Advanced Digital Meter

ODEON®

Reliability, simplicity and flexibility

■ **ALWAYS READY TO MEASURE :** *Digital plug and play probes*

■ **ALWAYS CONFIDENCE :** *Autodiagnostic, status always displayed, GLP compliance*

■ **SIMPLICITY :** *4' display and intuitive menus*

■ **HIGH PERFORMANCES :** *Mono/Multiparameters - 8 Mo Memory (100 000 data)*

■ **FIELD INTRUMENTATION :** *IP67*

. pH/ORP   . Dissolved Oxygen   . Conductivity   .Turbidity
                 OPTOD Optical Technology

Access to high performances with the **PONSEL ODEON®** Digital Handheld Instrumentation.

A real combination of simplicity, flexible, reliability and reduced maintenance technologies, the ODEON Meters offer you a total confidence in your readings in laboratory and field conditions.

This range of **6 ODEON Meters** are available in the **Classic Line** (single channel meters), **Open Line** (Versatile single channel meters), **X Line** (Versatile bi-channels Meters) to meet all yours requirements

Datasheet : ODEON Range
Applications : Wastewater, drinking water natural water…
MAJ : September 2014

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➢ ODEON® METERS *Classic Line, One Line and X Line*

8 Mb memory

Wide graphical screen 4' 320 x 240 backlighted

7 buttons to access to all functions

Ergonomic design for all hand

Probe 2 *(X Line only)*

-USB cable
-Loader supply
-External supply

Probe 1

IP 67
Watertight

Inserts for wrist-loop or strap

Watertight all-purpose connectors **Clic-Loc™ Plug**

- ■ **User friendly**
  Intuitive menus - No user manual required

- ■ **Comfortable and easy to read**
  Large 4' backlighted display

- ■ **PC USB connection**

- ■ **Easy handling in all situations**
  Only 5 buttons for all functions

- ■ **High autonomy**
  Low Power technology

Models

Classic LINE   *Open LINE*

One   X

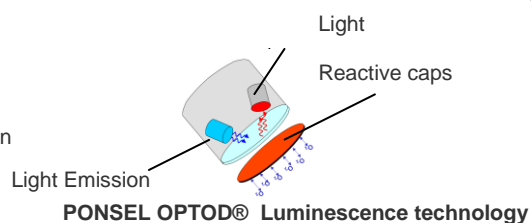| Models		Classic Line				Open Line	
		pH/ORP T	Oxygen / T	Conductivity	Turbidity 0 4000 NTU 0-4500 mg/L	One	X
Probes compatibility	PH/ORP/T	X				X	X
	OPTOD		X			X	X
	Conductivity			X		X	X
	Turbidity				X	X	X
Probe Channels		1					2
Digital Technology		CLASSIC *Possibility to upgrade to OPEN Technology*				OPEN	
Memory		100 000 points (with sample ID, User ID, date and time..)					
Data Management		GLP compliance					
ID		Samples, Campaigns, Users : Alphanumeric, 10 words max, 20 users max					
Reading/Recording		3 modes : Manual, interval,continuous					
Sensor status Indicator		Yes					
Autodiagnostic		Yes					
Display		Large backlighted graphic LCD 4' display, 240 x 320. Automatic switch in economic mode. With date, time, user and sample user, °C, status, pressure. Simultaneous display of 1 to 7 parameters (max)					
Power supply		4 AA batteries or chargeable batteries (battery charger needed)					
Autonomy		200 hours with standard batteries (in economic mode)					
Interfaces		-USB -RS 485 interface to probes (1 or 2) -External 12 V battery -Charger					
Box		PC/ABS					
Dimension - Weight		196 x 121x 46 mm - 400 g					
Protection		Outdoor instrument, IP67, Watertight					
Operate temperature		- 10 to + 60°C					
Storage temperature		- 25 to + 65°C					
Operate hydrometry		> 80%					

➢ PONSEL Digital probes

■ **Plug and Play digital probes**
   Your probe is immediately ready to use

■ **High fiability and confidence in your readings**
   Autocheck, status and calibration autodiagnostic

■ **Robust probes**
   Outdoor use design for Laboratory, wastewater, natural water, fishfarming applications.

■ **Flexible and smart probes**
   Calibration and history data inside

■ **Ultra low power probes**
   For long term campaigns

■ **PONSEL Probes**
   50 years experience in probes manufacturing

DISSOLVED OXYGEN *OPTOD® Optical Luminescence Technology*

- No Calibration, No membrane, No electrolyte, No drift
- No cross sensitivity with pH 1 -14, CO2, H2S, SO2
- Real Time Temperature, Salinity and Pressure Compensation
- Fast response sensor
- Body in stainless steel or Titanium
- ASTM International Method D 888 – 05 compliance

Light
Reactive caps
Light Emission

PONSEL OPTOD® Luminescence technology

TURBIDITY   *IR Nephelometry 0 – 4 000 NTU ; 0-4500 mg/L*

- IR Sensor – Optical fiber technology
- Precise and accurate measurements
- Calibration in mg/L
- No sampling – real turbidity value with direct measurement
- ISO 7027 compliance

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pH / ORP

- pH/ORP/Temp sensor
- PONSEL "PLASTOGEL"® Plasticized electrolyte
- Temperature compensation
- Robust field probe
- Cost effective : only pH/ORP Cartridge technology

CONDUCTIVITY   *PONSEL C4E*

- Conductivity / Salinity / Temp sensor
- C4E electrode
- Temperature compensation
- Robust field probe
- No maintenance

➤ Datasheets

Probes	pH/ORP T		Oxygen / T	Conductivity / T	Turbidity / T
Applications	Laboratory and field conditions		Laboratory and field conditions	Laboratory and field conditions	Laboratory and field conditions
Compatibilty	Wastewater, drinking water, seawater, rivers, natural water…..		Wastewater, drinking water, seawater, rivers, natural water…..	Wastewater, drinking water, seawater, rivers, natural water…..	Wastewater, drinking water, seawater, rivers, natural water…..
Sensors	pH, ORP, Temperature		OPTOD, Temperature	Conductivity, Salinity, temperature	Turbidity, Temperature
Dimension (D x L)	23 x 159 mm		25 x 146 mm	27 x 177 mm	27 x 170 mm
Standard Cable lenght	3 m		3 m	3 m	3 m
Weight with 3 m cable	350 g		450 g	350g	300 g
Protection Class	IP68		IP68	IP68	IP68
Operate temperature	-10°C – 50°C		-10°C – 50°C	-10°C – 50°C	-10°C – 50°C
Temperature sensor	CTN		CTN	CTN	CTN
Interface communication	Modbus RS 485		Modbus RS 485	Modbus RS 485	Modbus RS 485
Material	PVC/POM C		Inox 316 L or Titanium	PVC / POMC	PVC POMC
Spare	pH/ORP Cartridge		DOdisk®	-	-
parameters	pH	ORP	Dissolved Oxygen	Conductivity Salinity	Turbidity
Range	0,00 – 14,00 pH	-1000,0 mV +1000,0 mV	0,00 – 20,00 mg/L 0 – 200% SAT	4 ranges 0-200,0 µS/cm 0 –2000 µS/cm 0,00 –20,00 mS/cm 0,0 –200,0 mS/cm	0 - 4000 NTU 4 ranges : 0,0 – 50,0 NTU 0,0 – 200,0 NTU 0 – 1000 NTU 0 – 4000 NTU
Scale switch	-	-	-	Manual/Automatic	Manual/Automatic
Resolution	0,01 pH	0,1 mV	0,01 mg/L 1%SAT	0,01 to 1 µ/mS/cm	0,1 to 1 NTU -mg/L
Accuracy	± 0,1 pH	± 1 mV	± 0,1 mg/L ± 1 %	± 1 % of the full scale	< 5 % of the full scale NTU
Compensation	Temperature	-	Pressure, temp, salinity (Mode : Off, Manual, Automatic)	Temperature	Temperature
Measurement principe	plasticized PONSEL "PLASTOGEL"®. electrolyte Ag/AgCl reference	Platinum electrode Ag/AgCl reference	PONSEL OPTOD® optical luminescence technology ASTM D888 – 05 Complinace	C4E Technology 4 electrodes (2 platinum and 2 graphite)	IR 90° technology ISO 7027 compliance
Response time t90 Full range : 0 – 100%	< 5 s	< 5 s	< 1 s	< 5 s	< 5 s

➤ Standard Set

Meter	1 Meter **ODEON Classic**, **ODEON OPEN ONE** or **ODEON X** (with 4 AA batteries)
Probes	1, 2, 3 or 4 Digital PONSEL probes with 3 meters cables
Charger	1 230 V Charger
ODEON PC Cable	1
Standard solutions	125 mL standard solutions (according parameters)
Carrying case	Outdoor case, plastic case, shockproof, lightweight; for 2 probes, PC cable, Charger and and 4 bottles of standard solution(125 ml)
PC Software	Wintek Viewer

➤ Accessories/Options

■ **Standard solutions (125 mL) :**

pH : 4,01-7,01-10,01 **ORP :** 240 mV

Conductivity : 84 µS/cm, 1413 µS/cm et 12 880 µS/cm / **Turbidity :** Formazine

■ **Cable lengths :** 7 m / 15 m (other on demand)

■ **Carrying case**

■ **Software : ODEON Viewer**

■ **ODEON Upgrade : Classic to Open line**

■ **12 V external power supply cable**