIST buffer sets

Works with many ion-selective electrodes – The ± 1999 mV range covers most ISEs

Built-in electrode stand – Holds electrode firmly in place

Selectable manual or automatic temperature compensation – For highest accuracy in any situation

Built-in memory function – Stores up to 100 ion, mV, or pH readings

Hold function, "Ready" indicator, diagnostic messages

Slide-out instruction card for quick reference



Drinking Water



Food

Ion-selective and pH electrodes are available on pages 23–29.



The Ion 700 meter includes a removable electrode holder and handy slide-out instruction card.

35419-22

Specifications

Mode	pH	mV	Ion	Temperature
Range	-2.00 to 16.00 pH	± 2000 mV	0.01 to 2000 ppm	0.0 to 100.0°C (32 to 212°F)
Resolution	0.01 pH	0.1 mV from ± 199.9 mV, 1 mV beyond ± 199.9 mV	0.01 ppm from 0.01 to 0.99 ppm, 0.1 ppm from 1.0 to 199.9 ppm, 1 ppm from 200 to 1999 ppm	0.1°C or 0.1°F
Accuracy	± 0.01 pH	± 0.2 mV from ± 199.9 mV, ± 2 mV beyond ± 199.9 mV	$\pm 0.5\%$ of reading (monovalent) $\pm 1.0\%$ of reading (divalent)	$\pm 0.3^\circ\text{C}$ ($\pm 0.5^\circ\text{F}$)
Calibration	Up to 5 points (USA: 1.68, 4.01, 7.00, 10.01; 12.45 or NIST: 1.68, 4.01, 6.86; 9.18, 12.45); auto-buffer recognition	Offset up to ± 150 mV	From 2 to 5 points, 0.1; 1; 10; 100 ppm, 1 or 1000	Offset 0.1°C increments

Temperature compensation: selectable manual or automatic from 32 to 212°F (0 to 100°C)

Memory: up to 100 sets

Output: None

Display: 3¼" x 2½" (7.3 x 6.2 cm) dual LCD with temperature and mode annunciators

Error messages: diagnose operator error, electrode error, and meter error. Pull-out instruction card decodes message

Operating temperature: 5 to 45°C (41 to 113°F), noncondensing humidity

Power: 100/240 VAC, 50/60 Hz using AC adapters (included). AC adapters are UL and CSA listed.

Dimensions

Meter: 6½" x 6½" x 2¾" (15.5 x 17.5 x 6.9 cm)

Boxed: 9" x 12¾" x 5" (23 x 35 x 12.5 cm)

Weight

Meter only: 1.4 lb (0.6 kg); **Boxed:** 4 lb (1.8 kg)

Ordering Information

Catalog number	Description	Included
WD-35419-22	Ion 700 meter with electrode holder	Meter, removable electrode holder, and AC adapter
WD-35419-20	Ion 700 meter with probes	Meter, double-junction pH electrode 35805-04, temperature probe 35613-13, electrode holder, and AC adapter
WD-35419-23	Ion 700 meter with pH/ATC probe	Meter, "All-in-One" single-junction pH electrode 35811-71, electrode holder, and AC adapter

pH 2700 Meter

Advanced meters that meet GLP requirements

Takes up less bench space – Overall footprint is nearly 40% smaller than other benchtop meters

Oversized liquid crystal display with bright backlighting – Easier viewing under all lighting conditions

Dynamic reading stability indication shows when your measurement is stable – Eliminates guesswork from unstable readings

Auto pH buffer recognition for up to 6-point calibrations – Choose USA, NIST, DIN or custom buffer sets

Up to 500 point nonvolatile memory with time-and-date stamp – Meets Good Laboratory Practice (GLP) requirements

Bidirectional RS-232 – For easy data transfer to your computer

Calibration documentation – Allows you to display, download, or print out calibration details like date and time, buffer values, offset, and slope

Cal-due alarms – Visual and audible reminders when recalibration is needed

Audible out-of-range alarms – Indicate when a reading is above or below a user-settable range

Electrode status – Provides the diagnostics needed to determine when electrode service or replacement is needed

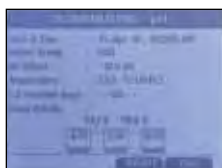
Password protection – Prevents unauthorized setup and calibration



Unstable reading is faded



Reading turns solid when stable.



Calibration documentation can be printed as needed.

New



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Mode	pH	mV	Temperature
Range	–2.000 to 20.000 pH	±2000.0 mV	0.0 to 100.0°C (32.0 to 212°F)
Resolution	0.001, 0.01, 0.1 pH	0.1 mV	0.1°C or °F
Accuracy	±0.002 + 1 LSD	±0.2 mV	±0.3°C (±0.5°F)
Calibration	Up to 6 (USA, NIST, DIN, or custom buffer sets)	Offset up to +150 mV	—
Connectors	BNC	BNC	2.5 mm phono

Temperature compensation: manual or automatic from 0 to 100°C (32 to 212°F)

Memory: up to 500 data sets with time/date stamp

Output: RS-232, 9-pin female

Display: 3 1/4" x 2 1/8" (8.3 x 6.2 cm) graphic LCD with backlight

Operating temperature: 0 to 50°C (32 to 122°F), noncondensing humidity

Power: universal 110/240 VAC, 50/60 Hz with adapter; UL/CSA listed

Dimensions

Meter: 6 1/8" x 6 7/8" x 2 3/4" (15.5 x 17.5 x 6.9 cm)

Boxed: 12" x 9" x 5" (30.8 x 15.5 x 12.4 cm)

Weight

Meter only: 1.4 lb (0.6 kg); **Boxed:** 4 lb (1.8 kg)

Ordering Information

Catalog number	Description	Included
WD-35420-22	pH 2700 meter	Meter, electrode holder, and AC adapter
WD-35420-20	pH 2700 meter kit	Meter, pH electrode 35805-04, ATC temperature probe 35613-13, 60-mL of electrode fill solution, electrode holder, and AC adapter

WD-35805-04 Replacement combination pH electrode, double-junction, glass body, refillable

WD-35420-01 RS-232 cable

WD-22050-58 RS-232 to USB adapter (requires 35420-01)



Laboratory



Pharmaceuticals

ION 2700 Meter

Measures pH, mV, and ion concentration—well-suited for environmental, water, and food analysis

Takes up less bench space – Overall footprint is nearly 40% smaller than other benchtop meters

Oversized liquid crystal display with bright backlighting – Easier viewing under all lighting conditions

Dynamic reading stability indication shows when your measurement is stable – Eliminates guesswork from unstable readings

Up to 500 point nonvolatile memory with time-and-date stamp – Meets GLP requirements

Bidirectional RS-232 – For easy data transfer to your computer

Calibration documentation – Allows you to display, download, or print out calibration details like date and time, buffer values, offset, and slope

Cal-due alarms – Visual and audible reminders when recalibration is needed

Audible out-of-range alarms – Indicate when a reading is above or below a user-settable range

Electrode status – Provides the diagnostics needed to determine when electrode service or replacement is needed

Password protection – Prevents unauthorized setup and calibration

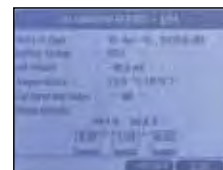
New



Unstable reading is faded



Reading turns solid when stable.



Calibration documentation



Research and Development



Water Testing

Specifications

Mode	pH	mV	ISE	Temperature
Range	-2.000 to 20.000 pH	±2000.0 mV	0.001 to 19,999 ppm	0.0 to 100.0°C (32.0 to 212°F)
Resolution	0.001, 0.01, 0.1 pH	0.1 mV	2 or 3 digits	0.1°C or °F
Accuracy	±0.002 pH	±0.2 mV	±0.5% full scale (monovalent), ±1% full scale (divalent)	±0.3°C (±0.5°F)
Calibration	Up to 6 (USA, NIST, DIN, or custom buffer sets)	Offset up to +150 mV	Up to 8 points	—
Connectors	BNC	BNC	BNC	2.5 mm phono

Temperature compensation: manual or automatic from 0 to 100°C (32 to 212°F)

Memory: up to 500 data sets

Output: RS-232, 9-pin female

Display: 3¼" x 2¼" (8.3 x 6.2 cm) graphic LCD with backlight

Operating temperature: 0 to 50°C (32 to 122°F), noncondensing probe

Power: universal 110/240 VAC, 50/60 Hz with adapter; UL/CSA listed

Dimensions

Meter: 6½" x 6½" x 2¼" (15.5 x 17.5 x 6.9 cm)

Boxed: 12" x 9" x 5" (30.8 x 15.5 x 12.4 cm)

Weight

Meter only: 1.4 lb (0.6 kg); **Boxed:** 4 lb (1.8 kg)

ISO9001:2000
CERTIFIED SUPPLIER

CE
3 year
warranty
meter only

Ordering Information

Catalog number	Description	Included
WD-35421-02	Ion 2700 meter	Meter, electrode holder, and AC adapter
WD-35421-00	Ion 2700 meter kit	Meter, pH electrode 35805-04, ATC temperature probe 35613-13, 60-mL of electrode fill solution, electrode holder, and AC adapter

WD-35805-04 Replacement pH electrode, double-junction, glass body, refillable

WD-35420-01 RS-232 cable

WD-22050-58 RS-232 to USB adapter (requires 35420-01)

Electrode Selection Guide

The right electrode

While the basic principles of pH measurement are simple, getting an accurate measurement can often be challenging. There are hundreds of applications for pH measurement and each presents different problems. Selecting the right electrode can make the most difficult samples easy to accurately measure.

Gel-filled vs refillable electrodes

Gel-filled electrodes are convenient and easier to maintain than refillable liquid-filled electrodes. However the liquid-filled electrode will provide a faster response. In addition the user can adjust the fill solution to optimize performance, for example adding glycol for better performance at low temperatures.

Glass vs epoxy body electrodes

Glass body electrodes will typically be able to withstand higher temperatures (100°C as opposed to 80°C for epoxy). In addition, the glass design offers better sealing, fusing glass to glass instead of relying on adhesives. The epoxy body however is less susceptible to breakage.

Note: Even though the body of an epoxy electrode is plastic, the measuring bulb will still be glass.

Body design

Oakton offers electrodes in a variety of lengths and diameters. Small diameter probes are ideal for measuring samples in test tubes. Electrodes with wider barrels, greater weight, and longer cable lengths are available for measurements in streams, lakes, or ponds.

Bulb design

Oakton pH electrodes are handblown by experienced craftsmen. The bulb shape can be modified to provide a semi-dome for increased ruggedness, a spear tip for soft penetration applications, or even a flat surface. In addition, the glass formulation can provide increased range.

Reference design

To achieve accurate results, the reference electrode must allow electrolyte solution (or ions, in the case of a gel-filled electrode) to flow into the sample. Depending on the size and material of the junction, this flow rate can be increased or kept to a minimum. Faster flow produces stable readings faster but results in greater service requirements or premature electrode failure.

Reference chemistry

The leading cause of electrode failure is reference contamination. The most popular electrodes use a silver chloride (AgCl) reference solution that can react with heavy metals, sulfides, and organics. If your application has any of these contaminants present, be sure to select a double-junction electrode. The double-junction electrode uses a second internal reference junction, restricting the AgCl solution to the upper chamber where it is isolated from the sample.



Double-junction, glass-body, refillable pH electrode 35805-04

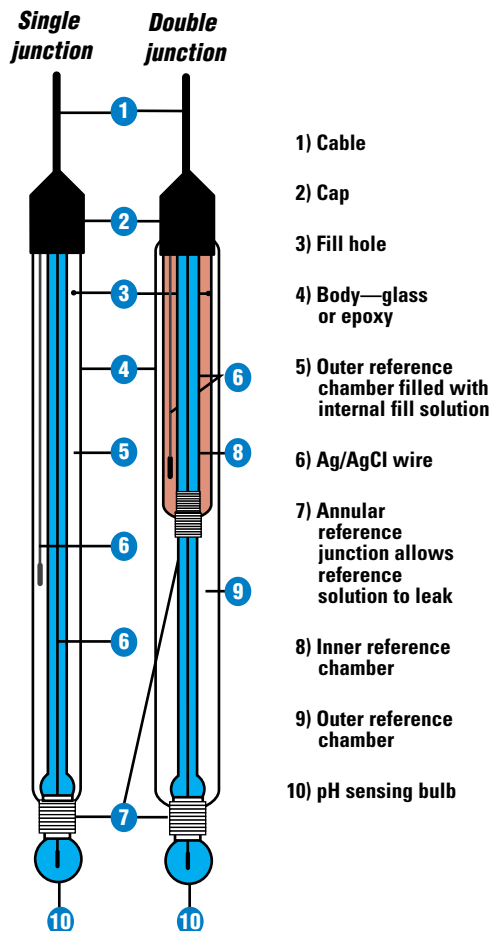


Single-junction, epoxy-body, gel-filled pH electrode 35808-71



Submersible pH electrode 35805-24

ph Electrode Anatomy



Electrodes for Laboratory and Field Applications

The Application Guide only offers suggestions—contact your Oakton Technical Product Specialist for more specific recommendations or clarification. Shipping dimensions for all electrodes are 10½" x 2¼" x 4" (26.7 x 5.3 x 10.2 cm). Shipping weight 0.5 lb (0.2 kg) each.



Application Guide

Application	Suggested electrode
Drinking water	Standard Ag/AgCl with single junction
Wastewater, solutions with heavy metals	Double junction solutions
Biological samples, proteins, and Tris buffers	Double junction
Pharmaceuticals	
Low ionic strength samples	Flushable or sleeve-type refillable electrode
Boiler feed water and distilled water	
Soil samples	Soil electrode, double junction
Moist flat surfaces, concrete, cheese, agar, paper, and skin	Flat-surface
Semisolid samples, food, fruits, cheese, and meat	Spear tip
Nonaqueous samples, solvents, alcohols, viscous samples, slurries, suspended solids, sludges, emulsions and oils, paints, and inks	Sleeve-type, flushable, or double junction electrode and fill with electrolyte containing methanol
Environmental, surface water, neutralization tanks	Double junction submersible

Use and Care of Electrodes

Handling – Electrodes should be rinsed between samples with distilled or deionized water. Never wipe an electrode—wiping can cause erroneous readings due to static charges. Gently blot the end of the electrode with lint-free paper to remove excess water.

Refillable Electrodes – See page 27 for reference solutions.

The filling solution in refillable electrodes should be filled up to, but not past, the refill hole. Make sure the refill hole is left open when measuring to ensure that the fill solution flows properly through the reference junction.

Storage – See page 27 for storage products.

Always keep your pH electrode moist. We recommend that you store your electrode in an electrode storage solution of 4 M KCl (see page 27). If 4 M KCl is not available, use a pH 4 or 7 buffer solution. **DO NOT** store electrode in distilled or deionized water—this will cause ions to leach out of the glass bulb and reference electrolyte, rendering your electrode useless.

Oakton electrodes are shipped with a protective electrode storage bottle to help prevent cracking or scratching, and to keep the bulb moist. Remove the electrode storage bottle before using your electrode. Keep your electrode in the bottle for long-term storage—just fill the bottle with enough 4 M KCl solution to cover the glass bulb and replenish as needed.

Electrode Types

Built-in temp sensor	Use electrode with the following meters
Standard: Most economical electrode; includes BNC connector and cable.	
No	pHTestr BNC, pH 5/6, Ion 6, pH 5+/6+, Ion 6+, pH 10/11/100/110, pH 300/310, pH 500/510, Ion 510, pH 1000/1100/2100/2500, pH 700/2700, Ion 700/2700, PC 700/2700, pH/DO 300, pH/CON 300, pH/CON 510, pH 600/610/620, PC600, PD600, PDC650, and non-Oakton meters with BNC pH electrodes
All-in-One: Combination pH electrode/temperature sensor; includes BNC connector, meter-specific temperature connector, and cable. (See key images below to match your Oakton meter with the correct All-in-One electrode.)	
Yes	A Original: pH 10/100, pH 500, pH 1000/2500
	B Phono: pH 5/6, pH 5+/6+, Ion 6, Ion 6+, pH 11/110, pH 510, Ion 510, pH 1100/2100, pH 700/2700, Ion 700/2700, PC 700/2700
	C Waterproof: pH 300/310, pH/CON 300, pH/CON 510
	D WP600: pH 600/610/620, PC600, PD600, PDC650
Direct connect: Electrode connects directly to meter; BNC connector and no cable.	
No	pHTestr BNC
ORP: Takes mV readings; includes BNC connector and cable.	
No	pH 5+/6+, pH 6, Ion 5/6, Ion 6+, pH 10/100, pH 300/310, pH 500, pH 510, Ion 510, pH 1000/2100/2500, pH/CON 510, pH 700/2700, Ion 700/2700, PC 700/2700
ISE: Takes ion-selective readings; includes BNC connector and cable. See pages 28-29 for ISEs	
No	Ion 5/6, pH 10/100, pH 300/310, pH 500, pH/CON 510, pH 510, Ion 510, pH 1000/1100/2100/2500, Ion 700/2700, PC 2700

Electrode Types



Temperature Probes

Order a temperature probe if you have an electrode without a built-in temperature sensor and you want to take readings with Automatic Temperature Compensation (ATC). Separate temperature probes offer faster temperature response and lower pH electrode replacement cost. See Connector Types key at right.

Catalog number	Key	Connector type	Use with the following meters
WD-35615-05	A	Original	pH 10, pH 100, pH 500, pH 1000, and pH 2500
WD-35613-05	B	Phono	pH 5+, pH 6+, Ion 6, pH 11, pH 110, pH 510, Ion 510, pH 1100, pH 2100
WD-35613-13	B	Phono	pH 700/2700, Ion 700/2700, PC 700/2700
WD-35618-05	C	Waterproof	pH 300, pH 310, pH/CON 300, pH/CON 510
WD-35418-05	D	WP600	pH 600/610/620, PC600, PD600, PCD650



Single-junction, epoxy-body, gel-filled pH electrodes

- Our most economical electrodes!
- 0 to 14 pH models available—use for high sodium/high pH solutions

These economical electrodes are ideal for field, clean water, and general-purpose applications. They feature a rugged epoxy housing. Pin-type junction provides low electrolyte flow for long life.

Specifications & Ordering Information

Max temperature: 80°C (except 35801-00: 70°C)

Diameter: 12 mm (except 35804-50: 12.5 mm)

Catalog number	Type*	Cable length
Standard range of 0 to 12 pH		
WD-35801-00	Standard	3 ft (1 m)
WD-35801-71	All-in-One Original A	30" (76.2 cm)
WD-35811-71	All-in-One Phono B	30" (76.2 cm)
WD-35808-71	All-in-One Waterproof C	30" (76.2 cm)
WD-35816-71	All-in-One WP600 D	30" (76.2 cm)
WD-35804-00	Direct connect	No cable
High range of 0 to 14 pH		
WD-35805-05	Standard	3 ft (1 m)
WD-35801-76	All in One	30" (76.2 cm)



Double-junction, epoxy-body, refillable pH electrodes

- Features flushable PTFE junction—use with substances that ordinarily clog standard electrodes

Ideal for testing dirty water, slurries, oils, paints, pastes, low ionic strength solutions, and solutions with heavy metals or organics. Flushable annular junction lets you refresh junction by pressing electrode cap—cleans clogs instantly.

Specifications & Ordering Information

Range: 0 to 12 pH Max temperature: 80°C Diameter: 12 mm

Catalog number	Type*	Cable length
WD-35805-09	Standard	3 ft (1 m)

Connector Types



Double-junction, epoxy-body, gel-filled pH electrodes

- Use to test dirty water and for other rugged field applications
 - 0 to 14 pH models available—use for high sodium/high pH solutions
- Ideal for most applications, including dirty field water and solutions with heavy metals or organics. Pin-type junction provides low electrolyte flow for long life.

Specifications & Ordering Information

Max temperature: 80°C Diameter: 12 mm

Catalog number	Type*	Cable length
Standard range of 0 to 12 pH		
WD-35805-01	Standard	3 ft (1 m)
WD-35641-51	Standard, poly-gel	3 ft (1 m)
WD-35801-72	All-in-One Original A	30" (76.2 cm)
WD-35811-72	All-in-One Phono B	30" (76.2 cm)
WD-35808-72	All-in-One Waterproof C	30" (76.2 cm)
WD-35816-72	All-in-One WP600 D	30" (76.2 cm)
WD-35804-02	Direct connect	No cable
High range of 0 to 14 pH		
WD-35805-06	Standard	3 ft (1 m)



Double-junction, glass-body, refillable pH electrodes

- Use for high-grade laboratory applications

These laboratory-grade electrodes are ideal for testing dirty water and solutions with heavy metals or organics. Annular-type junction provides faster electrode response. Order replacement electrode fill solution on page 27.

Specifications & Ordering Information


Max temperature: 100°C Diameter: 12 mm

Catalog number	Type*	Cable length
Standard range of 0 to 12 pH		
WD-35805-04	Standard	3 ft (1 m)
High range of 0 to 14 pH		
WD-35805-08	Standard	3 ft (1 m)
WD-35811-74	All-in-One Phono B	3 ft (1 m)

*See "Electrode Types" on page 24.

Electrodes for Laboratory and Field Applications

Electrode Types

Built-in temp sensor	Use electrode with the following meters
Standard: Most economical electrode; includes BNC connector and cable.	
No	pH 5+/6+, pHTestr BNC, pH 5/6, Ion 6, Ion 6+, pH 10/11/100/110, pH 300/310, pH 500/510, Ion 510, pH 1000/1100/2100/2500, pH 700/2700, Ion 700/2700, PC 700/2700, pH/DO 300, pH/CON 300, pH/CON 510, pH 600/610/620, PC600, PD600, PDC650, and non-Oakton meters with BNC pH electrodes
All-in-One: Combination pH electrode/temperature sensor; includes BNC connector meter specific temperature connector, and cable. (See key image at right.)	
Yes	 Waterproof: pH 300/310, pH/CON 300, pH/CON 510
Direct connect: Electrode connects directly to meter; BNC connector and no cable.	
No	pHTestr BNC
ORP: Takes mV readings; includes BNC connector and cable.	
No	pH 5+/6+, pH 6, Ion 5/6, Ion 6+, pH 10/100, pH 300/310, pH 500, pH 510, Ion 510, pH 1000/2100/2500, pH/CON 510, pH 700/2700, Ion 700/2700, PC 700/2700

Electrode Types



Glass-body, spear-tip pH electrodes

– Test gels, semisolids, and plant or animal materials

Spear tip feature is ideal for testing semisolids. Choose single or double junction electrodes; both have an annular-type junction for faster electrode response.

Specifications & Ordering Information

Range: 0 to 12 pH

Max temperature: 100°C

Diameter: 12 mm OD, 8 mm tip

Catalog number	Type*	Junction	Cable length
WD-35805-18	Standard	Double	3 ft (1 m)
WD-35804-06	Standard	Single	3 ft (1 m)



Submersible pH electrodes

– Completely submersible up to 9 feet


These ABS plastic electrodes are ideal for field applications. Use double junction for testing dirty water and solutions with heavy metals or organics. Completely submersible—including the extra-long 10-ft cable. Annular junction provides fast response and resists pressure effects of submersion.

Specifications & Ordering Information

Range: 0 to 12 pH

Max temperature: 80°C

Diameter: 25 mm

Catalog number	Type*	Junction	Cable length
WD-35805-24	Standard	Double	10 ft (3 m)
WD-35801-85	All-in-One Waterproof 	Double	10 ft (3 m)
WD-35805-23	Standard	Single	10 ft (3 m)
WD-35805-25	ORP	Single	10 ft (3 m)



Epoxy-body ORP electrodes

– Use to take mV readings

Choose a single-junction electrode for field, clean water, and general-purpose applications; choose a double junction electrode for most applications including field, dirty water, heavy metals, and organics. Both models have a pin-type junction that provides low electrolyte leakage. Use the gold disk sensor for ozone applications.

Specifications & Ordering Information

Range: ±2000 mV

Max temperature: 80°C (except 35805-13: 70°C)

Diameter: 12 mm

Catalog number	Type*	Junction	Cable length
Platinum band sensor			
WD-35805-13	Standard	Single	3 ft (1 m)
WD-35805-15	Standard	Double	3 ft (1 m)
Gold disk sensor			
WD-35805-27	Standard	Double	3 ft (1 m)



Small-diameter pH electrodes

– Ideal for measurements in test tubes, NMR tubes, and other applications where space is limited

These electrodes feature a diameter from 6 to 9 mm—ideal for test tube applications. Replacement electrode fill solution for refillable electrodes is available on page 27.

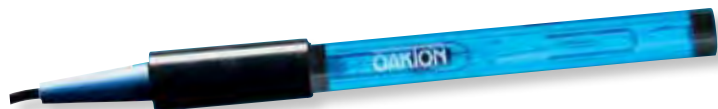
Specifications & Ordering Information

Range: 0 to 12 pH

Max temperature: 80°C epoxy body or 100°C glass body

Catalog number	Type*	Junction	Dia x L	Cable length
Epoxy-body electrodes, sealed				
WD-35805-22	Standard	Single	6 x 220 mm	3 ft (1 m)
WD-35804-01	Direct connect	Single	9 x 100 mm	No cable
WD-35804-03	Direct connect	Double	9 x 100 mm	No cable
Epoxy-body electrode, refillable				
WD-35804-05	Direct connect	Double	9 x 100 mm	No cable
Glass-body electrode, refillable				
WD-35805-21	Standard	Double	8 x 325 mm	3 ft (1 m)

*See "Electrode Types" above.



Flat surface, single-junction pH electrodes

– Ideal for flat surface measurements such as paper or skin

These single-junction electrodes are available with sealed epoxy body, or refillable glass body. Replacement electrode fill solution for refillable electrode is available below.

Specifications & Ordering Information

Range: 0 to 12 pH

Max temperature: 80°C epoxy body or 100°C glass body

Diameter: 12 mm

Catalog number	Type*	Cable length
Epoxy-body electrodes, sealed		
WD-35805-19	Standard	3 ft (1 m)
WD-35804-10	Direct connect	No cable
Glass-body electrode, refillable		
WD-35805-20	Standard	3 ft (1 m)



Sleeve-type, single-junction, refillable pH electrode

– Ideal for viscous liquids and low ionic strength samples

Sleeve design gives high electrolyte flow. Unique reference design and fill solution minimize drift and give excellent performance at high temperatures.

Specifications & Ordering Information

Range: 0 to 12 pH

Max temperature: 100°C

Diameter: 12 mm

Catalog number	Type*	Cable length
WD-35805-26	Standard	3 ft (1 m)

*See "Electrode Types" on page 26.



Semi-dome, epoxy-body, gel-filled pH electrodes

– Rugged semi-dome bulb design



Special close-knit ceramic junction prevents back diffusion problems and resists clogging. Vortexing junction design enhances electrolyte flow and self-cleans in flowing applications. Epoxy body; polymer gel reference fill won't break down over time, enhancing electrode performance and longevity.

Specifications & Ordering Information

Range: 0 to 13 pH

Max temperature: 100°C

Diameter: 12 mm

Catalog number	Type*	Junction	Cable length
WD-35808-88	All-in-One Waterproof 	Single	3 ft (1 m)
WD-35808-89	All-in-One Waterproof 	Double	3 ft (1 m)



Polymer gel, single-junction pH electrode


– Polymer gel reference fill won't break down over time, enhancing electrode performance and longevity

Specifications & Ordering Information

Range: 0 to 13 pH

Max temperature: 100°C

Diameter: 12 mm

Catalog number	Type*	Cable length
WD-35808-90	All-in-One Waterproof 	3 ft (1 m)



00653-04



00653-06



35805-50

Oakton® Electrode Care

– Extend the life of your electrode, increase speed of response, and get accurate readings

– Solutions to clean, store, and fill electrodes

WD-00653-04 pH electrode storage solution, one pint. Use with saver bottles; keep bulb moist for quicker, more accurate pH readings

WD-00653-06 pH/ORP electrode cleaning solution, one pint. Removes build-up from electrodes to maintain bulb sensitivity

WD-35805-50 Replacement pH electrode saver bottle. For pH electrodes up to 12 mm dia. 44.5 mm H x 25.4 mm dia

WD-35803-73 Reference fill solution for single junction pH electrodes. 4 M KCl saturated with AgCl, 125 mL

WD-35803-74 Reference fill solution for double junction or calomel reference refillable pH electrodes. 4 M KCl, 125 mL

WD-35803-83 Reference fill solution, lithium chloride (LiCl)/methanol, for double junction refillable pH electrodes. Use where organics are present. 125 mL

WD-35803-84 Reference fill solution, KCl with glycerol, for double junction refillable pH electrodes. Use for low-temperature samples. 125 mL

Accessories

WD-35820-64 In-line threaded housing. Use to install any 12-mm diameter electrode into pipe for in-line use or submersible monitoring; ¾" NPT(M), nylon

Ion-Selective Electrodes and Solution Kits

Ion-Selective Electrodes

Oakton has a large selection of ion-selective electrodes (ISEs) to suit a wide variety of applications. Each electrode has a typical response time of 20 to 30 seconds but will vary with solution concentration. Oakton offers four electrode types: membrane, solid-state, gas sensing, and glass bulb. Gas sensing electrodes also include replacement membranes.

Choose from single-junction or double-junction electrodes. Single-junction electrodes are ideal for clean water applications. Use double-junction electrodes for testing dirty water and solutions with heavy metals or organics. All electrodes are refillable and include 15 mL of electrolyte and a filling pipette. Solid-state electrodes also include polishing strips.

Epoxy-body,
double-junction
fluoride electrode
35812-18

Use these
ion-selective
electrodes (ISEs)
with:

Ion 700 benchtop meter
(see page 20)

Ion 2700 benchtop
meter (see page 21)

PC 2700 benchtop
meter (see page 62)

Ion 6+ handheld
meter (see page 12)

Or use with any other ion
meter, or with any meter
with 0.1 mV resolution.

Ordering Information

Ion	Electrodes			Solution Kits†			
	Epoxy body, single junction	Epoxy body, double junction	Glass body, double junction	Single-junction solution kit	Double-junction solution kit	Replacement calibration standard	Replacement ISA
Ammonia NH₃ High-purity power station water, fish tanks, sea water, wastewater, plating baths, air/stack gases, and biological samples. Range: 17,000 to 0.01 ppm Type: gas sensing	WD-35802-00	—	—	WD-35802-50*	—	WD-35803-01	—
Ammonium NH₄⁺ Boiler feed water, natural water and fertilizers. User must supply calibration standard. Range: 18,000 to 0.1 ppm Type: polymer membrane	WD-35802-02	WD-35812-02	WD-35802-03	WD-35802-52	WD-35802-53	—	WD-35803-53
Bromide Br⁻ Water, wine, soil, plant tissue, blood electrolytes, and clinical analysis. Range: 79,000 to 0.4 ppm Type: solid-state	WD-35802-04	WD-35812-04	WD-35802-05	WD-35802-54	WD-35802-55	WD-35803-03	WD-35803-51
Cadmium Cd⁺² Plating baths. User must supply calibration standard. Range: 11,200 to 0.01 ppm Type: solid-state	WD-35802-06	WD-35812-06	WD-35802-07	WD-35802-56	WD-35802-57	—	WD-35803-51
Calcium Ca⁺² Water softening systems, boiler feed water, drinking/mineral water, blood electrolytes, clinical analysis, and food applications. Range: 40,000 to 0.2 ppm Type: polymer membrane	WD-35802-08	WD-35812-08	WD-35802-09	WD-35802-58	WD-35802-59	WD-35803-05	WD-35803-52
Carbon Dioxide CO₂ and Carbonate CO₃⁻² Soft drinks/carbonated beverages, wine, beer, fermentation processes, bacterial cultures. Range: 440 to 4.4 ppm Type: gas sensing	WD-35802-10	—	—	WD-35802-60	—	WD-35803-07	WD-35803-55
Chloride Cl⁻ River/tap water, plant tissue, soils, boiler feed water, blood electrolytes, clinical analysis, sweat, urine, cement, plating baths, and food samples. Range: 35,500 to 1.8 ppm Type: solid-state	WD-35802-12	WD-35812-12	—	WD-35802-62	WD-35802-63	WD-35803-09	WD-35803-51
Copper Cu⁺² Plating baths and water Range: 6350 to 6.4 x 10 ⁻⁴ ppm Type: solid-state	WD-35802-14	WD-35812-14	—	WD-35802-64	WD-35802-65	WD-35803-11	WD-35803-51
Cyanide CN⁻ Plating baths, wastewater and plant tissue. User must supply calibration standard. Range: 260 to 0.13 ppm Type: solid-state	WD-35802-16	WD-35812-16	WD-35802-17	—	—	—	WD-35803-50
Fluoride F⁻ Drinking/natural water, wastewater, air/stack gases, acids, sea water minerals, soils, food, biological fluids, toothpaste/mouthwash, coal, carbonated beverages, and bone. Range: saturated to 0.02 ppm Type: solid-state	WD-35802-18	WD-35812-18	WD-35802-19	WD-35802-68	WD-35802-69	WD-35803-13	WD-35803-58

*Ammonia solution kit does not include ISA. †Contact your authorized Oakton Distributor for replacement electrolyte solutions.

Solution Kits

Be sure to select both the electrode and solution kit to complete your measurement system. Solution kits contain the solutions and accessories needed for calibration, sample preparation, and measurement of ion concentration and activity. All solutions are supplied with MSDS (Material Safety Data Sheet) and have a value of 1000 ppm. Solution kits include replacement reference electrolyte, ISA (ionic strength adjuster)*, calibration standard, and filling pipette. Kits for solid-state electrodes also include polishing strips. Kits for gas sensing electrodes also include replacement membranes.



Ordering Information

Ion	Electrodes			Solution Kits†			
	Epoxy body, single junction	Epoxy body, double junction	Glass body, double junction	Single-junction solution kit	Double-junction solution kit	Replacement calibration standard	Replacement ISA
Fluoroborate BF₄⁻ Plating baths (boron analysis) Range: 10,800 to 0.1 ppm Type: polymer membrane	—	—	—	WD-35802-70	WD-35802-71	WD-35803-15	WD-35803-60
Iodide I⁻ Milk, feeds, plants and pharmaceuticals. Range: 127,000 to 6 x 10 ⁻³ ppm Type: solid-state	WD-35802-22	WD-35812-22	WD-35802-23	WD-35802-72	WD-35802-73	WD-35803-17	WD-35803-51
Lead Pb⁺² Plating baths and organic compounds. Range: 20,700 to 0.2 ppm Type: solid-state	WD-35802-24	WD-35812-24	WD-35802-25	WD-35802-74	WD-35802-75	WD-35803-20	WD-35803-56
Nitrate NO₃⁻ Surface/drinking water, sewage effluent, soil extracts, fertilizers, plant tissue, meat, potatoes, spinach, beets, baby food. Range: 62,000 to 0.5 ppm Type: polymer membrane	WD-35802-30	WD-35812-30	WD-35802-31	WD-35802-78	WD-35802-79	WD-35803-24	WD-35803-60
Nitrogen Oxide NO_x Air and stack gases. Range: 220 to 0.2 ppm Type: gas sensing	WD-35802-32	—	—	WD-35802-82	—	WD-35803-26	WD-35803-57
Perchlorate ClO₄⁻ Explosives and solid propellants. Range: 98,000 to 0.7 ppm Type: polymer membrane	WD-35802-34	WD-35812-34	WD-35802-35	WD-35802-84	WD-35802-85	WD-35803-28	WD-35803-60
Potassium K⁺ Wastewater, river/tap water, blood electrolytes, clinical analysis, saliva, serum, fertilizers, soils, and wines. Range: 39,000 to 0.04 ppm Type: polymer membrane	WD-35802-38	WD-35812-38	WD-35802-39	WD-35802-88	WD-35802-89	WD-35803-30	WD-35803-53
Silver/Sulfide Ag⁺/S⁻² Sewage effluent, soils, sediments, plating baths and photographic fixing solution. User must supply solutions for sulfide. Range: 107,900 to 0.01 ppm Type: solid-state	WD-35802-40	WD-35812-40	WD-35802-41	WD-35802-90	WD-35802-91	WD-35803-32	WD-35803-51
Sodium Na⁺ Steam condensates in power plants, blood electrolytes, clinical analysis, serum, foods, wine, glass, sea water, swimming pools, fish farms and aquariums. Range: 23,000 to 0.2 ppm Type: glass bulb	WD-35802-42	WD-35812-42	WD-35802-43	WD-35802-92	WD-35802-93	WD-35803-34	WD-35803-54
Surfactant X⁺, X⁻ Detergents, dishwashing liquids, cleaning supplies, and food products. For titration only. Range: 12,000 to 1.0 ppm Type: polymer membrane	WD-35802-44	WD-35812-44	WD-35802-45	WD-35802-94	WD-35802-95	WD-35803-35	WD-35803-59
Water hardness Ca⁺², Mg⁺² Water softening systems, boiler feed water, drinking/mineral water, blood electrolytes, clinical analysis, and food applications. Range: 40,000 to 0.4 ppm Type: polymer membrane	WD-35802-48	WD-35812-48	WD-35802-49	WD-35802-98	WD-35802-99	WD-35803-05	WD-35803-52

*Ammonia solution kit does not include ISA. †Contact your authorized Oakton Distributor for replacement electrolyte solutions.

pH Buffer Solutions

Labeled with pH vs temperature tables for accurate calibration reference

Economical one-pint buffer solution bottles are freshness dated, and standardized against NIST-traceable references to ensure quality. Bottles are labeled with the name and CAS number for all ingredients (for "Right-to-Know" requirements). The high-accuracy solutions are ideal for pH meters with 0.001 resolution.



00654-00

Ordering Information

Catalog number	Description	Accuracy at 25°C
WD-00654-01	Buffer solution, pH 1.68	±0.01 pH
WD-00654-00	Buffer solution, pH 4.01	±0.01 pH
WD-00654-04	Buffer solution, pH 7.00	±0.01 pH
WD-00654-08	Buffer solution, pH 10.00	±0.01 pH
WD-00654-12	Buffer solution, pH 12.45	±0.01 pH
WD-05942-26	High-accuracy solution, pH 4.000	±0.002 pH
WD-05942-46	High-accuracy solution, pH 7.000	±0.002 pH
WD-05942-66	High-accuracy solution, pH 10.000	±0.005 pH

pH Buffer Pouches

Convenient and accurate

Single-use, air-tight pouches with high-precision calibration standards. All are freshness dated, and standardized against NIST-traceable references to ensure quality. Accuracy is ±0.01 pH at 25°C. Each box contains twenty 20-mL pouches.



Ordering Information

Catalog number	Description
WD-35653-01	pH 4.01
WD-35653-02	pH 7.00
WD-35653-03	pH 10.00
WD-35653-00	Deionized rinse water pouches
WD-35653-04	Assortment; five each of pH 4.01, 7.00, 10.00, and rinse water

Precision pH/mV Simulator

Ideal for testing benchtop or handheld meters, controllers, and transmitters!

Simulate any of following pH values: 1.00, 1.68, 4.01, 6.86, 7.00, 9.18, 10.01 and 12.45; and any of following mV values: -1800, -900, -390, 390, 900, and 1800.



Ordering Information

Catalog number	Description	Included
WD-35652-00	pH/mV simulator	Simulator, protective rubber boot, 3-ft (1-m) cable with BNC connectors, and batteries

pH Electrode Care Solutions

Extend the life of your electrode!

Use these solutions to extend the life of your electrode, increase speed of response, and get accurate readings. Electrodes should be cleaned or rinsed between sampling. Always keep your electrode moist by storing it in a solution when not in use. When adding fill solution, fill up to, but not past, the refill hole.



00653-04

00653-06

Ordering Information

Catalog number	Description
WD-00653-06	pH/ORP electrode cleaning solution, one pint. Removes buildup from electrodes to maintain bulb sensitivity.
WD-00653-04	pH electrode storage solution, one pint. Use with storage bottle (sold separately below table); keep bulb moist for quicker, more accurate pH readings.
WD-35803-73	Reference fill solution for single-junction pH electrodes. 4M KCl saturated with AgCl, 125 mL
WD-35803-74	Reference fill solution for double-junction or calomel reference refillable pH electrodes. 4M KCl, 125 mL
WD-35803-83	Reference fill solution, Lithium chloride (LiCl)/methanol, for double-junction refillable pH electrodes. Use where organics are present. 125 mL
WD-35803-84	Reference fill solution, KCl with glycerol, for double-junction refillable pH electrodes. Use for low-temperature samples. 125 mL

WD-35805-50 Electrode storage bottle accepts one electrode up to 12-mm dia

Portable Printer

Use with meters with RS-232 output

Create permanent records of your data from Oakton® meters with RS-232 output! This printer's compact size and rechargeable battery pack make it the perfect printer for both field use and crowded benchtop space. Pre-configured setup selections match the exact parameters of your meter. Printer accepts standard-sized adding machine rolls and printer ribbons; order separately below table.



Ordering Information

Catalog number	Description	Power
WD-35622-00	Portable printer	110 VAC
WD-35622-05		220 VAC

WD-35622-59 Printer cable, connects printer to meters with RS-232 output

WD-35622-60 Replacement ribbon cartridge

WD-35622-62 Replacement paper roll

TDSTestr®, ECTestr®, and SaltTestr® Selection Guide

Get Better Accuracy. Oakton Instruments offers the only TDS and conductivity Testrs with $\pm 1\%$ full-scale accuracy. This is the best accuracy available on any pocket-sized total dissolved solids or conductivity meter. This can make a tangible difference for your application.

A Good Value. You also want a good value when it comes to pocket-sized instruments. Our drive for quality and durability for our TDSTestr and ECTestr is what inspires us to do the extra things that may not even be readily apparent. From our use of custom thermoplastic housing materials that offer superior chemical and temperature durability, to our self-diagnostic error messages to help you immediately troubleshoot calibrations, batteries and sensors. Our application-specific microprocessors deliver superior instrument reliability. All of these attributes combine to give you a superior product that delivers long-term value.

Lots of Options. Oakton Instruments also gives you options offered by no one else. We offer pocket-sized TDS and EC Testrs that measure across many ranges from the economical EcoTestrs to the versatile multiparameter 35-Series. We also offer a series of testers that include built-in sample cup sensors, and selectable °C/°F temperature readout, a specially designed tester for sodium chloride solutions, and a series of traditional “dip and read” meters.

More for Your Money. Better accuracy and a higher-quality product featuring more options. You get it all with the Oakton TDSTestr, ECTestr, and SaltTestr.



Water Treatment



Hydroponics







Aquaculture



Laboratory

Conductivity/TDS calibration pouches and solutions are available. See page 45 to order.

Use this chart to find the best Testr for your application

Meter	EcoTestrs™	11 Series	11+ Series	Multiparameter 35-Series Testrs™
				
See pages	32	33–35	33–34	9
Parameters/ models	Conductivity, TDS, salt	Conductivity, TDS, salt	Conductivity, TDS	pH, conductivity, TDS, salt
Electrode	Permanently fixed, stainless steel	Replaceable, stainless steel	Replaceable, stainless steel	Replaceable, combined pH and conductivity module
Accuracy	Up to $\pm 1\%$ full scale	Up to $\pm 1\%$ full scale	Up to $\pm 1\%$ full scale	Up to $\pm 1\%$ full scale
Display	One-line LCD	Two-line LCD	Two-line LCD	Two-line LCD
Calibration	1-point, manual	Up to 3-point manual or 2-point automatic	Up to 2-point manual or 3-point manual/automatic	Up to 5-point pH; 3-point EC/TDS

EcoTestr™ TDS, EC, and Salt

Simplicity with Oakton reliability

Simple single-line display – Large upright display is easy to read

1% full-scale accuracy – Suitable for many applications

Transparent protective cap – Doubles as a container for on-site calibration

Waterproof, dustproof housing – Meets IP67 rating, plus it floats!

Durable sensor – Two pin stainless steel with probe guard

Click-lock battery compartment – Simply lift and remove cover to replace batteries; no additional tools required

Push-button calibration – Calibrate more precisely than trimpot adjustment; no screwdrivers necessary

Hold function – Freezes reading until you can record it

Auto shut-off – Extends the life of batteries

Automatic temperature compensation (ATC) – Gives you accurate readings even with fluctuating temperatures

Applications

Water quality: Aquaculture, aquariums (marine fish), fish ponds (koi), food processing, pools and spas, environmental monitoring



35462-10

Cap fits snugly on top when Testr is in use.



35462-30



35462-50



Stainless steel sensor tip is both durable and chemical resistant.

Specifications

ISO9001:2000
CERTIFIED SUPPLIER

CE 1 year warranty

Model	EcoTestr TDS Low	EcoTestr TDS High	EcoTestr EC Low	EcoTestr EC High	EcoTestr Salt
Range	0 to 1990 ppm	0 to 10.1 ppt	0 to 1990 µS/cm	0 to 19.90 mS/cm	0 to 10.00 ppt
Resolution	10 ppm	0.1 ppt	10 µS	0.1 mS	0.1 ppt
Accuracy	±1% full scale	±1% full scale (±2% above 5 ppt)	±1% full scale	±1% full scale (±2% above 10 mS/cm)	±1% full scale (±2% above 5 ppt)
TDS factor	0.4 to 1.0 (adjustable)	0.4 to 1.0 (adjustable)	N/A	N/A	Fixed curve

Calibration: manual single-point

Operating temperature: 0 to 50°C (32 to 122°F)

Temperature compensation: automatic (ATC), from 0 to 50°C (32 to 122°F)

Power: four 1.5 V alkaline batteries (included), >500 hours continuous use; Eveready® A76 or LR44 equivalent replacement

Dimensions

Unit only: 1¼" x 1½" x 6½" (3.2 x 3.8 x 16.8 cm)

Boxed: 1½" x 5¼" x 9¾" (3.8 x 13.6 x 24.8 cm)

Weight

Unit only: 3.25 oz (90 g); **Boxed:** 6.0 oz (170 g)

Ordering Information

Catalog number	Description
WD-35462-10	EcoTestr TDS Low
WD-35462-15	EcoTestr TDS High
WD-35462-30	EcoTestr EC Low
WD-35462-35	EcoTestr EC High
WD-35462-50	EcoTestr Salt

Accessories

WD-35624-45 Vinyl carrying case with belt loop; holds one tester and solution pouches

WD-09377-16 Replacement batteries, 1.5 V. Pack of 6

WD-35661-70 Deluxe calibration kit includes two each calibration pouches (447 µS, 1413 µS, 2764 µS, 15,000 µS, and rinse water), sample jar, and foam-lined hard plastic carrying case. (Tester not included)

TDSTestr® 11 Series

One meter can measure total dissolved solids from pure water to concentrated solutions

Large, easy-to-read display – Two-line display—units, measurement status, and battery life indicators

Replaceable electrodes – Reuse the meter body to save money

Temperature readout – Simultaneous display in °C or °F

Full reading displayed – No need to multiply the readout to obtain actual test values

Adjustable TDS factor – 0.4 to 1.0 gives better accuracy

Push-button calibration – Calibrate your tester more precisely than trimpot adjustment; no screwdrivers necessary

Hold function; Auto shutoff

Waterproof, dustproof housing – Meets IP67 ratings—plus, it floats!

Automatic temperature compensation (ATC) – Gives you accurate measurements even with fluctuating temperatures

TDSTestr 11+ features – Operate as either cup-style or dip-style tester for greater flexibility



Calibration buttons tucked away in battery compartment to avoid accidental recalibration.



35662-10

35662-15

Choose dip-style or cup-style electrodes

Applications

TDSTestr 11

Low range: Measure TDS in natural water. Verify reverse osmosis systems and tap water quality. Check nutrient solution concentration for hydroponics.

High range: For measuring TDS in salt water, wastewater, cooling tower water, and boiler condensate. Check nutrient solution concentration in hydroponics applications. Measure salinity for ponds and recirculating systems. Check saline and chemical levels in pools and spas.

TDSTestr 11+

Ultra-low range: ideal for measuring TDS or conductivity (µS) in distilled water, natural water, drinking water and reverse osmosis systems.

Low range: Use for measuring TDS or conductivity (µS) in natural water. Verify reverse osmosis system operation and tapwater quality. Check nutrient solution concentration in hydroponics applications.

High range: Use for measuring TDS or conductivity (mS) in salt water, wastewater, cooling tower water, and boiler condensate. Check nutrient solution concentration in hydroponics applications. Measure salinity in ponds and recirculating systems. Check saline and chemical levels in pools and spas.

Specifications

Model	TDSTestr 11 dual-range	TDSTestr 11+ multirange
Range	0 to 2000 ppm; 0 to 10.00 ppt	0 to 200 ppm, 0 to 2000 ppm; 0 to 10.00 ppt
Resolution	1 ppm; 0.01 ppt	0.1 ppm, 1 ppm; 0.01 ppt
Accuracy	±1% full-scale	±1% full-scale
Calibration standard range	300 to 1990 ppm; 3 to 10.00 ppt	20.0 to 199.9 ppm, 200 to 1999 ppm; 2.0 to 10.00 ppt
Calibration	3-point, manual	2-point, manual

Temperature display: 0 to 50°C (32 to 122°F), 0.1°C resolution, ±0.5°C accuracy

Operating temperature: 0 to 50°C (32 to 122°F)

Temperature compensation: automatic (ATC) from 0 to 50°C (32 to 122°F)

ATC coefficient: 2% per °C, 1.11% per °F, 25°C reference temperature

Wetted materials: 316 stainless steel (electrodes) and HDPE/Valox® housing

Power and battery life: four 1.5 V alkaline batteries Eveready A76BP (included), 100 hrs continuous use (approx 600 tests per battery pack). Alternate replacement model Eveready 357BP silver oxide, 140 hrs continuous use.

Dimensions

Unit only: 6½" L x 1½" dia (165 x 38 mm)

Boxed: 7¼" x 2¾" x 1½" (184 x 70 x 48 mm)

Weight

Unit only: 3.25 oz (90 g); **Boxed:** 6.0 oz (170 g)

Ordering Information

Catalog number	Description	Included
WD-35662-10	TDSTestr 11 dual-range	Tester, protective plastic storage case, lanyard, and batteries
WD-35662-15	TDSTestr 11+ multirange	

Accessories

WD-35661-17 Replacement electrode for TDSTestr 11

WD-35661-08 Replacement electrode for TDSTestr 11+

WD-35624-45 Vinyl carrying case with belt loop; holds one tester and solution pouches

WD-09377-16 Replacement batteries, 1.5 V. Pack of 6

WD-35661-70 Deluxe calibration kit includes two each calibration pouches (447 µS, 1413 µS, 2764 µS, 15,000 µS, and rinse water), sample jar, and foam-lined hard plastic carrying case. (Tester not included)

ECTests® 11 Series

Auto-ranging for maximum resolution

Large, easy-to-read display – Two-line display—units, measurement status, and battery life indicators

±1% full-scale accuracy – The best in its class!

Waterproof, dustproof housing – Meets IP67 ratings, plus—it floats!

Replaceable electrode – Reuse same meter body over and over

Push-button calibration – Calibrate more precisely than trimpot adjustment—no screwdrivers needed

Hold function – Freezes reading until you can record it

Auto shutoff – Saves your batteries

Full reading displayed – No need to multiply the readout to obtain actual test values

Temperature readout – Dual display for readings at a glance; °C or °F selectable

Automatic temperature compensation (ATC) – Gives you accurate readings even with fluctuating temperatures

ECTester 11+ features – Operate as either cup-style or dip-style tester for greater flexibility



35662-30

Dip-style sensor—just immerse and read



35662-35

Cup-style sensor—draw or grab samples

Applications

ECTestr 11

Low range: Use for measuring conductivity (µS) in natural water. Verify reverse osmosis system operation and tap water quality. Check nutrient solution concentration in hydroponics applications.

High range: For measuring conductivity (µS) in salt water, wastewater, cooling tower water, and boiler condensate. Check nutrient solution concentration in hydroponics applications. Measure salinity for ponds, recirculating systems. Check saline, chemical levels in pools and spas.

ECTestr 11+

Ultra-low range: Ideal for measuring TDS or conductivity (µS) in distilled water, natural water, drinking water, and reverse osmosis systems.

Low range: Use for measuring TDS or conductivity (µS) in natural water. Verify reverse osmosis system operation and tap water quality. Check nutrient solution concentration in hydroponics applications.

High range: Use for measuring TDS or conductivity (mS) in salt water, wastewater, cooling tower water, and boiler condensate. Check nutrient solution concentration in hydroponics applications. Measure salinity in ponds and recirculating systems. Check saline and chemical levels in pools and spas.

Specifications

Model	ECTestr 11 dual-range	ECTestr 11+ multirange
Range	0 to 2000 µS; 0 to 20.00 mS	0 to 200.0 µS, 0 to 2000 µS; 0 to 20.00 mS
Resolution	10 µS; 0.10 mS	0.1 µS, 1 µS; 0.01 mS
Accuracy	±1% full-scale	±1% full-scale
Calibration standard range	300 to 1990 µS; 3 to 19.90 mS	20.0 to 199.9 µS, 200 to 199.9 µS; 2.0 to 19.99 mS
Calibration	2-point, manual or auto (1413 µS; 12.88 mS)	3-point, manual or auto (84 µS, 1413 µS; 12.88 mS)

Temperature display: 0 to 50°C (32 to 122°F), 0.1°C resolution, ±0.5°C accuracy

Operating temperature: 0 to 50°C (32 to 122°F)

Temperature compensation: automatic (ATC) from 0 to 50°C (32 to 122°F)

ATC coefficient temperature: 2% per °C, 25°C reference

Wetted materials: 316 stainless steel (electrodes) and Valox® housing

Power and battery life: four 1.5 V alkaline batteries Eveready A76 (included), 100 hrs continuous use (approx 600 tests per battery pack). Alternate replacement model LR44.

Dimensions

Unit only: 6½" L x 1½" dia (165 x 38 mm)

Boxed: 7¼" x 2¾" x 1½" (184 x 70 x 48 mm)

Weight

Unit only: 3.25 oz (90 g); **Boxed:** 6.0 oz (170 g)

Ordering Information

Catalog number	Description	Included
WD-35662-30	ECTestr 11 dual-range	Tester, protective plastic storage case, lanyard, and batteries
WD-35662-35	ECTestr 11+ multirange	

Accessories

WD-35661-17 Replacement electrode for ECTestr 11

WD-35661-08 Replacement electrode for ECTestr 11+

WD-35624-45 Vinyl carrying case with belt loop; holds one tester and solution pouches

WD-09377-16 Replacement batteries, 1.5 V. Pack of 6

WD-35661-70 Deluxe calibration kit includes two each calibration pouches (447 µS, 1413 µS, 2764 µS, 15,000 µS, and rinse water), sample jar, and foam-lined hard plastic carrying case. (Tester not included)

ISO9001:2000
CERTIFIED SUPPLIER

CE 1 year warranty

SaltTestr® 11

Non-linear curve programmed for best results in testing NaCl in water applications

Factory calibrated against NaCl standards – Ideal for testing salinity levels in pools

±1% full-scale accuracy – The best in its class!

Full reading displayed – No need to multiply the readout to obtain actual test values

Automatic temperature compensation (ATC) – Gives you accurate measurements even in fluctuating temperatures

Waterproof, dustproof housing – Meets IP67 ratings, plus—it floats!

Replaceable electrode – Reuse same meter body over and over again

Push-button calibration – Calibrate more precisely than trimpot adjustment—no screwdrivers necessary

Hold function – Freezes reading until you can log it

Auto shutoff – Saves your batteries

Temperature display – Selectable for °C or °F



Calibration button tucked away in battery compartment to avoid accidental recalibration



35662-52

ISO9001:2000
CERTIFIED SUPPLIER

CE 1 year warranty

Specifications

Model	SaltTestr 11
Range	0 to 10.00 ppt
Resolution	0.10 ppt
Accuracy	0.00 to 7.00 ppt: ±1% full-scale; above 7.00 ppt: ±3% full-scale
Calibration standard range	3 to 10.00 ppt*
Calibration	One point push-button calibration (using keys inside battery compartment)

*For best accuracy, calibrate to 4.4 ppt NaCl with standard 00653-89 (order on page 45).

Temperature display: 0 to 50°C (32 to 122°F), 0.1°C resolution, ±0.5°C accuracy

Operating temperature: 0 to 50°C; 32 to 122°F

Temperature compensation: automatic (ATC) from 0 to 50°C (32 to 122°F)

ATC coefficient: 2% per °C, 1.11% per °F, 25°C reference temperature

Wetted materials: 316 stainless steel (electrodes) and Valox® housing

Power and battery life: four 1.5 V alkaline batteries Eveready A76 (included), 150 hrs continuous use (approx 600 tests per battery pack). Alternate replacement model LR44

Dimensions

Unit only: 6½" L x 1½" dia (165 x 38 mm)

Boxed: 7¼" x 2¾" x 1⅞" (184 x 70 x 48 mm)

Weight

Unit only: 3.25 oz (90 g); **Boxed:** 6.0 oz (170 g)

Ordering Information

Catalog number	Description	Included
WD-35662-52	SaltTestr 11	Tester, protective plastic storage case, lanyard, and batteries

Accessories

WD-35661-17 Replacement electrode for SaltTestr 11

WD-35624-45 Vinyl carrying case with belt loop; holds one tester and solution pouches

WD-35653-15 Salt standard pouches, 3000 ppm NaCl. Box of 20 pouches

WD-09377-16 Replacement batteries, 1.5 V. Pack of 6

WD-35661-70 Deluxe calibration kit includes two each calibration pouches (447 µS, 1413 µS, 2764 µS, 15,000 µS, and rinse water), sample jar, and foam-lined hard plastic carrying case. (Tester not included)



Fish Farms



Wastewater



Environmental Testing



Pools and Spas

Handheld Conductivity/TDS Meter Selection Guide

Get Better Accuracy

Oakton® offers meters with accuracy up to $\pm 1\%$ full-scale. Many meters feature adjustable temperature coefficients and TDS conversion factors. These functions let you minimize, even eliminate errors that are inherent in other manufacturers' less capable meters.

See page 45 to order conductivity/TDS cells and accessories.

Get Dependability

Oakton meters are built to last and include a two- or three-year warranty. Standard and waterproof meters are built for field duty, and the 6+ series meters come with a protective rubber boot. With the latest in technology including ASIC microprocessors, we offer trouble-free performance for years.

New



6+ series



Standard 11/110 series



Waterproof 400 series



Waterproof 600 series

Use this chart to find the best conductivity or TDS meter for your application

Meter	6+ series	Standard 11/110 series	Waterproof 400 series	Waterproof 600 series
See pages	37–38	39–40	41	42
Special features	Low-cost, rugged compact	Economical, dual-display meter	Holds up in rough environments	Most powerful, ideal for the field
Display	Single-line LCD	Dual LCD	Dual LCD	Multiline dot matrix
IP67 housing	—	—	Yes	Yes
Memory	—	50 to 100 points	50 points	Up to 500 points
Communication	RS-232	RS-232 (CON 110 only)	—	IrDA
Real-time clock	—	—	Yes	Yes
Calibration points	5	5	5	5
Auto standard recognition	Yes	Yes	No	Yes
Selectable calibration points	Yes	Yes	Yes	Yes
Automatic endpoint	—	—	Yes	Yes
Automatic shutoff	After 20 minutes	After 20 minutes	After 20 minutes	Selectable
Hold function	Yes	Yes	Yes	Yes
Ready/stability indicator	—	Yes	Yes	Yes
Error messages	Yes	Yes	Yes	Yes
Protective rubber boot	Included	—	—	Optional
Built-in stand	Yes	Yes	—	Yes (in boot)
Optional AC power	—	Yes	—	Yes

CON 6+ Meter

Variety of features at an economical price!

Wider measuring ranges – CON 6+ features five measuring ranges up to 200.0 mS

Automatic or manual ranging across five ranges – For a wide variety of applications from pure water to boiler blow-down water

Easy, push-button operation

Temperature readout and automatic temperature compensation (ATC) – For high accuracy in changing temperature conditions

Hold function; Auto-off function – Meters shut off after 20 minutes of nonuse

Automatic or manual calibration – For quick and easy calibrations, use automatic mode with preset calibration points at the most popular values. For more flexibility, calibrate in the manual mode and set your calibration point at any value. Five-point calibration.

Setup functions – Customize automatic temperature compensation and cell constant for better accuracy and precision

Includes fast-response probe – Easy to clean; 1.0 cell constant

Built-in stand for benchtop or long-term use

Protective rubber boot – Helps shield your meter from drops and dings



Meter includes built-in stand and protective rubber boot.



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Model	CON 6+
Range (Resolution)	0 to 20.00 μ S (0.01 μ S), 0 to 200.0 μ S (0.1 μ S), 0 to 2000 μ S (1 μ S), 0 to 20.00 mS (0.01 mS), 0 to 200.0 mS (0.1 mS)
Accuracy	$\pm 1\%$ full scale
Cell constant	0.1, 1, and 10 (selectable)
Calibration	Up to 5 points, one per band on conductivity range
Ranging	Automatic or manual (selectable)

Temperature range: -10.0 to 110.0°C

Temperature resolution/accuracy: $0.1^{\circ}\text{C}/\pm 0.5^{\circ}\text{C}$

Temperature compensation: automatic or manual from 0.0 to 50.0°C

Temperature coefficient: adjustable from 0 to 3% per $^{\circ}\text{C}$

Normalization temperature: 20 or 25°C , selectable

Probe connection

For conductivity: BNC
For temperature: subminiature audio

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included); approx 100 hours continuous use

Dimensions

Meter: $5\frac{1}{2}'' \times 2\frac{3}{4}'' \times 1\frac{1}{4}''$ ($14 \times 7 \times 3.5$ cm)

Probe: $5\frac{1}{2}''$ L x $\frac{5}{8}''$ dia with 36" L cable

(13 cm L x 1.6 cm dia with 91 cm L cable)

Boxed: $8\frac{1}{4}'' \times 5\frac{5}{8}'' \times 3''$ ($21 \times 15 \times 7.5$ cm)

Weight

Meter: 0.9 lb (0.4 kg); **Boxed:** 1 lb (0.5 kg)

Ordering Information

Catalog number	Description	Included
WD-35604-00	CON 6+ meter	Meter, conductivity probe (K = 1.0), protective rubber boot, and four AAA batteries
WD-35604-04	CON 6+ meter kit	Meter, conductivity probe (K = 1.0), calibration pouches, sample bottles, hard plastic carrying case, protective rubber boot, and four AAA batteries

WD-35606-53 Conductivity probe, K = 0.1

WD-35606-55 Replacement conductivity probe, K = 1.0

WD-35606-57 Conductivity probe, K = 10

WD-35632-97 Carrying case for 6+ meters. Includes rinse bottle and sample bottles



Laboratory



Cooling Tower



Printing

TDS 6+ and SALT 6+ Meters

Wider measuring ranges – TDS 6+ features five measuring ranges up to 200.0 ppt

Easy, push-button operation

Temperature readout and automatic temperature compensation (ATC) – For high accuracy in changing temperature conditions

Hold function; Auto-off function – Meters shut off after 20 minutes of nonuse

Automatic or manual calibration – For quick and easy calibrations, use automatic mode with preset calibration points at the most popular values. For more flexibility, calibrate in the manual mode and set your calibration point at any value.

Setup functions – Customize automatic temperature compensation, cell constant, and TDS conversion factor for better accuracy and faster use

Includes fast-response probe – Easy to clean; 1.0 cell constant

Built-in stand for benchtop or long-term use

Protective rubber boot – Helps shield your meter from drops and dings

TDS 6+ features

Automatic or manual ranging across five ranges – For a wide variety of applications from pure water to boiler blow down water

SALT 6+ features

Custom conductivity-to-TDS conversion curve – For the highest accuracy

New



Meters include built-in stand and protective rubber boot.



TDS 6+

SALT 6+

Specifications

Model	TDS 6+	SALT 6+
Range/Resolution	0.00 to 10.00 ppm/0.01 ppm, 10.0 to 100.0 ppm/0.1 ppm, 100 to 1000 ppm/1 ppm, 1.00 to 10.00 ppt/0.01 ppt, 10.0 to 100.0 ppt/0.1 ppt, up to 200.0 ppt*	1 to 50.0 ppt/0.1 ppt, 0.1 to 5.00%/0.01%
Accuracy	±1% full-scale	±1% full-scale
Cell constant	0.1, 1, and 10 (selectable)	1.0
Conductivity-to-TDS/ Saline conversion factor	0.4 to 1.00 adjustable	Nonlinear compensation
Calibration	Up to 5 points, one per band on conductivity range	One point in 1 to 50 ppt range
Ranging	Automatic or manual (selectable)	—

*Depending on TDS factor setting.

Temperature range: -10.0 to 110.0°C

Temperature resolution/accuracy: 0.1°C/±0.5°C

Temperature compensation: automatic or manual from 0.0 to 50.0°C

Temperature coefficient: adjustable: 0 to 3% per °C

Normalization temperature: 20 or 25°C, selectable

Probe connection

For conductivity, TDS, and SALT: BNC

For temperature: subminiature audio

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), approx 100 hours continuous use

Dimensions

Meter: 5½" x 2¾" x 1¼" (14 x 7 x 3.5 cm)

Probe: 5½"L x ½" dia with 36"L cable (13 cm L x 1.6 cm dia with 91 cm L cable)

Boxed: 8¼" x 5½" x 3" (21 x 15 x 7.5 cm)

Weight

Meter: 0.9 lb (0.4 kg); **Boxed:** 1 lb (0.5 kg)

Ordering Information

Catalog number	Description	Included
WD-35604-20	TDS 6+ meter	Meter, conductivity probe (cell constant K = 1.0), protective rubber boot, and batteries
WD-35604-24	TDS 6+ meter kit	Meter, conductivity probe (cell constant K = 1.0) calibration pouches, sample bottles, hard plastic carrying case, protective rubber boot, and four AAA batteries
WD-35604-40	SALT 6+ meter	Meter, conductivity probe (cell constant K = 1.0), protective rubber boot, and batteries
WD-35604-44	SALT 6+ meter kit	Meter, conductivity probe (cell constant K = 1.0) calibration pouches, sample bottles, hard plastic carrying case, protective rubber boot, and four AAA batteries

WD-35606-53 Conductivity probe, K = 0.1

WD-35606-55 Replacement conductivity probe, K = 1.0

WD-35606-57 Conductivity probe, K = 10

WD-35632-97 Carrying case for 6+ meters. Includes rinse bottle and sample bottles.



Hydroponics



Aquaculture



Environmental Monitoring

CON 11 Standard Meter

Our most economical meter with dual display—lets you see both conductivity or TDS and temperature at a glance!

Measurements in both TDS or conductivity

Auto ranging across five ranges – For fast response and best resolution over a wide range

Built-in memory – Stores up to 50 readings

Four-point conductivity calibration—automatic or manual – Calibrate one point per range for high $\pm 1\%$ full-scale accuracy

Single- or multi-point calibration – For multirange calibration of highest accuracy

Selectable manual or automatic temperature compensation – Great accuracy in any application

Adjustable conductivity-to-TDS conversion factor from 0.4 to 1.0

Power with batteries or optional AC adapter – Use in the field or at your benchtop

Built-in stand – For benchtop or long-term use

Ready indicator – Indicates when your measurement has stabilized, so you always record the best reading

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns meter off after 20 minutes of nonuse to conserve batteries

A wide range of conductivity cells and calibration solutions are available. See page 45 to order.



Conductivity Cells

Conductivity cells feature a built-in temperature sensor. Choose a cell with

K = 0.1 for low-range measurements;

K = 1.0 for midrange measurements;

K = 10 for high-range measurements.

All measure 100 mm L x 12 mm dia with 3-ft (1-m) cable.

Catalog number	Description	Constant
WD-35608-55	Conductivity cell, epoxy body/platinum sensor	0.1
WD-35608-50	Replacement conductivity cell, epoxy body/stainless steel	1.0
WD-35608-51	Conductivity cell, epoxy body/platinum sensor	10

Specifications

ISO9001:2000
CERTIFIED SUPPLIER

CE 3 year warranty
meter only

Mode	Conductivity	TDS	Temperature
Range/Resolution	0.00 to 19.99 $\mu\text{S}/0.01 \mu\text{S}$, 20.0 to 199.9 $\mu\text{S}/0.1 \mu\text{S}$, 200 to 1999 $\mu\text{S}/1 \mu\text{S}$, 20.00 to 19.99 mS/0.01 mS	0.00 to 9.99 ppm/0.01 ppm, 10.0 to 99.9 ppm/0.1 ppm, 100 to 999 ppm/1 ppm, 1.00 to 9.99 ppt/0.01 ppt	-10 to 110°C/0.1°C
Accuracy	$\pm 1\%$ full scale		
Cell constant (K)	0.1, 1.0, 10.0 (selectable)		
Conductivity-to-TDS factor	Adjustable from 0.4 to 1.0		
Calibration	Up to five points (one point per range)		Offset 0.1°C increments

Temperature compensation:
automatic or manual from 0 to 100°C

Temperature coefficient: 0 to 10%/°C

Memory: up to 50 data sets

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >200 hours continuous use; AC adapter (optional)

Dimensions

Meter: 7½" L x 3½" W x 1¾" H (19 x 9 x 4.5 cm)

Boxed: 9½" L x 9½" W x 2¾" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35607-40	CON 11 meter	Meter, conductivity cell 35608-50 (K = 1.0), probe holder, and batteries
WD-35607-80	CON 11 meter kit	Meter, conductivity cell 35608-50 (K = 1.0), probe holder, calibration solution pouches (four each of 477, 1413, 2704, and 15,500 mS), four rinse pouches, batteries, and hard carrying case

WD-35607-69 Calibration kit contains four each of TDS calibration solution pouches (447 μS , 1413 μS , 2764 μS , 15.0 mS), four rinse water pouches, rinse and sample bottles, all in a hard plastic carrying case with room for your meter and probe. Dimensions: 11.5" L x 14" W x 3" H (29.2 x 35.6 x 7.6 cm).

WD-35615-75 Soft carrying case with belt loop. Protects meter while you take measurements—nylon with hook and loop straps

WD-35615-07 AC adapter, 110 VAC

WD-35615-08 AC adapter, 220 VAC



Water Treatment



Laboratory

CON 110 Standard Meter

**Push-button, customizable operating parameters—
tailor functions to your application!**

Memory function — Stores and recalls 100 readings with corresponding temperature

RS-232/printer output — Convenient transfer of data to a computer or printer

FREE Oakton® PC datalog assist software on CD-ROM — Organizes data into format ready to import into popular spreadsheet programs

Reads conductivity from 0 to 199.9 mS across five ranges

Manual or auto-ranging for conductivity measurements; auto-ranging for TDS readings

Selectable cell constant (K) —

K = 1.0 for general applications;

K = 0.1 for pure water;

K = 10 for concentrated solutions

Adjustable temperature coefficient — Adjust from 0 to 10% per °C for accurate compensation of almost any solution

Five-point calibration—automatic or manual — Meter recalls previous calibration data

Single- or multipoint calibration — For quick multirange calibration for highest accuracy

Easily switches from conductivity to TDS readings — Features an adjustable conductivity-to-TDS factor from 0.4 to 1.0

Hold function, error messages, auto-off function

Selectable automatic or manual temperature compensation

A wide range of conductivity cells and calibration solutions are available. See page 45 to order.



Conductivity Cells

Choose a cell with K = 0.1 for low range; K = 1.0 for midrange; K = 10 for high range. Feature a built-in temperature sensor; measure 100 mm L x 12 mm dia.

Catalog number	Description	Constant
WD-35608-55	Conductivity cell, epoxy body/platinum sensor. 3-ft (1-m) cable	0.1
WD-35608-50	Replacement conductivity cell, epoxy body/stainless steel sensor. 3-ft (1-m) cable	1.0
WD-35608-51	Conductivity cell, epoxy body/platinum sensor. 3-ft (1-m) cable	10

Specifications

Mode	Conductivity	TDS	Temperature
Ranges/Resolution	0.00 to 19.99 μ S/0.01 μ S; 0.0 to 199.9 μ S/0.1 μ S; 0 to 1999 μ S/1 μ S; 0.00 to 19.99 mS/0.01 mS; 0.0 to 199.9 mS/0.1 mS	0.00 to 9.99 ppm/0.01 ppm, 10.0 to 99.9 ppm/0.1 ppm, 100 to 999 ppm/1 ppm, 1.00 to 9.99 ppt/0.01 ppt	-10 to 110°C (0.1°C), 14 to 230°F (0.1°F)
Accuracy	±1% full-scale		
Calibration	Up to five points (one point per range)		
			±0.5°C (±0.9°F) Offset 0.1°C increments

Cell constant (K): 0.1, 1.0, or 10 (selectable)

Conductivity-to-TDS factor: adjustable from 0.4 to 1.0

Temperature compensation: automatic or manual (selectable) from 0 to 100°C (32 to 212°F)

Temperature coefficient: adjustable from 0.00 to 10.00% per °C

Memory: up to 100 data sets

Output: RS-232

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >200 hours continuous use; AC adapter (optional)

Dimensions

Meter: 7½" L x 3½" W x 1¾" H (19 x 9 x 4.5 cm)

Boxed: 9½" L x 9½" W x 2¾" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35607-45	CON 110 meter	Meter, conductivity cell 35608-50 (K = 1.0), software, one probe holder, and batteries
WD-35607-85	CON 110 meter kit	Meter, conductivity cell 35608-50 (K = 1.0), software, one probe holder, calibration pouches (four each of 477, 1413, 2704, and 15,500 mS), four rinse pouches, batteries, and hard carrying case

Accessories

WD-35615-75 Soft carrying case with belt loop. Protects meter while you take measurements—nylon with hook-and-loop straps

WD-35615-07 AC adapter, 110 VAC

WD-35615-08 AC adapter, 220 VAC

RS-232 Computer/Printer Accessories

WD-35622-00 Portable printer, 110 VAC, rechargeable

WD-35622-05 Portable printer, 220 VAC, rechargeable

WD-35615-09 Computer cable, 9-pin male to 9-pin female connects meter to your PC

WD-35622-59 Printer cable, 25-pin male to 9-pin male connects meter to your printer



Research



Ecological Studies

CON 400 Meter

Highly advanced microprocessor-based conductivity meter with waterproof housing. . .and it even FLOATS!

Durable, waterproof and dustproof
IP67-rated design – Ideal for dirty, wet environments

Reads conductivity from 0 to 199.9 mS in five ranges

Switch between conductivity and TDS measurement with a press of a button

Selectable cell constant –
K = 1.0 for general applications;
K = 0.1 for pure water;
K = 10 for concentrated solutions

Selectable temperature coefficient –
Adjustable from 0 to 10% per °C for accurate compensation of almost any solution

Manual or automatic temperature compensation – For the highest accuracy in any situation

Expanded memory – Stores and recalls up to 50 readings with temperature, and previous calibration data

Real-time clock – Stamps stored data and calibration data with date and time; meets standards for GLP

°C or °F selectable

A wide range of conductivity cells and calibration solutions are available. See page 45 to order.



Conductivity Cells

Choose a cell with K = 0.1 for low range; K = 1.0 for midrange; K = 10 for high range. Feature a built-in temperature sensor; measure 100 mm L x 12 mm dia.

Catalog number	Description	Constant
WD-35608-50	Replacement conductivity cell, Ultem body, steel sensor. 3-ft (1-m) cable	1.0
WD-35608-51	Conductivity cell, epoxy body, platinum sensor. 3-ft (1-m) cable	10
WD-35608-55	Conductivity cell, epoxy body, platinum sensor. 3-ft (1-m) cable	0.1
WD-35608-57	Conductivity cell, Ultem body, steel sensor. 16-ft (5-m) cable	1.0

Specifications

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Mode	Conductivity	TDS	Temperature
Range/ Resolution	0.00 to 19.99 µS/0.01 µS, 0.0 to 199.9 µS/0.1 µS, 0 to 1999 µS/1 µS, 0.00 to 19.99 mS/0.01 mS, 0.0-199.9 mS/0.1 mS	0.00 to 9.99 ppm/0.01 ppm, 10.0 to 99.9 ppm/0.1 ppm, 100 to 999 ppm/1 ppm, 1.00 to 9.99 ppt/0.01 ppt, 10.0-99.9 ppt/0.1 ppt, 100-200 ppt/1 ppt	Epoxy-body cells: 0 to 80°C / 0.1°C Glass-body cells: 0 to 100°C / 0.1°C
Accuracy	±1% full-scale	±1% full-scale	±0.5°C (±0.5°F)
Calibration	Up to five points (one point per range)	Up to five points (one point per range)	Offset 0.1° increments

Cell constant (K): 0.1, or 1.0, 10.0 (selectable)
Conductivity-to-TDS factor: adjustable from 0.4 to 1.0
Temperature compensation: automatic or manual (selectable) from 0 to 50°C
Temperature coefficient: adjustable from 0.0 to 10.0% per °C
Memory: up to 50 data sets
Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >100 hours continuous use

Dimensions

Meter: 7½"L x 3½"W x 1¾"H (19 x 9 x 4.5 cm)

Boxed: 9¾"L x 9½"W x 2¾"H (23 x 23 x 7 cm)

Weight

Meter: 1.0 lb (0.5 kg); **Boxed:** 2.0 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35608-00	CON 400 meter	Meter, conductivity cell 35608-50 (K = 1.0), and batteries

WD-35607-69 Calibration kit contains four each of TDS calibration solution pouches (447 µS, 1413 µS, 2764 µS, 15.0 mS), four rinse water pouches, sample bottles, all in a hard plastic carrying case with room for your meter and probe. Dimensions: 11½"L x 14"W x 3"H (29.2 x 35.6 x 7.6 cm).



Drinking Water



Environmental Monitoring

CON 600 and CON 610 Meters

**Conductivity, TDS, resistivity, salinity—
measure from pure water to seawater!**

Durable waterproof and dustproof design with IP67 rating — Even with no probes attached

Single or multipoint calibration; auto or manual — Fast, trouble-free calibration for more accurate measurements

Large backlit graphic display — Multi-line display with electrode status indicator, calibration data, and more

User-settable “calibration due” alarm — Out-of-date or unperformed calibrations are now things of the past!

Built-in real-time clock — Time-and-date stamping meets Good Laboratory Practice (GLP) standards

Advanced data management — Store up to 500 data sets and download via Infrared IrDA wireless interface

Set point alarms — Audible warning when readings are outside set points limit

Accept 2-cell and 4-cell conductivity probes — Measure over a broad conductivity range up to 500 mS/cm

Password protection — Security for calibration and setup menus

Rugged rubber boot — Protects meter from bumps and dings (optional; included with kits)



Rubber boot protects meter in rugged environments

Multiparameter 650-Series meters are available. See pages 57–60.



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Model	CON 600 meter	CON 610 meter
Conductivity	0 to 200.0 mS	0 to 500.0 mS
TDS	0 to 200 ppt	0 to 500 ppt
Salinity	—	0 to 80 ppt
Resistivity	—	0 to 20.00 MΩ
Temperature	–10.0 to 110.0°C (14.0 to 230.0°F)	–10.0 to 110.0°C (14.0 to 230.0°F)
Resolution	0.05% full-scale; 0.1°C (0.1°F)	
Accuracy	±1% full-scale; ±0.5°C (±0.9°F)	
Calibration	Manual cal, up to 5 points (1 per range); automatic up to 4 points (84.0 μS/cm, 1413 μS/cm, 12.88 mS/cm, 111.8 mS/cm). Temperature offset 0.1°C (0.1°F) increments.	

TDS factor: 0.40 to 1.00

Cell constant: 0.010 to 10.000

Memory: up to 500 sets with GLP date and time

Output: infrared, IrDA

Real-time clock: time-and-date stamp on calibration and stored data

Temperature normalization: 15 or 30°C

Temperature coefficient: linear or pure (610 only)

Temperature compensation: automatic or manual (selectable) from 0 to 100°C

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AA batteries (included) or optional universal AC adapter, up to 200 hours continuous use

Dimensions

Meter: 7¼" L x 3¼" W x 2¼" H (18.4 x 8.3 x 5.7 cm)

Boxed: 9¼" L x 9¼" W x 2¼" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); Boxed: 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35408-02	CON 600 meter only	Meter and batteries
WD-35408-12	CON 610 meter only	Meter and batteries
WD-35408-00	CON 600 meter	Meter, conductivity cell 35408-52, and batteries
WD-35408-10	CON 610 meter	Meter, conductivity cell 35408-52, and batteries
WD-35408-70	CON 600 meter kit	Meter, conductivity cell 35408-52, conductivity standards (60 mL each of four solutions; 1413 μS, 12.88 mS, 3000 ppm, and rinse water), rubber boot, electrode holder, batteries, and hard carrying case
WD-35408-80	CON 610 meter kit	Meter, conductivity cell 35408-52, conductivity standards (60 mL each of four solutions; 1413 μS, 12.88 mS, 3000 ppm, and rinse water), rubber boot, electrode holder, batteries, and hard carrying case

WD-35408-50 Conductivity cell, 2-electrode, K = 0.1

WD-35408-52 Conductivity cell, 2-electrode, K = 1

WD-35408-54 Conductivity cell, 2-electrode, K = 10

WD-35408-56 Conductivity cell, 4-electrode, K = 0.3

WD-35418-83 Optional adapter, 110/220 VAC

WD-35418-86 Protective rubber boot for all 600- and 610- series meters



Laboratory



Industrial



Seawater Testing

CON 700 Meter

An affordable way to take consistent, accurate conductivity measurements in your laboratory!

Extra-large dual display shows both conductivity or TDS, and temperature in °C or °F – Plus mode indicators and annunciators to indicate meter status

Compact size saves bench space

Single- and multi-point automatic or manual calibration – Customize meter calibration for quick checks or for best meter accuracy

Auto ranging across five ranges – Offers the best resolution for your measurements

Advanced setup mode – Recalls previous calibration data, conductivity/TDS effective cell constants per range, and more

Built-in nonvolatile memory – Stores up to 100 conductivity or TDS readings with corresponding temperature

Automatic or manual temperature compensation

Selectable cell constant –

K = 0.1 for pure water;

K = 1.0 for most applications;

K = 10 for concentrated solutions

Adjustable conductivity-to-TDS conversion factor and temperature coefficient – Gives highest accuracy in any solution

Selectable normalization temperature – Choose between 15 to 30°C

Removable electrode holder arm; selectable "Ready" indicator; Hold function; diagnostic error messages

Includes conductivity cell – With cell constant of 1.0—ideal for most applications

New



CON 700 meter includes electrode holder and handy slide-out instruction card.

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Mode	Conductivity	TDS	Temperature
Ranges (Resolution)	0.00 to 20.00 μ S (0.01 μ S), 0.0 to 200.0 μ S (0.1 μ S), 0 to 2000 μ S (1 μ S), 0.00 to 20.00 mS (0.01 mS), 0.0 to 200.0 mS (0.1 mS)	0.00 to 10.00 ppm (0.01 ppm), 10.0 to 100.0 ppm (0.1 ppm), 100 to 1000 ppm (1 ppm), 1.00 to 10.00 ppt (0.01 ppt), 10.0 to 100.0 ppt (0.1 ppt), 100 to 200 ppt (1 ppt)*	0.0 to 100.0°C (0.1°C), 32.0 to 212.0°F (0.1°F)
Accuracy	$\pm 1\%$ full-scale or ± 1 digit		$\pm 0.5^\circ\text{C}$, $\pm 0.9^\circ\text{F}$
Calibration	Automatic: single or multi-point up to 4 points (84 μ S, 1413 μ S, 12.88 mS, 111.8 mS); Manual: single or multi-point (up to 5 points per range for multi-point calibration)		Offset 0.1° increments up to $\pm 5^\circ$

*200 ppt @ 1.0 factor

Cell constant (K): 0.1, 1.0, or 10 (selectable)

Temperature compensation: automatic or manual (selectable) from 32 to 212°F (0 to 100°C)

Temperature coefficient: adjustable from 0 to 10% per °C or °F

Conductivity-to-TDS factor: adjustable from 0.40 to 1.00

Normalization temperature: 15 to 30°C (adjustable)

Memory: 100 sets

Display: dual display of conductivity or TDS, with temperature (°C or °F)

Error messages: diagnose operator error, electrode error, and meter error. Pull-out instruction card decodes message.

Operating temperature: 0 to 50°C (32 to 122°F)

Power: 500 mA; 100/240 VAC, 50/60 Hz using AC adapter (included). AC adapter is UL and CSA listed.

Dimensions

Meter: 6 $\frac{1}{8}$ " x 6 $\frac{7}{8}$ " x 2 $\frac{3}{4}$ " (15.5 x 17.5 x 6.9 cm)

Boxed: 9" x 12 $\frac{3}{4}$ " x 5" (23 x 35 x 12.5 cm)

Weight

Meter only: 1.25 lb (0.6 kg); **Boxed:** 3 lb (1.4 kg)

A wide range of conductivity cells and calibration solutions are available. See page 45 to order.

Ordering Information

Catalog number	Description	Included
WD-35411-00	CON 700 meter	Meter, conductivity cell with an Ultem® body/stainless steel sensor K = 1.0 (35608-74), electrode holder, and AC adapter

WD-35608-72 Conductivity cell, epoxy body, platinum sensor, built-in temperature sensor (K = 0.1). 3-ft (1-m) cable

WD-35608-74 Replacement conductivity cell, Ultem body, stainless steel sensor, built-in temperature sensor (K = 1.0). 3-ft (1-m) cable

WD-35608-76 Conductivity cell, epoxy body, platinum sensor, built-in temperature sensor (K = 1.0). 3-ft (1-m) cable

WD-35608-78 Conductivity cell, epoxy body, platinum sensor, built-in temperature sensor (K = 10). 3-ft (1-m) cable

CON 2700 Meter

A great low price for a high performance meter that measures conductivity, total dissolved solids, resistivity, and salinity!

New

Takes up less bench space – Overall footprint is nearly 40% smaller than other benchtop meters

Oversized liquid crystal display with bright backlighting – Easier viewing under all lighting conditions

Dynamic reading stability indication shows when your measurement is stable – Eliminates guesswork from unstable readings

Up to 500 point nonvolatile memory with time-and-date stamp – Meets GLP requirements

Bidirectional RS-232 for easy data transfer to your computer

Includes a high-performance 4-cell conductivity probe! – Higher accuracy across a broader range of samples

Auto-calibration makes calibration easier – Meter automatically selects a conductivity calibration standard value based on the range and normalization temperature being used

Auto-standarization – detects the exact cell constant of your electrode

Probe status – Indicates when probe maintenance or replacement should be done

Cal-due alarm – no more out-of-date calibrations

User-settable limit alarms – alerts when reading falls out of range

Password protection – prevents unauthorized setup or calibration



Unstable reading



Stable reading



ISO9001:2000
CERTIFIED SUPPLIER

3 year
warranty
meter only

Specifications

Mode	Conductivity	TDS	Salinity	Resistivity	Temperature
Range	0.050 μ S/cm to 500.0 mS/cm (5-range autoranging)	0.050 to 500.0 ppt	0.0 to 80.0 ppt	2.000 Ω to 20.0 M Ω	0.0 to 100.0°C (32.0 to 212°F)
Resolution	0.01, 0.1 μ S/cm, 0.001, 0.01, 0.1 mS/cm	0.01, 0.1 ppm, 0.001, 0.01, 0.1 ppt	0.01, 0.1 ppm; 0.001, 0.01, 0.1 ppt	0.01/0.1 Ω , 0.01/0.1 k Ω , 0.01 M Ω	0.1°C or °F
Accuracy	± 1% full scale	± 1% full scale	± 1% full scale	± 1% full scale	± 0.3°C (± 0.5°F)
Calibration	5 points (one point per range)	5 points (one point per range)	5 points (one point per range)	5 points (one point per range)	Offset in 0.1 increments, ± 5°C (± 9°F)
Connectors	8-pin DIN	8-pin DIN	8-pin DIN	8-pin DIN	8-pin DIN

Temperature compensation: manual or automatic from -5°C to 105°C

Conductivity temp coefficient: adjustable from 0.0 to 10% per °C/°F

Conductivity cell constant: 0.01 to 10.000

Conductivity-to-TDS factor: adjustable from 0.4 to 1.0

Normalization temperature: adjustable from 15 to 30°C

Memory: up to 500 data sets

Output: RS-232, 9-pin female

Display: 3/4" x 2 7/16" (8.3 x 6.2 cm) graphic LCD with backlight

Operating temperature: 41 to 113°F, noncondensing

Power: universal 110/240 VAC with adapters; UL/CSA listed

Dimensions

Meter: 6 1/8" x 6 7/8" x 2 3/4" (15.5 x 17.5 x 6.9 cm)

Boxed: 12" x 9" x 5" (30.8 x 15.5 x 12.4 cm)

Weight

Meter only: 1.4 lbs (650 g); **Boxed:** 4 lbs (1800 g)

Ordering Information

Catalog number	Description	Included
WD-35412-00	CON 2700 meter	Meter, 4-cell conductivity/temperature probe 35412-10, electrode holder, and universal 110/240 VAC power supply

WD-35412-10 Replacement conductivity/temperature probe for 2700-series meter; 4-cell, K= 1.0 epoxy/graphite

WD-35420-01 RS-232 cable
WD-22050-58 RS-232 to USB adapter (requires 35420-01)



Laboratory

See page 45 for conductivity probes and calibration standards.

Probes and Calibration Solutions

Conductivity/TDS Probes

Choose from three cell constants

All probes feature built-in temperature compensation. A 1.0 cell constant (K) is ideal for midrange conductivity measurements. For high conductivity measurements (near or above 20 mS), order a probe with K = 10.0; for low conductivity measurements (near or below 20 µS), order a probe with K = 0.1.



Ordering Information

Catalog number	Body/sensor material	Cell constant (K)	Temperature range	Cable length	Probe style
Probes for use with CON 6/6+, TDS 6/6+, and SALT 6/6+					
WD-35606-53	Utem®/stainless steel	0.1	0 to 80°C	3 ft (1 m)	C
WD-35606-55	Utem/stainless steel	1.0	0 to 80°C	3 ft (1 m)	C
WD-35606-57	Utem/stainless steel	10	0 to 80°C	10 ft (3 m)	C
Probes for use with CON 11, CON 110, pH/CON 300, CON 400, CON 410, TDS 400, CON 510, and pH/CON 510					
WD-35608-50	Utem/stainless steel	1.0	0 to 80°C	3 ft (1 m)	C
WD-35608-57	Utem/stainless steel	1.0	0 to 80°C	10 ft (3 m)	C
WD-35608-51	Epoxy/platinum	10	0 to 80°C	3 ft (1 m)	A
WD-35608-52	Glass/platinum	1.0	0 to 100°C	3 ft (1 m)	B
WD-35608-55	Epoxy/platinum	0.1	0 to 80°C	3 ft (1 m)	A
Probes for use with CON 600, CON 610, PC 650, CD 650, and PCD 650					
WD-35408-50	Epoxy/graphite	0.1	0 to 80°C	3 ft (1 m)	A
WD-35408-52	Utem/stainless steel	1.0	0 to 80°C	3 ft (1 m)	C
WD-35408-57	Utem/stainless steel	1.0	0 to 80°C	10 ft (3 m)	C
WD-35408-54	Epoxy/graphite	10	0 to 80°C	3 ft (1 m)	A
WD-35408-56	Epoxy, 4-cell/graphite	0.3	0 to 80°C	3 ft (1 m)	A
2-cell conductivity probes for use with CON 700/2700 and PC 700/2700					
WD-35608-72	Epoxy/platinum	0.1	0 to 80°C	3 ft (1 m)	A
WD-35608-74	Utem/stainless steel	1.0	0 to 80°C	3 ft (1 m)	C
WD-35608-76	Epoxy/platinum	1.0	0 to 80°C	3 ft (1 m)	A
WD-35608-78	Epoxy/platinum	10	0 to 80°C	3 ft (1 m)	A
4-cell conductivity probes for use with CON 2700 and PC 2700					
WD-35608-90	Epoxy/platinum	0.1	0 to 80°C	3 ft (1 m)	A
WD-35412-10	Epoxy/graphite	1.0	0 to 80°C	3 ft (1 m)	A
WD-35608-92	Epoxy/platinum	1.0	0 to 80°C	3 ft (1 m)	A
WD-35608-94	Epoxy/platinum	10	0 to 80°C	3 ft (1 m)	A

Conductivity/TDS Calibration Pouches

Standardized against NIST-traceable reference for accuracy

Conductivity/TDS pouches are convenient, individually sealed pouches that contain high-precision calibration standards. Ideal for field calibration; just select the pouches you need and carry them to your test site for on-the-spot calibration and verification. Pouches are labeled with equivalent values for KCl, NaCl, and 442 and conductivity values at 25°C and CAS numbers for "Right-to-Know" requirements. Each box contains twenty 20-mL pouches.



Ordering Information

Catalog number	Conductivity value	Conductivity-to-TDS calibration values		
		ppm KCl	ppm NaCl	ppm 442
WD-35653-09	10 µS	4.7	4.8	7.0
WD-35653-10	447 µS	225.6	215.5	300.0
WD-35653-11	1413 µS	744.7	702.1	1000
WD-35653-12	2764 µS	1382	1414.8	2062.7
WD-35653-13	15,000 µS	8759	8532	13,455
WD-35653-15	5,650 µS	3240	3000	—

WD-35653-00 Deionized rinse water pouches, 20 pouches/box

Conductivity/TDS Calibration Solutions

Standardized against NIST-traceable references to ensure quality

Conductivity/TDS calibration solutions are cross checked using different test methods, premixed, and ready to use with ±1% accuracy at 25°C. Each one-pint bottle is labeled with the name and CAS number for all ingredients to conform with "Right-to-Know" requirements.



Ordering Information

Catalog number	Conductivity value	Conductivity-to-TDS calibration values		
		ppm KCl	ppm NaCl	ppm 442
WD-00653-23	23 µS	11.6	10.7	14.74
WD-00653-16	84 µS	40.38	38.04	50.50
WD-00653-47	447 µS	225.6	215.5	300.0
WD-00653-18	1413 µS	744.7	702.1	1000
WD-00653-15	1500 µS	757.1	737.1	1050
WD-00653-27	2070 µS	1045	1041	1500
WD-00653-20	2764 µS	1382	1414.8	2062.7
WD-00653-89	8974 µS	5101	4487	7608
WD-00606-10	12,880 µS	7447	7230	11,367
WD-00653-50	15,000 µS	8759	8532	13,455
WD-00653-32	80 mS	52,168	48,384	79,688

Dissolved Oxygen Meters

Get Better Accuracy. Oakton Instruments offers only galvanic probes with its handheld meters for one key reason—low drift. Low drift means better accuracy because the calibration lasts longer. This provides results you can count on all day—or night—in the field. Combine the superior probe technology with the application-specific microprocessor technology in Oakton® DO meters, and there is no doubt these are meters that deliver reliable, accurate results.



A Better Value. The value built into our DO meters is the result of our drive for quality, functionality, and durability. This commitment inspires us to do the extra things that may not be instantly apparent—from our use of custom thermoplastic housing materials for superior chemical and temperature durability, to our waterproof models' unique isolated battery and sensor input compartments that protect the meter even when it is not properly assembled by the user. Or our informative icons on our LCD, and our probe start-up kit included with every meter. All of these things combine to give you a superior product that delivers long-term utility and value.

Lots of Options. Oakton gives you a host of product options that enable you to select the best DO measurement system for your needs. We offer the economical 6+ and 110 series for those less demanding environments, such as your indoor applications. Our full-featured 300 series with backlit display is perfect for outdoor and nighttime use.

Plus, we offer a combination pH/DO meter that features—in a single unit—the two most important chemical measurements in aquaculture and wastewater treatment applications. Our GLP-compliant 600-series meter is our most robust option with lab quality performance in a completely waterproof body.

We are proud to introduce our new benchtop laboratory meters which measure DO (700 meter) or BOD (2700 meter). In support of these meter options, we offer DO probes with varying cable lengths up to 100 feet (30 meters).



See page 53 to order replacement DO probes and accessories.

Dissolved Oxygen Meter Selection Guide

Use this handy comparison chart to help select the dissolved oxygen meter right for your application.

New



6+ Series



110 Series



Waterproof 300 Series



Waterproof 600 Series



Benchtop Series

New

Meter	6+ series	110 series	Waterproof 300 series	Waterproof 600 series	Benchtop 700	Benchtop 2700
See page	47	48	49	50	51	52
Special features	Our most economical DO meter	Dual-line display, optional AC power	Waterproof, dustproof plus backlit display	Most powerful; ideal for the field	Versatile benchtop meters for the laboratory	
DO range	0.00 to 20.00 mg/L (ppm); 0.00 to 200.0%	0.00 to 20.00 mg/L (ppm); 0.00 to 200.0% saturation	0.00 to 20.00 mg/L (ppm); 0.00 to 200.0% saturation	0.00 to 20.00 mg/L (ppm); 0.00 to 200.0% saturation	0 to 30 mg/L; 0 to 300% saturation	0 to 19.99 mg/L; 50 mg/L; 0 to 600% saturation
DO resolution	0.01 mg/L (ppm); 0.1% saturation	0.01 mg/L (ppm); 0.1% saturation	0.01 mg/L (ppm); 0.1% saturation	0.01 mg/L (ppm); 0.01% saturation	0.01 mg/L; 0.1% saturation	0.01, 0.1 mg/L; 0.1% saturation
DO accuracy	±1.5% full-scale	±1.5% full-scale	±1.5% full-scale	±1.5% full-scale	±0.5% full-scale	
Probe technology	Galvanic	Galvanic	Galvanic	Galvanic	Galvanic	Polarographic BOD
Waterproof/dustproof	—	—	Yes	Yes	—	—
Memory function	—	100 data sets	50 data sets	500 data sets	100 data sets	500 data sets
Backlit display	—	—	Yes	Yes	—	Yes
Real-time clock	—	—	Yes	Yes	—	Yes
°C/°F selectable	—	Yes	Yes	Yes	Yes	Yes
Protective rubber boot	Yes	—	—	Yes	—	—
Built-in stand	Yes	Yes	—	Yes	—	—
AC power	—	Yes (optional)	—	Yes (optional)	Yes	Yes

DO 6+ Meter

**Compact and economical—
rugged rubber boot protects meter**

No meter warm-up required – Galvanic probe design lets you take measurements immediately without the typical 15-minute wait!

Easy-to-service, low-maintenance probe – Replaceable membrane cap assembly makes probe maintenance hassle-free! Simply fill cap with electrolyte solution and screw on.

Key in salinity and pressure values manually – Meter then calculates the offset value for increased accuracy

Independent 100% and zero adjustment calibrations – Gives meter high accuracy across entire measuring range

Offset adjustment capabilities – Calibrate your meter to a known work standard or titrimetrically determined value

Displays electrode diagnostics – Gives slope, zero offset, and millivolt values to help determine when you need to service or replace electrode

Easily toggle from mg/L (ppm) or % saturation to temperature mode

Built-in stand for benchtop or long-term use

Protective rubber boot – Helps shield your meter from drops and dings

New



Meter includes a protective rubber boot and a built-in stand.

See page 53 to order replacement DO probes and accessories.



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Mode	mg/L (ppm)	% Saturation	Temperature
Range	0.00 to 20.00 mg/L (ppm)	0.0 to 200.0%	-5.0 to 105.0°C
Resolution	0.01 mg/L (ppm)	0.1%	0.1°C
Accuracy	±1.5% full-scale	±1.5% full-scale	±0.5°C

Temperature compensation: automatic from 0 to 50°C

Salinity correction

Range: 0.0 to 50.0 ppt

Resolution: 0.1 ppt

Method: key in manually for meter calculated correction

Barometric pressure correction

Range: 500 to 1499 mm Hg

Resolution: 1 mm Hg

Method: key in manually for meter calculated correction

Probe: galvanic

Memory: none

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >700 hrs continuous use

Dimensions

Meter: 5½"L x 2¼"W x 1¼"H (14 x 7 x 3.5 cm)

Boxed: 8¼"L x 5¼"W x 3"H (21 x 15 x 7.5 cm)

Probe: 5"L x ½" dia (11.5 cm L x 1.2 cm dia)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 1.4 lb (0.6 kg)

Ordering Information

Catalog number	Description	Included
WD-35643-10	DO 6+ meter only	Meter and batteries
WD-35643-12	DO 6+ meter	Meter, DO probe 35642-50 with 3-ft (1-m) cable, electrolyte solution, replacement membrane cap, and batteries
WD-35643-14	DO 6+ meter kit	Meter, DO probe 35642-50 with 3-ft (1-m) cable, electrolyte solution, two replacement membrane caps, sample bottles, hard carrying case with space for meter and probe, and batteries

WD-35642-55 Maintenance kit includes replacement membrane cap and 10 mL of electrolyte solution

WD-35640-71 Replacement electrolyte, premixed 500-mL bottle



**Fish and Shrimp
Farming**



**Wastewater and
Water Treatment**

DO 110 Meter

**Measure dissolved oxygen immediately—
no meter warm-up required**

No meter warm-up required – Galvanic probe design lets you take measurements immediately without the typical 15 minute wait!

Easy-to-service, low-maintenance probe – Replaceable membrane cap assembly makes probe maintenance hassle-free! Simply fill cap with electrolyte solution and screw on.

Key in salinity and pressure values manually – Meter then calculates the offset value for increased accuracy

Independent 100% and zero adjustment calibrations – Gives meter high accuracy across entire measuring range

Offset adjustment capabilities – Calibrate your meter to a known work standard or titrimetrically determined value

Stores and recalls 100 DO readings with corresponding temperature

Transfer data directly from meter to PC – Made easy with RS-232 output included software

Displays electrode diagnostics – Gives slope, zero offset, and millivolt values to help determine when you need to service or replace electrode

Dual-line display simultaneously shows mg/L (ppm) or % saturation, plus temperature

°C/°F selectable

See page 53 to order replacement DO probes and accessories.



ISO 9001:2000
CERTIFIED SUPPLIER

CE 3 year
warranty
meter only

Specifications

Mode	mg/L (ppm)	% Saturation	Temperature
Range	0.00 to 20.00 mg/L (ppm)	0.0 to 200.0%	0.0 to 50.0°C (32 to 122°F)
Resolution	0.01 mg/L (ppm)	0.1%	0.1°C (0.1°F)
Accuracy	±1.5% full-scale	±1.5% full-scale	±0.1°C (±0.1°F)

Temperature compensation: automatic from 0 to 50°C

Salinity correction

Range: 0.0 to 50.0 ppt
Resolution: 0.1 ppt
Method: key in manually for meter calculated correction

Barometric pressure correction

Range: 555 to 808 mm Hg
Resolution: 1 mm Hg
Method: key in manually for meter calculated correction

Probe: galvanic

Memory: stores and recalls 100 sets

Output: RS-232

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >50 hrs continuous use; AC adapter (optional)

Dimensions

Meter: 7½"L x 3½"W x 1¼"H (19 x 9 x 4.5 cm)

Boxed: 9½"L x 9½"W x 2¾"H (23 x 23 x 7 cm)

Probe: 6¼"L x 1¼" dia (17.3 cm L x 3.2 cm dia)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 1.4 lb (0.6 kg)

Ordering Information

Catalog number	Description	Included
WD-35640-22	DO 110 meter only	Meter and batteries
WD-35640-20	DO 110 meter	Meter, DO probe 35640-50 with 10-ft (3-m) cable, electrolyte solution, replacement membrane caps, and batteries
WD-35640-64	DO 110 meter kit	Meter, DO probe 35640-50 with 10-ft (3-m) cable, electrolyte solution, replacement membrane caps, sample bottles, hard carrying case with space for meter and probe, and batteries

Accessories

WD-35615-09 RS-232 cable, connect meter to PC

WD-35615-07 AC adapter, 9 VDC to 110 VAC

WD-35615-08 AC adapter, 9 VDC to 220 VAC

WD-35615-75 Soft carrying case for hands-free operation



Industrial



Educational

DO 300 Meter

Advanced, high-accuracy dissolved oxygen meter with superior waterproof housing. . .and it FLOATS!

Waterproof, dustproof housing with IP67 rating

Expanded memory stores up to 50 DO/temp readings

Real-time clock – Time/date stamps data stored in memory and calibration data (GLP friendly)

Keypad-adjustable backlit display – Ideal for viewing readings in dark areas

Very low drift probe – For enhanced stability and repeatability

Input salinity and pressure values manually – Meter then calculates the offset value for increased accuracy

Independent 100% and zero adjustment calibrations – For high accuracy over the full meter range

Offset adjustment capabilities – Calibrate your meter to a known work standard or titrimetrically determined value

No meter warm-up required – Galvanic probe design lets you take measurements immediately without the typical 15-minute wait!

Easy-to-service, low-maintenance probe – Replaceable membrane cap assembly makes probe maintenance hassle-free—simply fill cap with electrolyte solution and screw on

Display electrode diagnostics – View slope, zero offset, and millivolt values

Dual-line display simultaneously shows mg/L (ppm) or % saturation, plus temperature °C/°F selectable



35641-00



IP67-rated housing floats!

See page 53 to order replacement DO probes and accessories.

ISO9001:2000
CERTIFIED SUPPLIER

CE

3 year
warranty
meter only

Specifications

Mode	mg/L (ppm)	% Saturation	Temperature
Range	0.00 to 20.00 mg/L (ppm)	0.0 to 200.0%	0.0 to 50.0°C (32.0 to 122.0°F)
Resolution	0.01 mg/L (ppm)	0.1%	0.1°C (0.1°F)
Accuracy	±1.5% full-scale	±1.5% full-scale	±0.3°C (±0.3°F)

Temperature compensation: automatic from 0 to 50°C

Salinity correction

Range: 0.0 to 50.0 ppt
Resolution: 0.1 ppt
Method: key in manually for meter calculated correction

Barometric pressure correction

Range: 500 to 1499 mm Hg, 66.6 to 199.9 kPa
Resolution: 1 mm Hg, 0.1 kPa
Method: key in manually for meter calculated correction

Probe: galvanic

Memory: 50 data sets

Real-time clock: stamps calibration data and stored data with time and date (month and day)

Backlit display: eight levels of brightness

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >100 hours continuous use: use of backlit display decreases battery life

Dimensions

Meter: 7½" L x 3½" W x 1¾" H (19 x 9 x 4.5 cm)

Boxed: 9½" L x 9½" W x 2¾" H (23 x 23 x 7 cm)

Probe: 6¾" L x 1¼" dia (17.3 cm L x 3.2 cm dia)

Weight

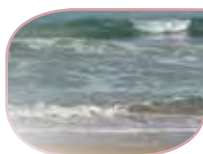
Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35641-01	DO 300 meter only	Meter and batteries
WD-35641-00	DO 300 meter kit	Meter, DO probe 35640-50 with 10-ft (3-m) cable, electrolyte solution, replacement membrane caps, and batteries



Environmental Monitoring



Seawater Testing

DO 600 Meter

Fast dissolved oxygen measurement with automatic pressure compensation

Durable waterproof and dustproof design with IP67 rating – Even with no probes attached

Single or multipoint calibration – Fast, trouble-free calibration in air

Large backlit graphic display – Multiline display with electrode status indicator, calibration data, and more

User-settable “calibration due” alarm – Out-of-date or unperformed calibrations are now a thing of the past!

Built-in real-time clock – Time-and-date stamping meets Good Laboratory Practice (GLP) standards

Advanced data management – Store up to 500 data sets and download via IrDA wireless interface

Set point alarms – Audible warning when readings are outside set points limit

No meter warm-up required – Galvanic probe design lets you take measurements immediately without the typical 15-minute wait!

Password protection – Security for calibration and setup menus

Rugged rubber boot – Protects meter when out in the field



Complete kit available; includes meter, solutions, rubber boot, and carrying case.

DO probes available with up to 100-ft (30-m) cable. See page 53 to order.



ISO9001:2000
CERTIFIED SUPPLIER

3 year
warranty
meter only

Specifications

Mode	mg/L (ppm)	% Saturation	Temperature
Range	0.00 to 90.00 mg/L (ppm)	0.0 to 600.0%	0.0 to 50.0°C (32.0 to 122.0°F)
Resolution	0.01 mg/L (ppm)	0.1%	0.1°C (0.1°F)
Accuracy	±0.2% mg/L (ppm)	±2% full-scale	±0.3°C (±0.3°F)

Temperature compensation: automatic or manual (selectable) from 0 to 50°C

Salinity correction

Range: 0.0 to 50.0 ppt
Resolution: 0.1 ppt
Method: key in manually for meter calculation correction

Barometric pressure correction

Range: 450 to 825 mm Hg, 59.9 to 109.9 kPa
Resolution: 1 mm Hg, 0.1 kPa
Method: automatic correction

Probe: galvanic

Memory: up to 500 sets with GLP date and time

Output: infrared, IrDA

Real-time clock: time-and-date stamp on calibration and stored data

Display: Multi-line LCD with backlighting

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AA batteries (included) or optional universal AC adapter, up to 500 hours continuous use

Dimensions

Meter: 7¼" L x 3¼" W x 2¼" H (18.4 x 8.3 x 5.7 cm)

Boxed: 9½" L x 9½" W x 2¼" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)



Laboratory



Wastewater Treatment

Ordering Information

Catalog number	Description	Included
WD-35441-02	DO 600 meter only	Meter and batteries
WD-35441-00	DO 600 meter	Meter, probe 35640-50 with 10-ft (3-m) cable, electrolyte solution, replacement membrane caps, and batteries
WD-35441-70	DO 600 meter kit	Meter, probe 35640-50 with 10-ft (3-m) cable, electrolyte solution, rubber boot, replacement membrane caps, hard carrying case, and batteries

WD-35640-50 Replacement dissolved oxygen probe, 10-ft (3-m) cable

WD-35418-83 Optional adapter, 110/220 VAC

WD-35418-86 Protective rubber boot for all 600- and 650-series meters

DO 700 Meter

Economical and user-friendly meter is perfect for water treatment facilities and schools

Takes up less bench space – Overall footprint is nearly 40% smaller than other benchtop meters

Oversized liquid crystal display – Easy to see from across the laboratory

Up to 100 point nonvolatile memory

Dissolved oxygen measurements in mg/L, ppm, or % saturation

Accurate readings under varying conditions – Corrections for temperature (automatic or manual), salinity (manual), and barometric pressure (manual)

Convenient pull-out reference guide

New



Electrode holder can be mounted on either side of meter



Splash-resistant keypad



Water Treatment



Educational Laboratories

See page 53 for probe maintenance and calibration supplies

Specifications

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Mode	mg/L (ppm)	% Saturation	Temperature
Range	0 to 30 mg/L	0 to 300%	0.0 to 50.0°C (32.0 to 122°F)
Resolution	0.01	0.1%	0.1°C or °F
Accuracy	±0.5% full scale	±0.5% full scale	±0.5°C (±0.9°F)
Connectors	BNC	BNC	Phono

Temperature compensation: manual or automatic from 0 to 50°C (32 to 122°F)

Salinity compensation

Range: 0 to 50 ppt
Resolution: 0.1 ppt
Method: key in manually and meter automatically corrects

Barometric compensation

Range: 450 to 825 mm Hg
Resolution: 1 mm Hg
Method: key in manually and meter automatically corrects

Probe: galvanic with 3-ft (1-m) cable

Memory: up to 100 data sets

Output: none

Display: 3¼" x 2½" (8.3 x 6.2 cm) graphic LCD

Operating temperature: 5 to 45°C (41 to 113°F), noncondensing humidity

Power: universal 110/240 VAC with adapters; UL/CSA listed

Dimensions

Meter: 6⅞" x 6⅞" x 2¼" (15.5 x 17.5 x 6.9 cm)

Boxed: 12" x 9" x 5" (30.8 x 15.5 x 12.4 cm)

Weight

Meter only: 1.4 lb (0.6 kg); **Boxed:** 4 lb (1.8 kg)

Ordering Information

Catalog number	Description	Included
WD-35415-00	DO 700 meter	Meter, dissolved oxygen probe 35642-50, electrode holder, and AC adapter

WD-35642-50 Replacement DO probe with 3-ft (1-m) cable

WD-35820-64 In-line fitting for DO probe 35642-50

DO 2700 Meter

Optimal performance and versatility at a very affordable price!

New

Takes up less bench space – Overall footprint is nearly 40% smaller than other benchtop meters

Oversized liquid crystal display – Easy to see readings from across the lab; viewing under all lighting conditions

Dynamic reading stability indication – Shows when your measurement is stable, eliminating guesswork from unstable readings

Up to 500 point nonvolatile memory with time-and-date stamp – Meets GLP requirements

Bidirectional RS-232 – Easy data transfer to your computer

Automatic calibration at 100% and independent 0% – Provides greater measurement sensitivity at low oxygen levels

Built-in barometer – Automatically adjusts for most accurate readings

Corrections for temperature and salinity variations – Automatic or manual temperature compensation and manual salinity correction

Calibration documentation – Details include date and time, calibration standard, offset, slope, and next cal date

User-settable alarms – Alert you when readings are out-of-range or calibration should be performed

Electrode diagnostics – Indicate when probe maintenance or replacement is due

Password protection – Prevents unauthorized use

Includes a self-stirring dissolved oxygen/BOD probe – Ideal for wastewater testing in the laboratory



Unstable reading



Stable reading



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Mode	mg/L (ppm)	% Saturation	Temperature
Range	0 to 50 mg/L	0 to 600.0%	0.0 to 50.0°C (32.0 to 122°F)
Resolution	0.01, 0.1	0.1%	0.1°C or °F
Accuracy	±0.5% full scale	±0.5% full scale	±0.3°C (±0.5°F)
Connectors	BNC	BNC	Phono

Temperature compensation: manual or automatic from 0 to 50°C (32 to 122°F)

Salinity compensation

Range: 0 to 50 ppt
Resolution: 0.1 ppt
Method: key in manually and meter automatically corrects

Barometric compensation

Range: 450 to 825 mm Hg
Resolution: 1 mm Hg
Method: meter automatically corrects with built-in barometer

Probe: polarographic self-stirring BOD with 3-ft (1-m) cable

Memory: up to 500 data sets

Output: RS-232

Display: 3¼" x 2⅞" (8.3 x 6.2 cm) graphic LCD with backlight

Operating temperature: 5 to 45°C (41 to 113°F), noncondensing humidity

Power: universal 110/240 VAC with adapters; UL/CSA listed

Dimensions

Meter: 6⅞" x 6⅞" x 2¾" (15.5 x 17.5 x 6.9 cm)

Boxed: 12" x 9" x 5" (30.8 x 15.5 x 12.4 cm)

Weight

Meter only: 1.4 lb (0.6 kg); **Boxed:** 4 lb (1.8 kg)



Laboratory

See page 53
for probe
maintenance and
calibration supplies

Ordering Information

Catalog number	Description	Included
WD-35416-00	DO 2700 meter	Meter, self-stirring dissolved oxygen/BOD probe 35420-82, six membrane caps, electrolyte solution, and AC adapter

WD-35420-82 Replacement self-stirring DO/BOD probe with 3-ft (1-m) cable

WD-35420-01 RS-232 cable

WD-22050-58 RS-232 to USB adapter (requires 35420-01)

DO Probes and Accessories

Probes

Oakton® probes use galvanic technology to provide rapid results, without any warm-up requirements for field use or economical polarographic technology for BOD use.

Probes for DO 6, DO 6+, and DO 700 meters

Includes 50 mL of electrolyte solution and one replacement membrane cap. Probe dimensions: 5"L x 0.5" dia (11.5 cm L x 1.2 cm dia)



Catalog number	Description
WD-35642-50	Replacement DO probe with 3-ft (1-m) cable
WD-35642-52	DO probe with 10-ft (3-m) cable
WD-35642-54	DO probe with 30-ft (9-m) cable

Probes for DO 110, DO 300, and DO 600 meters

Includes 50 mL of electrolyte solution and two replacement membrane caps. Probe dimensions: 6.8"L x 1.3" dia (17.3 cm L x 3.2 cm dia)

Catalog number	Description
WD-35640-50	Replacement DO probe with 10-ft (3-m) cable
WD-35640-52	DO probe with 25-ft (7-m) cable
WD-35640-54	DO probe with 50-ft (15-m) cable
WD-35640-56	DO probe with 100-ft (30-m) cable

Probe for DO 2700 meter – BOD electrode with self-stirring mechanism

Includes 20 mL of electrolyte solution and six replacement membrane caps. Probe dimensions: 2.4"L x 0.5" dia (6.2 cm L x 1.2 cm dia)

Catalog number	Description
WD-35420-82	Replacement BOD probe with 3-ft (1-m) cable

Probe Maintenance

Catalog number	Description
Membrane assembly for DO 6, DO 6+, and DO 700 meters	
WD-35642-55	Replacement membrane assembly consists of a preassembled membrane and cap. Simply screw replacement membrane assembly onto the probe you already have. Includes 50 mL of electrolyte solution.
Membrane assembly for DO 110, DO 300, and DO 600 meters	
WD-35640-80	Maintenance kit. Includes two complete membrane cap assemblies and 50 mL of electrolyte solution.
WD-35640-72	Replacement membrane assembly consists of a preassembled membrane, membrane lock, O-ring, and cap. Simply screw replacement membrane assembly onto your probe.
WD-35640-79	Membrane installation tool lets you remove and replace membrane in the lab or field.
WD-35640-74	Replacement HDPE membranes. Pack of 5
WD-35640-75	Replacement HDPE membranes. Pack of 25
Membrane assembly for DO 2700 meter	
WD-53109-55	Maintenance kit. Includes six membrane caps and 20 mL of electrolyte solution.

Solutions

Ensure accurate readings by using Oakton solutions with your DO meter. Zero oxygen solution lets you calibrate for accurate low-end readings. Replacement electrolyte should be used whenever you replace the membrane or membrane cap.



Catalog number	Description
WD-00653-00	Zero oxygen calibration solution, 500 mL
WD-35640-71	Replacement electrolyte solution, premixed 500 mL
WD-35640-70	Replacement electrolyte powder, 58.5 g. Mix your own electrolyte solution—makes 400 mL. Has longer shelf life in unmixed form.

DO Meter Accessory Kit

for DO 110, DO 300, and DO 600 meters

Bring everything you need for accurate DO measurement with you when you work in the field. Includes 50 mL of electrolyte solution, two replacement membrane caps, rinse bottles, and hard carrying case with space for your meter and probe. (Meter not included.)

Catalog number	Description
WD-35640-60	DO meter accessory kit (meter not included)



pH/CON 10 Meter

Measure pH, conductivity, and temperature with just one meter and probe!

Toggle between pH/°C and conductivity/°C readings with one button press – For the convenience of three meters in one!

Includes multi-sensor submersible probe with 10-ft submersible cable – There's no need to switch probes when you switch measurement modes!

Optional groundwater down-well probes available – 1.7" diameter probe fits into a 2" well head

Dual display shows measured parameter plus °C simultaneously – Mode annunciators clearly indicate status of readings

Easy push-button pH and conductivity calibration – Calibrate pH at up to three points and conductivity at up to four points for high accuracy over the entire measuring range

Auto-buffer recognition for pH calibration

Auto ranging for conductivity measurements – For fast response over a wide range

Automatic temperature compensation (ATC) – Keeps your measurements accurate even in solutions with varying temperatures

Hold, Ready indicator, Automatic shutoff functions

Meter kit available – Contains everything you need for calibration and measurement packaged in a hard carrying case



Down-well probes fit easily into 2" (5.1 cm) well heads.



Waterproof pH/CON 10 with multi-sensor probe 35630-50

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Mode	pH	Conductivity	Temperature
Range	0.00 to 14.00 pH	0 to 19.99 µS, 0 to 199.9 µS, 0 to 1999 µS, 0 to 19.99 mS	0.0 to 100.0°C
Resolution	0.01 pH	0.01 µS, 0.1 µS, 1 µS, 0.01 mS	0.1°C
Accuracy	±0.01 pH	±1% full scale or ±1 digit	±0.5°C
Calibration	Up to three points (pH 4.01, 7.00, 10.00)	Up to four points (one point per range)	Offset in 0.1°C increments

Conductivity cell constant (K): fixed at 1.0

Temperature coefficient: fixed at 2.00% per °C

Temperature compensation: automatic from 0 to 50°C

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >50 hours continuous use

Dimensions

Meter: 7½"L x 3¾"W x 2¼"H (19 x 9.5 x 5.7 cm)

Boxed: 9½"L x 9½"W x 2¾"H (23 x 23 x 7 cm)

Probe: 6¾"L x 1¼" dia (173 mm L x 33 mm dia) with 10-ft (3-m) cable

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35630-03	pH/CON 10 meter only	Meter and batteries
WD-35630-02	pH/CON 10 meter	Meter, pH/conductivity/°C probe 35630-50, and batteries
WD-35630-62	pH/CON 10 meter kit	Meter, pH/conductivity/°C probe 35630-50, calibration solution pouches (three each of pH 4.01, 7.00, 10.00; and two each of conductivity 447 µS, 1413 µS, 2764 µS, 15,000 µS), three rinse water pouches, sample bottles, batteries, and hard carrying case

WD-35630-50 Replacement pH/conductivity/°C probe, 10-ft (3-m) submersible cable

WD-09376-00 Replacement batteries, 1.5 V AAA. Pack of 12

WD-35630-69 Calibration kit includes calibration solution pouches (three each of pH 4.01, 7.00, 10.01, rinse water; and two each of conductivity 447 µS, 1413 µS, 2764 µS, 15,000 µS), squeeze bottle, and hard carrying case. (Meter not included)

Down-Well Probes

These pH/conductivity/temperature probes were specially engineered with a slim design so you can use the pH/CON 10 meter to test ground water. Probes measure only 1.7" (4.3 cm) dia and easily fit into 2" (5.1 cm) well heads.

WD-35630-52 Down-well probe, pH/conductivity/temperature; 10-ft (3-m) cable

WD-35630-54 Down-well probe, pH/conductivity/temperature; 25-ft (7.5-m) cable

WD-35630-56 Down-well probe, pH/conductivity/temperature; 100-ft (30-m) cable



Drinking Water



Environmental Monitoring

pH/CON 300 Meter

A waterproof meter that does it all—measures pH, conductivity, TDS, and temperature!

Waterproof and dustproof with IP67 rating—it FLOATS!

Toggle between pH, conductivity, and TDS readings

Dual display shows measured parameter plus temperature (°C/°F) – Read two parameters at a glance

Advanced setup mode – Recalls previous calibration points, pH electrode slope and offset, conductivity/TDS effective cell constants per range, and more

Easy push-button calibration – Five-point calibration for pH and either conductivity or TDS; temperature offset calibration

pH auto buffer recognition – Fast, easy pH calibration

Auto ranging for conductivity and TDS measurements – Fast response and best resolution over a wide range

Selectable manual or automatic temperature compensation (ATC) – The highest accuracy in any situation

Selectable automatic endpoint – Automatically freezes reading when stable for five seconds

Separate pH and conductivity/TDS probes – Lets you use specialty probes for different applications

Hold function, Ready indicator, Automatic shutoff



Waterproof, IP67-rated housing floats!

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Mode	pH	Conductivity	TDS	Temperature
Range	-2.00 to 16.00 pH	0 to 19.99 μ S, 0 to 199.9 μ S, 0 to 1999 μ S, 0 to 19.99 mS, 0 to 199.9 mS	0.00 to 9.99 ppm, 10.0 to 99.9 ppm, 100 to 999 ppm, 1.00 to 9.99 ppt, 10.0 to 99.9 ppt, 100 to 200 ppt	0.0 to 100.0°C (32.0 to 212.0°F)
Resolution	0.01 pH	0.01 μ S, 0.1 μ S, 1 μ S, 0.01 mS, 0.1 mS	0.01, 0.1, 1 ppm, 0.01, 0.1, 1 ppt	0.1°C (0.1°F)
Accuracy	\pm 0.01 pH	\pm 1% full-scale	\pm 1% full-scale	\pm 0.5°C (\pm 0.5°F)
Calibration	Up to five points (1.68, 4.01, 7.00, 10.00, 12.45)	Up to five points (one per range)	Up to five points (one per range)	Offset 0.1° increments

Conductivity-to-TDS factor: adjustable from 0.4 to 1

Normalization temperature: adjustable from 15 to 30°C (59 to 86°F)

Temperature coefficient: adjustable from 0.0 to 10.0% per °C or °F

Temperature compensation: automatic or manual (selectable) from 0 to 100°C (32 to 212°F)

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >200 hours continuous use

Dimensions

Meter: 7½" L x 3¼" W x 2¼" H (19 x 9.5 x 5.7 cm)

Boxed: 9½" L x 9½" W x 2¾" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35631-00	pH/CON 300 meter	Meter, pH electrode 35641-51, combination conductivity/TDS/temperature probe 35608-50, and batteries
WD-35631-60	pH/CON 300 meter kit	Meter, pH electrode 35641-51, combination conductivity/TDS/temperature probe 35608-50, calibration solution pouches (three each of pH 4.01, 7.00, 10.00, and rinse water; and one each of 447 μ S, 1413 μ S, 2764 μ S, 15,000 μ S, and rinse water), sample bottles, hard carrying case, and batteries

Probes

WD-35641-51 Replacement pH electrode, double-junction, sealed, polygel fill, 3-ft (1-m) cable

WD-35608-50 Replacement combination conductivity/TDS/temperature probe, K = 1.0, 3-ft (1-m) cable

WD-35618-05 Temperature probe. Provides ATC for pH when used with pH electrodes without ATC



Hydroponics



Aquaculture

pH/DO 300 Meter

Measure pH, dissolved oxygen, and temperature with one waterproof, dustproof meter that FLOATS!

Waterproof and dustproof with IP67 rating

Toggle between pH/temperature and DO/temperature – For the convenience of three meters in one!

Backlit display – With adjustable brightness—ideal for viewing readings in dark areas

Automatic temperature compensation (ATC)

Display probe diagnostics – View slope, offset and millivolt values for both pH and DO

°C/°F selectable

pH features

Push-button pH calibration at five points with automatic buffer recognition

DO features

No meter warm-up required – Galvanic DO probe design lets you take measurements immediately without the typical 15-minute wait!

Easy-to-service, low-maintenance

DO probe – Replaceable membrane cap assembly makes DO probe maintenance hassle-free

Salinity and pressure compensation – Key in values and meter automatically compensates for increased accuracy

Independent 100% and zero adjustment calibrations – High accuracy over the full meter range

Offset adjustment capabilities – Calibrate your meter to a known work standard or titrimetrically determined value



Adjustable backlit display is ideal for taking readings in dark areas.

ISO9001:2000
CERTIFIED SUPPLIER

CE

3 year
warranty
meter only

Specifications

Mode	pH	DO in mg/L (ppm)	DO in % saturation	Temperature
Range	-2.00 to 16.00 pH	0.00 to 20.00 mg/L (ppm)	0.0 to 200.0%	0.0 to 50.0°C (32.0 to 122.0°F)
Resolution	0.01 pH	0.01 mg/L (ppm)	0.1%	0.1°C (0.1°F)
Accuracy	±0.01 pH	±1.5% full-scale	±1.5% full-scale	±0.3°C (±0.5°F)
Calibration	Up to 5 points: pH 1.68; 4.01, 7.00, 10.01, 12.45	One or two points (100% and 0% saturation); plus separate mg/L (ppm) offset		Offset up to ±5°C or °F

Salinity correction

Range: 0.0 to 50.0 ppt
Resolution: 0.1 ppt
Method: key in manually and for meter calculated correction

Barometric pressure correction

Range: 500 to 1499 mm Hg, 66.6 to 199.9 kPa
Resolution: 1 mm Hg, 0.1 kPa
Method: key in manually and for meter calculated correction

DO probe type: galvanic

Backlit display: eight levels of brightness

Temperature compensation: automatic from 0 to 50°C

Operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AAA batteries (included), >100 hours continuous use. Use of backlit display decreases battery life.

Dimensions

Meter: 7½" L x 3¼" W x 2¼" H (19 x 9.5 x 5.7 cm)

Boxed: 9½" L x 9½" W x 2¼" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35632-02	pH/DO 300 meter only	Meter and batteries
WD-35632-00	pH/DO 300 meter	Meter, pH electrode 35805-23, DO probe 35640-50, 500 mL of electrolyte solution, and batteries
WD-35632-60	pH/DO 300 meter kit	Meter, pH electrode 35805-23, DO probe 35640-50, pH buffer pouches, 500 mL of electrolyte solution, rinse bottle, five replacement membranes, membrane replacement tool, hard carrying case, and batteries

Probes

WD-35805-23 Replacement pH electrode, 10-ft (3-m) cable

WD-35640-50 Replacement DO probe, 10-ft (3-m) cable

WD-35641-52 DO probe, 25-ft (7.5-m) cable

WD-35641-54 DO probe, 50-ft (15-m) cable

WD-35641-56 DO probe, 100-ft (30-m) cable



Environmental
Testing



Wastewater

PC 650 pH/Conductivity Meter

Two most common electrochemistry measurements in one convenient meter!

Durable waterproof and dustproof design with IP67 rating – Even with no probes attached

Push-button pH calibration at up to six points – Up to 15 buffer options with auto-buffer recognition of USA, NIST, DIN, and PWB standards

Large backlit graphic display – Multiline display with electrode status indicator, calibration data, and more

User-settable “calibration due” alarm – Out-of-date or unperformed calibrations are now things of the past!

Built-in real-time clock – Time-and-date stamping meets Good Laboratory Practice (GLP) standards

Store up to 500 data sets – Infrared IrDA wireless technology makes PC downloading convenient and easy

Set point alarms – Audible warning when readings are outside set points limit

Research-grade accuracy – Resolution to 0.001 pH and accuracy to ± 0.002 pH

Electrode status indicator – Calibration data provides electrode diagnostic tool

Password protection – Security for calibration and setup menus

Rugged rubber boot – Protects meter from impact (optional; included with kit)



Optional rubber boot (included with kit) provides added protection.



ISO9001:2000
CERTIFIED SUPPLIER

CE 3 year
warranty
meter only

Specifications

	Model	PC 650 meter
Range	pH	–2.000 to 20.000 pH
	Ion	0.001 to 19,900 ppm, molar, or mg/L
	mV	± 2000 mV
	Conductivity	0 to 500.0 mS
	TDS	0 to 500 ppt
	Salinity	0 to 80 ppt
	Resistivity	0 to 20.00 M Ω
Resolution	Temperature	–10.0 to 110.0°C (14.0 to 230.0°F), selectable
	pH	0.1/0.01/0.001 pH
	Ion	2 or 3 digits
	mV	0.1 mV
	Conductivity	0.05% full-scale
Accuracy	Temperature	0.1°C (0.1°F)
	pH	± 0.002 pH
	Ion	$\pm 0.5\%$ full-scale (monovalent); 1% full-scale (divalent)
	mV	± 0.2 mV
	Conductivity	1% full-scale
Calibration	Temperature	$\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$)
	pH	Up to 6 buffer values (select from 4 sets): USA: 1.68, 4.01, 7.01, 10.01, 12.45; NIST: 1.68, 4.01, 6.86, 9.18, 12.45; DIN: 1.09, 2.06, 4.65, 6.79, 9.23, 12.75; or custom buffers
	Ion	Up to 6 points
	Conductivity	Manual up to 5 points (1 per range); automatic up to 4 points (84.0 $\mu\text{S}/\text{cm}$, 1413 $\mu\text{S}/\text{cm}$, 12.88 mS/cm, 111.8 mS/cm)
	Temperature	Offset 0.1°C (0.1°F) increments

Memory: up to 500 sets with GLP date and time

Output: infrared, IrDA

Real-time clock: time-and-date stamp on calibration and stored data

Temperature compensation: automatic or manual (selectable), from 0 to 100°C

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AA batteries (included) or optional universal AC adapter, up to 200 hours continuous use

Dimensions

Meter: 7 1/2" L x 3 3/4" W x 2 1/4" H (19 x 9.5 x 5.7 cm)

Boxed: 9 3/8" L x 9 1/8" W x 2 3/4" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35431-02	PC 650 meter only	Meter and batteries
WD-35431-00	PC 650 meter	Meter, “All-in-One” electrode 35816-77, conductivity cell 35408-57, and batteries
WD-35431-70	PC 650 meter kit	Meter, “All-in-One” electrode 35816-77, conductivity cell 35408-57, calibration standards (60 mL each of pH 4.01, pH 7.00, 1413 $\mu\text{S}/\text{cm}$, 12.88 mS solution), two electrode holders, rubber boot, hard carrying case, and batteries

WD-35816-77 Replacement “All-in-One” pH electrode with built-in ATC; double junction, epoxy body, 10-ft (3-m) cable with BNC connector

WD-35418-05 ATC probe. Use for temperature compensation with any pH electrode without built-in ATC

WD-35408-57 Replacement conductivity cell, 2-electrode, K = 1

WD-35431-52 Down-well probe for PC 650, pH/conductivity/temperature; 10-ft (3-m) cable

WD-35434-85 Multiprobe holder. Holds one each pH, conductivity, DO, and temperature probes

WD-35418-83 Optional adapter, 110/220 VAC



Research and
Laboratory



Food Testing

See pages 23–29
for more pH and
ISE electrodes;
page 45 for
conductivity cells.

PD 650 pH/ Dissolved Oxygen Meter

Ideal for wastewater and aquaculture!

Durable waterproof and dustproof design with IP67 rating – Even with no probes attached

Push-button calibration for all parameters – 6 points each for pH and conductivity; 3 points for DO

Large backlit graphic display – Multiline display with electrode status indicator, calibration data, and more

User-settable “calibration due” alarm – Out-of-date or unperformed calibrations are now things of the past!

Built-in real-time clock – Time-and-date stamping meets Good Laboratory Practice (GLP) standards

Store up to 500 data sets – Infrared IrDA wireless technology makes PC downloading convenient and easy

Set point alarms – Audible warning when readings are outside set points limit

Research-grade accuracy – Resolution to 0.001 pH and accuracy to ± 0.002 pH

Electrode status indicator – Calibration data provides electrode diagnostic tool

Password protection – Security for calibration and setup menus

Rugged rubber boot – Protects meter from impact (optional; included with kit)



Optional rubber boot (included with kit) provides added protection.



ISO9001:2000
CERTIFIED SUPPLIER



3 year warranty
meter only

Specifications

Model	PD 650 meter	
Range	pH	–2.000 to 20.000 pH
	Ion	0.001 to 19,900 ppm, molar, or mg/L
	mV	± 2000 mV
	DO	0.00 to 90.00 mg/L (ppm), 0.0 to 600.0%
	Temperature	–10.0 to 110.0°C (14.0 to 230.0°F), selectable
Resolution	pH	0.1/0.01/0.001 pH
	Ion	2 or 3 digits
	mV	0.1 mV
	DO	0.01 mg/L (ppm), 0.1%
	Temperature	0.1°C (0.1°F)
Accuracy	pH	± 0.002 pH
	Ion	$\pm 0.5\%$ full-scale (monovalent); $\pm 1\%$ full-scale (divalent)
	mV	± 0.2 mV
	DO	± 0.2 mg/L; $\pm 2.0\%$
	Temperature	$\pm 0.5^\circ\text{C}$ (0.9°F)
Calibration	pH	Up to 6 buffer values (select from 4 sets): USA: 1.68, 4.01, 7.01, 10.01, 12.45; NIST: 1.68, 4.01, 6.86, 9.18, 12.45; DIN: 1.09, 2.06, 4.65, 6.79, 9.23, 12.75; or custom buffers
	Ion	Up to 6 points
	DO	Two points; 100% and 0%
	Temperature	Offset 0.1°C (0.1°F) increments

DO salinity correction

Range: 0.0 to 50.0 ppt;
Resolution: 0.1 ppt

DO pressure correction

Range: 500 to 1499 mm Hg, 66.6 to 199.9 kPa
Resolution: 1 mm Hg, 0.1 kPa

Memory: up to 500 sets with GLP date and time

Output: infrared, IrDA

Real-time clock: time-and-date stamp on calibration and stored data

Temperature compensation: automatic or manual (selectable), from 0 to 100°C

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AA batteries (included) or optional universal AC adapter, up to 200 hours continuous use

Dimensions

Meter: 7½" L x 3¼" W x 2¼" H (19 x 9.5 x 5.7 cm)

Boxed: 9½" L x 9½" W x 2¼" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35432-02	PD 650 meter only	Meter and batteries
WD-35432-00	PD 650 meter	Meter, “All-in-One” electrode 35816-77, DO probe 35640-50, and batteries
WD-35432-70	PD 650 meter kit	Meter, “All-in-One” electrode 35816-77, DO probe 35640-50, calibration standards (60 mL each of pH 4.01, pH 7.00, electrode storage solution, and rinse water), rubber boot, multiprobe holder, batteries, and hard carrying case

WD-35816-77 “All-in-One” pH electrode with built-in ATC; double junction, epoxy body, 10-ft (3-m) cable with BNC connector

WD-35418-05 ATC probe. Use for temperature compensation with any pH electrode without built-in ATC

WD-35640-50 DO probe with 10-ft (3-m) cable

WD-35434-85 Multiprobe holder. Holds one each pH, conductivity, DO, and temperature probes

WD-35418-83 Optional adapter, 110/220 VAC

WD-35418-86 Protective rubber boot



Ecological Studies



Wastewater Treatment

See pages 23–29
for more pH electrodes;
page 53 for DO probes.

CD 650 Conductivity/ Dissolved Oxygen Meter

Great for salt water testing!

Durable waterproof and dustproof design with IP67 rating – Even with no probes attached

Push-button calibration for all parameters – 5 points for conductivity; 3 points for DO

Large backlit graphic display – Multiline display with electrode status indicator, calibration data, and more

User-settable “calibration due” alarm – Out-of-date or unperformed calibrations are now things of the past!

Built-in real-time clock – Time-and-date stamping meets Good Laboratory Practice (GLP) standards

Store up to 500 data sets – Infrared IrDA wireless technology makes PC downloading convenient and easy

Set point alarms – Audible warning when readings are outside set points limit

Research-grade accuracy – Resolution to 0.001 pH and accuracy to ± 0.002 pH

Electrode status indicator – Calibration data provides electrode diagnostic tool

Password protection – Security for calibration and setup menus

Rugged rubber boot – Protects meter from impact (optional; included with kit)



Optional rubber boot (included with kit) provides added protection.



ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Specifications

Model	CD 650 meter
Range	Conductivity 0 to 500.0 mS
	TDS 0 to 500 ppt
	Salinity 0 to 80 ppt
	Resistivity 0 to 20.00 M Ω
	DO 0.00 to 90.00 mg/L (ppm), 0.0 to 600.0%
	Temperature -10.0 to 110.0°C (14.0 to 230.0°F), selectable
Resolution	Conductivity 0.05% full-scale
	TDS 0.05% full-scale
	DO 0.01 mg/L (ppm), 0.1%
	Temperature 0.1°C (0.1°F)
Accuracy	Conductivity $\pm 1\%$ full-scale
	TDS $\pm 1\%$ full-scale
	DO ± 0.2 mg/L; $\pm 2\%$
	Temperature $\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$)
Calibration	Conductivity Manual up to 5 points (1 per range); automatic up to 4 points (84.0 $\mu\text{S}/\text{cm}$, 1413 $\mu\text{S}/\text{cm}$, 12.88 mS/cm, 111.8 mS/cm)
	DO Two points; 100% and 0%
	Temperature Offset 0.1°C (0.1°F) increments

TDS factor: 0.40 to 1.00

Cell constant: 0.100 to 10.000

DO salinity correction

Range: 0.0 to 50.0 ppt

Resolution: 0.1 ppt

DO pressure correction

Range: 500 to 1499 mm Hg, 66.6 to 199.9 kPa

Resolution: 1 mm Hg, 0.1 kPa

Memory: up to 500 sets with GLP date and time

Output: infrared, IrDA

Real-time clock: time-and-date stamp on calibration and stored data

Temperature normalization: 15 or 30°C

Temperature coefficient: linear or pure

Temperature compensation: automatic or manual (selectable), from 0 to 100°C

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AA batteries (included) or optional universal AC adapter, up to 200 hours continuous use

Dimensions

Meter: 7½" L x 3¼" W x 2¼" H (19 x 9.5 x 5.7 cm)

Boxed: 9½" L x 9½" W x 2¾" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35433-02	CD 650 meter only	Meter and batteries
WD-35433-00	CD 650 meter	Meter, conductivity cell 35408-57, DO probe 35640-50, and batteries
WD-35433-70	CD 650 meter kit	Meter, conductivity cell 35408-57, DO probe 35640-50, calibration standards (60 mL each of pH 4.01, pH 7.00, 1413 $\mu\text{S}/\text{cm}$, and 12.88 mS solution), rubber boot, multiprobe holder, batteries, and hard carrying case

WD-35408-57 Replacement conductivity cell, 2-electrode, K = 1

WD-35640-50 Replacement DO probe with 10-ft (3-m) cable

WD-35434-85 Multiprobe holder. Holds one each pH, conductivity, DO, and temperature probes

WD-35418-83 Optional adapter, 110/220 VAC

WD-35418-86 Protective rubber boot for all 600- and 650-series meters



**Marine
Environments**



Water Treatment

See page 45 for
more conductivity cells;
page 53 for DO probes.

PCD 650 pH/Conductivity/ Dissolved Oxygen Meter

All three parameters, plus temperature, measured and displayed simultaneously!

Durable waterproof and dustproof design with IP67 rating – Even with no probes attached

Push-button calibration for all parameters – 6 points each for pH and conductivity; 3 points for DO

Large back-light graphic display – Multiline display with electrode status indicator, calibration data, and more

User-settable “calibration due” alarm – Out-of-date or unperformed calibrations are now things of the past!

Built-in real-time clock – Time-and-date stamping meets Good Laboratory Practice (GLP) standards

Store up to 500 data sets – Infrared IrDA wireless technology makes PC downloading convenient and easy

Set point alarms – Audible warning when readings are outside set points limit

Research-grade accuracy – Resolution to 0.001 pH and accuracy to ± 0.002 pH

Electrode status indicator – Calibration data provides electrode diagnostic tool

Password protection – Security for calibration and setup menus

Rugged rubber boot – Protects meter from impact (optional; included with kit)



Right: Multiprobe holder makes it easy to manage probes simultaneously.



ISO9001:2000
CERTIFIED SUPPLIER

CE
3 year
warranty
meter only

Specifications

Model	PCD 650 meters	
Range	pH	-2.000 to 20.000 pH
	Ion	0.001 to 19,900 ppm, molar, or mg/L
	mV	± 2000 mV
	Conductivity	0 to 500.0 mS
	TDS	0 to 500 ppt
	Salinity	0 to 80 ppt
	Resistivity	0 to 20.00 M Ω
	DO	0.00 to 90.00 mg/L (ppm), 0.0 to 600.0%
Resolution	Temperature	-10.0 to 110.0°C (14.0 to 230.0°F), selectable
	pH	0.1/0.01/0.001 pH
	Ion	2 or 3 digits
	mV	0.1 mV
	Conductivity	± 0.05 % full-scale
	DO	0.01 mg/L (ppm), 0.1%
	Temperature	0.1°C (0.1°F)
Accuracy	pH	± 0.002 pH
	Ion	± 0.5 % full-scale (monovalent); ± 1 % full scale (divalent)
	mV	± 0.2 mV
	Conductivity	± 1 % full-scale
	DO	± 0.2 mg/L; ± 2 %
	Temperature	± 0.5 °C (± 0.9 °F)
Calibration	pH	Up to 6 buffer values (select from 4 sets): USA 1.68, 4.01, 7.01, 10.01, 12.45; NIST: 1.68, 4.01, 6.86, 9.18, 12.45; DIN: 1.09, 2.06, 4.65, 6.79, 9.23, 12.75, or custom buffers
	Ion	Up to 6 points
	Conductivity	Manual up to 5 points (1 per range); automatic up to 4 points (84.0 μ S/cm; 1413 μ S/cm; 12.88 mS/cm; 111.8 mS/cm)
	DO	Two points; 100% and 0%
	Temperature	Offset 0.1°C (0.1°F) increments

TDS factor: 0.40 to 1.00

Cell constant: 0.100 to 10.000

DO salinity correction

Range: 0.0 to 50.0 ppt

Resolution: 0.1 ppt

DO pressure correction

Range: 500 to 1499 mm Hg, 66.6 to 199.9 kPa

Resolution: 1 mm Hg, 0.1 kPa

Memory: up to 500 sets with GLP date and time

Output: infrared, IrDA

Real-time clock: time-and-date stamp on calibration and stored data

Temperature normalization: 15 or 30°C

Temperature coefficient: linear or pure

Temperature compensation: automatic or manual (selectable) from 0 to 100°C

Ambient operating temperature: 0 to 50°C (32 to 122°F)

Power: four 1.5 V AA batteries (included) or optional universal AC adapter, up to 200 hours continuous use

Dimensions

Meter: 7 1/4" L x 3 1/4" W x 2 1/4" H (18.4 x 8.3 x 5.7 cm)

Boxed: 9 5/8" L x 9 5/8" W x 2 3/4" H (23 x 23 x 7 cm)

Weight

Meter: 1 lb (0.5 kg); **Boxed:** 2 lb (0.9 kg)

Ordering Information

Catalog number	Description	Included
WD-35434-02	PCD 650 meter only	Meter and batteries
WD-35434-00	PCD 650 meter	Meter, "All-in-One" electrode 35816-77, conductivity cell 35408-57, DO probe 35640-50, and batteries
WD-35434-70	PCD 650 meter kit	Meter, "All-in-One" electrode 35816-77, conductivity cell 35408-57, DO probe 35640-50, calibration standards (60 mL each of pH 4.01, pH 7.00, 1413 μ S/cm, and 12.88 mS solution), multiprobe holder, rubber boot, hard carrying case, and batteries

WD-35816-77 "All-in-One" pH electrode with built-in ATC: double junction, epoxy body, 10-ft (3-m) cable with BNC connector

WD-35418-05 ATC probe: Use for temperature compensation with any pH electrode without built-in ATC

WD-35408-57 Conductivity cell, 2-electrode, K = 1

WD-35640-50 DO probe with 10-ft (3-m) cable

WD-35434-85 Multiprobe holder. Holds one each pH, conductivity, DO, and temperature probes

WD-35434-90 Multiprobe flow block for groundwater sampling

WD-35418-83 Optional adapter, 110/220 VAC



Use multiprobe flow block 35434-90 for groundwater sampling. Holds two 12-mm diameter pH, ORP, or ISE probes, one Oakton conductivity/TDS probe, and one Oakton dissolved oxygen probe.

PC 700 pH/Conductivity Meter

Measures pH, mV, conductivity, TDS, and temperature—ideal for water quality testing in the lab!

Easily toggle between pH, mV, conductivity, and TDS readings

Large, dual display shows both measured parameter and temperature (°C/°F) – Read two parameters from across the lab

New space-saving design uses less benchspace – Footprint is 40% smaller

Easy push-button calibration – Five-point calibration for pH and either conductivity or TDS; temperature offset calibration

Advanced setup mode – Recalls previous calibration points, pH electrode slope/offset, conductivity/TDS effective cell constants per range, and more

Removable electrode holder arm – Holds electrodes firmly in place

pH auto buffer recognition – For fast, easy pH calibration

Selectable auto or manual ranging for conductivity and TDS measurements

Adjustable conductivity-to-TDS conversion factor and temperature coefficient – Gives highest accuracy in any solution

Selectable manual or automatic temperature compensation

Selectable automatic endpoint – Automatically freezes reading when stable

Hold function, "Ready" indicator, diagnostic error messages

Slide-out instruction card for quick reference

New



PC 700 meter includes electrode holder and handy slide-out instruction card.

ISO9001:2000
CERTIFIED SUPPLIER

CE

3 year
warranty
meter only

Specifications

Mode	pH	mV/RelmV	Conductivity	TDS	Temperature
Range	-2.00 to 16.00 pH	±2000 mV	0.00 to 19.99 µS, 0.0 to 199.9 µS, 0 to 1999 µS, 0 to 19.99 mS, 0.0 to 200 mS	0.00 to 9.99 ppm, 10.0 to 99.9 ppm, 100 to 999 ppm, 1.00 to 9.99 ppt, 10.0 to 99.9 ppt, 100 to 200 ppt*	0 to 100°C (32 to 212°F)
Resolution	0.01 pH	0.1 mV from ±199.9 mV, 1 mV beyond	0.01 µS, 0.1 µS, 1 µS, 0.01 mS, 0.1 mS	0.01 ppm, 0.1 ppm, 1 ppm, 0.01 ppt, 0.1 ppt	0.1°C/°F
Accuracy	±0.01 pH	±0.2 mV from ±199.9 mV, ±2 mV beyond	±1% full-scale	±1% full-scale	±0.5°C (±0.9°F)
Calibration	Up to five points (USA: 1.68, 4.01, 7.00, 10.00, 12.45; NIST: 1.68, 4.01, 6.86, 9.18, 12.45)	—	One point per range (up to 5)	One point per range (up to 5)	Offset up to ±5°C/°F

*200 ppt @ 1.0 factor

Input impedance: >1012 Ω

Temperature compensation: selectable manual or automatic from 0 to 100°C (32 to 212°F)

Conductivity cell constant (K): 0.1, 1.0, 10.0 (selectable)

Conductivity temperature coefficient: 0.0 to 10.0% per °C (adjustable)

Conductivity-to-TDS conversion factor: 0.4 to 1.0 (adjustable)

Normalization temperature: 15 to 30°C (adjustable)

Memory: up to 100 data sets

Display: 3¼" x 2⅝" (8.3 x 6.2 cm) dual LCD of pH, mV, conductivity, or TDS with temperature (in °C or °F)

Error messages: diagnose operator error, electrode error, and meter error; pull-out instruction card decodes message.

Operating temperature: 0 to 50°C (32 to 122°F), noncondensing humidity

Power: universal 100/240 VAC, with AC adapters is UL/CSA listed

Dimensions

Meter: 6⅞" x 6⅞" x 2¾" (15.5 x 17.5 x 6.9 cm)

Boxed: 9" x 12¼" x 5" (23 x 35 x 12.5 cm)

Weight

Meter only: 1.25 lb (0.6 kg); **Boxed:** 3 lb (1.4 kg)



Laboratory and
Research



Food Analysis

See page 45 for
conductivity probes and
calibration solutions.

Ordering Information

Catalog number	Description	Included
WD-35410-20	PC 700 meter	Meter, electrode holder, and AC adapter
WD-35410-00	PC 700 meter with probes	Meter, double-junction pH electrode 35641-51, conductivity/temperature probe 35608-74, electrode holder, and AC adapter

PC 2700 Meter

Measures pH, mV, conductivity, TDS, and temperature—ideal for water quality testing in the lab!

New

Takes up less bench space — Overall footprint is nearly 40% smaller than other benchtop meters

Oversized liquid crystal display with bright backlighting — Easier viewing under all lighting conditions

Dynamic reading stability indication — shows when your measurement is stable; eliminates guesswork from unstable readings

Auto-standardization with cell constant recognition — Detect the exact cell constant value of your probe with the press of a button

Up to 500 point nonvolatile memory with time-and-date stamp — Meets GLP requirements

Bidirectional RS-232 for easy data transfer to your computer

Additional performance features include pH autobuffer recognition, conductivity standard auto-calibration, calibration documentation and cal-due alarms, audible out-of-range alarms, password protection, electrode status and diagnostics, and more!

Includes a high-performance 4-cell conductivity probe! — Higher accuracy across a broader range of samples



Unstable reading is faded



Reading turns solid when stable



Specifications

ISO9001:2000
CERTIFIED SUPPLIER

3 year
warranty
meter only

Mode	pH	mV	ISE	Conductivity	TDS	Salinity	Resistivity	Temperature
Range	-2.000 to 20.000 pH	±2000.0 mV	0.001 to 19,999 ppm	0.050 µS/cm to 500.0 mS/cm (5-range autoranging)	0.050 to 500.0 ppt	0.0 to 80.0 ppt	2.000 Ω to 20.0 MΩ	0.0 to 100.0°C (32.0 to 212°F)
Resolution	0.001, 0.01, 0.1 pH	0.1 mV	2 or 3 digits	0.01, 0.1 µS/cm, 0.001, 0.01, 0.1 mS/cm	0.01, 0.1 ppm, 0.001, 0.01, 0.1 ppt	0.1 ppt	0.01/0.1 Ω, 0.01/0.1 kΩ, 0.01 MΩ	0.1°C or °F
Accuracy	±0.002 pH	±0.2 mV	0.5% full scale (monovalent), 1% full scale (divalent)	±1% full scale	±1% full scale	±1% full scale	±1% full scale	±0.3°C (±0.5°F)
Calibration	Up to 6 (USA, NIST, DIN, or custom buffer sets)	Offset up to +150 mV	Up to 8 points	5 points (one point per range)	5 points (one point per range)	5 points (one point per range)	5 points (one point per range)	Offset in 0.1 increments; ±5°C (±9°F)
Connectors	BNC	BNC	BNC	8-pin DIN	8-pin DIN	8-pin DIN	8-pin DIN	8-pin DIN

Temperature compensation: manual or automatic from -5°C to 105°C

Conductivity temp coefficient: adjustable from 0.0 to 10% per °F/°C

Conductivity cell constant: 0.010 to 10.000

Conductivity-to-TDS factor: adjustable from 0.4 to 1.0

Normalization temperature: adjustable from 15 to 30°C

Memory: up to 500 data sets

Output: RS-232, 9-pin female

Display: 3 1/4" x 2 1/16" (8.3 x 6.2 cm) graphic LCD with backlight

Operating temperature: 32 to 122°F, noncondensing probe

Power: universal 110/240 VAC with adapter; CSA/UL listed

Dimensions

Meter: 6 1/8" x 6 7/8" x 2 3/4" (15.5 x 17.5 x 6.9 cm)

Boxed: 12" x 9" x 5" (30.8 x 15.5 x 12.4 cm)

Weight: Meter only: 1.4 lbs (650 g); Boxed: 4 lbs (1800 g)

Ordering Information

Catalog number	Description	Included
WD-35414-20	PC 2700 meter only	Meter, electrode holder and AC adapter
WD-35414-00	PC 2700 meter	Meter, pH electrode with DJ, refillable, glass body; conductivity/temperature probe 35412-10, electrode holder, and AC adapter

WD-35805-04 Replacement pH electrode, double-junction, glass body, refillable

WD-35412-10 Replacement conductivity/temperature probe for 2700-series meter; 4-cell, K= 1.0 epoxy/graphite

WD-35420-01 RS-232 cable

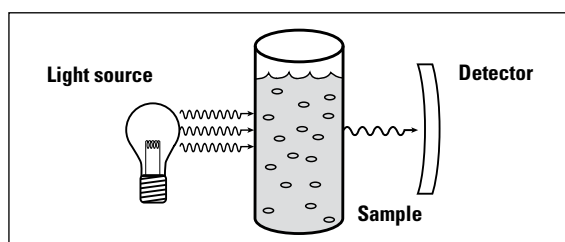
WD-22050-58 RS-232 to USB adapter (requires 35420-01)

Optical Measurement

Light

When light passes through a liquid, the amount of particles and color in solution will affect the light. Optical techniques measure solution characteristics by using a defined light source, passing the light through a sample, and then measuring the light that passes through the sample. Turbidimetric and colorimetric methods both involve measuring the resulting light intensity. They differ in that the light is attenuated by scattering in turbidimetry and by absorption in colorimetry.

Both determinations may use similar instrumentation. By employing different wavelengths of light and different optical configurations, we can optimize the system for determining the transmitted light of interest for a given analytical method.



Turbidimetry

The cloudiness in a liquid caused by the presence of finely divided, suspended material is called “turbidity.” Turbidity meters provide a means of quantifying this “cloudiness” by determining the reduction of light passing through a turbid solution and then comparing the results against a standard. In some applications, the clarity of solution is critical. In other applications the appearance of particles indicates bacterial growth. In either case, the turbidimeter provides process numerical data on the sample solution.

Colorimetry

The colorimetric method of chemical analysis involves the measurement of light absorption by colored solutions. While the differences in color development are visible to the human eye, visual determination is subject to user interpretation. Colorimeters eliminate the differences encountered with color comparitors to produce an exact numerical value—with greater resolution than can be achieved through comparitors. Colorimeters use the well-understood principals of wet chemistry to provide precise, repeatable analysis methods. For example, the standard DPD method for determining free and total chlorine is well accepted and approved by the US EPA.

Reagents and Accessories

Reliable reagents and standards ensure accurate measurement for turbidimeters and colorimeters

Turbidity Calibration Set

For use with the T-100 turbidity meter sold on page 64. Stable standards ensure accurate turbidity measurements.



Catalog number	Description	Included
WD-35635-50	Calibration set	60 mL each of primary calibration standard 0.02, 20.0, 100, and 800 NTU

Secondary Chlorine Standards

Verify performance of your C201, C301; or C401 colorimeters (see page 65).



Catalog number	Description	Included
WD-35645-70	Secondary standards	Set of four vials

Colorimeter Reagents

The pH reagent features a dropper bottle making it easy to repetitively provide the correct amount of reagent. The convenient foil packs are ideal for use in the field or in the lab. DPD reagents follow US EPA method 330.5 for wastewater, and Standard Method 4500-Cl G for drinking water.



Catalog number	Description	Included
WD-35645-60	pH reagent	Dropper bottle, for 50 tests
WD-35645-62	Cyanuric acid reagent	100 foil packs
WD-35645-64	Free-chlorine reagent DPD	100 foil packs
WD-35645-66	Total-chlorine reagent DPD	100 foil packs
WD-35645-68	Chlorine dioxide reagent	100 foil packs

Cuvettes

For use with the T-100 turbidity meter on page 64 and all colorimeters on page 65. High-quality borosilicate glass ensures good light transmittance. Indexing mark on each cuvette makes it easy to get repeatable results.



Catalog number	Description	Included
WD-35653-55	Cuvettes	Pack of three

T-100 Turbidity Meter

Completely waterproof—even the sample chamber

Waterproof and dustproof housing –

IP67-rated waterproof housing allows operation in wet conditions ensuring durability, easy cleaning, and maintenance—it even floats!

Auto-ranging from 0 to 1000 NTU –

Meter determines the sample's turbidity level and automatically adjusts to the appropriate measurement range—eliminating any guesswork

Simple, display-prompted push-button calibration

– Pressing the “CAL” button initiates the quick and simple calibration procedure. The instrument automatically prompts the user for the next calibration standard.

Large, easy-to read display –

Large, custom LCD shows readings with units of measure and user-friendly message codes that guide meter operation

Advanced power supply management –

Measures over 1200 samples with a single set of batteries, delivering quick, stable results in less than six seconds. Also features auto-off function.

Sturdy carrying case with accessories

– Compact case contains all items necessary for turbidity measurements and protects the meter when not in use. Items include the T-100 meter, four primary calibration standards, three borosilicate sample cuvettes with light shield caps, collection bottle, lint-free cloth, silicone oil, and batteries.



Index markings on the cuvettes make it easy to perform repeatable measurements



Kit includes standards, sample vials, and a rugged carrying case



Drinking Water



Environmental Monitoring

Specifications

Model	T-100 Turbidity meter
Range	0.1 to 19.99 NTU, 20.0 to 99.9 NTU, 100 to 1000 NTU
Resolution	0.01 NTU, 0.1 NTU, 1 NTU
Measurement method	ISO 7027 (DIN EN 27027) compliant nephelometric method (90°)
Accuracy	±2% of measurement from 0 to 500 NTU, ±3% of measurement from 501 to 1000 NTU
Repeatability	±0.01 NTU or ±1% of measurement, whichever is greater
Response time	<6 seconds for full-step change
Calibration standards	0.02 NTU, 20.0 NTU, 100 NTU, 800 NTU

Standardization: EPA-approved polymer-based primary standards

Light source: infrared-emitting diode (850 nm wavelength)

Light source life: >1,000,000 measurements

Detector: Silicon photovoltaic

Stray light: <0.02 NTU

Display: 4-digit, 14-segment customized LCD

Sample vials: borosilicate glass with screw caps, fill line, and indexing mark. 2"H x 1" dia (51 x 25 mm)

Sample volume: 10 mL (0.33 oz) minimum

Operating temperature range: 0 to 50°C (32 to 122°F)

Operating humidity: 0 to 90% RH, noncondensing at 30°C (86°F) range

Power: four AAA alkaline batteries (included), >1200 measurements

Enclosure: ABS plastic/IP67 rated

Dimensions (W x L x H)

Meter: 2 3/4" x 6 1/8" x 1 7/8" (6.8 x 15.5 x 4.6 cm)

Meter with case: 6 1/2" x 14" x 4 1/4" (16.5 x 35.5 x 10.5 cm)

Weight

Meter: 7 oz (200 g); **Meter with case:** 2.75 lb (1.25 kg)

ISO9001:2000
CERTIFIED SUPPLIER

CE 2 year warranty

Ordering Information

Catalog number	Description	Included
WD-35635-00	T-100 turbidity meter kit	Meter, four primary calibration standards (0.02, 20.0, 100, and 800 NTU), three empty cuvettes with light shield caps, collection bottle, lint-free cloth, silicone oil, batteries, and hard carrying case

Accessories

WD-35635-50 Replacement calibration set, includes one 60 mL each of primary calibration standard 0.02, 20.0, 100, and 800 NTU

WD-35653-55 Replacement cuvettes, borosilicate glass. Pack of three

C201, C301 and C401 Multiparameter Colorimeters

Multiparameter measurement for convenient field testing

Convenient, foil pack reagents – Follows US EPA method 330.5 for wastewater, and Standard Method 4500-Cl G for drinking water

Simple to use – One-time blanking for multiple measurements

Waterproof and dustproof IP67 housing – Even the sample chamber is waterproof

Compact size – Take your Oakton colorimeter anywhere!

No detachable parts and no light shield required – Vial cap prevents stray light from affecting readings

Large, easy-to-read display – Large, custom LCD displays readings with units of measure and user-friendly message codes that guide meter operation

Advanced power-supply management – Measures over 1200 samples with a single set of batteries, delivering quick, stable results in less than six seconds. Also features auto-off function.

Sturdy carrying case with accessories – Compact carrying case includes all items necessary for colorimeter measurements and protects the meter when not in use



Colorimeters include
case and reagents



Specifications

Model	C201 colorimeter	C301 colorimeter	C401 colorimeter
Chlorine (free and total)			
Range	0 to 1.99 ppm; 2.0 to 6.0 ppm	0 to 1.99 ppm; 2.0 to 6.0 ppm	0 to 1.99 ppm; 2.0 to 6.0 ppm
Resolution	0.01 ppm; 0.1 ppm	0.01 ppm; 0.1 ppm	0.01 ppm; 0.1 ppm
Accuracy	±0.02 ppm, ±0.2 ppm	±0.02 ppm, ±0.2 ppm	±0.02 ppm, ±0.2 ppm
pH			
Range	—	5.9 to 8.2 pH	5.9 to 8.2 pH
Resolution	—	0.1 pH	0.1 pH
Accuracy	—	±0.1 pH	±0.1 pH
Cyanuric acid			
Range	—	—	5 to 90 ppm
Resolution	—	—	1 ppm
Accuracy	—	—	1 ppm

Light source: light emitting diode (LED)

Wavelength: 525 nm

Detector: silicon photodiode

Absorbance range: 0 to 2.5 Abs

Photometric precision: ±0.0015 Abs

Calibration points: user-selectable, one point per colorimetric test

Sample volume required: 10 mL (0.33 oz)

Display: 4-digit, 14-segment, customized LCD with annunciators

Operating temperature range: 0 to 50°C (32 to 122°F)

Operating humidity range: 0 to 90% RH, noncondensing at 30°C (86°F)

Power supply: four AAA alkaline batteries (included)

Battery life: >3000 tests

Electromagnetic compliance: (EMC) EN 61326

Dimensions

Meter: 6 1/8" L x 2 5/8" W x 1 3/4" H (15.5 x 6.8 x 4.6 cm)

Meter with case: 13 3/4" x 6 1/4" x 4 3/4" (35 x 16 x 12 cm)

Weight

Meter: 7 oz (200 g); **Meter with case:** 2.75 lb (1.25 kg)



Drinking Water



Swimming Pools

Ordering Information

Catalog number	Description	Included
WD-35645-20	C201 chlorine colorimeter kit	Meter, foil pack reagents (100 each for free chlorine and total chlorine), sample vials, batteries, and hard carrying case
WD-35645-30	C301 chlorine/pH colorimeter kit	Meter, foil pack reagents (100 each for free chlorine and total chlorine), pH dropper bottle reagent (50 tests), sample vials, batteries, and hard carrying case
WD-35645-40	C401 chlorine/pH/cyanuric acid colorimeter kit	Meter, foil pack reagents (100 each for free chlorine, total chlorine, and cyanuric acid), pH dropper bottle reagent (50 tests), sample vials, batteries, and hard carrying case

Replacement Reagents and Secondary Standards

WD-35645-60 pH reagent includes dropper bottle with reagent for 50 tests

WD-35645-62 Cyanuric acid reagent includes individual foil packs for 100 tests

WD-35645-64 Free chlorine reagent includes individual foil packs for 100 tests

WD-35645-66 Total chlorine reagent includes individual foil packs for 100 tests

WD-35645-70 Chlorine secondary standard, includes set of four vials

Measuring Solutions for Your Application

Thermocouple Meters

Instruments amplify, linearize, and display the millivolt signal generated by the two dissimilar wires of the thermocouple probe. The signal is proportional to the temperature gradient between the measuring and reference junctions. Oakton offers many low-cost, fast-response probes in a wide variety of designs. Handheld probes are ideal for inspection and maintenance. Many types of probes can be permanently installed. Probes resist mechanical shock. Use probe within 2000 feet of the instrument. **See pages 67–77 for thermocouple meters and probes.**

Platinum RTD Meters

These instruments provide excellent accuracy, stability, and repeatability over a wide temperature range. Probes have an element with a characteristic resistance that increases as the temperature increases. Three-wire probe reduces effect of lead-length resistance on measurements, giving a more precise indication of temperature. **See pages 78–82 for RTD meters and probes.**

Thermistor Meters

Thermistors exhibit a greater sensitivity and accuracy in the biological range—32 to 212°F (0 to 100°C). Probes encase a ceramic element that generally decreases in resistance as the temperature increases. **See pages 83–87 for thermistor meters and probes.**

Infrared Thermometers

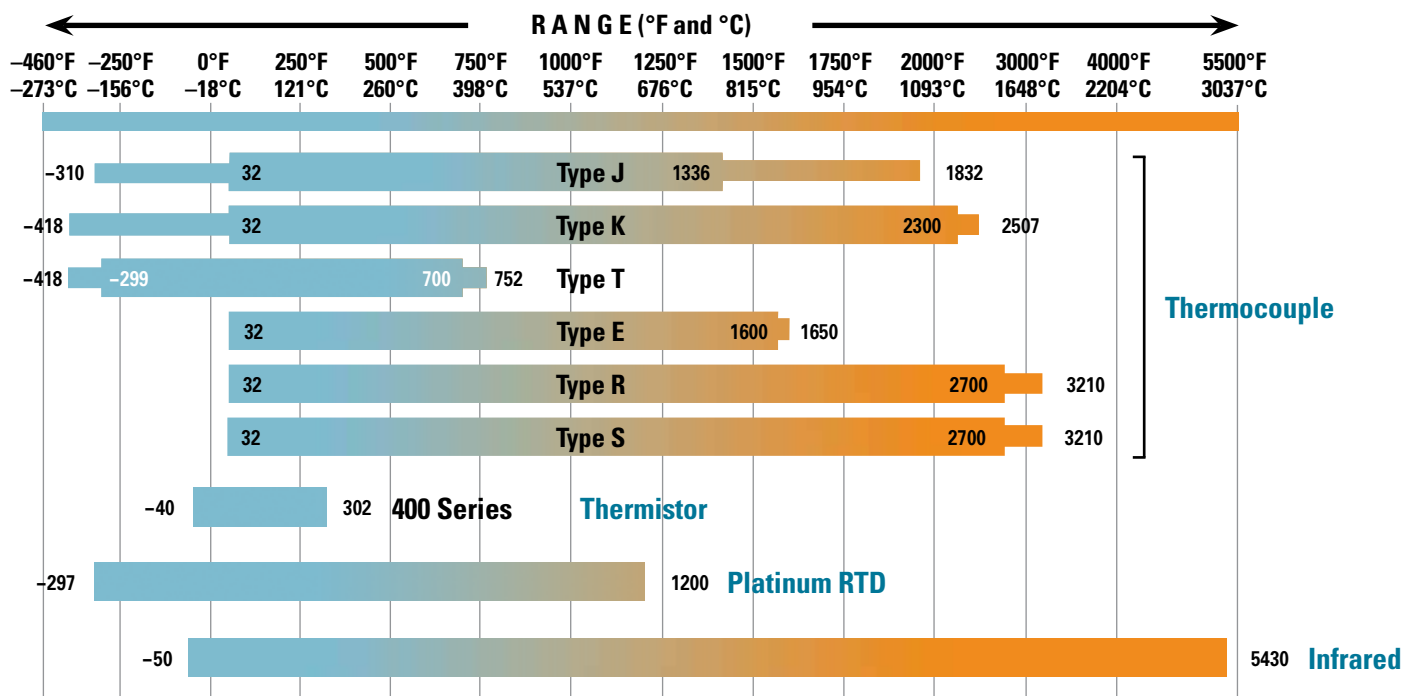
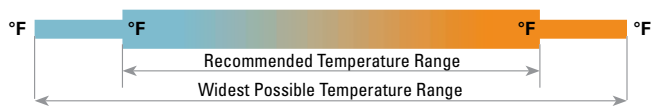
Provide fast response for surface temperatures. Models are available for both close- and far-range measurements. **See pages 88–90 for infrared thermometers.**



Temperature Instrument Range Guide

The stated accuracy of any temperature measurement device is for the “Recommended Temperature Range” only. The narrow section of the temperature bar represents the widest range the instrument can be used in. Accuracy in this range is not guaranteed. Probe damage may occur at the extreme ends of the temperature range. Temperatures listed below are approximate.

Key to Color Bar



Typical Accuracies

Thermocouple

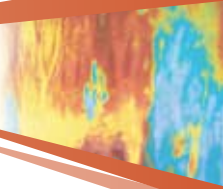
Type J, K, and E probes: ± 1.8 to 7.9°F or $\pm 0.4\%$ of reading above 32°F , whichever is greater
 Type T probes: ± 0.9 to 3.6°F or $\pm 0.4\%$ of reading above 32°F , whichever is greater
 Type R and S probes: $\pm 2.5^\circ\text{F}$ or $\pm 0.25\%$ of reading, whichever is greater
 Meters: ± 0.1 to 1% of reading and $\pm 1.8^\circ\text{F}$ ($\pm 1^\circ\text{C}$)

Thermistor

400-series probes: $\pm 0.36^\circ\text{F}$ ($\pm 0.2^\circ\text{C}$) from 32 to 167°F (0 to 75°C)
 500-series probes: $\pm 0.2^\circ\text{F}$ ($\pm 0.1^\circ\text{C}$)
 700-series probes: $\pm 0.27^\circ\text{F}$ ($\pm 0.15^\circ\text{C}$)
 Meters: ± 0.2 to 0.4°F (± 0.1 to 0.2°C)

Platinum RTD

Probes: ± 0.2 to 0.35% of reading
 Meters: $\pm 0.1\%$ of reading and $\pm 1^\circ\text{F}$ ($\pm 1^\circ\text{C}$)
 Infrared: ± 1 to 3% of reading



Our Rugged, Versatile, User-Friendly Handheld Thermometers

Main Features

- Rugged ergonomic housing
- Simple-to-use automatic field calibration ensures accurate readings
- Sealed keypad and ABS plastic case meet IP54 standards for splash resistance
- Min/Max and Hold functions
- Temperature units in °C or °F

**PREDICTING
A CHANGE IN
TEMPERATURE**

Quick connections for a variety of probes

- Mini-connectors on thermocouple meters, mini-din on RTD meters, and bayonet on thermistor meters
- Dual-input thermocouple datalogger version available



Large, backlit display

- Custom LCD on basic meters
- Dot-matrix on advanced meter; simultaneously display individual probes and differential readings

USB output available

- Advanced meters feature computer interface via USB

Menu-driven operation on advanced meters

- Access easy-to-follow setup; intuitive on-screen menus
- Quick review of operations and functions

Datalogging capabilities available

- Log up to 2000 points
- Review on the meter at the touch of a key

Optional three-way hands-free

- Flip stand for benchtop use



- Magnet mount; sticks to metal surfaces



- Hook-and-loop strap to hold on your belt or hang from a pipe



Available protective rubber armor

- Protects meter from accidental drops and dings
- Provides added grip in wet environments
- Built-in flip stand



Temp 10 Thermocouple Thermometers

Choose from models for J, K, or T input

Standard miniconnectors – Choose from a wide variety of probes

All push-button operation – For fast, easy use

Ergonomic design – Easy to grip for one-handed operation

°C/°F selectable

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Sealed keypad and ABS plastic case – Meet IP54 standards for splash resistance

Available rubber armor – Protects meter; features a built-in stand



Thermometers are shown with available rubber armor.



35427-10

PREDICTING
A CHANGE IN
TEMPERATURE



Laboratory



Industrial

Select a probe
to match your
application

See pages 72–77
for our wide
selection of probes.

Specifications

ISO9001:2000
CERTIFIED SUPPLIER

3 year
warranty
meter only

Model	Temp 10J	Temp 10K	Temp 10T
Probe	One type J	One type K	One type T
Range	–210 to 1200°C (–346 to 2192°F)	–250 to 1372°C (–418 to 2501°F)	–250 to 400°C (–418 to 752°F)
Resolution	0.1°F/°C between –199.9° and 999.9°; 1° below –199.9° and above 999.9°		
Accuracy	Below –238°F (–150°C): ±0.25% of reading ±2°F (±1°C) Above –238°F (–150°C): ±0.1% of reading ±0.7°F (±0.4°C)		

Display: 4-digit LCD (6 x 15 mm digits), viewing area 58 x 40 mm (backlit)

Power: three AA batteries (included)

Battery life: 700 hours continuous (without use of backlighting)

Dimensions:

Meter: 4"W x 7"H x 2"D (10.2 x 18 x 5.2 cm) (with protective boot)

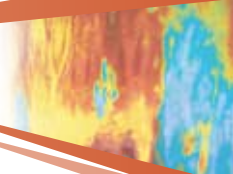
Boxed: 10 1/4" x 5 1/4" x 3" (26 x 13.5 x 7.5 cm)

Weight: Meter: 0.75 lb (0.4 kg); Boxed: 1.25 lb (0.6 kg)

Ordering Information

Catalog number	Description	Included	Calibrated meter	Calibrated system*
WD-35427-00	Temp 10J	Meter and batteries	WD-35427-01	WD-35427-02
WD-35427-10	Temp 10K	Meter and batteries	WD-35427-11	WD-35427-12
WD-35427-20	Temp 10T	Meter and batteries	WD-35427-21	WD-35427-22
WD-35427-80	Rubber armor	Rubber armor with built-in meter stand	—	—
WD-35427-85	Hands-free kit	Multipurpose hanging strap and mounting magnets	—	—

*Includes meter and calibration service; probe sold separately



Temp 300 Datalogging Thermocouple Thermometer

Our most advanced thermocouple thermometer

Datalogging for up to 2000 points – Time-and-date stamp for advanced data analysis

Menu-driven setup and operation – Detailed on-screen information makes the Temp 300 easy to use

T1/T2 function – Take differential temperature measurements with simultaneous display of individual probes

USB output – Easily transfer stored readings to your computer

Standard miniconnectors – Choose from a wide variety of probes

All push-button operation – For fast, easy use

Automatic field calibration – Easily performed for either a single- or dual-point calibration for each probe

°C/°F/°R or K selectable

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Sealed keypad and ABS plastic case; available rubber armor – Meet IP54 standards for splash resistance; armor adds protection and features a built-in stand



Available protective armor makes the Temp 300 rugged enough for your tough environment



35427-50

Select a probe to match your application

See pages 72–77 for our wide selection of probes.

**PREDICTING
A CHANGE IN
TEMPERATURE**

ISO9001:2000
CERTIFIED SUPPLIER

CE

**3 year
warranty
meter only**

Specifications

Probe	Range
Type J	–210 to 1200°C (–346 to 3192°F)
Type K	–250 to 1372°C (–418 to 2501°F)
Type T	–250 to 400°C (–418 to 752°F)
Type E	–250 to 1000°C (–418 to 1832°F)
Type R	0 to 1768°C (32 to 3214°F)
Type S	0 to 1768°C (32 to 3214°F)
Type N	–250 to 1300°C (–418 to 2372°F)
Type B	200 to 1800°C (392 to 3272°F)

Resolution: 0.01 or 0.1°F/°C; auto-ranging to 0.1° above +99.99°

Accuracy:

Type J, K, T, E, and N: $\pm 0.25\%$ of reading $\pm 2^\circ\text{F}$ ($\pm 1^\circ\text{C}$)
below -148°F (-99.9°C), $\pm 0.1\%$ of reading $\pm 0.7^\circ\text{F}$ ($\pm 0.4^\circ\text{C}$) above -238°F (-150°C)

Type R, S, and B: $\pm 0.1\%$ of reading $\pm 2^\circ\text{F}$ ($\pm 1^\circ\text{C}$)

Datalogging: 2000 real-time readings, with time-and-date stamp

Display: 4-digit, custom dot matrix display; $\frac{1}{4}'' \times \frac{1}{2}''$ digits, $\frac{2}{4}'' \times \frac{1}{2}''$ backlit viewing area

Digital output: USB

Power: three AA batteries (included) or optional AC adapter

Battery life: 400 hours continuous (without use of backlighting)

Probe: two thermocouples; use any J, K, T, E, R, S, N, or B probe with miniconnector (not included)

Dimensions:

Meter: 4"W x 7"H x 2"D (10.2 x 18 x 5.2 cm) (with protective boot)

Boxed: 10 $\frac{1}{4}$ " x 5 $\frac{1}{16}$ " x 3" (26 x 13.5 x 7.5 cm)

Weight: Meter: 0.75 lb (0.4 kg); Boxed: 1.25 lb (0.6 kg)



General



Industrial

Ordering Information

Catalog number	Description	Included
WD-35427-50	Temp 300 datalogging	Meter and batteries
WD-35427-51	Calibrated Temp 300	Meter and NIST-traceable calibration report
WD-35427-52	Calibrated system	Meter and NIST-traceable calibration; probe sold separately
WD-35427-80	Rubber armor	Rubber armor with built-in meter stand
WD-35427-85	Hands-free kit	Multipurpose hanging strap and mounting magnets
WD-35427-86	USB cable	For connection to PC

Acorn® Basic K Thermocouple Thermometer

Our most inexpensive thermocouple thermometer

Compact size – Fits right in your pocket—take your Oakton Temp meter anywhere!

All push-button operation – For fast, easy use

Standard Type K miniconnector – Type K probes provide widest temperature range

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

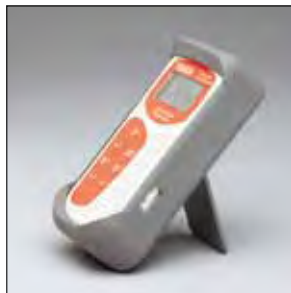
°C/°F selectable

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Available rubber armor – Protects meter; features a built-in stand



Available rubber armor features built-in stand



93000-00



General Temperature Monitoring

Specifications

Range: –250 to 1372°C (–418 to 2501°F)

Resolution: 0.1°F/°C from –99.9 to 299.9°F/°C; 1°F/°C outside this range

Accuracy: ±0.25% of reading plus 0.9°F (0.5°C) above –99.9°F/°C, ±0.25% of reading plus 2°F (1°C) below –99.9°F/°C

Display: 4-digit LCD with 5/8" (14 mm) high numerals

Display update rate: every 0.5 second

Probe: one type K thermocouple probe with miniconnector (not included)

Power: four AAA batteries (included)

Dimensions:

Meter: 5½" x 2¾" x 1¼" (14 x 7 x 3.5 cm)

Boxed: 9½" x 6½" x 3¼" (24 x 16.5 x 8.5 cm)

Weight:

Meter: 0.4 lb (0.2 kg); **Boxed:** 1.1 lb (0.5 kg)

Select a probe to match your application

See pages 72–77 for our wide selection of probes.

Ordering Information

Catalog number	Description	Included
WD-93000-00	Acorn Temp Basic K	Meter and batteries
WD-35627-80	Rubber armor	Rubber armor with built-in meter stand

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS

Ensure the accuracy of your thermocouple probe, meter, or system!

Calibration to a NIST-traceable standard helps you meet ISO, FDA, USDA, and EPA guidelines. Our A2LA-accredited metrology laboratory will pretest and calibrate your thermocouple equipment. Service includes NIST-traceable calibration report with before and after test data at four temperature test points. See pages 92–93 for ordering information.

Acorn® Temp JKT Thermocouple Thermometer

One meter—three thermocouple types

Standard miniconnector – Use with many widely available probes or order from our selection

All push-button operation – For fast, easy use

Compact size – Fits right in your pocket—take your Oakton Temp meter anywhere!

°C/°F selectable

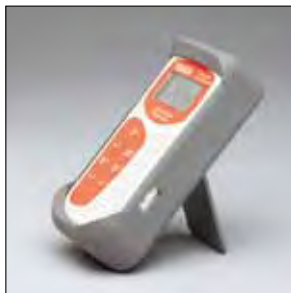
Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Protective rubber armor – Protects meter; features a built-in stand



Rubber armor features built-in stand



35627-00



General



Educational

Select a probe to match your application

See pages 72–77 for our wide selection of probes.

Specifications

Probe	Range
Type J	–200 to 1000°C (–328 to 1832°F)
Type K	–250 to 1372°C (–418 to 2501°F)
Type T	–250 to 400°C (–418 to 752°F)

Resolution: 0.1°F/°C from –99.9 to 299.9 (°F or °C); 1°F/°C outside this range

Accuracy: ±0.25% of reading plus 2°F (1°C) for temp ≤ 99.9°F/°C, ±0.25% of reading plus 0.9°F (0.5°C) for temp ≥ 99.9°F/°C

Display: single-line LCD

Probe: one thermocouple; use any type J, K, or T thermocouple probe with miniconnector (not included)

Power: four 1.5 V AAA batteries (included), for >200 hours continuous use

Dimensions:

Meter: 5½" x 2¾" x 1¼" (14 x 7 x 3.5 cm)

Boxed: 9½" x 6½" x 3¼" (24 x 16.5 x 8.5 cm)

Weight: Meter: 0.9 lb (0.4 kg); **Boxed:** 1.1 lb (0.5 kg)

ISO9001:2000
CERTIFIED SUPPLIER

CE

3 year
warranty
meter only

Ordering Information

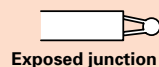
Catalog number	Description	Included
WD-35627-00	Acorn Temp JKT	Meter, rubber armor, and batteries
WD-85000-00	Calibrated meter kit	Meter, general-purpose probe (08516-55), NIST-traceable calibration report, rubber armor, and batteries

Thermocouple Probe Selection Guide

Thermocouple Probe Junction Types

Sheaths with small diameters have faster response times; sheaths with larger diameters have longer life and are better for measuring higher temperatures.

Exposed Junction has the fastest response time—ideal for measuring rapid temperature changes. Clear coating on most models provides a humidity barrier for the thermocouple. Do not use with corrosive fluids or atmospheres.



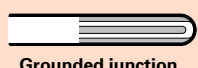
Exposed junction

Ungrounded Junction has a welded junction insulated from the protective sheath and is electrically isolated. Longer response time; use for conductive solutions or where isolation of the measuring circuitry is required.



Ungrounded junction

Grounded Junction has a junction welded to tip of sheath. Wires are completely sealed from contaminants. Good response time.



Grounded junction

Probe Sheath/Body Materials

Inconel® 600 Sheath is ideal for severely corrosive environments and elevated temperatures. Resists progressive oxidation. Maximum operating temperature: 1148°C (2100°F) continuous; 1371°C (2500°F) intermittent.

304 SS Sheath is for general-purpose use, is corrosion-resistant, and good for food service and biological applications. Maximum operating temperature: 898°C (1650°F) continuous; 1398°C (2550°F) intermittent.

316 SS Sheath has higher corrosion resistance than 304 SS. Withstands some strong acids. Maximum operating temperature: 898°C (1650°F) continuous; 1371°C (2500°F) intermittent.

SS Sheath with Coating of PTFE or PFA with grounded junction is ideal with corrosive liquids and atmospheres. Longer response time. Temperatures to 260°C (500°F).

Polymer Body Probes are available in a variety of polymers including Kapton® and PTFE. These provide excellent flexibility and often good chemical resistance. Be sure to consult a chemical compatibility table when selecting a probe for your application.

Physical Characteristics of Thermocouples



Type J Thermocouple

Wire insulation color:

- + = White
- = Red

Wire material:

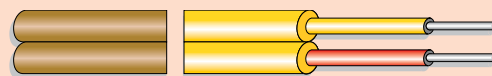
- + = Iron
- = Constantan

Properties:

- + = Strongly magnetic

Atmosphere for exposed junction:

Reducing



Type K Thermocouple

Wire insulation color:

- + = Yellow
- = Red

Wire material:

- + = Chromel
- = Alumel

Properties:

- + = Moderately magnetic

Atmosphere for exposed junction:

Clean oxidizing



Type T Thermocouple

Wire insulation color:

- + = Blue
- = Red

Wire material:

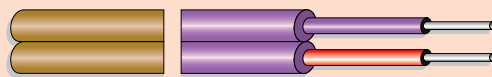
- + = Copper
- = Constantan

Properties:

- + = Copper color

Atmosphere for exposed junction:

Mildly oxidizing and reducing or with moisture



Type E Thermocouple

Wire insulation color:

- + = Purple
- = Red

Wire material:

- + = Chromel
- = Constantan

Properties:

- + = Greater stiffness

Atmosphere for exposed junction:

Vacuum, inert mildly oxidizing or reducing

General Considerations

Extend Your Thermocouples up to 2000 feet without signal loss. Extension wire must be the same type as the thermocouple.

System Error becomes important when you select a probe and meter to make a complete temperature measurement system. For example: a meter has an accuracy of $\pm 0.7^\circ\text{F}$; probe error for the type T probe with metal sheath, straight cable, and stripped ends will have an error limit of $\pm 1.8^\circ\text{F}$ at 400°F . Therefore, the probe-meter system accuracy will be $(\pm 0.7) + (\pm 1.8) = \pm 2.5^\circ\text{F}$ at 400°F .

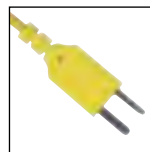
NIST traceability is required for many applications. In order to make an item traceable to NIST standards, the item and the standard are exposed to the same conditions, the readings are noted, and the difference between the readings is recorded on a NIST-traceable calibration report. When taking future readings with the item, the value on the report must be added or subtracted from the measured value.

General-Purpose Probes

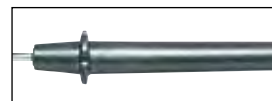
Stainless steel sheaths provide good chemical resistance and fast thermal response

These thermocouple probes were designed to measure any general-purpose or liquid immersion application. All thermocouple probes include a 5-ft PVC coiled cord with strain relief that protects from repeated flexing and tugging. Ergonomic, easy-grip 5"L glass-filled nylon handle (unless noted below) provides maximum heat insulation and impact resistance. Fingerstops on handle prevent probe from rolling and fingers from sliding when inserting probe into hard materials.

The 316 stainless steel sheath (shaft casing) provides durability, strength, and maximum abrasion resistance. Rugged thermoset plastic miniconnector is compatible with all Oakton and Acorn® thermocouple thermometers. Connectors and coiled cord are color-coded based on type: type J black, type K yellow, and type T blue.




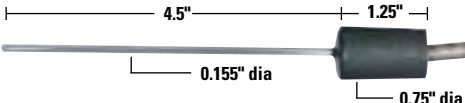
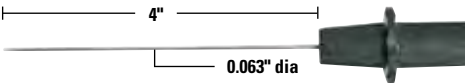
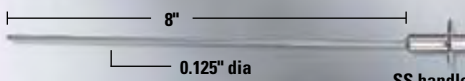
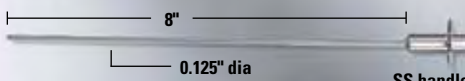
Miniconnector



Standard nylon handle

General-purpose probe
08516-55

Specifications & Ordering Information

Catalog number	Type	Temperature range	Features	Tip length	Dimensions*
Standard probes					
WD-08517-55	J	–190 to 760°C (–310 to 1400°F)	Junction: grounded Response time: 15 sec (liquids) 316 SS sheath; nylon handle	5"	
WD-08516-55	K	–250 to 899°C (–418 to 1650°F)		12"	
WD-08500-55	T	–250 to 400°C (–418 to 752°F)		24"	
WD-93756-03	J	–190 to 760°C (–310 to 1400°F)			
WD-93756-23	K	–250 to 899°C (–418 to 1650°F)			
WD-93756-63	T	–250 to 400°C (–418 to 752°F)			
WD-93756-04	J	–190 to 760°C (–310 to 1400°F)	Junction: grounded Response time: 30 sec (liquids) 304 SS sheath; PVC short handle		
WD-93756-24	K	–250 to 899°C (–418 to 1650°F)		4.5"	
WD-93756-44	T	–250 to 400°C (–418 to 752°F)			
Low-cost probes					
WD-08439-60	J	–190 to 760°C (–310 to 1400°F)	Junction: grounded Response time: 30 sec (liquids) 304 SS sheath; PVC short handle	4.5"	
WD-08439-62	K	–250 to 899°C (–418 to 1650°F)			
WD-08439-64	T	–250 to 400°C (–418 to 752°F)			
Small-diameter standard probes					
WD-08505-55	J	–190 to 704°C (–310 to 1300°F)	Junction: grounded Response time: 10 sec 316 SS sheath; nylon handle	4"	
WD-08505-56	K	–250 to 816°C (–418 to 1500°F)			
WD-08505-57	T	–250 to 343°C (–418 to 650°F)			
All stainless steel probes					
WD-93600-02	J	–190 to 760°C (–310 to 1400°F)	Junction: grounded Response time: 30 sec 316 SS sheath; 316 SS handle	8"	
WD-93600-22	K	–250 to 899°C (–418 to 1650°F)			
WD-93600-42	T	–250 to 400°C (–418 to 752°F)			

*Overall probe sheath lengths may vary up to ±0.25".

INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS

Ensure the accuracy of your thermocouple probe, meter, or system!

Calibration to a NIST-traceable standard helps you meet ISO, FDA, USDA, and EPA guidelines. Our A2LA-accredited metrology laboratory will pretest and calibrate your thermocouple equipment. Service includes NIST-traceable calibration report with before and after test data at four temperature test points. See pages 92–93 for ordering information.

Penetration and Air/Gas Probes

Spear tips make semisolid testing easy; exposed junctions with perforated shields provide fast response to flowing air

Probes include a 5-ft PVC coiled cord with strain relief that protects from repeated flexing and tugging. Ergonomic, easy-grip 5"L glass-filled nylon handle (unless noted below) provides maximum heat insulation and impact resistance. Fingerstops on handle prevent probe from rolling and fingers from sliding when inserting probe into hard materials.

The 316 stainless steel sheath (shaft casing) provides durability, strength, and maximum abrasion resistance. Rugged thermoset plastic miniconnector is compatible with all Oakton and Acorn® thermocouple thermometers. Connectors and coiled cord are color-coded based on thermocouple type: type J black, type K yellow, and type T blue.

A Penetration Probes offer a pointed tip style for penetration into hard and semisolid materials. Sturdy stainless steel tip casing prevents tip from bending when inserting.

B Air/Gas Probes are designed with a perforated shield which allows air and other gases to flow into the sensor for quick readings. Metal shield also absorbs radiated heat and minimizes sensor error. Our sensors are encased in ceramic mineral (MGO) insulation to provide stability, and shock and vibration resistance.

Standard penetration probe
08516-65



Miniconnector



Standard nylon handle

Specifications & Ordering Information

Catalog number	Type	Temperature range	Features	Tip length	Dimensions
A Penetration probes					
Standard probes					
WD-08517-65	J	–190 to 760°C (–310 to 1400°F)	Junction: grounded	4"	
WD-08516-65	K	–250 to 899°C (–418 to 1650°F)	Response time: 25 sec (liquids)		
WD-08500-65	T	–250 to 400°C (–418 to 752°F)	304 SS sheath; nylon handle		
WD-93601-22	J	–190 to 760°C (–310 to 1400°F)	Junction: grounded	12"	
WD-93601-24	K	–250 to 900°C (–418 to 1652°F)	Response time: 50 sec		
WD-93601-26	T	–250 to 371°C (–418 to 700°F)	316 SS sheath; nylon handle		
WD-93601-42	J	–190 to 760°C (–310 to 1400°F)	Junction: grounded	24"	
WD-93601-44	K	–250 to 900°C (–418 to 1652°F)	Response time: 50 sec		
WD-93601-46	T	–250 to 287°C (–418 to 550°F)	316 SS sheath; nylon handle		
Small-diameter probes with hypodermic tip					
WD-93601-02	J	–190 to 704°C (–310 to 1300°F)	Junction: grounded	4"	
WD-93601-04	K	–250 to 816°C (–418 to 1500°F)	Response time: 15 sec		
WD-93601-06	T	–250 to 343°C (–418 to 650°F)	316 SS sheath; nylon handle		
Low-cost probes					
WD-08439-80	J	–190 to 760°C (–310 to 1400°F)	Junction: grounded	4.5"	
WD-08439-82	K	–250 to 899°C (–418 to 1650°F)	Response time: 25 sec (liquids)		
WD-08439-84	T	–250 to 400°C (–418 to 752°F)	316 SS sheath; PVC short handle		
B Air/gas probes					
Standard probes					
WD-08517-75	J	–190 to 537°C (–310 to 1000°F)	Junction: exposed; isolated	8.5"	
WD-08516-75	K	–250 to 537°C (–418 to 1000°F)	Response time: 225 s at 5 m/s airflow		
WD-08500-75	T	–250 to 537°C (–418 to 1000°F)	316 SS sheath and radiation shield		
Low-cost probes					
WD-08439-90	J	–190 to 300°C (–310 to 572°F)	Junction: exposed; isolated	5"	
WD-08439-92	K	–250 to 300°C (–418 to 572°F)	Response time: 225 s at 5 m/s airflow		
WD-08439-94	T	–250 to 300°C (–418 to 572°F)	304 SS sheath and SS wire coil		

Surface Probes

Surface ground junction ensures junction senses temperature of surface, not surrounding atmosphere

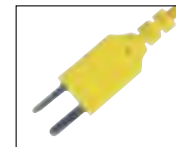
Surface probes offer dual spring tips to provide positive contact with flat or slightly irregular surfaces. Include a 5-ft PVC coiled cord with strain relief that protects from repeated flexing and tugging. Ergonomic, easy-grip 5"L glass-filled nylon handle (unless noted below) provides maximum heat insulation and impact resistance. Fingerstops on handle prevent probe from rolling and fingers from sliding when inserting probe into hard materials.

The 316 stainless steel sheath (shaft casing) provides durability, strength, and maximum abrasion resistance. Rugged thermoset plastic miniconnector is compatible with all Oakton and Acorn® thermocouple thermometers. Connectors and cord are color-coded based on thermocouple type: type J black, type K yellow, and type T blue.

A,B,C Standard Surface Probes feature ceramic tips to ensure excellent thermal contact.

D Flat-leaf Probe facilitates insertion into openings.

E Adhesive Probes make it easy to monitor surface temperatures over time.



Miniconnector

Specifications & Ordering Information

Catalog number	Type	Temperature range	Features	Tip length	Dimensions
A Standard straight probes					
WD-08517-60 WD-08516-60 WD-08500-60	J K T	–190 to 649°C (–310 to 1200°F) –250 to 649°C (–418 to 1200°F) –250 to 343°C (–418 to 650°F)	Junction: exposed; isolated Response time: 30 sec Aluminum housing; nylon handle	10"	
B Low-cost probes					
WD-08439-70 WD-08439-72 WD-08439-74	J K T	–190 to 649°C (–310 to 1200°F) –250 to 649°C (–418 to 1200°F) –250 to 371°C (–418 to 700°F)	Junction: exposed; isolated Response time: 30 sec Aluminum housing; no handle	4.5"	
C 90°-angle probes: ideal for hard-to-reach areas.					
WD-08517-64 WD-08516-64 WD-08500-64	J K T	–190 to 649°C (–310 to 1200°F) –250 to 649°C (–418 to 1200°F) –250 to 343°C (–418 to 650°F)	Junction: exposed; isolated Response time: 30 sec Aluminum housing; nylon handle	2"	
D Flat-leaf probe: flexible for positive contact in hard-to-reach areas; use between metal plates or on other surfaces.					
WD-08518-60	K	–250 to 900°C (–418 to 1650°F)	Response time: 5 sec	4.5"	
E Self-adhesive probes: adhere to most surfaces, Kapton®-insulated wire and industrial adhesives for high temperature and long-term durability.					
WD-08519-50 WD-08519-52 WD-08519-54	J K T	–190 to 404°C (–310 to 760°F) –250 to 404°C (–418 to 760°F) –250 to 404°C (–418 to 760°F)	Junction: grounded Response time: 5 sec No handle; 5-ft L wire	—	

Flexible Insulated-Wire Probes

Choose from a variety of coating materials to match your application

Flexible insulated-wire probes include a straight insulated cable without a handle. These probes can be easily bent and mounted on walls or around corners.

Rugged thermoset plastic miniconnector is compatible with all Oakton and Acorn® thermocouple thermometers. Connectors and cord are color-coded based on thermocouple type: type J black, type K yellow, and type T blue.

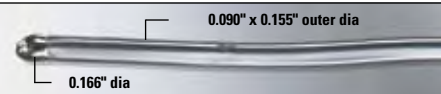
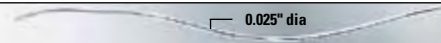
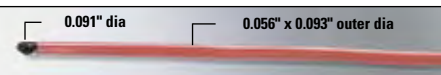
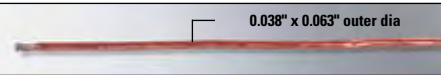
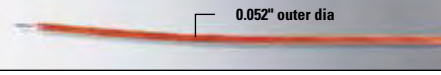
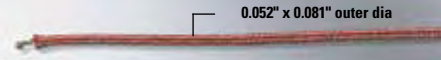
A PVC-insulated probes provide economical options with good flexibility.

B The PTFE- and FEP-insulated probes are for use with acids and chemicals.

C Kapton®-insulated probes exhibit an excellent balance of physical, chemical, and electrical properties over a wide temperature range, particularly at unusually high temperatures.

D Fiberglass-insulated probes offer excellent electrical insulation properties and can be exposed to extremely high temperatures.

Specifications & Ordering Information

Catalog number	Type	Temperature range	Features	Dimensions
A PVC-insulated probes with epoxy-coated tip, 20-gauge (0.032" dia) wire; 10-ft L; short-term immersible.				
WD-08466-02	J	–190 to 105°C (–310 to 221°F)	Junction: ungrounded	
WD-08466-04	K	–250 to 105°C (–418 to 221°F)	Response time: 25 sec	
WD-08466-06	T	–250 to 105°C (–418 to 221°F)		
B Fine-gauge PTFE-insulated probe, 0.025" outer dia; 3-ft L; implant in semisolids. Includes five 18-gauge needles.				
WD-08506-75	T	–250 to 150°C (–418 to 302°F)	Junction: ungrounded Response time: 0.5 sec	
C FEP-insulated probes with epoxy-coated junction, 24-gauge (0.020" dia) wire; 10-ft L; long-term immersible.				
WD-08466-81	J	–190 to 204°C (–310 to 400°F)	Junction: ungrounded	
WD-08466-82	K	–250 to 204°C (–418 to 400°F)	Response time: 15 sec	
WD-08466-83	T	–250 to 204°C (–418 to 400°F)		
C Kapton-insulated probe, 24-gauge (0.020" dia) wire; 10-ft L; ideal for multipoint temperature measurements.				
WD-08517-90	J	–190 to 315°C (–310 to 600°F)	Junction: exposed Response time: 15 sec	
C Kapton-insulated probes, 30-gauge (0.010" dia) wire; 5-ft L; ideal for checking food temperatures. Pack of six.				
WD-08505-87	J	–190 to 404°C (–310 to 759°F)	Junction: exposed	
WD-08505-86	K	–250 to 404°C (–418 to 759°F)	Response time: 0.5 sec	
WD-08505-85	T	–250 to 404°C (–418 to 759°F)		
D Fiberglass-insulated probes, 24-gauge (0.020" dia) wire; 10-ft L. Use for high-temperature measurements.				
WD-08512-81	J	–190 to 482°C (–310 to 900°F)	Junction: exposed	
WD-08512-82	K	–250 to 482°C (–418 to 900°F)	Response time: 15 sec	
WD-08512-83	T	–250 to 400°C (–418 to 750°F)		

Thermocouple Wires

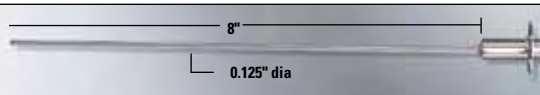
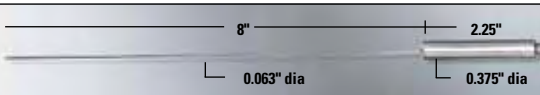
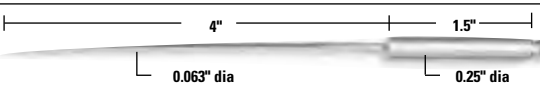
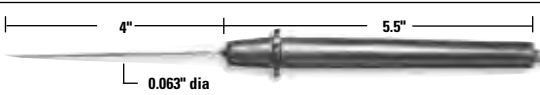
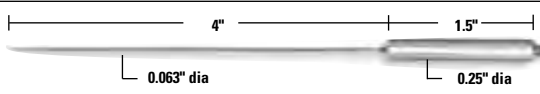
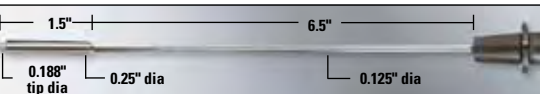
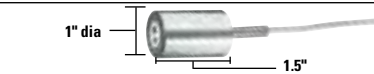

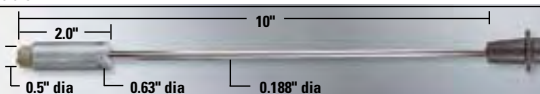
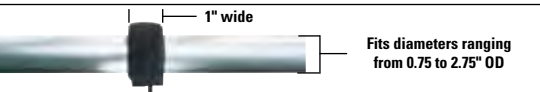
Wires come in 20-, 24-, or 30-gauge for fabricating your own probes or extension cables (meets ANSI and ASTM standards). Choose from wire with PVC, FEP, or fiberglass braid insulation. 100 ft (30 m) bolt.



Catalog number	Type	Gauge	Max temperature	Insulation
WD-08541-16	J	20	105°C (221°F)	PVC
WD-08541-06	J	24	105°C (221°F)	PVC
WD-08541-07	J	24	204°C (400°F)	FEP
WD-08541-08	J	24	482°C (900°F)	Glass braid
WD-08541-00	J	30	204°C (400°F)	FEP
WD-08541-20	K	20	105°C (221°F)	PVC
WD-08541-22	K	20	482°C (900°F)	Glass braid
WD-08541-23	K	20	704°C (1300°F)	High-temp glass braid
WD-08541-09	K	24	105°C (221°F)	PVC
WD-08541-10	K	24	204°C (400°F)	FEP
WD-08541-11	K	24	482°C (900°F)	Glass braid
WD-08541-02	K	30	204°C (400°F)	FEP
WD-08541-25	T	20	105°C (221°F)	PVC
WD-08541-26	T	20	204°C (400°F)	FEP
WD-08541-12	T	24	105°C (221°F)	PVC
WD-08541-13	T	24	204°C (400°F)	FEP
WD-08541-04	T	30	204°C (400°F)	FEP

Specialty Probes

Designed for food, science, electronics, and HVAC applications

Catalog number	Type	Temperature range	Features	Dimensions*
Food probes —easy clean-up designs. For more food probes, see the stainless steel probes on page 73				
All stainless steel probes, 8"L ; for added durability—ideal for food processing applications. Include 4.5"L stainless steel handle and 4-ft SS-armored cable.				
WD-93600-02 WD-93600-22 WD-93600-42	J K T	–190 to 760°C (–310 to 1400°F) –250 to 899°C (–418 to 1650°F) –250 to 400°C (–418 to 752°F)	Junction: grounded Response time: 30 sec 316 SS sheath; miniconnector; SS handle	
Small-diameter probes with miniature stainless steel handles, 8"L . Ideal for checking food temperatures. Include 5-ft coiled cable.				
WD-08505-61 WD-08505-62 WD-08505-63	J K T	–190 to 704°C (–310 to 1300°F) –250 to 816°C (–418 to 1500°F) –250 to 343°C (–418 to 650°F)	Junction: grounded Response time: 10 sec 316 SS sheath; miniconnector; SS handle	
Food-service probes with hypodermic tip, 4"L . Include 4-ft straight armored cable.				
WD-93607-20 WD-93607-22 WD-93607-24	J K T	–190 to 371°C (–310 to 700°F) –250 to 371°C (–418 to 700°F) –250 to 371°C (–418 to 700°F)	Junction: grounded Response time: 10 sec 316 SS sheath and handle; miniconnector	
Science needle tip probes				
Small-diameter probes with hypodermic tip, 4"L . Include 5-ft coiled cable.				
WD-93601-02 WD-93601-04 WD-93601-06	J K T	–190 to 704°C (–310 to 1300°F) –250 to 816°C (–418 to 1500°F) –250 to 343°C (–418 to 650°F)	Junction: grounded Response time: 15 sec 316 SS sheath; miniconnector; glass-filled polypropylene handle	
Hypodermic probes, 4"L . Include 4-ft straight PVC cable and bendable sheath.				
WD-08116-65 WD-08117-65 WD-08113-65	J K T	–190 to 371°C (–310 to 700°F) –250 to 371°C (–418 to 700°F) –250 to 371°C (–418 to 700°F)	Junction: grounded Response time: 10 sec 316 SS sheath and handle; miniconnector	
Electronics small surface probes —fast response and minimal damages to components.				
Small-diameter probes, 8"L . Small diameter is ideal for confined areas. Exposed junction is isolated from 316 SS shaft and aluminum housing with ceramic support. Include 5-ft coiled cable.				
WD-08517-62 WD-08516-62 WD-08500-62	J K T	–190 to 649°C (–310 to 1200°F) –250 to 649°C (–418 to 1200°F) –250 to 343°C (–418 to 650°F)	Junction: exposed; isolated Response time: 15 sec 316 SS shaft and aluminum housing; miniconnector; nylon handle	
HVAC probes				
Dropping/magnetic probes, 1.5"L . Attach magnetic probe to any flat ferrous surface. Include 10-ft straight SS braid over fiberglass-insulated wire.				
WD-08519-86 WD-08514-86 WD-08525-86	J K T	–190 to 649°C (–310 to 1200°F) –250 to 649°C (–418 to 1200°F) –250 to 399°C (–418 to 750°F)	Junction: exposed Response time: 30 sec Aluminum housing; miniconnector	
General-purpose air/gas probes, 8.5"L ; for general-purpose air temperature measurement. Includes 5-ft coiled cable.				
WD-08517-75 WD-08516-75 WD-08500-75	J K T	–310 to 1000°F (–190 to 537°C) –418 to 1000°F (–250 to 537°C) –418 to 1000°F (–250 to 537°C)	Junction: exposed; isolated Response time: 225 s at 5 m/s airflow 316 SS sheath and radiation shield; miniconnector; nylon handle	
Standard straight probes, 10"L . Use to monitor such surfaces as hot plates, furnaces, and molds. Exposed junction is isolated from 316 SS shaft and aluminum housing with ceramic support. Includes a 5-ft coiled cable.				
WD-08517-60 WD-08516-60 WD-08500-60	J K T	–190 to 649°C (–310 to 1200°F) –250 to 649°C (–418 to 1200°F) –250 to 343°C (–418 to 650°F)	Junction: exposed; isolated Response time: 30 sec 316 SS shaft; aluminum housing; miniconnector; nylon handle	
Hook-and-loop strap-on probes, 8"L . Temporarily or permanently strap onto tubing or pipes—probes are easy to install and remove. Strap is 8" long and fits diameters from 0.75 to 2.75" OD. Include 10-ft straight PVC cable.				
WD-08469-80 WD-08469-82 WD-08469-84	J K T	–190 to 100°C (–310 to 212°F) –250 to 100°C (–418 to 212°F) –250 to 100°C (–418 to 212°F)	Junction: ungrounded Response time: 300 sec Miniconnector	

*Overall probe sheath lengths may vary up to ± 0.25 ".

RTD Selection Guide

What is an RTD?

RTD stands for Resistance Temperature Detector. This is the sensing technology that determines temperature by measuring the change in electrical resistance across two metal wires. The resistance value is then measured and interpreted by a RTD thermometer, and displayed for a user to view. Platinum is the metal of choice for RTD wire due to its excellent repeatability, stability, and resistance to corrosion and chemicals.

The temperature to resistance curve varies for different RTD elements. All Oakton RTD probes have an Alpha coefficient of $0.003850 \Omega/\Omega/^\circ\text{C}$ (DIN IEC 751). Resistance at ice point (0°C) is 100Ω . This curve is well documented and so ensures cross-compatibility between Oakton RTD thermometers and probes and those made by other thermometry suppliers.

Why choose an RTD?

RTDs are more accurate and stable and thus slightly more expensive than other sensors, such as thermocouples, but they cannot be used to measure extremely high temperatures.

Conversely, RTDs have a wider temperature range compared to thermistor probes but lower overall system accuracy. When your expected measurements require a balance between range and accuracy, RTDs are the best choice.

The table at right shows the general trade-offs.

Time constants and temperature response

Temperature probe response is often stated as time constant. By definition, a probe reaches 63% of its final value within one time constant. Within five time constants, the probe will reach 99% of final reading. Time constant depends on a number of factors including junction design, sheath materials, and type of sensing element.



HVAC Measurements



Preventive Maintenance



35426-60
(see page 80)

System Accuracies—RTD vs Thermistor and Thermocouple

Instrument	Recommended temperature range	Widest possible temperature range	Typical accuracies
Platinum RTD			
Probes	-182 to 500°C (-297 to 932°F)	—	±0.2 to 0.35% of reading
Meters	—	—	±0.1% of reading and ±1°C (±1°F)
Thermistor			
400-series probes	-40 to 150°C (-40 to 302°F)	—	±0.2°C (±0.36°F) from 0 to 75°C (32 to 167°F)
Meters	—	—	±0.1 to 0.2°C (±0.2 to 0.4°F)
Thermocouple			
Type J probes	0 to 724°C (32 to 1336°F)	-190 to 1000°C (-310 to 1832°F)	±1.8 to 7.9°F or ±0.4% of reading above 32°F, whichever is greater
Type K probes	0 to 1260°C (32 to 2300°F)	-250 to 1375°C (-418 to 2507°F)	
Type T probes	-183 to 371°C (-299 to 700°F)	-250 to 400°C (-418 to 752°F)	±0.9 to 3.6°F or ±0.4% of reading above 32°F, whichever is greater
Type E probes	0 to 871°C (32 to 1600°F)	0 to 898°C (32 to 1650°F)	±1.8 to 7.9°F or ±0.4% of reading above 32°F, whichever is greater
Meters	—	—	±0.1 to 1% of reading and ±1°C (±1.8°F)

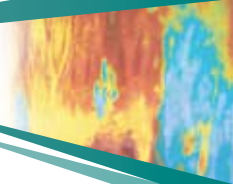
INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS

WD-17002-04 NIST-traceable calibration report for RTD system (meter + probe)

WD-17000-04 NIST-traceable calibration report for RTD meter

WD-17001-04 NIST-traceable calibration report for RTD probe

Service includes test data calibrated at four temperature test points.



Temp 16 RTD Thermometer

Rugged and reliable

Standard three-pin connector – Use with many widely available probes or order from our selection

All push-button operation – For fast, easy use

Ergonomic design – Easy to grip for one-handed operation

°C/°F selectable

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Sealed keypad and ABS plastic case – Meet IP54 standards for splash resistance

Available protective rubber armor – Protects meter and features a built-in stand

**PREDICTING
A CHANGE IN
TEMPERATURE**



35426-20 shown with available rubber armor



General



Educational

Specifications

Range: –200 to 850°C (–328 to 1562°F)

Resolution: 1°C/F from –200 to –100°C (–328 to –148°F) and 200 to 850°C (392 to 1562°F); 0.1°C/F from –100 to 200°C (–148 to 392°F)

Accuracy

From –200 to –100°C (–328 to –148°F): $\pm 2^\circ\text{C}/\pm 4^\circ\text{F}$,
From –99.9 to 199.9°C (–148 to 392°F): $\pm 2^\circ\text{C}/\pm 4^\circ\text{F}$,
From 200 to 850°C (392 to 1562°F): $\pm 2^\circ\text{C}/\pm 4^\circ\text{F}$

Display: 4-digit LCD, 2 1/4" x 1 1/2" (5.7 x 3.8 cm) backlit viewing area

Probe: one 100 Ω platinum RTD with three-pin DIN connector (not included)

Power: three AA batteries (included)

Battery life: 400 hours continuous (without the use of backlighting)

Dimensions (W x H x D):

Meter: 4" x 7" x 2" (10.2 x 18 x 5.2 cm) (with protective armor)

Boxed: 5 3/4" x 10 1/4" x 3" (13.5 x 26 x 7.5 cm)

Weight: Meter: 0.75 lb (0.4 kg); Boxed: 1.25 lb (0.6 kg)

Select a probe to match your application
See page 82 for our wide selection of probes.

Ordering Information

Catalog number	Description	Included
WD-35426-20	Temp 16	Meter and batteries
WD-35426-21	Calibrated Temp 16	Meter and NIST-traceable calibration report
WD-35426-22	Calibrated system	Meter and NIST-traceable calibration report; probe sold separately
WD-35427-80	Rubber armor	Rubber armor with built-in meter stand
WD-35427-85	Hands-free kit	Multipurpose hanging strap and mounting magnets

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Temp 360 Datalogging RTD Thermometer

Our most advanced RTD thermometer

Datalogging for up to 2000 points –

Time-and-date stamp for advanced data analysis

Menu-driven setup and operation – Detailed on-screen information makes the Temp 360 easy to use

USB output – Easily transfer stored readings to your computer

Standard three-pin connector – Use with many widely available probes or order from our selection

All push-button operation – For fast, easy use

Compact size – Fits right in your pocket—take your Oakton Temp meter anywhere!

°C/°F selectable

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

Temperature offset calibration

adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Sealed keypad and ABS plastic case; available rubber armor – Meet IP54 standards for splash resistance; armor adds protection and features a built-in stand



**PREDICTING
A CHANGE IN
TEMPERATURE**

35426-60
shown with available
rubber armor



Industrial



Manufacturing

**Select a probe
to match your
application**
See page 82
for our wide
selection of probes.

Specifications

Range: –330 to 2210°F (–201 to 1210°C)

Resolution

From –330.0 to –100°F/°C: 0.1°F/°C,
From –99.99 to 99.99°F/°C: 0.01°F/°C,
From 100.0 to 999.9°F/°C: 0.1°F/°C,
Above 1000°F/°C: 1°F/°C

Accuracy

From –330.0 to –100°F/°C: ±0.1°F/°C,
From –99.99 to 99.99°F/°C: ±0.06°F/±0.03 °C,
From 100.0 to 999.9°F/°C: ±0.1°F/°C,
Above 1000°F/°C: ±1°F/°C

Datalogging: 2000 real-time readings, with time-and-date stamp

Display: 4-digit, custom dot matrix display; 1/4" x 1/2" digits, 2 1/4" x 1 1/2" backlit viewing area

Probe: one 100 Ω platinum RTD with three-pin DIN connector (not included)

Power: three AA batteries (included) or optional AC adapter

Battery life: 400 hours continuous (without use of backlighting)

Dimensions:

Meter: 4" x 7" x 2" (10.2 x 18 x 5.2 cm)
(with protective armor)

Boxed: 5 5/8" x 10 1/4" x 3" (13.5 x 26 x 7.5 cm)

Weight: Meter: 0.75 lb (0.4 kg); Boxed: 1.25 lb (0.6 kg)

Ordering Information

Catalog number	Description	Included
WD-35426-60	Temp 360 datalogging	Meter and batteries
WD-35426-61	Calibrated Temp 360	Meter and NIST-traceable calibration report
WD-35426-62	Calibrated system	Meter and NIST-traceable calibration report; probe sold separately
WD-35427-80	Rubber armor	Rubber armor with built-in meter stand
WD-35427-85	Hands-free kit	Multipurpose hanging strap and mounting magnets

WD-91427-99 AC power adapter

WD-35427-86 USB cable to connect to PC

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Acorn® Temp 6 RTD Thermometer

Our simplest RTD thermometer

Compact size – Fits right in your pocket—take your Oakton Temp 6 meter anywhere!

All push-button operation – For fast, easy use

Standard mini-three-pin connector – Accepts a variety of 100 Ω Pt 100 probes

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

°C/°F selectable

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Rubber armor – Protects meter and features a built-in stand



Rubber armor features built-in stand



General



Industrial

Select a probe to match your application

See page 82 for our wide selection of probes.

Specifications

Range: -250 to 1372°C (-418 to 2501°F)

Resolution: 0.1°C/F from -99.9 to 299.9°C/F; 1°C/F outside this range

Accuracy: $\pm 0.25\%$ of reading plus 0.5°C (0.9°F) above -99.9°C/F; $\pm 0.25\%$ of reading plus 1°C (2°F) below -99.9°C/F

Display: single-line LCD, $\frac{7}{8}$ " high

Probe: one 100 Ω platinum RTD with mini-three-pin DIN connector (not included)

Power: four AAA batteries (included), for >200 hours continuous use

Dimensions: 5½" x 2¾" x 1⅝" (14 x 7 x 3.5 cm)

Weight: 0.9 lb (0.4 kg)

Ordering Information

Catalog number	Description	Included
WD-35626-20	Acorn Temp 6	Meter, rubber armor, and batteries
WD-85000-02	Calibrated meter kit	Meter, general-purpose probe (08117-70), NIST-traceable calibration report, rubber armor, and batteries

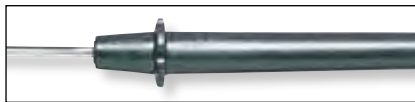
ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

RTD Probes

Provide excellent accuracy, stability, and repeatability



Nylon handle



Three-pin connector

Use our RTD probes to measure temperature when accuracy is important. All probes include a 5-ft PVC coiled cord with strain relief that protects from repeated flexing and tugging. Ergonomic, easy-grip 5" long glass-filled nylon handle provides maximum heat insulation and impact resistance. Fingerstops on handle prevent probe from rolling and fingers from sliding when inserting probe into hard materials.

The 316 stainless steel sheath (tip casing) provides durability, strength, and maximum abrasion resistance. Rugged three-pin circular connector with positive-locking tab prevents loose connections. Compatible with all Oakton and Acorn® RTD thermometers.

A General-Purpose: Designed for most common and liquid immersion applications.

B Penetration: Pointed tip style for penetration into hard and semi-solid materials. Sturdy stainless steel tip casing prevents tip from bending when inserting.

C Surface: Flat sensor wires are encased in hardened MgO ceramic insulation to ensure positive contact even under vibrating circumstances and extreme conditions.

D Air/Gas: Perforated shield allows air and other gases to flow into sensor for quick readings. Metal shield also absorbs radiated heat and minimizes sensor error.

E FEP-Coated: Same as our general-purpose tip, but this tip has a FEP coating over the tip casing for use with acids and strong chemicals.

F Small Diameter: Same as our general-purpose tip, but this probe has a 1/8" diameter tip for insertion into soft and semisoft materials.

G Smallest Diameter Wedge: Small diameter angled tip with point can be wedged into tight areas and minimizes damage to samples.

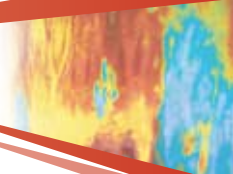
H Alligator Clip: Clips onto objects up to 3/8" thick. The 10-ft, 304 stainless steel flexible braid over fiberglass cable has no handle.

Specifications & Ordering Information

Key	Catalog number	Temperature range	Tip length	Dimensions
A	WD-08117-70	-50 to 500°C (-58 to 932°F)	10"	
	WD-08117-72		18"	
B	WD-08117-85	-50 to 500°C (-58 to 932°F)	4"	
C	WD-08117-75	-50 to 500°C (-58 to 932°F)	8"	
D	WD-08117-90	-50 to 500°C (-58 to 932°F)	10"	
E	WD-08117-87	-50 to 260°C (-58 to 500°F)	10"	
F	WD-08117-73	-50 to 500°C (-58 to 932°F)	10"	
	WD-08117-74		18"	
G	WD-08117-80	-50 to 500°C (-58 to 932°F)	2"	
H	WD-08117-89	-50 to 500°C (-58 to 932°F)	1.5"	

INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS

WD-17002-04 NIST-traceable calibration with data for RTD system (meter + probe) with test data calibrated at four temperature test points
WD-17001-04 NIST-traceable calibration with data for RTD probe



Thermistor Selection Guide

What is a thermistor?

A thermistor is a thermally sensitive resistor which changes electrical resistance due to temperature changes. It has very predictable characteristics and offers long-term stability.

Why choose a thermistor?

Thermistors have excellent accuracy over the biological or ambient temperature ranges when compared to thermocouples or RTDs, but have a limited temperature range that usually cannot exceed 150°F (300°C). Response times are generally faster than other types of probes.

Other thermistor series

Unless otherwise specified, Oakton thermistor thermometers are designed for use with 400-series probes. These probes provide accurate thermistor results and are interchangeable with little probe-to-probe variation. Oakton meters can be used with 500-series probes (not offered by Oakton) but will require the user to consult a conversion chart typically provided with the 500-series probe. The 500-series probes have significant probe-to-probe variability that can not be compensated for in the meter. Oakton meters are not compatible with 700-series probes.



INNOCAL®

INNOVATIVE CALIBRATION SOLUTIONS

WD-17002-06 NIST-traceable calibration with data for Thermistor system (meter + probe)

WD-17000-06 NIST-traceable calibration with data for Thermistor meter

WD-17001-06 NIST-traceable calibration with data for Thermistor probe

Service includes test data calibrated at four temperature test points.

General-Purpose 400-Series Thermistor Probes

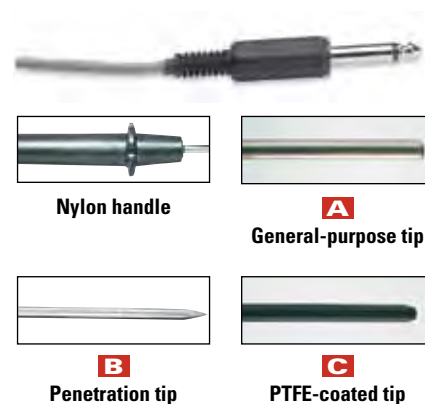
Ideal for measurement in liquids or semisolids

Use our thermistor probes to measure temperature when accuracy within the biological range is important. All probes include a 5-ft PVC coiled cord with strain relief that protects from repeated flexing and tugging. Ergonomic, easy-grip 5"L glass-filled nylon handle provides maximum heat insulation and impact resistance. Fingerstops on handle prevent probe from rolling and fingers from sliding when inserting probe into hard materials. The 316 stainless steel sheath (tip casing) provides durability, strength, and maximum abrasion resistance. All probes come with a 1/4" phono plug connector. Compatible with all Oakton and Acorn® thermistor thermometers.

Specifications & Ordering Information

Key	Catalog number	Temperature range	Tip length	Dimensions
A	WD-93824-00	-30 to 100°C (-22 to 212°F)	10"	
B	WD-93824-30	-30 to 100°C (-22 to 212°F)	4"	
C	WD-93824-12	-30 to 100°C (-22 to 212°F)	10"	

You'll find more thermistor probes on page 87.



A General-Purpose: Designed for most common and liquid immersion applications.

B Penetration: Pointed tip style for penetration into hard and semisolid materials. Sturdy stainless steel tip casing prevents tip from bending when inserting.

C PTFE-Coated: Same as our general-purpose tip above, but this tip has a PTFE coating over the casing for use with acids and strong chemicals.

Temp 14 Thermistor Thermometer

Rugged and reliable

Standard bayonet connectors – Choose from a wide variety of thermistor probes

All push-button operation – For fast, easy use

Ergonomic design – Easy to grip for one-handed operation

°C/°F selectable

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Available rubber armor – Protects meter and features a built-in stand

**PREDICTING
A CHANGE IN
TEMPERATURE**



35426-00 shown with available rubber armor



General-purpose
QC research labs
and biological
process monitoring

Select a probe
to match your
application

See pages 83 and 87
for our wide
selection of probes.

Specifications

Range: –40 to 302°F (–40 to 150°C)

Resolution: 0.01 or 0.1°C/°F

Accuracy:
From –40 to 125°C (–40 to 257°F): ±0.2°C (±0.4°F),
From 125 to 150°C (257 to 302°F): ±0.5°C (±0.9°F)

Display: 4-digit LCD (1/4" X 1/2" digits), 2 1/4" x 1 1/2" backlit viewing area

Probe: one 400-series thermistor (not included)

Power: three AA batteries (included) or optional AC adapter

Battery life: 700 hours continuous (without use of backlighting)

Dimensions:
Meter: 4" x 7" x 2" (10.2 x 18 x 5.2 cm)
(with protective armor)

Boxed: 5 5/8" x 10 1/4" x 3" (13.5 x 26 x 7.5 cm)

Weight: Meter: 0.75 lb (0.4 kg); Boxed: 1.25 lb (0.6 kg)

Ordering Information

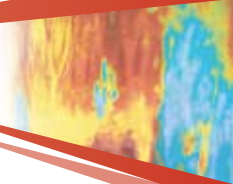
Catalog number	Description	Included
WD-35426-00	Temp 14	Meter and batteries
WD-35426-01	Calibrated Temp 14	Meter and NIST-traceable calibration report
WD-35426-02	Calibrated system	Meter and NIST-traceable calibration report; probe sold separately
WD-35427-80	Rubber armor	Rubber armor with built-in meter stand
WD-35427-85	Hands-free kit	Multipurpose hanging strap and mounting magnets

WD-91427-99 AC power adapter

ISO9001:2000
CERTIFIED SUPPLIER

CE

3 year
warranty
meter only



Temp 340 Datalogging Thermistor Thermometer

Our most advanced thermistor thermometer

Datalogging for up to 2000 points – Time- and-date stamp for advanced data analysis

Menu-driven setup and operation – Detailed on-screen information makes the Temp 340 easy to use

USB outout – Easily transfer stored readings to your computer

Standard bayonet connectors – Choose from a wide variety of thermistor probes

All push-button operation – For fast, easy use
°C/°F selectable

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Sealed keypad and ABS plastic case; available rubber armor – Meet IP54 standards for splash resistance; armor adds protection and features a built-in stand



**PREDICTING
A CHANGE IN
TEMPERATURE**

35426-50 shown with available rubber armor



QC labs and research lab testing requiring GLP datalogging and analysis

Select a probe to match your application

See pages 83 and 87 for our wide selection of probes.

Specifications

Range: –40.00 to 150.0°C (–40.00 to 302.0°F)

Resolution: 0.01 or 0.1°C/°F; auto-ranging to 0.1° above +99.99°

Accuracy

From –40.00 to 99.99°C (–40.00 to 99.99°F):
±0.03°C (±0.06°F),

From 100.0 to 125.0°C (100.0 to 257.0°F): ±0.1°C (±0.1°F),

From 125.0 to 150.0°C (257.0 to 302.0°F): ±0.5°C (±0.9°F)

Datalogging: 2000 real-time readings, with time-and-date stamp

Display: 4-digit, custom dot matrix display; 1/4" x 1/2" digits, 2 1/4" x 1 1/2" backlit viewing area

Probe: two 400-series thermistor (not included)

Power: three AA batteries (included) or optional AC adapter

Battery life: 400 hours continuous (without use of backlighting)

Dimensions:

Meter: 4" x 7" x 2" (10.2 x 18 x 5.2 cm) (with protective armor)

Boxed: 5 3/8" x 10 1/4" x 3" (13.5 x 26 x 7.5 cm)

Weight: Meter: 0.75 lb (0.4 kg); **Boxed:** 1.25 lb (0.6 kg)

Ordering Information

Catalog number	Description	Included
WD-35426-50	Temp 340	Meter and batteries
WD-35426-51	Calibrated Temp 340	Meter and NIST-traceable calibration report
WD-35426-52	Calibrated system	Meter and NIST-traceable calibration report; probe sold separately
WD-35427-80	Rubber armor	Rubber armor with built-in meter stand
WD-35427-85	Hands-free kit	Multipurpose hanging strap and mounting magnets

WD-91427-99 AC power adapter

WD-35427-86 USB cable to connect to PC

ISO9001:2000
CERTIFIED SUPPLIER



3 year
warranty
meter only

Acorn® Temp 4 and Temp 5 Thermistor Thermometers

Accurate and affordable measurement in biological temperature range

All push-button operation – For fast, easy use

Compact size – Fits right in your pocket—take your Oakton Temp meter anywhere!

°C/°F selectable

Minimum and maximum temperature display – Displays highest/lowest temperature since meter was switched on, or use Min/Max Hold Mode to continuously update lowest/highest temperature

Temperature offset calibration adjustment – Push-button adjustment for fine-tuning factory calibration

Hold function – Freezes measurements for convenient reading and recording

Auto-off function – Turns off meter after 17 minutes of nonuse to save batteries

Protective rubber armor – Protects meter and features a built-in stand



35626-10



35626-00

Rubber armor features built-in stand



General



Laboratory



Educational

Specifications

Range: –40 to 125°C (–40 to 257°F)

Resolution: Temp 4: 0.1°C (0.1°F) from –99.9 to 199.9°C (–147.8 to 391.8°F); 1.0°C (1.0°F) outside this range
Temp 5: 0.1°C (0.1°F)

Accuracy: Temp 4: ±0.2°C (±0.4°F) from –99.9 to 199.9°C (–147.8 to 391.8°F); ±2.0°C (±4.0°F) outside this range
Temp 5: 0.1°C (±0.4°F)

Input connector: 6.3 mm phono jack

Display: single-line LCD

Probe: Temp 4: one 400-series thermistor probe (not included)
Temp 5: custom thermistor included

Power: four 1.5 V AAA batteries (included), for >200 hours continuous use

Dimensions:

Meter: 5½" x 2½¼" x 1¼¼" (14 x 7 x 3.5 cm)

Boxed: 9½" x 6½" x 3¼¼" x (24 x 16.5 x 18.5 cm)

Weight: Meter: 0.4 lb (0.2 kg); Boxed: 1.1 lb (0.5 kg)

Ordering Information

Catalog number	Description	Included
WD-35626-00	Acorn Temp 4	Meter, rubber armor, and batteries
WD-85000-04	Calibrated Acorn Temp 4 meter kit	Meter, general-purpose probe (93824-00), NIST-traceable calibration report, rubber armor, and batteries
WD-35626-10	Acorn Temp 5	Meter, rubber armor, general-purpose probe, and batteries
WD-85000-06	Calibrated Acorn Temp 5 meter kit	Meter, general-purpose probe (35616-50), NIST-traceable calibration report, rubber armor, and batteries
WD-35626-50	Custom thermistor probe	Replacement probe for Temp 5 meter

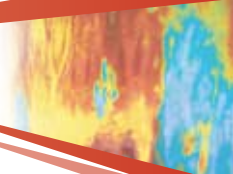
ISO9001:2000
CERTIFIED SUPPLIER

CE

3 year
warranty
meter only

Select a probe to match your application

See pages 83 and 87 for our wide selection of probes.



Flexible 400-Series Thermistor Probes

Excellent accuracy over the biological temperature range

Probes are accurate to $\pm 0.2^\circ\text{F}$ from 32 to 150°F ($\pm 0.1^\circ\text{C}$ from 0 to 70°C). Electrically isolated probes include a nondetachable 10-ft lead with $\frac{1}{4}$ " phono plug (except as noted).



$\frac{1}{4}$ " phono plug

Specifications & Ordering Information

Catalog number	Description	Temperature range	Dimensions
WD-08491-02	General-purpose probe, immersible for short-term deep-water and sub soil readings. Vinyl sheath and tip. 10-ft lead.	-40 to 100°C (-40 to 212°F)	
WD-08491-04	Like 08491-02 above, but with 50-ft lead.		
WD-08491-03	Like 08491-02 above, but with 100-ft lead.		
WD-08491-05	Small flexible probe, vinyl sheath and tip.	-40 to 100°C (-40 to 212°F)	
WD-08491-06	Liquid-immersion probe, $\frac{5}{32}$ " dia, 316 stainless steel (SS). Immersible only to cap unless waterproofed.	-40 to 150°C (-40 to 302°F)	
WD-08491-07	Like 08491-06 above, but with $\frac{1}{8}$ " dia probe.		
WD-08491-13	Liquid-immersion probe, chemically inert for thermometric titrations. Pyrex® glass sheath.	-40 to 150°C (-40 to 302°F)	
WD-08491-17	Small flexible probe for frozen food packages and cuvettes. Nylon and epoxy tip.	-80 to 100°C (-110 to 212°F)	
WD-08491-15	Epoxy-encapsulated thermistor element. Copper wire is 32 gauge; 3" long (no plug).	-80 to 75°C (-110 to 167°F) continuous use; 100°C (212°F) max intermittent use.	
WD-08491-14	Pipe-fitting probe for closed pipes or vessels. Probe and fitting are 316 SS; autoclavable except lead; lead is detachable via BNC connector. Not electrically isolated; 1" long.	-40 to 150°C (-40 to 300°F)	
WD-08491-08	Air temperature probe for test rooms, gas stream temperatures, and incubators. 316 SS cage around epoxy-encapsulated thermistor.	-40 to 150°C (-40 to 300°F)	
WD-08491-10	Attachable surface probe, recommended for skin or flat-surface temperature measurements. Epoxy-backed 316 SS disk. Vinyl-covered parallel leads.	-40 to 100°C (-40 to 212°F)	
WD-08491-09	Surface probe for skin, flat surfaces, and soil temperatures. Disk is 316 SS; probe includes handle.	-40 to 150°C (-40 to 300°F)	
WD-08491-11	Small surface probe. Epoxy-backed 316 SS disk on 24" nondetachable PTFE lead. Not autoclavable; not electrically isolated.	-40 to 150°C (-40 to 300°F)	
WD-08491-16	Penetration probe for insertion into semi-solids like fruits, soil, tobacco. No handle. All 316 SS, with vinyl-covered lead.	-40 to 150°C (-40 to 300°F)	

You'll find more thermistor probes on page 83.

Infrared Thermometers

Why use noncontact infrared thermometers?

Noncontact infrared (IR) thermometers use infrared technology to quickly and conveniently measure the surface temperature of objects. They provide fast temperature readings without physically touching the object. You simply aim, pull the trigger, and read the temperature on the LCD.

Lightweight, compact, and easy-to-use IR thermometers can safely measure hot, hazardous, or hard-to-reach surfaces without contaminating or damaging the object. Also, infrared thermometers can provide several readings per second, as compared to contact methods where each measurement can take several minutes.



Boiler Operation



Mechanical Troubleshooting



Industrial



Food Preparation



Foodservice



HVAC

Mini TempTestr® Infrared Thermometer

Economical noncontact thermometer fits right in your pocket!

Switchable °C/°F display

Hold function – Freezes reading so you can record it

Minimum/maximum memory readings

Adjustable emissivity – Measure the surface temperature of a variety of materials

Low-battery indication

Flip-open stand

Soft-touch keypad – Provides more comfortable use

Includes metal storage case, wrist strap, and spare battery



Specifications & Ordering Information

CE 1 year warranty

Catalog number	WD-39642-00
Range	–33 to 220°C (–27 to 428°F)
Accuracy	±2% of reading or ±2°C (±4°F), whichever is greater
Response time	One sec
Emissivity	Adjustable from 0.01 to 1.00
Laser sighting	None
Distance-to-target size ratio	1:1
Power	One 3 V battery (included)
Dimensions	2½"L x 1½"W x ½"H (6.4 x 3.8 x 1.3 cm)

TempTestr® Infrared Thermometer

Laser sighting pinpoints your exact target area

Ergonomic design – Allows for easy gripping and one-handed operation

Very fast response time – Results in under one-half second

Hold function – Freezes reading for seven seconds so that you can record it

Switchable °C/°F display

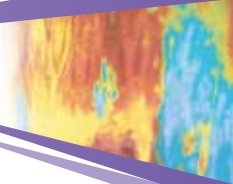


CE 1 year warranty

Specifications & Ordering Information

Catalog number	WD-35625-10
Range	–18 to 260°C (0 to 500°F)
Accuracy	±2% or 2°C (±3°F) from 25 to 260°C (77 to 500°F); 3°C (±5°F) from –1 to 25°C (30 to 77°F); 4°C (±7°F) from –18 to –1°C (0 to 30°F)
Response time	500 msec, 95% response
Emissivity	Preset at 0.95
Laser sighting	Class II
Distance-to-spot-size ratio	8:1
Power	One 9 V battery (included)
Dimensions	7¼"L x 1¾"W x 1½"H (18.4 x 4.4 x 3.8 cm)

WD-35625-80 Carrying case



InfraPro® Infrared Thermometers

Easily measure moving objects and dangerous targets from a distance

Single, extra-bright laser – Targets your measurement area for precise readings both indoors and outdoors

Rugged yet compact design – Tough enough for industrial use while light enough to be carried around with you

Easy to use – Just aim, pull the trigger, and read the display

Large backlit display – Features easy-to-see temperature readings in either °C or °F

Underrange and overrange can be indicated on the display

Hold function freezes your measurement for 7 seconds for convenient recording

Also features low-battery indication, scan, and max

All thermometers include one 9 V battery and hard carrying case

InfraPro 3, 4, and 5 also feature

RTD input – To take contact temperatures

Max, min, differential, and average reading display

High and low reading alarms

Datalogging – Up to 12 points with recall

Adjustable emissivity – For measuring a wide variety of materials

Rubber grip and nose – For shock, water, and dust protection

InfraPro 5 is rated intrinsically safe – For Class I Division 1, Groups A, B, C, D and Class I locations, Zone 0, AEx ia IIC, T4 at 50°C

InfraPro 5 includes RTD contact probe

Laser targets your measuring area.



35639-20



Economical InfraPro 1 meter has fixed emissivity for simplicity of use.



Measuring industrial equipment that is too hot to touch.



Measuring panels that are difficult to evaluate with contact sensors.



CE 1 year warranty

Specifications & Ordering Information

Catalog number	WD-35639-00	WD-35639-20	WD-35639-30	WD-35639-40
Description	InfraPro 1	InfraPro 3 advanced	InfraPro 4 advanced	InfraPro 5 intrinsically safe
Range	–32 to 535°C (–25 to 999°F)	–32 to 600°C (–25 to 1100°F)	–32 to 760°C (–25 to 1400°F)	–32 to 760°C (–25 to 1400°F)
Resolution	0.2°C (0.5°F)	0.1°C (0.1°F)		
Accuracy	±1% of the reading or ±1°C (±2°F) whichever is greater			
Response time	500 msec			
Emissivity	Fixed at 0.95	0.10 to 1.00	0.10 to 1.00	0.10 to 1.00
Laser sighting	Class II laser	Class II laser	Class II laser	Class II laser
Distance-to-target ratio	12:1	30:1	50:1	50:1
Power	One 9 V battery (included)			
Contact probe	—	Optional	Optional	Included
Dimensions	8" L x 6" W x 2" H (20.3 x 15.2 x 5.1 cm)			

WD-35629-50 RTD contact probe for 35639-20 and -30. Range is –40 to 260°C (–40 to 500°F); 40" (1 m) L coiled cable

WD-35629-90 Soft carrying case with integral belt loop and Velcro® closure



The intrinsically safe InfraPro 5 meter includes remote RTD probe 35629-50 with a penetration tip.

INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS

Ensure the accuracy of your infrared equipment today. See pages 92–93 for information on our NIST-traceable calibration services.

Mini-InfraPro™ Infrared Thermometers

Low-cost gun-style design for point and shoot ease of measurement

Pistol-grip handle – Provides comfortable and dependable aiming

Affordable price – Fits into budget-conscious applications

Single, extra-bright laser – Targets your measurement area for precise indoor and outdoor readings

Large backlit display – Easy-to-see temperature readouts in either °C or °F

Also features simultaneous current and maximum readings and continuous scanning

Mini-InfraPro 4 features

Temperature range of –18 to 400°C (0 to 750°F)

Mini-InfraPro 6 features

Expanded temperature range of –30 to 500°C (–20 to 932°F)

Advanced 10:1 optics – Measure smaller objects from a longer distance

Protective boot – For rugged environments

Storage pouch – For transporting your thermometer



Specifications & Ordering Information

Catalog number	WD-39641-04	WD-39641-06
Description	Mini-InfraPro 4	Mini-InfraPro 6
Range	–18 to 400°C (0 to 750°F)	–30 to 500°C (–20 to 932°F)
Resolution	±1% of reading or ±1°C (±2°F)	±1% of reading or ±1°C (±2°F)
Accuracy	±2% or 2°C (3.5°F) –1 to 525°C (30 to 275°F), ±3°C from where needed (±5°F) –18 to –1°C (0 to 30°F)	±1°C (±2°F) from 10 to 30°C (50 to 86°F), ±1.5% of reading or 1.5°C (±3°F) whichever is greater
Response time	500 msec, 95% response	500 msec, 95% response
Emissivity	0.95 fixed	0.95 fixed
Laser sighting	Single point, offset Class II	Single point, offset Class II
Distance-to-target ratio	8:1	10:1
Display	LCD, backlit	LCD, backlit
Power	One 9 V battery (included)	One 9 V battery (included)
Dimensions	4"W x 6"H x 1½"D (10.2 x 15.2 x 3.8 cm)	4"W x 6"H x 1½"D (10.2 x 15.2 x 3.8 cm)



CE 1 year warranty

Food TempTestr® I Infrared Thermometer

Noncontact measurement eliminates the risk of cross-contamination

Easy one-handed operation

Laser sighting – Pinpoints your exact target

Selectable °C or °F display

Steam interference filter – Great for hot food serving areas

Hold function – Freezes display for 7 seconds

Sealed, hand-washable IP54 housing

Specifications & Ordering Information

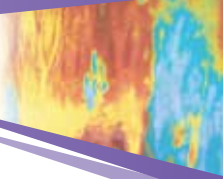
Catalog number	WD-35625-15
Range	–35 to 275°C (–31 to 572°F)
Resolution	0.2°C (0.2°F)
Accuracy	From 0 to 65°C (32 to 150°F): ±1°C (±2°F)
Response time	500 msec
Emissivity	Preset at 0.97
Laser sighting	Single point, offset Class II
Distance-to-target-size ratio	4:1
Power	One 9 V battery (included)
Dimensions (L x W x H)	7" x 1¾" x 1½" (17.8 x 4.4 x 3.8 cm)



CE



35625-15



Food TempTestr® II Infrared Thermometer

Easy way to determine safe food preparation or storage temperatures

Noncontact measurement eliminates the risk of cross-contamination – Ideal for food inspections and HACCP programs where harmful bacteria grows most rapidly

Scan numerous surfaces quickly and easily – Safe, noncontact readings in only ½ second

LEDs quickly indicate if food temperatures are in the bacterial growth safety – Green LED light indicates food-safe hot and cold holding temperatures. Red LED light indicates that food is within the food temperature danger zone.

Sealed, hand-washable IP54 housing

Compact design allows for easy one-handed operation

Includes one 9 V battery and wrist strap

Specifications & Ordering Information



Catalog number	WD-35625-45
Range	–30 to 200°C (–20 to 400°F)
Accuracy	±1°C (±2°F) from 0 to 65°C (32 to 150°F)
Response time	0.5 second
Emissivity	Preset at 0.97
Laser sighting	LED (non-laser)
Distance-to-target ratio	2.5:1
Power	One 9 V battery (included)
Dimensions	2"L x 1¼"W x 6"H (5.1 x 3.2 x 15.2 cm)



Food Safety Infrared Thermometer

Check critical food temperatures and monitor HACCP food safety zones with this combination contact/noncontact thermometer

Go/no-go LEDs provide quick noncontact surfaces checks of HACCP bacterial growth safety zone – Green lights indicate safe temperatures below 4°C (40°F) and above 60°C (140°F). Red light indicates the HACCP danger zone between 4 to 60°C (40 to 140°F).

Target illumination – Indicates target measurement area at working distances of 2 to 12" (5.1 to 30.5 cm)

Swing-out contact penetration probe – For internal temperature checks, folds in for storage

Built-in countdown timer with alarm – Monitor cooking and cooling intervals and HACCP exposure times—set countdown timer to a maximum of eight hours

Sealed, hand-washable IP54 housing

Includes one 9 V battery, carrying case, and quick reference card

Specifications & Ordering Information



Catalog number	WD-35625-40	
Mode	Infrared	Contact
Range	–35 to 275°C (30 to 525°F)	–40 to 200°C (–40 to 390°F)
Accuracy	±1°C (±2°F) from 0 to 65°C (32 to 150°F)	±0.5°C (±1°F) from 0 to 65°C (32 to 150°F)
Response time	500 msec	5 sec
Emissivity	Preset at 0.97	
Laser sighting	LED (non-laser)	
Distance-to-target-size ratio	2.5:1	
Power	One 9 V battery (included)	
Dimensions	Overall: 2"L x 1¼"W x 6½"H (5.1 x 3.2 x 16.5 cm); contact probe: 3¼"L x ⅛" dia (8.3 x 0.3 cm)	

WD-35625-70 Replacement probe for thermometer 35625-40

WD-86106-10 Antimicrobial sanitizing wipes. Box of 100



Target illumination
clearly indicates
target area.



Contact penetration
probe swings out
for fast temperature
checks.



Trust InnoCal[®], service provider for Oakton Instruments, to satisfy your calibration and equipment repair needs. Their accredited metrology laboratory has helped thousands of customers meet ISO, FDA, USDA, EPA, GLPs/cGMPs and other quality standards.

Plus, InnoCal calibration services are easy to use.

- **New Instrument Calibrations:** If you are purchasing a new instrument from Oakton Instruments, simply have InnoCal calibrate the item before it is shipped. Order calibration reports by including the catalog number listed on page 93.
- **Recalibration Services:** Simply request a return authorization number (RA) and ship your existing instrument to InnoCal for regularly scheduled maintenance and recalibration. When your instrument reaches the lab, it is cleaned, calibrated, and quickly returned—with documentation—to keep your business running smoothly.

Choose the best option for you. One call to **888-40AKTON** puts you on the way to ensuring the accuracy of your instrumentation.



Calibration Traceable to NIST

InnoCal's commitment to quality and to the science of metrology is demonstrated by their utilization of highly trained, experienced metrologists using some of the most advanced methods and standards available. They provide you with the documentation you need to meet your most stringent quality requirements for the control of inspection, measuring, and test equipment. They will calibrate your new or existing instruments traceable to NIST standards.

Calibration Report with test data, including:

- Description and identification of the item
- Condition of the item as received
- Identification of calibration procedure
- Calibration date
- As found/as left test data
- Electronic signature of technician
- Statement of measurement uncertainty
- Test uncertainties (TURs)
- List of standards used to perform calibration (including their calibration dates)

Conformity*

ANSI/ISO/IEC 17025:2005 accredited
NIST Handbook 150, 2000 Edition
ANSI/NCSL Z540-2:1997
NIST Technical Note 1297
ISO 9000:2000

*Please check our scope of accreditation for any limitations.

INNO[®]CAL[®]
INNOVATIVE CALIBRATION SOLUTIONS
825 East Rocket Court
Vernon Hills, Illinois
848-17000 • 848-400-0000
Fax: 848-200-0000
www.innocal.com

NIST Traceable Calibration Report

John Doe
ABC Company
8888 Anywhere
No where, CA, XXXXX

Calibration Item: 06/14/2008
Calibration Due Date: 06/14/2009
Calibration Interval: 12 Months
Condition As Found: In Tolerance
Condition As Left: Limited Range
Procedure: 17-2037-15

Manufacturer: ABC Company
Model Number: 9100-400015-15
Description: Temperature, Thermocouple, w/Probe Type E, Air G
Asset Number: CP202274
Serial Number: L12008655 R

Remarks:
These items have been calibrated as to used as a system. This calibration covers only items as tested. All measurements are traceable to NIST. Limited calibration items -35 to +425°C. Calibration was performed on 11 types of the meter. Calibration was performed by Emily Leonard, NIST/ILAC.

Standards Utilized

Asset No.	Manufacturer	Model No.	Description	Cal. Date	Due Date
CP20115	Han Scientific	5015	Thermometer, Platinum Resistance Probe	07/24/07	07/24/08
CP20115	Han Scientific	5045	Thermocouple, Probe, Type E	08/13/07	08/13/08
CP20115	Han Scientific	1520	Temperature, Thermocouple, THERMOCOUPLER, 1	09/12/07	09/12/08
CP20115	Han Scientific	1520	Temperature, Thermocouple, THERMOCOUPLER, 1	09/12/07	09/12/08
CP20115	Han Scientific	2152	Temperature, Thermocouple, THERMOCOUPLER, 1	09/12/07	09/12/08
CP20115	Han Scientific	8015	Temperature, Platinum Resistance Probe	08/13/07	08/13/08
CP20115	Han Scientific	8015	Temperature, Platinum Resistance Probe	08/13/07	08/13/08

Calibration Data

FUNCTION TESTED	Standard Value	As Found	As Left	Calibration Tolerance
Temperature Accuracy	-0.153 °C	-0.1	0.00	+0.200 to -0.412 °C (TUR 0.5:1)
	0.010 °C	-0.2	0.00	+0.400 to -0.420 °C (TUR 0.5:1)
	231.888 °C	232.4	0.00	227.482 to 236.888 °C (TUR 0.5:1)
	418.027 °C	417.6	0.00	415.081 to 424.952 °C (TUR 0.5:1)

Technician: Emily Leonard
Signature: [Signature]
Date: 06/14/2008

Quality Review: [Signature]
Date: 06/14/2008



Temperature Meter, Probe, and System Calibrations

Thermometry type	Description	Meter only calibration	Probe only calibration	System (meter and probe) calibration
		Catalog number	Catalog number	Catalog number
Thermocouple, all standard types	Four test points across range of instrument. Meter: -270 to 2316°C (-454 to 4200°F); Probe and System: -80 to 1000°C (-112 to 1832°F). Actual range is dependent on type of probe.	WD-17000-10	WD-17001-10	WD-17002-10
Thermocouple, cryogenic	Low temperature to -197°C (-322°F)	—	—	WD-17103-25
Thermistor	Four test points across range of instrument. Meter, probe, and system: -80 to 150°C (-112 to 302°F)	WD-17000-06	WD-17001-06	WD-17002-06
RTD	Four test points across range of instrument. Meter: -200 to 1000°C (-328 to 1832°F); Probe and System: -80 to 1000°C (-112 to 1832°F). Actual range is dependent on type of probe.	WD-17000-04	WD-17001-04	WD-17002-04
Infrared	Four test points across range, -15 to 500°C (5 to 932°F)	WD-17004-00	WD-17004-10	WD-17004-20
Bimetal or dial	Four test points across range, -197 to 1000°C (-320 to 1832°F)	—	—	WD-17003-00

Additional NIST-Traceable Reports

NIST-traceable report for:	Calibration test points	Catalog number
General		
pH pocket meter (non-BNC)	Up to three points against NIST-traceable buffers	WD-17102-10
pH simulator	Up to five electrical test points	WD-17106-06
pH meter (BNC connection)	Five electrical pH and five mV test points	WD-17106-20
pH temperature probe	Three test points	WD-17106-21
Conductivity meter	Five electrical test points	WD-17090-30
Recorder, chart	Ten to fourteen test points (depends on range of recorder) volts (AC/DC) and amps (AC/DC)	WD-17100-00
Recorder, X-Y	Ten to fourteen test points (depends on range of recorder) volts (AC/DC) and amps (AC/DC)	WD-17100-10
Recorder, temperature	Use temperature calibration catalog numbers from temperature table above	—
Timer/stopwatch	Test data supplied in average seconds/day	WD-17060-00
Temperature		
Thermometer, glass (liquid in glass)	One test point (for bottle freezer/refrigerator glass thermometers only)	WD-17006-01
	Two to four test points	WD-17006-03
	Five to nine test points	WD-17006-05
	Ten to fifteen test points	WD-17006-06
	Certificate of accuracy (not NIST-traceable)	WD-17006-10
Temperature datalogger	Three test points across range	WD-17002-20
Temperature transducer/transmitter	0.5°C (32.9°F) or worse accuracy	WD-17101-36
	Better than 0.5°C (32.9°F) accuracy	WD-17103-08
Handheld digital indicator	Four test points across range, -80 to 150°C (-112 to 302°F)	WD-17101-61
Scanning thermometer, 12-channel	Simulation temperature to mV or Ω	WD-17103-00
	Four temperature test points with probes, -80 to 1000°C (-112 to 1832°F)	WD-17103-12
Scanning thermometer, 24-channel	Four temperature test points with probes, -80 to 1000°C (-112 to 1832°F)	WD-17103-24
HART®-style PRT	Per manufacturer's specifications	WD-17001-11
Temperature bath	Per manufacturer's specifications	WD-17001-13
Humidity/Temperature		
Thermohygrometer, handheld or benchtop	Three humidity test points (30, 60, and 80% RH) and one temperature test point at ambient (22 to 25°C)	WD-17030-20
Datalogger	—	WD-17030-24
Recorder	—	WD-17030-26
Digital/dial indicator	—	WD-17030-28

00606-10	45	08469-82	77	08541-02	76	17106-21	93	35426-52	85	35608-50	45
00653-00	53	08469-84	77	08541-04	76	22050-58	21	35426-60	80	35608-51	45
00653-04	27	08491-02	87	08541-06	76	35408-00	42	35426-61	80	35608-52	45
00653-04	30	08491-03	87	08541-07	76	35408-02	42	35426-62	80	35608-55	45
00653-06	25	08491-04	87	08541-08	76	35408-10	42	35427-00	68	35608-57	45
00653-06	27	08491-05	87	08541-09	76	35408-12	42	35427-01	68	35608-72	45
00653-06	30	08491-06	87	08541-10	76	35408-50	45	35427-02	68	35608-74	45
00653-15	45	08491-07	87	08541-11	76	35408-52	45	35427-10	68	35608-76	45
00653-16	45	08491-08	87	08541-12	76	35408-54	45	35427-11	68	35608-78	45
00653-18	45	08491-09	87	08541-13	76	35408-56	45	35427-12	68	35608-90	45
00653-20	45	08491-10	87	08541-16	76	35408-57	45	35427-20	68	35608-92	45
00653-23	45	08491-11	87	08541-20	76	35408-70	42	35427-21	68	35608-94	45
00653-27	45	08491-13	87	08541-22	76	35408-80	42	35427-22	68	35613-05	25
00653-32	45	08491-14	87	08541-23	76	35411-00	43	35427-50	69	35613-13	25
00653-47	45	08491-15	87	08541-25	76	35412-10	45	35427-51	69	35613-20	11
00653-50	45	08491-16	87	08541-26	76	35414-00	62	35427-52	69	35613-22	11
00653-89	45	08491-17	87	09376-00	13	35414-20	62	35427-80	68	35613-24	11
00654-00	30	08500-55	73	09377-16	4	35415-00	51	35427-85	68	35613-50	11
00654-01	30	08500-60	75	17000-04	93	35416-00	52	35427-86	69	35613-52	11
00654-04	30	08500-62	77	17000-06	93	35418-00	16	35431-00	57	35613-54	11
00654-08	30	08500-64	75	17000-10	93	35418-02	16	35431-02	57	35613-80	12
00654-12	30	08500-65	74	17001-04	93	35418-05	25	35431-52	57	35613-82	12
05942-26	30	08500-75	74	17001-06	93	35418-10	16	35431-70	57	35614-20	13
05942-46	30	08505-55	73	17001-10	93	35418-12	16	35432-00	58	35614-22	13
05942-66	30	08505-56	73	17001-11	93	35418-20	17	35432-02	58	35614-79	15
08113-65	77	08505-57	73	17001-13	93	35418-22	17	35432-70	58	35614-80	13
08116-65	77	08505-61	77	17002-04	93	35418-70	16	35433-00	59	35615-05	25
08117-65	77	08505-62	77	17002-06	93	35418-80	16	35433-02	59	35615-07	13
08117-70	82	08505-63	77	17002-10	93	35418-83	16	35433-70	59	35615-08	39
08117-72	82	08505-85	76	17002-20	93	35418-86	16	35434-00	60	35615-09	14
08117-73	82	08505-86	76	17003-00	93	35418-90	17	35434-02	60	35615-20	14
08117-74	82	08505-87	76	17004-00	93	35419-00	19	35434-70	60	35615-22	14
08117-75	82	08506-75	76	17004-10	93	35419-03	19	35434-85	57	35615-75	14
08117-80	82	08512-81	76	17004-20	93	35419-10	19	35434-90	60	35615-80	14
08117-85	82	08512-82	76	17006-01	93	35419-12	19	35441-00	50	35618-02	15
08117-87	82	08512-83	76	17006-03	93	35419-20	20	35441-02	50	35618-03	15
08117-89	82	08514-86	77	17006-05	93	35419-22	20	35441-70	50	35618-05	25
08117-90	82	08516-55	73	17006-06	93	35419-23	20	35462-10	32	35618-12	15
08439-60	73	08516-60	75	17006-10	93	35420-01	21	35462-15	32	35618-13	15
08439-62	73	08516-62	77	17030-20	93	35420-20	21	35462-30	32	35618-70	15
08439-64	73	08516-64	75	17030-24	93	35420-22	21	35462-35	32	35618-72	15
08439-70	75	08516-65	74	17030-26	93	35420-82	53	35462-50	32	35622-00	30
08439-72	75	08516-75	74	17030-28	93	35421-00	22	35604-00	37	35622-05	30
08439-74	75	08517-55	73	17060-00	93	35421-02	22	35604-04	37	35622-59	30
08439-80	74	08517-60	75	17090-30	93	35423-10	4	35604-20	38	35622-60	30
08439-82	74	08517-62	77	17100-00	93	35425-00	9	35604-24	38	35622-62	30
08439-84	74	08517-64	75	17100-10	93	35425-05	9	35604-40	38	35624-38	5
08439-90	74	08517-65	74	17101-36	93	35425-10	9	35604-44	38	35624-45	4
08439-92	74	08517-75	74	17101-61	93	35425-50	9	35606-53	45	35624-70	4
08439-94	74	08517-90	76	17102-10	93	35426-00	84	35606-55	45	35625-10	88
08466-02	76	08518-60	75	17103-00	93	35426-01	84	35606-57	45	35625-15	90
08466-04	76	08519-50	75	17103-08	93	35426-02	84	35607-40	39	35625-40	91
08466-06	76	08519-52	75	17103-12	93	35426-20	79	35607-45	40	35625-45	91
08466-81	76	08519-54	75	17103-24	93	35426-21	79	35607-69	39	35625-70	91
08466-82	76	08519-86	77	17103-25	93	35426-22	79	35607-80	39	35625-80	88
08466-83	76	08525-86	77	17106-06	93	35426-50	85	35607-85	40	35626-00	86
08469-80	77	08541-00	76	17106-20	93	35426-51	85	35608-00	41	35626-10	86

35626-20	81	35645-60	63	35802-32	29	35803-15	29	35805-15	26	35816-77	57
35626-50	86	35645-62	63	35802-34	29	35803-17	29	35805-18	26	35820-64	27
35627-00	71	35645-64	63	35802-35	29	35803-20	29	35805-19	27	39641-04	90
35627-80	70	35645-66	63	35802-38	29	35803-24	29	35805-20	27	39641-06	90
35629-50	89	35645-68	63	35802-39	29	35803-26	29	35805-21	26	39642-00	88
35629-90	89	35645-70	63	35802-40	29	35803-28	29	35805-22	26	53109-55	53
35632-00	56	35650-09	8	35802-41	29	35803-30	29	35805-23	26	85000-00	71
35632-02	56	35650-10	8	35802-42	29	35803-32	29	35805-24	26	85000-02	81
35632-60	56	35650-14	8	35802-43	29	35803-34	29	35805-25	26	85000-04	86
35632-97	37	35652-00	30	35802-44	29	35803-35	29	35805-26	27	85000-06	86
35634-10	5	35653-00	30	35802-45	29	35803-50	28	35805-27	26	86106-10	91
35634-14	7	35653-01	30	35802-48	29	35803-51	28	35805-50	27	91427-99	80
35634-20	5	35653-02	30	35802-49	29	35803-52	28	35808-71	25	93000-00	70
35634-30	5	35653-03	30	35802-50	28	35803-53	28	35808-72	25	93600-02	73
35634-40	6	35653-04	30	35802-52	28	35803-54	29	35808-88	27	93600-22	73
35634-50	6	35653-09	45	35802-53	28	35803-55	28	35808-89	27	93600-42	73
35634-70	5	35653-10	45	35802-54	28	35803-56	29	35808-90	27	93601-02	74
35634-80	5	35653-11	45	35802-55	28	35803-57	29	35811-71	25	93601-04	74
35634-90	5	35653-12	45	35802-56	28	35803-58	28	35811-72	25	93601-06	74
35635-00	64	35653-13	45	35802-57	28	35803-59	29	35811-74	25	93601-22	74
35635-50	63	35653-15	45	35802-58	28	35803-60	29	35812-02	28	93601-24	74
35635-55	64	35653-55	63	35802-59	28	35803-73	30	35812-04	28	93601-26	74
35639-00	89	35661-08	33	35802-60	28	35803-74	30	35812-06	28	93601-42	74
35639-20	89	35661-17	34	35802-62	28	35803-83	30	35812-08	28	93601-44	74
35639-30	89	35661-70	32	35802-63	28	35803-84	30	35812-12	28	93601-46	74
35639-40	89	35662-10	33	35802-64	28	35804-00	25	35812-14	28	93607-20	77
35640-20	48	35662-15	33	35802-65	28	35804-01	26	35812-16	28	93607-22	77
35640-22	48	35662-30	34	35802-68	28	35804-02	25	35812-18	28	93607-24	77
35640-50	53	35662-35	34	35802-69	28	35804-03	26	35812-22	29	93756-03	73
35640-52	53	35662-52	35	35802-70	29	35804-05	26	35812-24	29	93756-04	73
35640-54	53	35801-00	25	35802-71	29	35804-06	26	35812-30	29	93756-23	73
35640-56	53	35801-71	25	35802-72	29	35804-08	7	35812-34	29	93756-24	73
35640-60	53	35801-72	25	35802-73	29	35804-10	27	35812-38	29	93756-44	73
35640-64	48	35801-76	25	35802-74	29	35805-01	25	35812-40	29	93756-63	73
35640-70	53	35801-85	26	35802-75	29	35805-04	25	35812-42	29	93824-00	83
35640-71	53	35802-00	28	35802-78	29	35805-05	25	35812-44	29	93824-12	83
35640-72	53	35802-02	28	35802-79	29	35805-08	25	35812-48	29	93824-30	83
35640-74	53	35802-03	28	35802-82	29	35805-09	25	35816-71	25		
35640-75	53	35802-04	28	35802-84	29	35805-13	26	35816-72	25		
35640-79	53	35802-05	28	35802-85	29						
35640-80	53	35802-06	28	35802-88	29						
35641-00	49	35802-07	28	35802-89	29						
35641-01	49	35802-08	28	35802-90	29						
35641-51	25	35802-09	28	35802-91	29						
35641-52	56	35802-10	28	35802-92	29						
35641-54	56	35802-12	28	35802-93	29						
35641-56	56	35802-14	28	35802-94	29						
35642-50	51	35802-16	28	35802-95	29						
35642-52	53	35802-17	28	35802-98	29						
35642-54	53	35802-18	28	35802-99	29						
35642-55	53	35802-19	28	35803-01	28						
35643-10	47	35802-22	29	35803-03	28						
35643-12	47	35802-23	29	35803-05	28						
35643-14	47	35802-24	29	35803-07	28						
35645-20	65	35802-25	29	35803-09	28						
35645-30	65	35802-30	29	35803-11	28						
35645-40	65	35802-31	29	35803-13	28						

Visit us online:

Log on to www.4oakton.com
for product pricing,
technical data, and
customer assistance.



Even MORE Products from Oakton Instruments

Oakton® Hygrothermographs

Use to measure and record humidity and temperature. Choose from low-cost models with a humidity-sensing coil or high-accuracy versions that feature a human hair bundle humidity sensor. All offer an aged bimetallic strip temperature sensor. Select single-speed (7-day rotation), dual-speed (1- or 7-day rotation), three-speed (1-, 7-, or 32-day rotation), or long-cycle (1- or 3-month rotation) units.



Economy single-speed
hygrothermograph 35701-00



Three-speed
hygrothermograph 37250-00



Long-cycle hygrothermograph
37250-20

Find detailed descriptions
and complete specifications
at www.4oakton.com

Visit us online:

Log on to www.4oakton.com for product pricing,
technical data, and customer assistance:

- **Access** detailed information on new Oakton products as soon as they become available
- **Download** operating manuals and product specifications for every Oakton instrument
- **Search** our technical library for application tips based on our most frequently asked questions
- **Navigate** quickly to the information you need with our enhanced Search function
- **Find e-mail links** to the Oakton team for fast technical assistance
- **Access MSDS sheets** for Oakton solutions



EUTECH INSTRUMENTS Controllers and Transmitters

Since 1991, Eutech Instruments has developed and manufactured products to meet the most demanding electrochemistry control applications. Their full-featured control line comes standard with control relays, alarm relays, and current output; no plug-in cards or user assembly required. All parameters are accessed from the front keypad for worry-free operation, while intuitive operating systems and removable terminal strips make installation and setup easy. Eutech's team of research and development personnel is constantly seeking new technologies to incorporate into our instruments.

Controllers and transmitters are available for pH, ORP, conductivity, resistivity, TDS, and dissolved oxygen. And you'll find rugged, reliable probes to complete your control and measurement systems. Eutech provides a wide selection of models to meet almost any application.

alpha 2000 Series

This high-end series of 1/2-DIN controllers has the powerful features needed for process control, data transmission, and long-term reliability. Four relays and two current outputs provide versatility. The relays can be programmed for on/off, pulse frequency or pulse length control with proportional integral (PI) control. A NEMA 4X enclosure provides protection and is designed for wall, pole, or panel mounting. Models available for use with standard or differential pH electrodes.

alpha 1000 and 800 Series

The alpha 1000 and 800 Series offer versatile control in a 1/4-DIN, panel-mount housing. The alpha 1000 controllers are full-featured, high-performance products at a competitive price—addressing the middle market; the alpha 800 controllers offer you a budget-conscious option. The alpha 1000 offers three relays; the alpha 800 offers two relays—both feature a current output. The alpha 1000 relays can be programmed for on/off, pulse frequency or pulse length control with PI control; the alpha 800 offers on/off control.

alpha 200 and 190 Series

These compact, 1/8-DIN controllers offer reliable control in a panel-mount housing. Two relays and a current output provide basic on/off process control.

alpha 500 and 550 series

These monitors/transmitters provide basic but reliable two-wire operation. They are ideal for integration into PLC systems or for simple data recording. Both models feature a dual LCD indicating measured parameter and temperature simultaneously.



alpha pH2000D
differential
pH controller
56715-20



alpha pH1000
controller
56717-00



alpha pH800
controller
56705-00



alpha pH200
controller 56700-00



Differential pH
electrode 56715-50



pH electrode 35807-21



alpha pH500
transmitter
56717-20

Find detailed descriptions
and complete specifications
at www.4oakton.com

LOOK AT WHAT'S **New** FOR 2011!

Space-saving

700 Series Benchtop Meters (see pages 19, 20, 43, 51, and 61)

Gain a little more space in your laboratory with our latest line of basic benchtop electrochemistry meters. A new compact design gives you more bench room while the large screen display makes it easier to see your readings. Choose from meters that measure pH, ion, conductivity/TDS, multiparameters, or—for the first time from Oakton—dissolved oxygen.

Enhanced Functionality

2700 Series Benchtop Meters (see pages 21, 22, 44, 52, and 62)

Get advanced features like a bright backlit display, 500 data point memory with GLP-compliant time-and-date stamping, easy computer data transfer, and dynamic stability indication that tells you at a glance whether your reading is stable or not. With the valuable benefits of electrode diagnostics, password protection, and calibration due alarm, you would expect to pay more, but with these meters, you don't have to! Select from meters that measure pH, ion, conductivity/TDS, a combination of pH, ion, conductivity, and TDS, or biological oxygen demand (BOD)—another first from Oakton Instruments.

Economical

6+ Series Handheld Meters (see pages 11, 12, 37, 38, and 47)

Take a look at these redesigned (from our popular Acorn® electrochemistry meters) compact meters. A brand-new body with the same great performance—at an affordable price. Choose from meters that measure pH, ion, conductivity, TDS, salinity, or dissolved oxygen.



ORDER FROM:

novatech
INTERNATIONAL

sales@novatech-usa.com

www.novatech-usa.com

Tel: (866) 433-6682

Fax: (866) 433-6684

Tel: (281) 359-8538

Fax: (281) 359-0084

OAKTON
INSTRUMENTS



99999-19

Oakton® 2011. Printed in the U.S.A. 02/11 Oakton TM Reg. #1,692,543. We reserve the right to make changes, improvements and modifications to products shown. Oakton Instruments are available only through authorized Oakton distributors.