

# OILPORT 20 SET

## Moisture in Oil Hand-Held

To measure moisture in oil with a hand-held, user-friendly instrument requires extraordinary measurement technology. The hand-held meter OILPORT 20 meets these multiple demands and is available with a pressure-tight or short measuring probe. The robust housing of the OILPORT 20 allows usage in harsh industrial environments.

The physical quantities measured are water activity  $a_w$  and temperature  $T$ . With these quantities OILPORT 20 SET calculates the water content (ppm) in mineral transformer oils. Calculation of water content in non-mineral transformer oils and lubrication oils can be accomplished by downloading specific parameters of the oil.



OILPORT 20 SET

The carrying cases can accommodate the measuring equipment with optional calibration devices. The accuracies of the measured values are traceable to international standards, administered by NIST, PTB, BEV...

### Typical Applications

Measurement of moisture in mineral and synthetic oil

### Features

measurands:  $T$ ,  $a_w$ , ppm  
 input of specific oil parameters  
 HOLD / MIN / MAX / AVG readout  
 real time clock  
 SI/US units selectable  
 recalibration by user

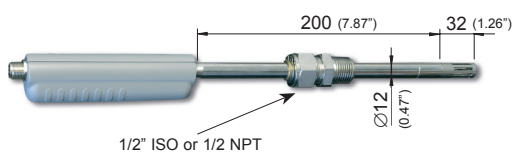
### Technical Data - Display unit

#### General

Resolution	moisture measurement: $a_w$ : 0.001 [ ] or 0.01...1ppm (depending on measuring range) temperature measurement: 0.1°C; 0.1°F		
Supply voltage	4x 1.5V AA alkali-manganese battery		
Battery lifetime	200h		
Working temperature range	display unit and grip of sensing probe: 0...50°C (32...122°F)		
CE compatibility according	EN61000-6-3	EN55011	CE
	EN61000-6-2	EN61000-4-2 EN61000-4-3	
Housing / protection class	ABS / IP40		
Dimensions (HxWxD)	145 x 85 x 37 mm (5.7 x 3.3 x 1.5")		
Weight	ca. 400g (1lbs)		
Display	LC display, 90 x 50 mm (3.5 x 2"), illuminated		

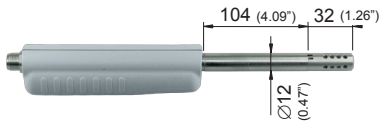
### Oil Probes:

#### Pressure-tight Oil probe Ø12mm (0.47")



Application: measurement of moisture in mineral and synthetic oil  
 Working range: 0...1  $a_w$  / 0...20000ppm / -40...120°C (-40...248°F)  
 Accuracy:  $\pm 0.02a_w$  (0...0.9 $a_w$ ),  $\pm 0.03a_w$  (0.9...1 $a_w$ )  
 $\pm 0.2^\circ\text{C}$  /  $\pm 0.36^\circ\text{F}$  (20°C / 68°F),  
 $\pm 0.5^\circ\text{C}$  /  $\pm 0.9^\circ\text{F}$  (-40 resp. 120°C / -40 resp. 248°F)  
 Response time  $\tau_{90}$ :  $\leq 10$  min (in still oil)  
 Pressure range: 0.01...20bar (0.15...300psi)  
 Measurand: channel 1:  $T$  [°C/°F]  
 channel 2:  $a_w$  [ ] or  $x$  [ppm] oil specific parameters are adjustable at the basic device  
 Temperature dependence:  $a_w$ :  $\pm 0.0003a_w / ^\circ\text{C}$  ( $a_w / ^\circ\text{F}$ )

## Short Oil probe $\varnothing 12\text{mm}$ (0.47")



Application: measurement of moisture in mineral and synthetic oil  
 Working range:  $0 \dots 1 a_w / 0 \dots 20000\text{ppm} / -40 \dots 120^\circ\text{C}$  ( $-40 \dots 248^\circ\text{F}$ )  
 Accuracy:  $\pm 0.02 a_w$  ( $0 \dots 0.9 a_w$ ),  $\pm 0.03 a_w$  ( $0.9 \dots 1 a_w$ )  
 $\pm 0.2^\circ\text{C} / \pm 0.36^\circ\text{F}$  ( $20^\circ\text{C} / 68^\circ\text{F}$ ),  
 $\pm 0.5^\circ\text{C} / \pm 0.9^\circ\text{F}$  ( $-40$  resp.  $120^\circ\text{C} / -40$  resp.  $248^\circ\text{F}$ )  
 Response time  $\tau_{90}$ :  $\leq 10$  min (in still oil)  
 Measurand: channel 1: T [ $^\circ\text{C}/^\circ\text{F}$ ]  
 channel 2: aw [ ] or x [ppm] oil specific parameters  
 are adjustable at the basic device  
 Temperature dependence:  $a_w$ :  $\pm 0.0003 a_w / ^\circ\text{C}$  ( $a_w / ^\circ\text{F}$ )

## Scope of supply

- Display unit type OMNIPORT 20 (including a set of 4 AA batteries)
- Oil probe
- Probe cable type HA010813, 2m (6,6ft)
- Calibration certificate for the sensing probe
- Calibration certificate for the display unit
- S01 protection sleeve for the sensing head
- Carry case
- Calibration kit horizontal<sup>\*)</sup>
- 5 ampoules humidity standard 10% RH<sup>\*)</sup>
- 5 ampoules humidity standard 80% RH<sup>\*)</sup>
- Accredited calibration certificate for the humidity standards<sup>\*)</sup>

<sup>\*)</sup> Only with version C01

## Ordering Guide

MODEL	PROBES	CALIBRATION SET
(OILPORT 20 SET)	pressure-tight oil probe 1/2" ISO (1)	without calibration set (--)
	pressure-tight oil probe 1/2" NPT (2)	with calibration set (C01)
	short oil probe (3)	

## Accessories

humidity standards / calibration kit  
 probe cable 5m  
 pressure-tight oil probe - 1/2" ISO  
 pressure-tight oil probe - 1/2" NPT  
 short oil probe  
 ball valve set 1/2" ISO  
 ball valve set 1/2" NPT

refer to data sheet "humidity calibration set"

HA010814

HA040204

HA040206

HA040210

HA050101<sup>\*)</sup>

HA050104<sup>\*)</sup>

<sup>\*)</sup> only suitable for pressure tight oil probe