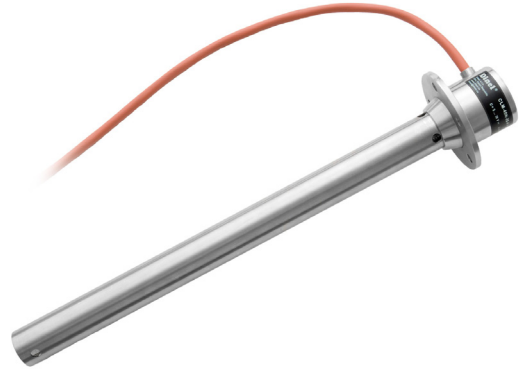


- For continuous level measurement of diesel fuel in trucks, building machines, locomotives, etc.
- Direct mounting into a tank through the 5-hole flange
- Arbitrary electrode length (max. 1 m)
- Current (4 ... 20 mA) or voltage (0 ... 10 V) output
- Housing and rod electrode from stainless steel
- Simple installation without any settings

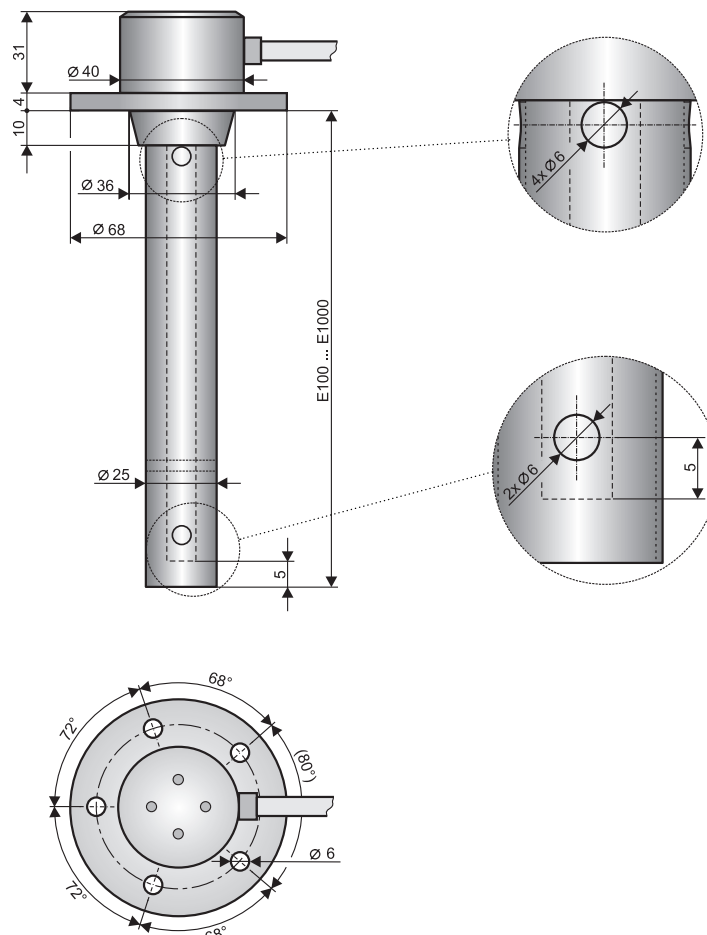


Capacitive level meter CLM[®] is intended for continuous measurement of the level of fuel (diesel). It consists of a measuring electrode and the electronics housing to which is firmly attached the cable. The electronic part converts the capacity to the current or voltage signal. For accurate measurements independent on the tank shape is the rod electrode placed inside the reference tube. The level meter has no setting elements, neither mechanical moving parts and so its installation is very simple. The production of its electrodes is possible in any length in the range from 100 to 1000 mm, so that the level meter can go through entire height of the tank. Mounting of the tank level meter is done by using 5-hole flange (SAE).

FEATURES OF VARIANTS

- **CLM-40N-20** **Uncoated rod electrode and reference tube** for level measurement of diesel fuel.
Electrode length from 0.1 m to 1 m.

DIMENSION DRAWING



TECHNICAL SPECIFICATION		
Supply voltage	CLM-40N-20-F-I CLM-40N-20-F-U	9 ... 30 V DC 16 ... 36 V DC
Type of Output	Current Voltage	4 ... 20 mA 0 ... 10 V
Off-load power consumption (CLM-40N-F-U)		Approx. 8 mA
Nonlinearity		Typ. 0.5% (max. 1%)
Temperature error		Max. 0.05% / K
Voltage error for current and voltage output		Max. 0.3 μ A/V and 0.1 mV/V
Maximal load (serial) resistance for current output (U = 24 V DC)		$R_{max} = 750 \Omega$
Minimal load resistance for voltage output		$R_{min} > 1 k\Omega$
Internal resistance / Electric strength (Electrode – Housing)		1 M Ω / 250 V AC
Coupling capacity / Electric strength (Housing – Supply leads)		51 nF / 250 V AC
Ambient temperature range		-40 ... +85°C
Vibration resistance (random)		57,9 m/s ² (10...2000 Hz)
Protection class		IP68
Cable	CLM-40N-20-F-I CLM-40N-20-F-U	PVC 2x 0.75 mm ² PVC 3x 0.5 mm ²
Weight (exclude electrode)		Approx. 0.5 kg

MATERIAL PERFORMANCE	
Sensor part	Standard material
Housing	Stainless steel W. Nr. 1.4301 (AISI 304)
Insulating bushing	plastic PPS
Electrode	Stainless steel W. Nr. 1.4301 (AISI 304)
Reference tube	Stainless steel W. Nr. 1.4301 (AISI 304)
Process flange	Stainless steel W. Nr. 1.4301 (AISI 304)

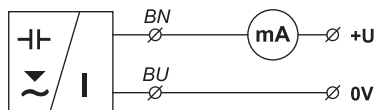
INSTALLATION AND RECOMMENDATIONS

- Mounting of the tank level meter is done by using 5-hole flange (SAE). Distance from the wall and bottom of the tank may be arbitrary.
- The level meter has no setting elements, its parameters are set on diesel fuel measurement. Measuring the level other media (bio-diesel, oil, etc.) must be consulted with the manufacturer (readjustment of the level meter).
- The level meter can be also used for similar applications in stationary tanks, containers, etc.

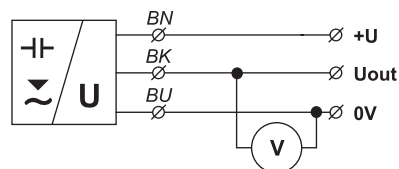
ELECTRICAL CONNECTION

The level meter is designed to be connected to supply unit or to controller through two or three-wire cable with. Connection diagram and inner view of the connector as shown in picture. Always disconnect the power supply before connecting the level meter! You can use car battery (24 V) or power supply (9 ... 30 V DC).

Wiring colours:
 BN – Brown
 BU – Blue
 BK – Black



Level meter with current output connection



Level meter with voltage output connection

AREAS OF APPLICATION

Accurate level measurement in diesel tanks of trucks, construction and agricultural machinery, locomotives etc.

ORDER CODE

CLM-40N-20-F- E Cable — Length of cable in meters (*variant "A"*)

Length of electrode (100 ... 1000 mm)

Type of output: **I** – Current (4 ... 20 mA)
U – Voltage (0 ... 10 V)

CORRECT SPECIFICATION EXAMPLES

CLM-40N-20-F-I E 250 Cable 4 m

CLM-40N-20-F-U E 870 Cable 6 m

ACCESSORIES

Optional – for extra charge

- Extra cables (over the standard length 2 m)
-

SAFETY, PROTECTIONS AND COMPATIBILITY

Level meter CLM-40 is equipped with protection against electric shock on electrode, reverse polarity, output current overload, short circuit and short time over voltages.

Electromagnetic compatibility is provided by conformity with standards: EN 55022/B, EN 61326-1, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6.

