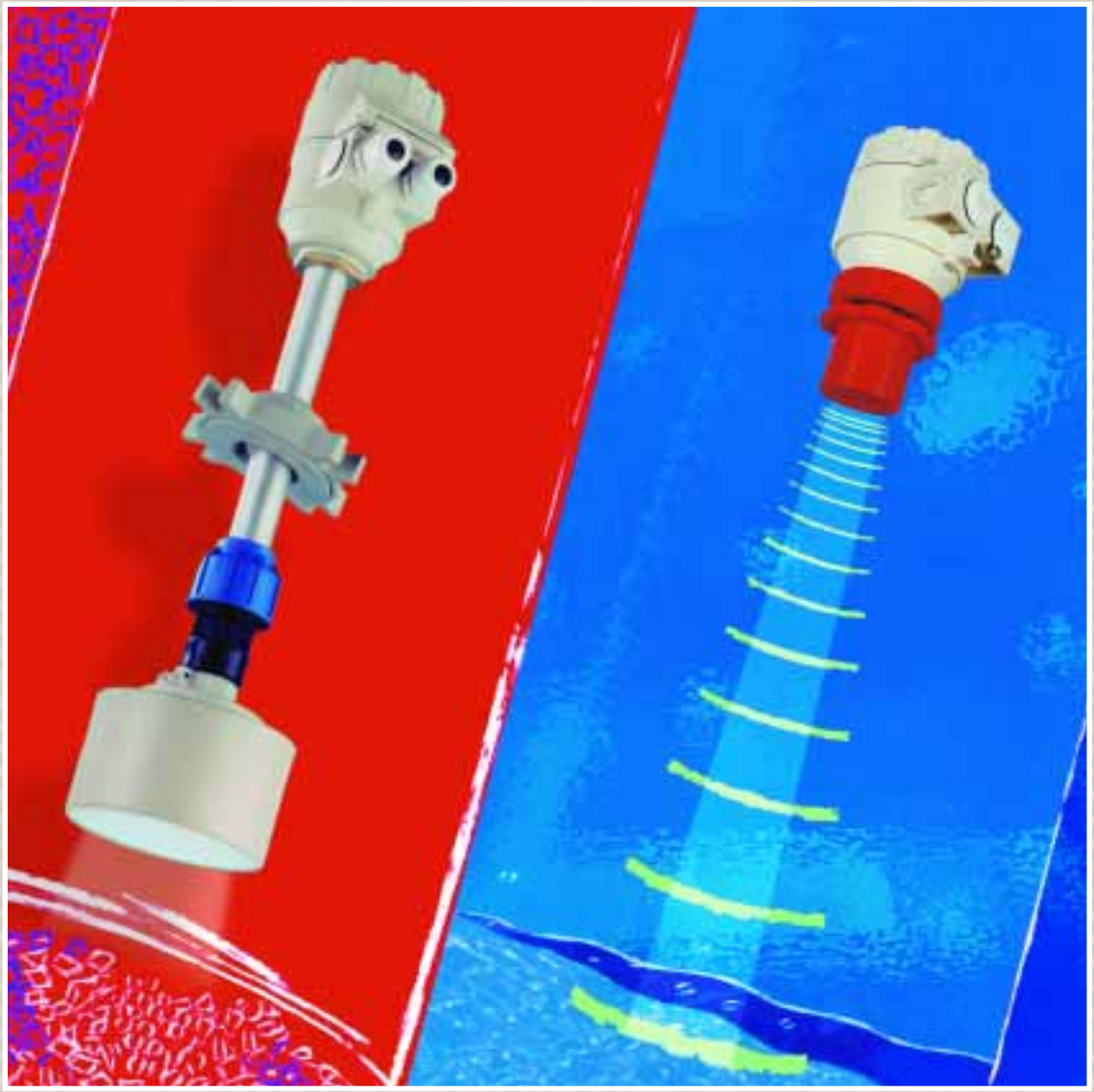
HART · Modbus
two or four-wire

nivelco®

EchoTREK

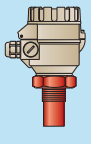
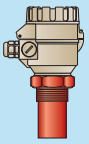
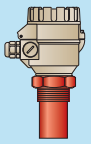
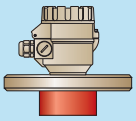
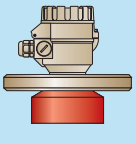
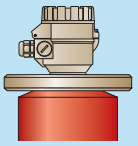
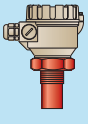
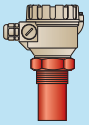
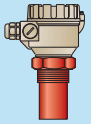
THE NEXT GENERATION

ULTRASONIC LEVEL TRANSMITTERS



OUR PROFESSION IS YOUR LEVEL

ECHOTREK – THE NEXT GENERATION – FOR LIQUIDS

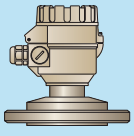
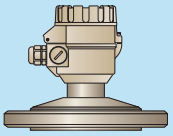
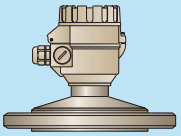
EchoTREK transmitters with plastic transducers for Liquids Four-wire						
Type	SB / ST-39□-□	SB / ST-38□-□	SB / ST-37□-□	SB / ST-36□-□	SB / ST-34□-□	SB / ST-32□-□
EchoTREK transmitters with plastic transducers for Liquids Two-wire				–	–	–
Type	SE / SG-39□-□	SE / SG-38□-□	SE / SG-37□-□ *	–	–	–
Range (m / feet)	4 / 13	6 / 20	8 / 26	10 / 33	15 / 49	25 / 82
Dead Band (m / feet)	0.2 / 0.65	0.25 / 0.82	0.35 / 1.2	0.35 / 1.2	0.45 / 1.5	0.6 / 2
Total beam angle	6°	5°	7°	5°	5°	7°
Process connection	1 1/2" BSP / NPT	2" BSP / NPT	2" BSP / NPT	Flange	Flange	Flange
Sensor material	PP, PVDF or PTFE			PP or PVDF		
Housing materials	Flame retardant plastic or powder paint coated aluminium					
Accuracy **	± (0.2% of measured distance + 0.05% of range)					
Ingress protection	Sensor: IP 68 Housing: IP 67					
Process temperature	– 30°C ... + 90°C					
Outputs	Two-wire: 4–20 mA max. 600 ohm, HART					
	Four-wire: 4–20 mA max. 600 ohm, HART, Relay (SPDT), RS485 (ModBus)					
Power Supply	Two-wire: 11.4 ... 36 V DC / 44 ... 800 mW					
	Four-wire: High V.: 85 ... 255 V AC / 6 VA Low V.: 10.5 ... 40 V DC / 3.6 W 10.5 ... 28 V AC / 4 VA					
Technical Information	DataSheet: Ultrasonics for Liquids Sm30gl2a06_ _a					

EchoTREK ultrasonic transmitters offer the best in liquid level measurement in a compact simple package. Developed using the established SenSonic range of Nivelco narrow beam angle pulse echo transducers, EchoTREK units are available with measurement ranges up to 25 metres - with standard plastic, PTFE or stainless steel sensor faces. Installed on the tank roof, or above the liquid surface to be measured, the transmitter gives an analogue output proportional to liquid level. Initial set-up is achieved using the simple plug-in display module: then the intelligent QUEST+ process adaptive signal processing software system ensures that the electronics identifies and validates the liquid surface signal, giving reliable level monitoring.

- Relay output for alarm and control (only four-wire)
- Complete open channel flow metering package
- 32 point linearisation
- Suitable for wastewater through to chemical industry applications
- Flush face sensors tolerate CIP cleaning (only four-wire)
- Full temperature compensation
- Easy set-up, even without the programmer



Display module of the two-wire EchoTREK

EchoTREK transmitters with stainless steel flush face transducers for Liquids (four-wire)			
Type	SBS / STS-36□-□	SBS / STS-34□-□	SBS / STS-32□-□
Range (m / feet)	7 / 23	12 / 39	15 / 49
Dead Band (m / feet)	0.4 / 1.3	0.55 / 1.8	0.65 / 2.2
Total beam angle	5°	5°	7°
Process connection	Flange	Flange	Flange
Sensor material	Stainless Steel		
Housing materials	Flame retardant plastic or aluminium		
Accuracy **	± (0.2% of measured distance + 0.05% of range)		
Ingress protection	Sensor: IP 68 Housing: IP 67		
Process temperature	– 30°C ... + 100°C (CIP 120 °C for max. 2 hours)		
Outputs	4–20 mA max. 600 ohm, HART, Relay (SPDT), RS485 (ModBus)		
Power Supply	High V.: 85 ... 255 V AC / 6 VA Low V.: 10.5 ... 40 V DC / 3.6 W 10.5 ... 28 V AC / 4 VA		
Technical Information	DataSheet: Ultrasonics for Liquids Sm30gl2a06_ _a		



* Under development

** Under optimal conditions of reflection and stabilised transducer temperature

ECHOTREK – THE NEXT GENERATION – FOR SOLIDS

A surprise from Nivelco - the experts in solids level measurement. EchoTREK compact level transmitters featuring SenSonic narrow beam angle transducers are offered for solids level monitoring - where previously only more complex, two part systems have performed. With the high efficiency SenSonic transducers, giving superb signal transmission, plus the QUEST+ software, using advanced process adaptive signal processing for reliable echo monitoring, EchoTREK units overcome filling noise, dusting and irregular surface formations in most cases to give a high performance, compact, powder and solids level measurement transmitter.

- Ranges up to 60 m
- Possibility of metering even during filling
- Narrow beam, highly efficient transducers
- Built-in aiming
- Full temperature compensation
- Dust-Ex approval**

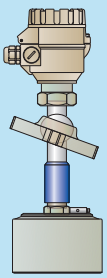
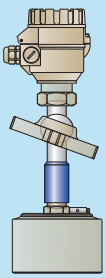
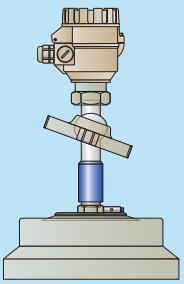


Programming module of the four-wire EchoTREK



EchoTREK measures the level of any powder or free flowing solid, even under difficult circumstances - such as dust clouds caused by pneumatic filling, or constantly varying and uneven material surfaces. Simple to install and commission, a built-in aiming device aids initial setting up on the tank roof. EchoTREK offers a unique cost effective transmitter solution for single as well as multi-vessel applications.



EchoTREK transmitters for solids (Four-wire)			
Type	SBD / STD-34□-□	SBD / STD-33□-□	SBD / STD-31□-□
Range (m / feet) *	15 / 49	30 / 98	60 / 196
Dead Band (m / feet)	0.6 / 2	0.6 / 2	1.2 / 4
Total beam angle	5°		
Process connection	Flange with aimer		
Sensor material	Plastic with plastic foam facing		
Housing materials	Flame retardant plastic or aluminium		
Accuracy *	± (0.2% of measured distance + 0.1% of range)		
Ingress protection	Sensor: IP 65 Housing: IP 67		
Approvals **	Dust-Ex-D (Zone 20)		
Process temperature	– 30°C ... + 75°C		
Outputs	4–20 mA max. 600 ohm, HART, Relay (SPDT), RS485 (ModBus)		
Power Supply	High V.:85 ... 255 V AC / 6.8 VA Low V: 10.5 ... 40 V DC / 4.1 W 10.5 ... 28 V AC / 4.6 VA		
Technical Information	DataSheet: Ultrasonics for Solids Sm30gS2a06_ _a		

* Under optimum conditions

** Pending

St30s01a0606b

ECHOTREK – THE NEXT GENERATION

HARSH PROCESS EXPERIENCE PACKED INTO A SINGLE COMPACT INTELLIGENT TRANSMITTER.

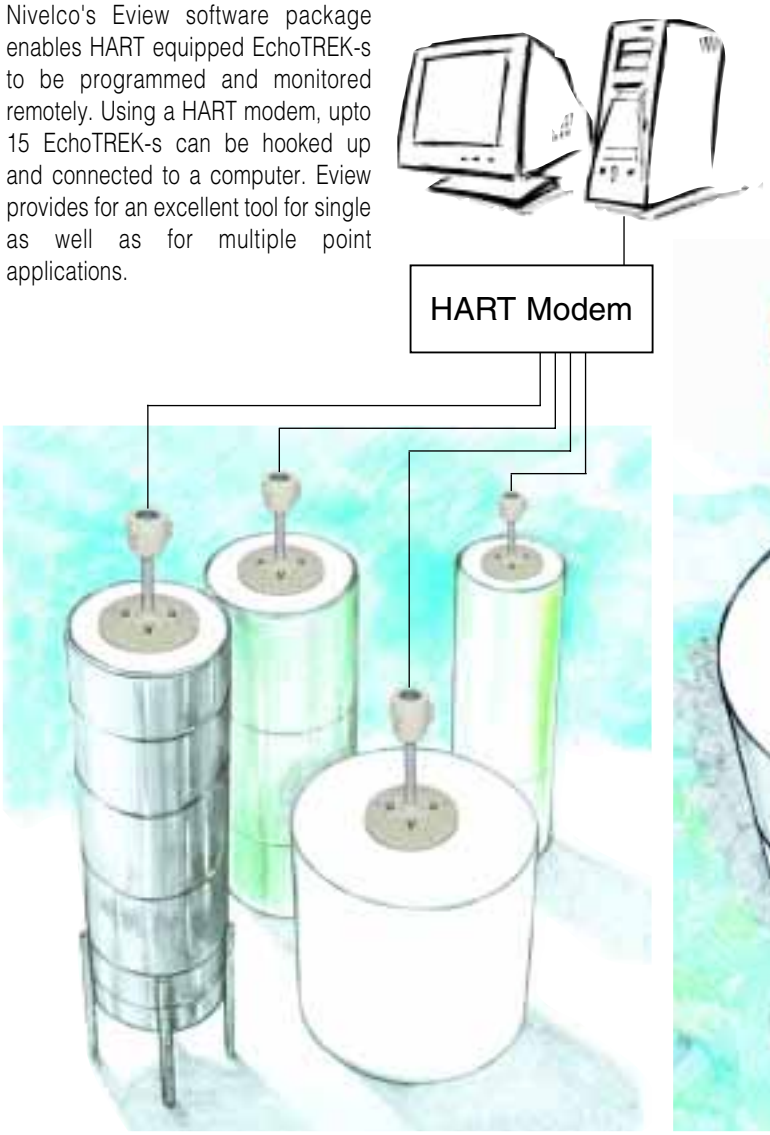
Ultrasonic pulse echo level meters from Nivelco offer you excellent tools for tank level or contents measurement of liquids or bulk solids. Experience gained over two decades and 30,000 applications in the harshness of the real process World - this is where Nivelco excels.

EchoTREK - the next generation level measurement transmitter - combines all this expertise into one compact transmitter. HART and ModBus communications allows remote data access as well as total access to the EchoTREK transmitter diagnostics, and allows reprogramming when needed, from the control room.

The practical experience behind EchoTREK has not been forgotten. For solids level measurement the sensors incorporate a built-in aiming device, to set up the transmitter at the optimum angle. The plug-in display module allows programming of the transmitter on the tank itself, whilst monitoring the level measurement. The QUEST software includes the capability to suppress interference from a fixed target within the ultrasonic pulse echo beam, where such reflection is unavoidable. All transmitters have a built-in temperature sensor for ullage space speed of sound compensation.

Multi-vessel application

Nivelco's Eview software package enables HART equipped EchoTREK-s to be programmed and monitored remotely. Using a HART modem, upto 15 EchoTREK-s can be hooked up and connected to a computer. Eview provides for an excellent tool for single as well as for multiple point applications.



Single vessel application

The plug-in programming module has a custom LCD display, plus a bar graph indicator, to show the tank level, volume contents, or open channel flow rate, in five digits of identified engineering units.



Technical specification may be changed without notice

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