



# CONDUCTIVITY MEASURING DEVICE

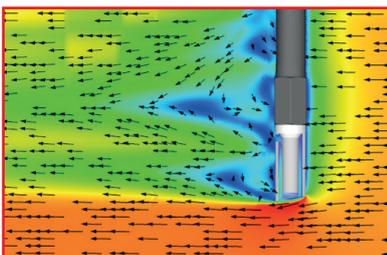
PRODUCT SERIES IN-LINE-MEASUREMENT MLA1000



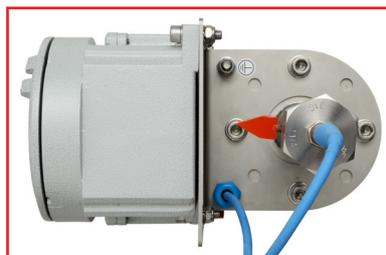
Continuous measurement of the conductivity and temperature in light mineral oils

## MLA1000

- + *Measuring method according to ASTM D2624*
- + *High measurement accuracy*
- + *Digital recording of measurement data*
- + *Easy start-up*
- + *Measurement in ATEX Zone 0*



Flow model of the patented measuring probe



Optional fastening of the display unit on the probe tube



Additional check of the measurement data directly on-site



## MLA1000 the stationary, continuous measurement system

The MLA 1000 measures the electrical conductivity and temperature of light mineral oils such as kerosene, for example. Measurement of the electrical conductivity is a prerequisite for the high safety requirements. Only through accurate knowledge of the electrical conductivity can decisions be made regarding whether the medium can be pumped safely. If the electrical conductivity is too low, then this will result in electrostatic charging followed by discharging, which often becomes a dangerous ignition source because of sparking. In addition to the electrical conductivity, the MLA 1000 also measures the temperature.

Measurements are taken in the pipeline continuously and sent to the PLC control unit in the control room. With the determined average values, the additives can be controlled optimally in order to obtain the stipulated conductivity value.



**Areas of application:**

light mineral oils such as, for example, kerosene (Jet a-1); rolling oil; hydraulic oil; release agents...

**TECHNICAL DESCRIPTION**

**Measurement values**

Electrical conductivity:	5 ... 2.000 pS/m	5 ... 10.000 pS/m	5 ... 15.000 pS/m
Temperature:	-20 ... +60°C		

**Measurement accuracy/tolerances**

Electrical conductivity:	5 ... 100 pS/m ±5 pS/m	above 100 pS/m ±2 % of the measured value
Temperature:	±0.5 °C of the measured value	

**Certifications for use in potentially explosive areas**

Display unit MLA1000-A:	gas exzone 1	Ex II 2(1)G Ex de [ia Ga] IIB T4 Gb
Measuring probe MLA1000-S:	gas exzone 0	Ex II 1G Ex ia IIB T4 Ga

**Measured value outputs**

Display on the unit:	electrical conductivity, temperature and unit status
Signal outputs:	electrical conductivity: 4 ... 20 mA / Temperature: 4 ... 20 mA 24 mA: Measured value exceeded / 0 mA: fault

**Operating voltage**

Voltage input:	24 V DC (±10%) / Capacity: 5 W
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**Product properties**

Probe:	Nickle-plated surface
Process connection:	loose flange connection (min. DN50 / 2")
Probe tube material:	Stainless steel
Cable length display/probe:	max. 24 m
Housing protection of display unit:	IP65

**Operating requirements**

Operating pressure:	max. 16 bar
Flow rate:	0,5 ... 7 m/s
Viscosity:	less than 2 m Pa·s
Ambient temperature:	-20 ... +60 °C