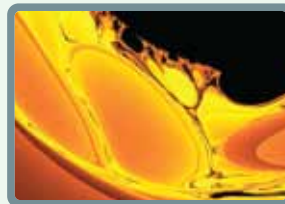




# Echo 200

## Orion Ultrasonic Level Transmitter

Orion Echo 200 Ultrasonic Level Sensors Transmitter offer non-contact measurement of liquids and solid levels and volume. The transmitter is four-wire type and uses PC software to set up parameters of the level and distance range to be measured. Fault indication keeps you informed of the operational and fault status at the transmitter. Orion Echo 200 is a cost effective, ultrasonic level transmitter for measuring and monitoring liquid levels in open and closed tanks. Its small size makes it compact, combining sensor and electronics in one housing. The sensor section is manufactured from Glass reinforced epoxy.



### FUNCTIONS

Ultrasonic level sensors are used for non-contact level sensing of highly viscous liquids, as well as bulk solids. They are also widely used in water treatment applications for pump control and open channel flow measurement. The sensors emit high frequency acoustic waves that are reflected back to and detected by the emitting transducer. Ultrasonic level sensors are also affected by the changing speed of sound due to moisture, temperature, and pressures. Correction factors can be applied to the level measurement to improve the accuracy of measurement.

### FEATURES AND APPLICATION AREAS

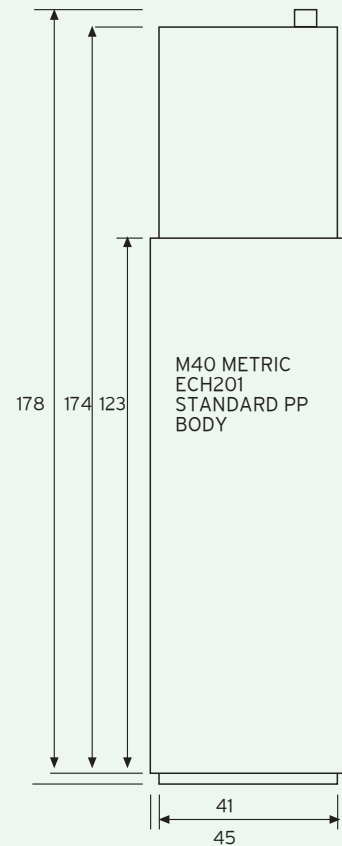
Signal loss, energy loss, minimum and maximum level alarm turns on error led at the end of definable time; filter feature controls rotary echo and takes them into process and eliminates interferences. Number of filter, measuring distance, reference depth for level measuring, measuring frequency, 4-20 mA scaling can be configured through configuration software. If a signal is given to Senc-latch input that its sensor front is closed for tanks containing mixer; it saves the last value and keep the analog output constant and reactivates the output again after signal goes off and it can be used in applications containing mixer arm scraper. When transducer with auxiliary more than one is to be attached to a single tank, senc-latch inputs are used by measuring permission and measuring is taken respectively and compared and measurement safety can be increased.

- Echo 200 series ultrasonic level transmitters; ultrasonic sensor, signal transmitter, Level Controller are inside IP68 PP case which is programmed with computer interface.
- Transmitter is powered 15-30 VDC; Features one digital input/Data (senc-latch), one 4-20 mA output.
- A range of filter functions control the return echoes and automatically eliminate all interference.
- The measured value can be transmit as level, distance
- Non-contact continuous level or volume measurement with all liquids in open or closed vessels.
- Distance and movement supervision.
- Waste engineering, water treatment and process technology.
- Food industry.
- Chemical and pharmaceutical industry.



## TECHNICAL DATA

SPECIFICATIONS	ECH 201
Power	24V DC +- %30 / 2 W max
Serial port	RS232 / Senc-Latch
Process out	4-20mA optically isolated (2kv) 14bit
Operating condition	Transmitter:-10 °C to +60 °C Sensor:-20 °C to +60 °C
Operating pressure	3bar max
Sensor acoustic window	Glass reinforced epoxy
Sensor housing	Delrin® POM-C EN 10204
Protection class	IP68
Resolution	1mm max
Linearity	%0.2
Max measuring distance	4m ( Liquid surface )
Min measurement distance	0,2m
Sensor frequency	75Khz
Beamwidth	-3 dB Full angle 10 degree
Compensation	Temperature compensated
Vibration test	5-500Hz 3G RMS random vibration IEC-60068-2-64



## ORDERING CODES

ECH201-24VDC

## COMPLIANCE TO APPLICABLE NORMS

### CE COMPLIANCE

EN 61000-6-4:2001 Generic emission standard. Industrial environments.

EN 61000-6-2:2005 Generic immunity standard. Industrial environments.

EN 61010-1:2001 Safety requirements for electrical equipment for measurement, control, and laboratory use.