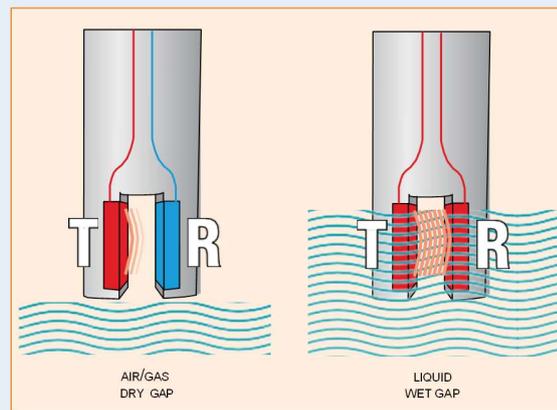


## ULTRASONIC CONTACT



Echotel® ultrasonic contact operates on a two crystal pulsed or “transmit-receive” principle which applies a high frequency electronic burst to the transmit crystal. The signal is then converted into ultrasonic energy and transmitted across the sensing gap towards the receiver crystal. When there is air in the gap, the high frequency ultrasonic energy will be attenuated, thereby not allowing the energy to be received. When there is liquid in the gap, the ultrasonic energy will propagate across the gap and the current shift or relay output will indicate a reception of the signal.



## ECHOTEL® 961

Ultrasonic level switch for hygienic use



**BPE**

## DESCRIPTION

Echotel® 961 ultrasonic level switches require no calibration to detect the presence of any liquid in less than 1s. Foam is ignored by this technology, so that the unit only detects the presence or absence of liquid. The pulsed wave technology permits the unit to resist turbulence, aeration, suspended solids and build-up.

ECHOTEL 961 has both 3A and EHEDG approval for use in hygienic applications.

ECHOTEL 961 offers either current shift or relay output.

## FEATURES

- No calibration required.
- 2-wire loop powered with mA output, AC/DC line powered with integrated relays.
- Continuous selftest with selectable error output.
- Process temperature from -40 °C to +165 °C (-40 °F to +325 °F).
- Process pressure up to 103 bar (1500 psi).
- LED identification for:
  - process alarm
  - error of transducer, electronics or electrical noise interference
  - wet/dry status of transducer.
- Push buttons for manual testing of alarm and error signals.
- Adjustable time delay up to 45 s.
- Suitable sensor design for CIP/SIP cleaning.
- Suited for SIL 1 and SIL 2 loops (full FMEDA report available).
- Hygienic connections.

## APPLICATIONS

- MEDIA: Any liquid.
- VESSELS: Any mounting position.
- CONDITIONS: Unaffected by
  - shifting dielectric, density or pH
  - presence of foam, turbulence, visible vapours
  - fast drain/fill rates
  - vacuum conditions.

## AGENCY APPROVALS

	Ex d	Ex ia	Ex n	Ex t	XP	IS	NI	Other
CSA						•	•	
FM						•	•	
SIL	SIL 2 (1001)							
TNO	Hygienic Machinery Directive 98/37/EC annex 1, section 2,1 EN 1672 part 2, Hygienic requirements EHEDG doc. 2 (second edit. March 2000) and doc. 8 (July 1993)							
Other approvals are available, consult factory for more details								



[www.bennypass.com](http://www.bennypass.com)