

Automated Design Service, Inc. (ADS) is now operating as Dixon® Industrial Fluid Control to manufacture products specifically designed for liquid terminal operations. Our standard product offering is shown on the following pages. However, there are numerous additional applications, materials and custom designs available. Please call **877.963.4966** for technical information or assistance with ordering these products or visit canada.dixonvalve.com/ADS.

ADS Outalarms with Probe

Application:

- specifically designed for liquid terminal operation on batch loading and overfill protection, tank cars, tanks trucks, marine barges, suitable for open and closed dome

Sizes:

- 24", 36", 48" and 60" probe lengths standard, other lengths available

Materials:

- wetted materials: 316 stainless steel, PTFE standard, other materials available

Features:

- totally self-contained; no wires, tubing or external power
- rugged weather and corrosion resistant construction
- no moving parts, tip sensitive phase shift™ digital capacitance sensor for conductive and non-conductive fluid, conductivity sensor with integral splash shield
- requires no calibration or adjustment
- adjustable insertion length through a standard ½" NPT fitting
- high intensity audible and flashing visual outputs
- optional opto-isolated solid state contact output
- full, hard graduated laser engraved rod
- A100 operates up to 2500 hours on a single 9V alkaline battery
- fail safe continuous battery monitor goes to alarm state on low battery
- battery current drain <0.23 ma during standby; <50 ma in alarm state

Specifications:

- minimum dielectric constant 1.7
- temperature range: capacitance probe: -14°F to 250°F (-26°C to 121°C)
high-temp capacitance probe: -14°F to 325°F (-26°C to 163°C)
- activation point ¼" above liquid surface
- compatible with any liquid or dry bulk material with a dielectric constant of 1.7 or greater
- horn intensity 101 dB at 2'
- light output 3 each 3000 mcd high intensity flashing LED's
- pressure rating on standard unit: **50 PSI**, consult Dixon® for applications up to 300 PSI

Approvals:

- intrinsically safe design per ANSI/UL913 for Class I, Div I Groups A, B, C and D Hazardous Areas



A100
capacitance probe

A100 Probe

Length	Capacitance 250°F (121°C) max	Hi-temp Capacitance 325°F (163°C) max	Conductivity for conductive fluids
12"	<i>A100C12A</i>	<i>A100HC12A</i>	<i>A100CSS12A</i>
24"	<i>A100C24A</i>	<i>A100HC24A</i>	<i>A100CSS12A</i>
36"	<i>A100C36A</i>	<i>A100HC36A</i>	<i>A100CSS12A</i>
48"	<i>A100C48A</i>	<i>A100HC48A</i>	<i>A100CSS12A</i>
60"	<i>A100C60A</i>	<i>A100HC60A</i>	<i>A100CSS12A</i>
72"	<i>A100C72A</i>	<i>A100HC72A</i>	<i>A100CSS12A</i>
84"	<i>A100C84A</i>	<i>A100HC84A</i>	<i>A100CSS12A</i>

ADS Spillguard™ Systems

Application:

- shutdown and alarm system for tank cars, tank trucks, barges and ships, suitable for open and closed dome

Sizes:

- standard cable lengths: 15', 25' and 50', other lengths available
- insertion lengths 4" to 60" standard, other lengths available

Materials:

- wetted materials: 316 stainless steel and PTFE standard, other materials available
- controller housing NEMA 4X, NEMA 7, Explosion Proof, Class I, II, Groups B, C and D

Features:

- rugged, explosion proof, weather, chemical and corrosion resistant
- LED status lights visible through glass cover
- inserts into tank through standard ½" NPT fitting
- probe can be portable or permanently installed in the vessel
- laser engraved graduated rod with ¼" graduations
- probe-to-controller cable protected by stainless steel interlocking armor sheath and heavy duty latching connectors at both ends
- fail safe design, unit trips in the event of an open or shorted cable or loss of power
- choice of capacitance, conductivity, ultrasonic, temperature or float sensors
- input power: 120 VAC, 240 VAC or 24 VDC, 2.5 watts
- output relay de-energizes on high level, broken or shorted sensor cables or loss of power
- sensor excitation open circuit voltage 8 VDC, short circuit current 8 MA with built-in FM approved barrier
- optional self test feature, tilt and ground verification interlocks and latching circuit available

Specifications:

- probe temperature range: **-14°F to 212°F (-26°C to 100°C)**
- probe pressure rating: **50 PSI** with standard fitting, consult Dixon® for applications up to 300 PSI
- sensor suitable for Class I, II, III, Div 1, Groups A, B, C and D when used with supplied controller and cable lengths of 10,000' or less
- output relay contacts 2 form C (2PDT) rated 2 amps at 120/240 VAC, 1 form C (SPDT) with optional latching circuit and reset switch

Approvals:

- cable connectors designed for repeated mating meet IP 65 mechanical and environmental specifications
- FM, CSA HAZ Loc Class I Div I, Groups B, C and D



A210 Spillguard™ Monitors

Monitor Options	24V DC	120V DC
A210 Spillguard™ monitor	A210-24	A210-120
with bypass timer	A210B-24	A210B-120
with external reset switch	A210R-24	A210R-120

ADS Spillguard™ Probes

Capacitance Probes

Application:

- for materials with dielectric constant > 1.7, liquids, powders, slurries

Materials:

- probe: 316 stainless
- housing: NEMA 4X, IP66

Features:

- ½" NPT sliding fitting standard, ¾" fitting optional
- open dome adapter and washout fitting available
- tilt sensor optional

Specifications:

- capacitance probe: **250°F (121°C)** maximum
- high temp probe: **325°F (163°C)** maximum

Length	Capacitance	
	Capacitance	High-Temp
12"	A200PC12A	A200PHC12A
24"	A200PC24A	A200PHC24A
36"	A200PC36A	A200PHC36A
48"	A200PC48A	A200PHC48A
60"	A200PC60A	A200PHC60A
72"	A200PC72A	A200PHC72A
84"	A200PC84A	A200PHC84A

Conductivity Probes

Application:

- for conductive fluids such as acids and water based mixtures

Materials:

- probe: 316 stainless, Hastelloy available for HCL service
- housing: NEMA 4X, IP66

Features:

- ½" NPT sliding fitting standard, ¾" fitting optional
- open dome adapter and washout fitting available
- pressure and tilt sensor options
- single electrode protected in housing
- dual electrodes exposed for easy cleaning

Length	Conductivity	
	Single Electrode	Dual Electrode
12"	A200PCSS12A	A200PCSSDP12A
24"	A200PCSS24A	A200PCSSDP24A
36"	A200PCSS36A	A200PCSSDP36A
48"	A200PCSS48A	A200PCSSDP48A
60"	A200PCSS60A	A200PCSSDP60A
72"	A200PCSS72A	A200PCSSDP72A
84"	A200PCSS84A	A200PCSSDP84A

Float Probes

Application:

- for use with foaming, very low density, or highly viscous liquids

Materials:

- probe: 316 stainless, Hastelloy available for HCL service
- housing: NEMA 4X

Features:

- single point standard, dual or multi-level float available
- open dome adapter and washout adapter available
- A100 battery powered monitor

Length	A100	A200
	Outalarm Float Probe	Float Probe
24"	A100F24DA	A200F24DA
36"	A100F36DA	A200F36DA
48"	A100F48DA	A200F48DA

Multi-Point Ultrasonic Probes

Application:

- for use when multiple detection points are required such as dribble mode, pump shutoff and overflow alarm

Features:

- Up to 5 sense points available
- pressure sensor
- ground verification
- tilt storage probe only active in vertical operational position

ADS Spillguard™ ultrasonic probes are built special order to customer specifications. Contact Dixon at 877-963.4966 to discuss with our technical specialists.

ADS Outgauge Gauges

Applications:

- set level fill point for manual / visual fill control
- measure outage requirements on mobile tanks

Material:

- 316 stainless steel

Feature:

- open dome bracket

Length	Standard Outgauge	Outgauge with J Bar
2'	A800OG2	A8000GJ2
3'	A800OG3	A8000GJ3
4'	A800OG4	A8000GJ4
5'	A800OG5	A8000GJ5



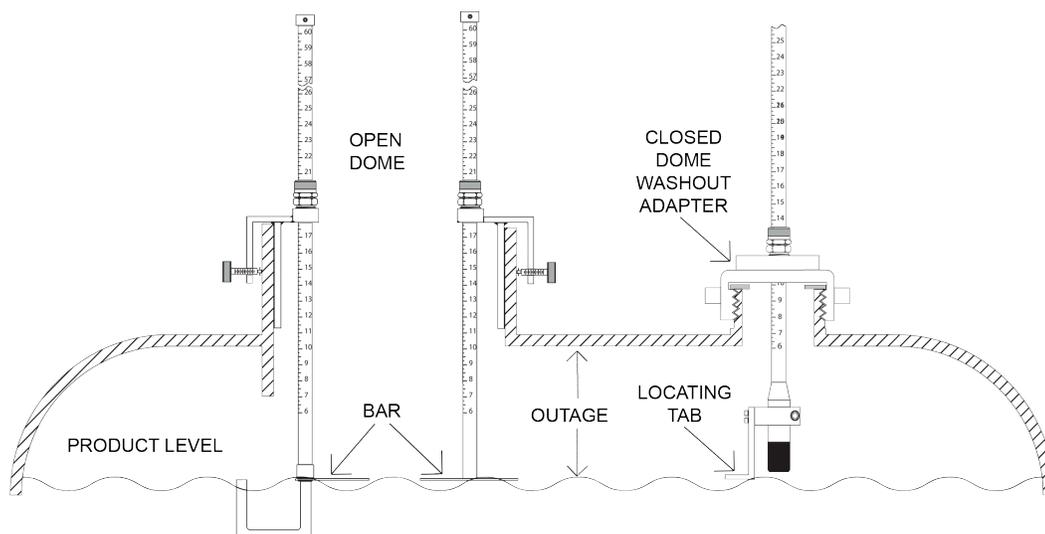
laser engraving closeup

Setting Outgauge on Closed Dome with A100LT Locating Tab

1. Screw washout adapter on to washout nozzle
2. Withdraw gauge rod until tab touches inside shell of tank. Note reading on rod.
3. Add desired outage to reading and push down rod to the calculated reading.
4. The probe sensor is now at the desired outage.

Setting Outgauge on Open Dome Operation

1. Clamp bracket to vertical section of dome.
2. Withdraw gauge rod until bar touches inside shell of tank. Note reading on rod.
3. Add desired outage to reading and push down rod to the calculated reading.
4. The bar is now at the desired outage.
5. For tanks with manway protruding past shell, use J-bar gauge.



ADS Gauge Rods



Application:

- used to gauge liquid levels in any mobile tank

Size:

- 1/2" x .065 weight hardened 316 stainless steel

Features:

- laser engraved scale with 1/4" graduations
- rods come in two sections that screw together at the midpoint
- foot marks inscribed on rod at 1' intervals below the inch mark
- heavy duty plastic handle



laser engraving closeup

Part Number	Description
ADS4R	gauge rod, 4' length, one piece
ADS8GR	gauge rod, 8' length, two piece
ADS12GR	gauge rod, 12' length, two piece

ADS Spillguard™ Cables

Features:

- 3 or 5 pin connector
- 316 stainless steel armoured cable or yellow rubber cable
- custom lengths available, call 877.963.4966 for more information

Armored Cables



Length	3 Pin	5 Pin
15'	A200CA3P15	A200CA5P15
20'	A200CA3P20	A200CA5P20
25'	A200CA3P25	A200CA5P25
50'	A200CA3P50	A200CA5P50

Rubber Cable¹



Length	3 Pin
25'	A200CB3P25

¹Note: For use with (-M) mini connectors only.

ADS Parts and Accessories

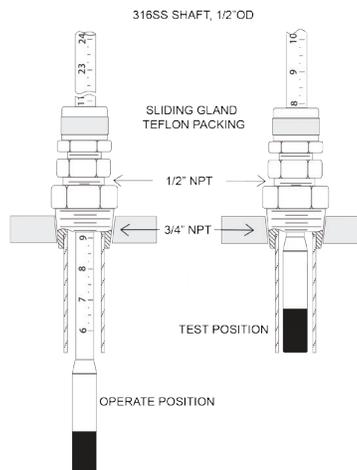
Part Number	Description
A100DA	open dome adapter 1/2" NPT
A100DB	open dome adapter 3/4" NPT
A100TTB	tank truck 3" wash-out adapter, 3/4" NPT
A100ST	self test fitting, 316 stainless steel, 3/4" NPT
A100CA1050	1" cam and groove coupler and 1/2" NPT bushing, stainless steel
A100CA1050V	1" cam and groove coupler with 1/2" NPT busing and 1" NPT vent tee, stainless
A100SG-POLY	A100 / 200 splash guard, with 1 1/8" diameter poly
A100LT	locating tab for A100 / 200 probes
A100MTR	replacement A100 monitor only
A100CBLMTR	cable to monitor adapter
A2100CR-3	cable junction box 3-pin
A210CR-5	cable junction box 5-pin
A210PZH-24	A210 Piezo horn 24VDC
A210-120TC	tri color external signal light



A100DA / A100DB



A100TTB



A100ST



closed position (normal) open position (for cleaning)

A100SG-POLY



A100LT



A210PZH-24



A210-120TC

Dixon®, founded in 1916, is a premier manufacturer and supplier of hose couplings, valves, dry-disconnects, swivels, and other fluid transfer and control products. The company's global reach includes a wide range of products for numerous industries including petroleum exploration, refining, transportation, chemical processing, food & beverage, steel, fire protection, construction, mining and manufacturing. Dixon®'s strategic objective is to create solutions that make products safer, leak-free, longer lasting, and always available.



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INDUSTRIAL CONTROLS

Industrial Fluid Controls

Cincinnati, OH 45246
ph 513.874.8499

