



Quality. Service. Value.

labCHEM Series Benchtop Instruments



Waterproof



User
Friendly



One-Touch
Calibration



RS232
Port

www.tps.com.au

Waterproof Construction

At TPS we know that working in wet areas is sometimes unavoidable. The labCHEM Series is therefore designed for the harshest of operating conditions. The labCHEM enclosure and connectors are waterproof to IP65. Chemically resistant, plastic connectors with gold plated contacts are used where possible.

TPS uses the latest microprocessor electronics to totally eliminate moving parts in the labCHEM Series. There are no internal or external adjustments, resulting in excellent long term reliability.

User-friendly

The 16 character alphanumeric display provides readout of 1 or 2 parameters simultaneously. The user can choose which combination of parameters to display. To simplify operation of the labCHEM Series, plain English prompts and error messages are provided. There are no obscure codes to interpret like some other brands. The display has huge 14.5mm characters, which can be clearly read from up to 5 metres away. Try it yourself by placing this brochure on a wall and viewing the illustration on the opposite page from a distance.

The simple keypad uses just four keys to perform all calibration and set-up functions. This makes operation of the labCHEM Series absolutely simple.

One-Touch Calibration

Calibration of the labCHEM Series could not be easier. Just place the relevant sensor into the standard solution supplied and press the Calibrate key. That's all there is to it!

Sensor condition is displayed after calibration has been completed, allowing for preventative maintenance. This information can be recalled on the display at any time.

All calibration information is stored in memory when the labCHEM Series is switched off, even if the power supply is removed.

Automatic Stability Function

The new Automatic Stability Function (ASF) makes taking readings absolutely simple. While readings are still drifting, the display shows a cross. When all the readings have fully stabilised, the ASF system will freeze the display and show a tick. The reading can then be recorded as required. The user can also disable the ASF system.

Multiple Outputs

Expand the capabilities of the labCHEM Series with the optional RS232 interface. All readings obtained with the instrument can be stored permanently on disk. The WinTPS software package is also available, allowing the labCHEM Series to communicate with a PC running Windows 95, 98, ME, 2000 & XP.

An analogue recorder output is another option. This provides an interface with pen type recorders or dataloggers with analogue input.

A polarisation output makes it possible to use the labCHEM-pH and labCHEM-CP for moisture measurements using the Karl Fischer titration method.

Australian Made

The labCHEM Series is proudly designed and manufactured in Australia. Our aim is to provide you with the best quality, service and value for money. The TPS Quality System has been certified in accordance with the AS/NZS ISO 9001 standard. Since 1968, TPS has built a reputation for excellent backup service that is second to none. The labCHEM Series sets the standard for Quality, Service and Value for laboratory instruments.

labCHEM Series

General Specifications

Enclosure

Rugged ABS plastic construction. Case, keypad and connectors waterproof to IP65.

Display

14.5mm high, 16 character alphanumeric LCD with user-friendly, full text messages.

RS232 Serial Port (Optional)

1200, 9600, 19200 or 38400 baud.
8 Bits, No Parity, 1 Stop Bit, XON/XOFF

Recorder Output (Optional)

Cond...0 ~ 2000 counts	= 0 ~ 2000 mV
i.e. 2.76 mS/cm	= 276 mV
TDS0 ~ 1000 counts	= 0 ~ 1000 mV
i.e. 36.0 ppK	= 360 mV
pH.....0 ~ 14.00 pH	= 0 ~ 2000 mV
i.e. 7.00 pH	= 1000 mV
mV.....-1500 ~ 1500 mV	= 0 ~ 2000 mV
i.e. 600 mV	= 1400 mV
Temp ..-10.0 ~ 120.0°C	= 0 ~ 2000 mV
i.e. 22.5°C	= 500 mV

Power

12V DC via AC/DC adaptor.
AC/DC Adaptor to suit specified country is supplied.

Dimensions

240 x 190 x 105 mm

Mass

Instrument only Approx 1.0 kg
Full Kit. Up to 2.5 kg,
depending on model

Environment

Temperature 0 to 45 °C
Humidity 0 to 95% R.H.

labCHEM - pH

pH-mV-Temperature
Meter

Ordering Information

labCHEM - pH 121104

Kit Includes

pH Sensor with Porous Teflon . 121207
Double Junction Reference
Temperature/ATC Sensor 121248
pH6.88 Buffer, 200mL 121306
pH4.00 Buffer, 200mL 121381
AC/DC Power Adaptor 130037
labCHEM-pH Handbook 130050

Options

RS232 Serial Interface Port. . 130039
(includes cable)
Analogue Recorder Port 130028
(includes cable)
RS232 PLUS Recorder Port . . . 130049
(includes cable)
WinTPS Communication Software 130086
(for Windows 95 and later)
Flexible Arm Electrode Holder. 130088

Optional Sensors

Intermediate Junction pH . . . 121234
ORP Sensor with Porous Teflon. 121262
Double Junction Reference
Intermediate Junction ORP . . 121263
Double Platinum Sensor 122209
for Karl Fischer Titrations

labCHEM - C

Conductivity-TDS-
Temperature Meter

Ordering Information

labCHEM - C 122106

Kit Includes

Glass k=1/ATC/Temp Sensor . . 122230
Temperature Sensor 121248
2.76mS/cm Cond Std, 200mL . . 122306
2ppK TDS Standard, 200mL . . . 122307
AC/DC Power Adaptor 130037
labCHEM-C Handbook 130050

Options

RS232 Serial Interface Port . 130039
(includes cable)
Analogue Recorder Port 130028
(includes cable)
RS232 PLUS Recorder Port . . . 130049
(includes cable)
WinTPS Communication Software 130086
(for Windows 95 and later)
Flexible Arm Electrode Holder. 130088

Optional Sensors

Glass k=10/ATC/Temp Sensor . . 122234
Glass k=0.1/ATC/Temp Sensor . 122232

labCHEM - CP

Conductivity-TDS-pH
Temperature Meter

Ordering Information

labCHEM - CP 126129

Kit Includes

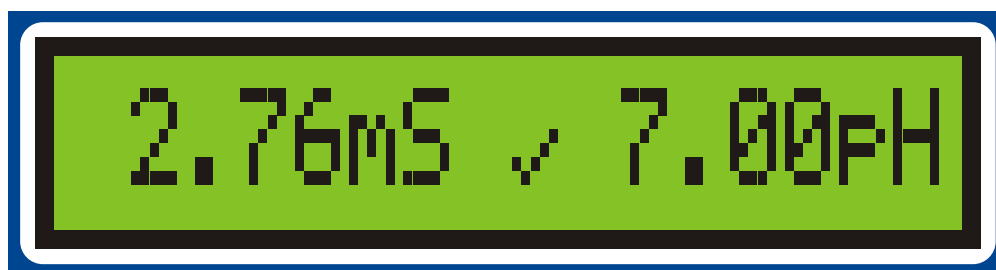
Glass k=1/ATC/Temp Sensor . . 122230
pH Sensor with Porous Teflon . 121207
Double Junction Reference
Temperature Sensor 121248
pH6.88 Buffer, 200mL 121306
pH4.00 Buffer, 200mL 121381
2.76mS/cm Cond Std, 200mL . . 122306
2ppK TDS Standard, 200mL . . . 122307
AC/DC Power Adaptor 130037
labCHEM-CP Handbook 130050

Options

RS232 Serial Interface Port. . 130039
(includes cable)
Analogue Recorder Port 130028
(includes cable)
RS232 PLUS Recorder Port . . . 130049
(includes cable)
WinTPS Communication Software 130086
(for Windows 95 and later)
Flexible Arm Electrode Holder. 130088

Optional Sensors

Glass k=10/ATC/Temp Sensor . . 122234
Glass k=0.1/ATC/Temp Sensor . 122232
Intermediate Junction pH . . . 121234
ORP Sensor with Porous Teflon. 121262
Double Junction Reference
Intermediate Junction ORP . . 121263
Double Platinum Sensor 122209
for Karl Fischer Titrations



*Actual size of labCHEM display. Most people can clearly read this from 5 metres or more.
Try it yourself by placing this brochure on a wall and viewing it from a distance.*

Model	pH	mV	Conductivity	TDS	Temperature	Notes
labCHEM-pH	●	●			●	Ideal for production testing, Q.A. labs, and educational use.
labCHEM-C			●	●	●	Fully automatic range selection for Conductivity and TDS.
labCHEM-CP	●	●	●	●	●	Combination instrument provides excellent value for money

Model	Range(s)	Resolution	Accuracy	General Specifications
pH	0 to 14.00 pH	0.01 pH	±0.01 pH	<ul style="list-style-type: none"> ▶ One-touch calibration in pH4.00, pH6.88, pH7.00, pH9.23 and pH10.06 Buffers ▶ -1.00 to +1.00 pH Asymmetry range ▶ 85.0% to 105.0% Slope range ▶ >3 x 10¹² Ohms input impedance ▶ Automatic or manual temperature compensation, 0 to 100 °C
Millivolts	0 to ±600.0 & 0 to ±1500 mV (auto-ranging)	0.1 & 1 mV	±0.15 & ±1 mV	<ul style="list-style-type: none"> ▶ Factory-set calibration ▶ Temperature compensation not applicable
Conductivity	k=0.1 Sensor 0 to 2.000 uS/cm 0 to 20.00 uS/cm 0 to 200.0 uS/cm 0 to 2000 uS/cm 0 to 20.00 mS/cm k=1.0 Sensor 0 to 20.00 uS/cm 0 to 200.0 uS/cm 0 to 2000 uS/cm 0 to 20.00 mS/cm 0 to 200.0 mS/cm k=10 Sensor 0 to 200.0 uS/cm 0 to 2000 uS/cm 0 to 20.00 mS/cm 0 to 200.0 mS/cm 0 to 2000 mS/cm	0.001 uS/cm 0.01 uS/cm 0.1 uS/cm 1 uS/cm 0.01 mS/cm 0.01 uS/cm 0.1 uS/cm 1 uS/cm 0.01 mS/cm 0.1 mS/cm 0.1 uS/cm 1 uS/cm 0.01 mS/cm 0.1 mS/cm 1 mS/cm	±0.2 % of full scale of selected range at 25.0 °C	<ul style="list-style-type: none"> ▶ One-touch calibration in any of the following standards... 14.94 uS/cm, 73.9 uS/cm, 150.0 uS/cm, 717.8 uS/cm, 1413 uS/cm, 2.76 mS/cm, 6.67 mS/cm, 12.88 mS/cm, 24.82 mS/cm, 58.0 mS/cm, 111.9 mS/cm ▶ Span range 75% to 133% of nominal k factor ▶ Automatic temperature compensation, 0 to 100 °C
TDS	k=0.1 Sensor 0 to 1.000 ppM 0 to 10.00 ppM 0 to 100.0 ppM 0 to 1000 ppM 0 to 10.00 ppK k=1.0 Sensor 0 to 10.00 ppM 0 to 100.0 ppM 0 to 1000 ppM 0 to 10.00 ppK 0 to 100.0 ppK k=10 Sensor 0 to 100.0 ppM 0 to 1000 ppM 0 to 10.00 ppK 0 to 100.0 ppK 0 to 1000 ppK	0.001 ppM 0.01 ppM 0.1 ppM 1 ppM 0.01 ppK 0.01 ppM 0.1 ppM 1 ppM 0.01 ppK 0.1 ppK 0.1 ppM 1 ppM 0.01 ppK 0.1 ppK 1 ppK	±0.5 % of full scale of selected range at 25.0 °C	<ul style="list-style-type: none"> ▶ One-touch calibration in 69.5 ppM, 2000 ppM, 8.00 ppK, 36.0 ppK standards ▶ Span range 75% to 133% of nominal k factor ▶ Automatic temperature compensation, 0 to 100 °C
Temperature	-10.0 to 120.0 °C	0.1 °C	±0.2 °C	<ul style="list-style-type: none"> ▶ Calibration against reference thermometer. ▶ Sensor Offset range -10.0 to +10.0 °C ▶ The following temperature limits apply to sensors... Temperature probe : 120 °C pH Sensor : 60 °C Conductivity/TDS sensor : 60 °C Dissolved Oxygen sensor : 50 °C



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 TPS reserves the right to change this specification without notice.
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