

PORTABLE MULTI-PARAMETER INSTRUMENTS "27 SERIES" MODEL TP 27, TD 27, TPC 27, TPCD 27, TPI 27 & TMULTI 27

•pH •ORP •ION •Conductivity •TDS •Salinity •Resistivity •Dissolved Oxygen •Air Pressure •Temp.



TMULTI 27

pH	-2 ... 20 pH
mV	±2000 mV
Ion	0.01 ng/l ... 100 g/l
Conductivity	0 ... 2000 mS/cm
Resistivity	0 ... 200 MΩ cm
Salinity	0 ... 70 ppt
TDS	0 ... 100 g/l
Dissolved Oxygen	0 ... 60 mg/l 0 ... 600%
Air Pressure	600 ... 1300 hPa
Temperature	-5 ... +105°C

TP 27

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

TD 27

Dissolved Oxygen	0 ... 60 mg/l 0 ... 600%
Temperature	-5 ... 105°C

TPC 27

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

TPCD 27

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
Dissolved Oxygen	0 ... 60 mg/l 0 ... 600%
Temperature	-5 ... 105°C

TPI 27

pH	-2 ... 20 pH
mV	±2000 mV
ION	0.01 ng/l ... 100 g/l
Temperature	-5 ... +105°C

COMMON FEATURES:

• **pH**

Multi-point (1...5) calibration for more linearity.
Selectable resolution from 0.001pH to 0.1 pH.
Automatic calibration with any of eleven pre-programmed and five user specified pH buffers.
pH electrodes with any zero point (Eo) between ±999 mV.

• **mV**

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

• **Ion (in TPI 27 & TMULTI 27)***

Direct concentration measurement.
Ion mode is easily calibrated with any 2...5 standards and a blank correction.
Useable with Ion Selective Electrodes like F⁻, Cl⁻, NO₃⁻, NH₃, NH₄⁺, Br⁻, I⁻, CN⁻, Ca⁺⁺ etc.
Stores calibration curves for up to 9 different electrodes.

• **Conductivity (in TPC 27, TPCD 27 & TMULTI 27)***

Multi-point (1...3) calibration for more linearity.
Extended conductivity range; to measure the full range from 0.001 μS/cm to 2000 mS/cm requires 3 electrodes: 0.1, 1 and 10 cm².
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!).

• **Dissolved Oxygen (in TD 27, TPCD 27 & TMULTI 27)****

Operates with a galvanic dissolved oxygen electrode requiring no polarisation time and no zero calibration.

TOSHNIWAL INSTRUMENTS MANUFACTURING PVT. LTD.,

An ISO 9001:2015 Company

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PORTABLE MULTI-PARAMETER INSTRUMENTS "27 SERIES" MODEL TP 27, TD 27, TPC 27, TPCD 27, TPI 27 & TMULTI 27

Selectable resolution from 0.01 mg/l (0.1%) to 0.1 mg/l (1%).

Manual salinity compensation 0-40 ppt.

Automatic air pressure compensation 600-1300 hPa.

Rapid Air Calibration.

•Temperature

Reads temperatures with 0.1°C resolution.

Manual or automatic temperature compensation.

Calibrates temperature probe for quality measurements.

•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

Galvanically isolated USB communication port for connection to a computer.

•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.

Allows to mix data from all ranges in the same table.

A powerful data acquisition software enables to view, store and edit the measurements in your computer.

•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.

Two-way communication with a printer or computer using USB.

Mains & rechargeable battery operation with programmable automatic switch-off.

Shows percentage of remaining battery capacity.

Optional 12V car adaptor.

Standard Supply: Meter + Mains Adaptor + Instruction Manual + Test Certificate + Warranty Card + ATC

Essential & Optional Accessories including Electrodes on Order

For more details kindly contact:

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**Specifications for TP27, TD27, TPC27, TPCD27, TPI27 & TMULTI 27
with difference marked in Blue coloured text in bracket & *s**

pH	Range	-2 ... +20 pH
	Resolution	0.001 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
	mV	Range
Resolution		0.1 mV
Accuracy		0.1% ± 1 digit
Calibration		1 point
ION* <small>(in TPI27 & TMULTI 27)</small>	Range	0.01 ng/l... 100 g/l
	Resolution	3 digits
	Accuracy	0.5% ± 1 digit
	Calibration	2... 5 points + blank
CONDUCTIVITY	Range	0... 2000 mS/cm
	Resolution	0.001 µS/cm
	Accuracy	0.5% 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 ⁻¹ ± 30%
	Temperature Compensation	-5 ... +105°C
	Reference Temperature	20°C or 25°C
	Temperature Coefficient	natural waters (EN27888)
	Range Lock	✓
Capacitive Compensation	✓	
RESISTIVITY	Range	0... 200 MΩ.cm
	Resolution	1 Ω.cm
SALINITY	Range	0... 70 ppt
	Resolution	0.1 ppt
TDS	Range	0... 100 g/l
	Resolution	0.01 mg/l
DISSOLVED OXYGEN <small>(in TD27, TPCD 27 & TMULTI 27)**</small>	Range	0... 60mg/l (0... 600%)
	Resolution	0.01 mg/l (0.1%)
	Accuracy	1% ± 1 digit
	Calibration	1 point
	Temperature Compensation	0... 50°C
	Salinity Compensation	0... 40 ppt
TEMPERATURE	Range	-5 ... +105°C
	Resolution	0.1°C
AIR PRESSURE <small>(in TD 27, TPCD 27 & TMULTI 27)**</small>	Accuracy	0.3°C
	Calibration	1 point
	Range	600 ... 1300 hPa
	Calibration	1 point
INPUTS	Measurement	1 BNC, 10 ² Ω
	Temperature	2 banana, for Pt1000 or NTC 30 KΩ
CALIBRATION	Reminder	0... 999 h
	GLP	✓
DISPLAY	LCD	240x64 pixels
	White Backlight	✓
	Hold Function	✓
	Selectable Resolution	✓
	Real Time Clock	✓
USB	Interface with computer	✓
RS232	Baud Rate	1200... 115200 b/s
	Values	12000 + °C/date/time
DATA-LOGGING	Modes	all (9)
	Manual or Timed	✓
	Interval	1... 9999 s
SECURITY	Identification number	✓
	Password protection	✓
AMBIENT CONDITIONS	Temperature	0... 40°C
POWER SUPPLY	Humidity	0... 95% non-condensing
	Mains	210... 250VAC, 50/60Hz
DIMENSIONS	Low Voltage	9... 15 VDC
	WxDxH	25x12x5 cm
WEIGHT	Meter	635 gms

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