

DOBLE IN-SERVICE TESTING & ASSESSMENT

DOMINO USS

Portable Water in Oil and Dewpoint Analyzer

MONITOR LEVELS AND CHANGES IN WATER IN OIL MEASUREMENTS IN REAL TIME

The Doble DOMINO USS (Ultimate Sampling System) gives you a fast, efficient way to measure water content in oil and/or the dewpoint of a gas. The DOMINO USS is a portable system that connects quickly and easily to transformer valves or other oil-filled electric devices. Operating on AC power supply or with its rechargeable battery, you will have accurate readings quickly. The DOMINO USS is customizable to your testing requirements, coming with either a water in oil test sensor, a water in gas (dewpoint) test sensor, or both.



FEATURES

- Get accurate results quickly
- Analyze different oil types: new and in-service transformer oil, very aged transformer oil (>0.18 mg KOH/g), silicone and natural esters (vegetable oil dielectrics)
- Sensor can quickly be connected to a transformer valve or other oil-filled electric device for readouts of water content in ppm
- Sensor is immune to oil vapor

BENEFITS

- Maximize testing time by taking high quality samples during field testing
- Modular, multi-option structure allows you to begin with a basic kit and add to it as your needs evolve
- With special features to monitor transformer installation you can:
 - » Monitor the dewpoint of the interior atmosphere of the incoming transformer
 - » Monitor the dewpoint of vacuum, dry air, nitrogen and other inert gases
 - » Monitor the oil filling process by measuring the incoming and outgoing oil from the processing trailer

DOMINO USS TECHNICAL SPECIFICATIONS

HANDHELD INDICATOR	
OPERATING AND MECHANICAL PARAMETERS	
Humidity	0...100%RH, non-condensing
Temperature range	-10...40°C
Languages	English, Finnish, French, German, Spanish, Swedish
Display	Backlit LCD; Character height up to 16mm
Probe inputs	1 or 2
Power supply	Rechargeable NIMH battery pack with AC power or 4 x AA size alkalines, type IEC LR6
Analog output	0 to 1 VDC
Output resolution	0.6mV
Accuracy	0.2% full scale
Temperature dependence	0.0002%/°C full scale
Minimum load resistor	10 kΩ to ground
Data interface	RS232C (EIA-232)
Data logging capacity	900 to 2700 real time data points
Logging interval	1s...12h
Logging duration	1 min to memory full
Alarm	Audible alarm function
Housing classification	IP 54
Housing material	ABS/PC-Blend
Housing weight	400g
Storage temperature	-40...70°C
Storage humidity range	0 to 100% RH, non-condensing
BATTERY PACK	
Operation times	48 hours typical at 20°C continuous use Up to 30 days data logging use
Power consumption	10W maximum during charge
Charging time	4 hours

WATER-IN-OIL PROBE OPTION	
MEASURED VARIABLES	
Relative saturation (RS)	0 to 100%; -40...60°C
Temperature measurement	-40...100°C
Parts per million of water	calculated (ppm w/w)
SENSOR TYPES	
Water sensor	Thin film polymer
Temperature	Pt 100 RTD 1/3 Class B IEC 751
SENSOR ACCURACY	
RS: Accuracy (including non-linearity and repeatability)	(0-90% range) ±1% RS (90-100% range) ±2% RS
Temperature at 20°C	±0.1°C
MECHANICS	
Pressure range of sensor head (probe)	0-20 bar (0-290 psi)
Operating temperature	-40...60°C range
Sensor protection grid	Stainless steel
Probe head diameter	12mm
Housing classification	IP65 (NEMA 4)
Electronics housing	APS/PC-Blend material
Probe material	Stainless steel (AIS316L)
Probe cable length	1.9m
Extension cable (option)	10m
Weight of probe assembly	520g

DEWPOINT PROBE OPTION	
MEASURED VARIABLES	
Dewpoint	-70...30°C
Temperature Measurement	-10...60°C
Gas types	Air, nitrogen, inerts, SF ₆
SENSOR TYPES	
Water sensor	Thin film polymer, 180M
Temperature	Pt 100 RTD 1/3 Class B IEC 751
SENSOR ACCURACY	
Dewpoint	±2°C full scale
Temperature at 20°C	±0.2°C
MECHANICS	
Pressure range of sensor head (probe)	0-20 bar (0-290 psi) head (probe)
Operating temperature	-10...60°C range
Sensor protection	Stainless steel sintered filter
Connection	G1/2 inch, ISO228-1 thread with bonded seal ring
Housing classification	IP65 (NEMA 4)
Electronics housing	APS/PC-Blend material
Probe material	Stainless steel (AIS316L)
Probe cable length	1.9m
Weight of probe assembly	350g
Sampling cell	Included, stainless steel



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Specifications are subject to change without notice.
 Doble is ISO certified.
 Doble is an ESCO Technologies Company.
 MKT_SL_DOMINOUSS_04/21