

# UCL-200 Premier Continuous Ultrasonic Sensors

- Accuracy of  $\pm 0.25\%$
- Easy push-button calibration
- Automatic temperature compensation over entire range
- Filtration eliminates false echo signals
- Small beam ( $8^\circ$ ) allows installation in tight spaces

Our premier ultrasonic sensors are available in three models:

**Intrinsically Safe (201001):** This two-wire model provides non-contact measurement up to 18 feet. Approved for use in Class I, Groups A, B, C and D; Class II, Groups E, F and G; Class III; T3C environments, the transmitter is an excellent choice for use with solvent, hydrocarbon and petroleum type liquids.

**General Purpose with Relays (201002):** This three-wire model provides non-contact measurement up to 24.5 feet and features an integral relay for pump, valve or alarm control. This transmitter is an excellent choice for applications with dirty, coating, scaling or corrosive type liquids such as wastewater, crude oil or wax.

**Long Range with Relays (201003):** This flange mounted, three-wire model provides non-contact measurement up to 40 feet. Its deeper measuring range makes this general purpose transmitter ideal for large bulk storage tanks, water or chemical reservoirs and waste stations. Media examples include chemicals, acids and slurries.



LCD display on Part Number 201001



LED display on Part Numbers 201002 and 201003

## Specifications

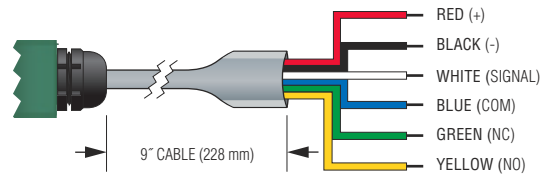
Accuracy	$\pm 0.25\%$ of span
Resolution	0.125"
Output	4-20mA
Beam Width	8-degree conical
Failure Mode	22mA
Supply Voltage	14 to 36 VDC
Pressure	30 psi @ 77°F
Temperature	-40°F to +140°F (-40°C to +60°C)
Temperature Compensation	Automatic over entire range
Enclosure Rating	NEMA 4X (IP 65)
Enclosure Material	Polypropylene
Transducer Material	PVDF
Calibration	Push button
Display units	Inches (cm)
Conduit Connection	0.5" NPT
CE Compliance	EN 50082-2 immunity EN 55011 emissions EN 61010-1 safety <sup>1</sup>

1. Not applicable to Part Number 201001.

## Wiring Diagram

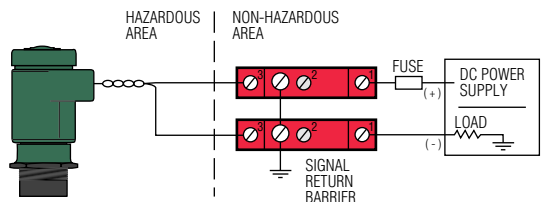
### SPDT Relay

Part Numbers 201002 and 201003

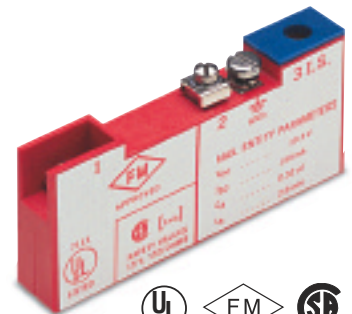


### Intrinsically Safe

Part Number 201001



Part Number 111954



The exceptionally compact, almost "wafer-thin" design of

GEMS 65800 Series zener barriers saves space and simplifies installation. They limit D.C. voltage and current to the hazardous area and provide a path for fault current. Encapsulated construction is impervious to dust and moisture.



UCL-200 Premier Continuous Ultrasonic Sensors – Continued

How to Order

Specify part number based on mounting, range and output requirements.

Mounting	2" NPT	2" NPT	3" 150# ANSI Flange <sup>1</sup>
Dimensions: inches/mm			
Parts Number	201001 ⚡	201002 ⚡	201003 ⚡
Intrinsically Safe	Yes	No	No
Range (ft)	0.5 to 18	0.5 to 24.5	1.5 to 40
Display Type	LCD	LED	
Sensor Material	PVDF	PVDF	PVC
Frequency	50 kHz	50 kHz	26 kHz
Dead Band	6"	6"	18"
Pulse Rate/sec.	2	8	8
Output	2-wire loop; 4-20 mA	3-wire sourcing; 4-20 mA	
Relay	Not available	SPDT latching, 10A, 250 VAC, 0.5 Hp	
Relay Mode	Not available	Selectable NO or NC	

⚡ = Stock item

Note 1: Four (4) 0.75" diameter bolt holes on a 6" diameter circle.

Beam Dimension



2" NPT Mount

Part Number	Depth (ft)	Radius (in)	Radius (cm)
201001	1	1.2	3.1
	2	2.1	5.2
	3	2.9	7.3
	4	3.7	9.5
	5	4.6	11.6
	6	5.4	13.7
	7	6.2	15.9
	8	7.1	18.0
	9	7.9	20.1
	10	8.8	22.3
	11	9.6	24.4
	12	10.4	26.5
	13	11.3	28.7
	14	12.1	30.8
	15	13.0	32.9
	16	13.8	35.1
	17	14.6	37.2
	18	15.5	39.3
201002	19	16.3	41.3
	20	17.2	43.6
	21	18.0	45.7
	22	18.8	47.8
	23	19.7	50.0
	24	20.5	52.1
	25	21.4	54.2

Flange Mount – Part Number 201003

Depth (ft)	Radius (in)	Radius (cm)	Depth (ft)	Radius (in)	Radius (cm)
1	1.59	4.04	21	18.37	4.04
2	2.43	6.17	22	19.21	6.17
3	3.27	8.30	23	20.05	8.30
4	4.11	10.43	24	20.89	10.43
5	4.95	12.56	25	21.73	12.56
6	5.78	14.69	26	22.57	14.69
7	6.62	16.82	27	23.41	16.82
8	7.46	18.96	28	24.25	18.96
9	8.30	21.09	29	25.08	21.09
10	9.14	23.22	30	25.92	23.22
11	9.98	25.35	31	26.76	25.35
12	10.82	27.48	32	27.60	27.48
13	11.66	29.61	33	28.44	29.61
14	12.50	31.74	34	29.28	31.74
15	13.34	33.88	35	30.12	33.88
16	14.18	36.01	36	30.96	36.01
17	15.02	38.14	37	31.80	38.14
18	15.85	40.27	38	32.64	40.27
19	16.69	42.40	39	33.48	42.40
20	17.53	44.53	40	34.31	44.53