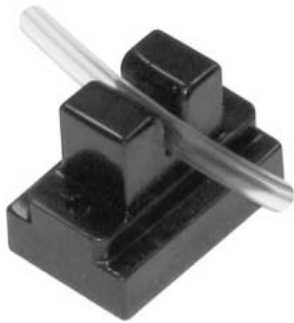


# ULTRASONIC SENSORS



TE Connectivity offers a wide range of level sensors using ultrasonic technology. Our ultrasonic sensors measure liquid level despite variations in transparency, viscosity, color or dielectric. These solutions include air bubble detection for medical pumps; point and continuous level sensors for the semi-conductor and high purity markets; and point level sensors for a variety of process control applications. We offer high accuracy, high frequency, short range continuous measurement sensors through air for process control. We also offer standard products that provide a system without moving parts, adjustments, or maintenance. TE works closely with OEMs to offer custom sensors suited for temperature ranges of -30°C to 150°C, pressures to 1,000 psi, various input/output configurations and multiple sensing points.

## STANDARD CONTACT POINT LEVEL



**MEAS LL-01**



**MEAS LL-10**



**MEAS LL-100**



**MEAS LL-101**

	<b>MEAS LL-01</b>	<b>MEAS LL-10</b>	<b>MEAS LL-100</b>	<b>MEAS LL-101</b>
Type	Gap	Tip	Tip	Gap
Unique Features	<ul style="list-style-type: none"> <li>All 316L SS</li> <li>Integral electronics</li> <li>Miniature threads</li> <li>No adjustment for viscosity, density</li> </ul>	<ul style="list-style-type: none"> <li>All 316L SS</li> <li>Integral electronics</li> <li>No adjustment for viscosity, density</li> </ul>	<ul style="list-style-type: none"> <li>All 316L SS</li> <li>Integral electronics</li> <li>No adjustment for viscosity, density</li> <li>Remote electronics available</li> </ul>	<ul style="list-style-type: none"> <li>High / normal fail-safe</li> <li>Integral electronics</li> <li>No adjustment for viscosity, density</li> <li>Demand self-test</li> <li>Remote electronics available</li> </ul>
Input	5 - 30 VDC	5 - 30 VDC	DC and AC options	DC and AC options
Output	<ul style="list-style-type: none"> <li>30 V, 3 W relay</li> <li>Analog 4 - 20 mA power loop</li> </ul>	<ul style="list-style-type: none"> <li>1 A SPDT</li> <li>Analog 4 - 20 mA power loop</li> </ul>	10A DPDT or analog	10A DPDT
Pressure Range	250 psi	1000 psi	1000 psi	1000 psi
Operating Temp.	-30°C to 80°C	-30°C to 80°C	-40°C to 150°C	-40°C to 150°C
Actuation point	0.25 inches	Custom (2.25, 6, 12, 18, 24 inches)	Custom (2.25 to 36 inches)	Custom (1 to 36 inches)
Process Connection	1/4"NPT and 1/2"NPT	3/4"NPT	3/4"NPT	3/4"NPT
Cable	1, 4, 10, 20 feet	1, 4, 10, 20 feet	10 to 40 feet optional	10 to 40 feet optional
Approvals	CE	CE	CE	CE
Typical Applications	Medical waste tanks, histology processors, compressors, chillers, coolant reservoirs	Hydraulic reservoirs, storage tanks, pipe lines, sewage systems	Industrial tanks, pump protection, hydraulic supply lines, storage tanks	Food processing tank, chemical tanks, oil and fuel level, liquid pharmaceuticals

## AIR-BUBBLE AND NON-INVASIVE POINT LEVEL



### MEAS AD-101

Type	Non-invasive
Unique Features	<ul style="list-style-type: none"> <li>• Bubble detection from 1 to 10 mm (+) tube</li> <li>• Temperature option</li> <li>• Occlusion option</li> <li>• Fluid differentiation</li> <li>• 3.3 V and 5 V input option</li> </ul>
Input	6 - 24 VDC standard
Output	Open collector
Pressure Range	Atmosphere
Operating Temp.	0°C to 65°C
Actuation point	—
Process Connection	—
Cable (Inches)	12
Approvals	CE
Typical Applications	Infusion pumps, dialysis machines, apheresis, auto-transfusion



### MEAS SL-630

Type	Non-invasive
Unique Features	<ul style="list-style-type: none"> <li>• Stick on dry contact</li> <li>• Point level detection</li> </ul>
Input	5 - 24 VDC
Output	TTL (High), dry condition
Pressure Range	Atmosphere
Operating Temp.	-30°C to 70°C
Actuation point	Variable
Process Connection	Reusable sensor, disposable tape
Cable (Inches)	12
Approvals	CE
Typical Applications	Chromatography, chemical analyzer, hemodialysis, reagent vessels

## CONTACT MULTI-POINT LEVEL



### MEAS SL-900

Type	Contact
Unique Features	<ul style="list-style-type: none"> <li>• Miniature</li> <li>• 10 μRA electropolished finish</li> <li>• 316 LSS body</li> <li>• Designed for high purity market</li> </ul>
Input	Variable
Output	Dual color LED and ½ A relay
Pressure Range	250 PSIG
Operating Temp.	-30°C to 93°C
Actuation point	Variable
Process Connection	1/2", 3/4" VCR, male/female
Cable (Inches)	Up to 24" shielded with strain relief, 9 pin connector
Approvals	NEMA 1 housing
Typical Applications	Pharmaceutical and semiconductor industries, high pressure vessels

## CONTINUOUS LEVEL



### MEAS SL-700

Type	Continuous transmitter through liquid
Unique Features	<ul style="list-style-type: none"> <li>• Contact</li> <li>• Remotely mounted</li> <li>• 316 SS sensor</li> <li>• Configurable via RS-232</li> </ul>
Input	24 VDC
Output	RS-232, analog, relay setpoints
Pressure Range	250 psi
Operating Temp.	-30°C to 93°C
Sensing Range	1.25" to 15" inches
Process Connection	3/4" VCR, male/female
Accuracy	0.06"
Elect Connection	Terminal block
Approvals	NEMA 1 housing
Typical Applications	Semiconductor tanks, ampoules and bubblers, high purity fluids, level in vacuum



### MEAS ML Series

Type	Continuous transmitter through air
Unique Features	<ul style="list-style-type: none"> <li>• Non-contact</li> <li>• Remotely mounted</li> <li>• 316 SS or epoxy sensor material</li> <li>• Configurable via RS-232</li> </ul>
Input	24 VDC
Output	RS-232, analog, relay setpoints
Pressure Range	Atmosphere
Operating Temp.	-30°C to 70°C
Sensing Range	0.5" to 5" inches
Process Connection	—
Accuracy	±0.0075"
Elect Connection	Terminal block
Approvals	NEMA 1 housing
Typical Applications	Microplate well level, test tubes and vials, bottle fill level, surface flaw detection