

# BENCHTOP

## MULTI-PARAMETER INSTRUMENTS "17 SERIES"

### MODEL TP 17, TC 17 & TPC 17

•pH •ORP •Conductivity •TDS •Salinity •Resistivity •Temp.



#### TP 17

pH	-2 ... 20 pH
ORP	±2000 mV
Temperature	-5 ... 105°C

#### TC 17

Conductivity	0 ... 2000 mS/cm
TDS	0 ... 100 g/l
Salinity	0 ... 70 ppt
Resistivity	0 ... 200 MΩ cm
Temperature	-5 ... 105°C

#### TPC 17

pH	-2 ... 20 pH
ORP	±2000 mV
Conductivity	0 ... 2000 mS/cm
TDS	0 ... 100 g/l
Salinity	0 ... 70 ppt
Resistivity	0 ... 200 MΩ cm
Temperature	-5 ... 105°C

#### COMMON FEATURES:

• **pH (in TP 17 & TPC 17)\***

Multi-point (1...5) calibration for more linearity.  
 Selectable resolution from 0.01pH to 0.1 pH.  
 Automatic calibration with any of eleven pre-programmed and five user specified pH buffers.  
 pH electrodes with any zero point (E<sub>o</sub>) between ±999 mV.

• **mV**

Features mV calibration for accurate ORP measurements.  
 Selectable resolution from 0.1 mV to 1 mV.

• **Conductivity (in TC 17 & TPC 17)\***

Multi-point (1...3) calibration for more linearity.  
 Extended conductivity range; to measure the full range from 0.01 μS/cm to 2000 mS/cm requires 3 electrodes: 0.1, 1 and 10 cm<sup>-1</sup>.

Selectable reference temperature: 20° or 25°C.

Automatically selects correct range and frequency.

Automatic cell constant determination with any of three preprogrammed standards (0.01, 0.1 or 1M KCl).

Allows to lock the initial conductivity range to avoid non-linear titration curves.

Accurate low conductivity measurements by eliminating the capacitive component of the electrode and its cable (avoid the use of long cables!).

• **Temperature**

Reads temperatures with 0.1°C resolution.

Manual or automatic temperature compensation.

Calibrates temperature probe for quality measurements.

**TOSHNIWAL INSTRUMENTS MANUFACTURING PVT. LTD.,**

P.O. Gagwana - 305023, Distt. Ajmer (Raj.) INDIA

Phone: +91-145-2971131/2/3; Mobile: +91-9829112345

Email: [info@toshcon.com](mailto:info@toshcon.com), [support@toshcon.com](mailto:support@toshcon.com); Website: [www.toshcon.com](http://www.toshcon.com)

REGD OFFICE: 401, Manish Chamber, Sonawala Cross Lane, Goregaon (E), MUMBAI - 400 063



# BENCHTOP

## MULTI-PARAMETER INSTRUMENTS "17 SERIES"

### MODEL TP 17, TC 17 & TPC 17

#### •Inputs

One common input for all ranges + corresponding reference input.  
Reference input for special applications.  
Separate input for a Pt1000 automatic temperature probe.  
Low voltage DC input for e.g. a mains adaptor.

#### •Outputs

RS232 interface for connection to a printer.

#### •GLP

All procedures for a Good Laboratory Practice are on board.

#### •Display

Bright LCD screen for better readability.  
A white backlight automatically illuminates when operated on the mains.  
Stability indicator prompts the user when readings should be taken.  
Hold function allows to freeze the display for convenient reading or recording.  
The interactive LCD screen provides step by step instructions in the language of your choice (English, Dutch, French, German).  
Real-time clock displays time and date.  
Shows a GLP report on the LCD screen.

#### •Data-logging

Stores up to 12000 data sets can be stored manually or at a programmable interval.

#### •Cabinet

Robust dust and splash-proof cabinet.

#### •Special features

Calibration reminder 0...999 h.  
Programmable identification number for use with a computer.  
Password protection prevents any unauthorised access to the instrument.  
Communication with a printer using RS232.  
Mains operation with programmable automatic switch-off.

**Standard Supply: Meter + Mains Adaptor + Instruction Manual + Test Certificate + Warranty Card + ATC**  
Essential & Optional Accessories including Electrodes on Order

#### Specifications for TP 17, TC 17 & TPC 17 with difference marked in Blue coloured text in bracket & \*s

<b>pH</b> <small>(in TP 17 &amp; TPC 17)*</small>	Range	-2...+20 pH
	Resolution	0.01 pH
	Accuracy	0.1% ± 1 digit
	Calibration	1...5 points
	Buffers	11 pre-programmed 5 user specified
	Temperature Compensation	-5...+105°C
	ISO-pH	6...8 pH
	Slope	80...120%
	Zero Point (Eo)	±999 mV
	Range	± 2000 mV
<b>mV</b>	Resolution	1 mV
	Accuracy	0.1% ± 1 digit
	Calibration	1 point
	Resolution	0...2000 mS/cm
<b>CONDUCTIVITY</b> <small>(in TC 17 &amp; TPC 17)*</small>	Resolution	0.01 µS/cm
	Accuracy	1% f.s. of range
	Calibration	1...3 points
	Standards	0.01/0.1/1M KCl
		3 user specified
	Cell Constant	0.1/1/10 cm <sup>-1</sup> ± 30%
	Temperature Compensation	-5...+105°C
	Reference Temperature	20°C or 25°C
	Temperature Coefficient	natural waters (EN27888)
	Range Lock	✓
Capacitive Compensation	✓	
<b>RESISTIVITY</b>	Range	0...200 MΩ.cm
	Resolution	1 Ω.cm
<b>SALINITY</b>	Range	0...70 ppt
	Resolution	0.1 ppt
<b>TDS</b>	Range	0...100 g/l
	Resolution	0.1 mg/l
<b>TEMPERATURE</b>	Range	-5...+105°C
	Resolution	0.1°C
	Accuracy	0.3°C
	Calibration	1 point
<b>INPUTS</b>	Measurement	1 BNC, 10 <sup>3</sup> Ω
	Temperature	2 banana, for Pt1000 or NTC 30 KΩ
<b>CALIBRATION</b>	Reminder	0...999 h
	GLP	✓
<b>DISPLAY</b>	LCD	240x64 pixels
	White Backlight	✓
	Hold Function	✓
	Selectable Resolution	✓
<b>USB</b>	Interface with Printer	✓
	RS232	Baud Rate 1200...115200 b/s
<b>DATA-LOGGING</b>	Values	12000 + °C/date/time
	Modes	all (9)
	Manual or Timed	✓
	Interval	1...9999 s
<b>SECURITY</b>	Identification number	✓
	Password protection	✓
<b>AMBIENT</b>	Temperature	0...40°C
<b>CONDITIONS</b>	Humidity	0...95% non-condensing
<b>POWER SUPPLY</b>	Mains	210...250VAC; 50/60Hz
	Low Voltage	9...15 VDC
<b>DIMENSIONS</b>	WxDxH	18x13x5/3 cm
	<b>WEIGHT</b>	Meter

For more details kindly contact:

analytical1@toshcon.com ☎ 9351497767

analytical2@toshcon.com ☎ 9351497747

**TOSHNIWAL INSTRUMENTS MANUFACTURING PVT. LTD.,**

P.O. Gagwana - 305023, Distt. Ajmer (Raj.) INDIA

Phone: +91-145-2971131/2/3; Mobile: +91-9829112345

Email: info@toshcon.com, support@toshcon.com; Website: www.toshcon.com

REGD OFFICE: 401, Manish Chamber, Sonawala Cross Lane, Goregaon (E), MUMBAI - 400 063