TRODEKS®

COMPACT

ULTRASONIC LEVEL TRANSMITTER

TRTL

LEVEL MEASUREMENT IN SOLIDS and LIQUIDS!

The series is an compact 2-wire series ultrasonic level meter for continuous non-contact level measurement in liquids and solids.

Chemical Storage Tanks

Sewages

Pump Station

Water Tanks, Lakes, Ponds common use

- **Level or Distance mode**
- **4-20 mA output**
- **Continuous non-contact level measurement with compact version**
- **LC Display**
- **Exproof version**
- **All metal outer cover (IP67), airproof and alkali-resisting**

RELIABLE MEASUREMENT AND CONTROL

TRODEKS®

ULTRASONIC LEVEL TRANSMITTER TRTL

GENERAL SPECIFICATIONS

Power Supply:	24 VDC (±20%) 30mA
Display:	4 digit LCD
Display resolution:	For 4-6-8 m; 1 mm- others 1 cm
Accuracy:	% 0.2 F.S (in air)
Output:	4-20 mA, 2 wire, (0-500 ohm), (0-600 ohm Ex model)
Output Accuracy:	% 0.03 F.S
Temperature Range:	-40…+75°C , (LCD: -20…+70°C)
Temp. Compensation:	Otomatic
Pressure Range:	±1 bar
Measuring Period:	1 s
Configuration:	3 keys
Cable Connection:	PG 13.5
Beam Angle:	For 4-6-8-10-15-20-30 m 8° ,for 20-30 m 5° (3db)
Material:	Electronic Part Housing: ABS, Aluminium
Sensor:	ABS and PVC (Ex. Model St. St. ve PVC)
Protection:	IP 67
Process Connection:	G2" (for 4, 6 and 8m), others M94x2

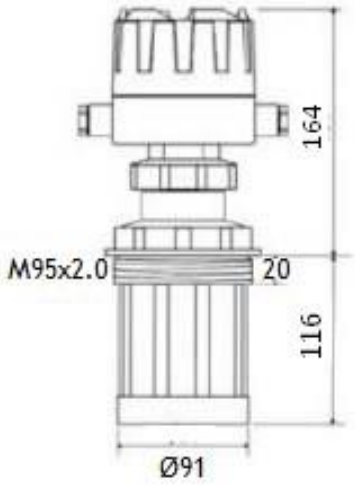
Measuring Range			Blacking list
	TRTL4 : 4m (Liquid)		TRTL4 : 0.20m
	TRTL6 : 6m (Liquid)		TRTL6 : 0.25m
	TRTL8 : 8m (Liquid)	TRTL8: 3m (Solid)	TRTL8 : 0.30m
	TRTL10: 10m (Liquid)	TRTL10: 4m (Solid)	TRTL10: 0.40m
	TRTL12: 12m (Liquid)	TRTL12: 5m (Solid)	TRTL12: 0.45m
	TRTL15: 15m (Liquid)	TRTL15: 6m (Solid)	TRTL15: 0.80m
	TRTL20: 20m (Liquid)	TRTL20: 10m (Solid)	TRTL20: 0.80m
	TRTL30: 30m (Liquid)	TRTL30: 15m (Solid)	TRTL30: 1.20m
	TRTL40: 40m (Liquid)	TRTL40: 20m (Solid)	TRTL40: 1.60m

Note: While in solids level measurement, ultrasonic energy is absorbed or scareted by the solid surface and a small amount of ultrasonic signal waves turn back to sensor. Therefore, measurement range of solids is aproximetly half of fluids . Valid measurement distance in solids depends on installation location, and spacing

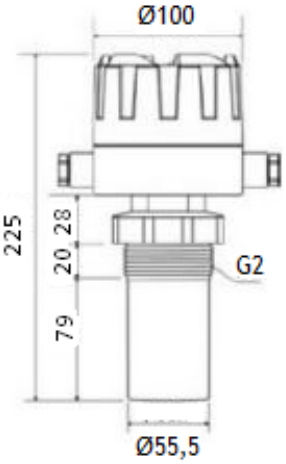
Codification:

Type	Material	Electrical Connection	Ex-Proof	Measuring Range
ALIT	B: Blue, Window, IP67	T: 2 wire	-	6m, 8m, 12m
	G: green, No Window, IP67		-	
	IF: Cream, No Window, IP67		Exia II C T6	

Dimensions for 12 m;



Dimensions for 6 and 8 m;



Measuring Principle:

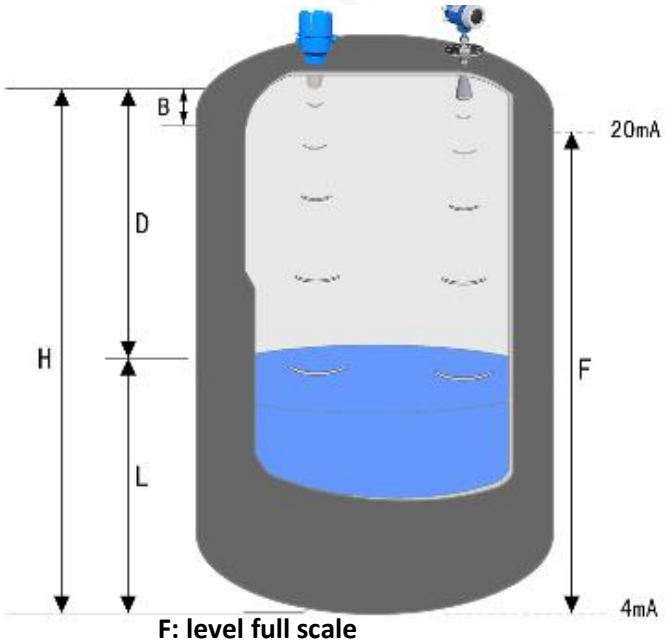
The sensor of the meter pulses in the direction of the product surface. There, they are reflected back and received by the sensor. The meter measures the time t between pulse transmission and reception. The meter uses the time t (and the velocity of sound c) to calculate the distance D between the sensor membrane and the product surface:

$$D = \frac{c.t}{2}$$

As the device knows the empty distance H from a user entry, it can calculate the level as follows:

$$L = H - D$$

An integrated temperature sensor compensates for changes in the velocity of sound caused by temperature changes.



F: level full scale

D: distance value

H: installation height

B: blacking distance

Calibration:

Calibration Enter the empty distance H and the span F to calibrate the device.

Application:

The series is an compact 2-wire series ultrasonic level meter for continuous non-contact level measurement in liquids and solids. It consists of probe and electronic units, both of which are leak-proof structure. This series can be widely applied to the metallurgical, chemical, electricity and oil industries.

Application Areas:

- Waste Water Treatment Plants
- Potable Water Treatment Plants
- Mining, Pulp and Paper Mills
- Food, Beverage & Industries
- Chemical, Petrochemical Industries
- Pools, Lakes and Dams
- Pump Stations
- Hydro-Electric Power Plants