Westbay MOSDAX System

General Description

MOSDAX* System probes are designed to access measurement port couplings and to carry out monitoring and testing tasks in Westbay* System installations. MOSDAX probes can be used in all MP38 System and MP55 System installations. All MOSDAX probes incorporate a silicon strain gauge pressure transducer and an electronic module for bi-directional communication of data and commands between the control circuitry and the surface control devices. The modules are individually addressable for daisy-chain operation of multiple MOSDAX probes on a single cable.

The Model 2523 Pressure Probe is used to measure fluid pressure inside and outside of the Westbay System casing for calculation of piezometric levels.

The Model 2531 Sampler Probe is used to collect fluid samples, measure fluid pressure, and conduct some kinds of tests.

The Model 2532 Sampler Probe can be used to collect samples, measure fluid pressure, conduct some kinds of tests, and operate Westbay System hydraulic pumping port couplings.

The Model 2536 MAGI Interface is used to supply power to the probe(s) and control communication using the integral keypad and LCD or a PC running MProfile software.

The Model 2546 MAGI Data Logger is used for recording and storing data from one to thirty-one MOSDAX probes plus the integral barometric module. Programming/setup/data retrieval is accomplished using a PC running MLog software.

Transducer Ranges

0	to	30	psia	[0	to	2	bar]
0	to	250	psia	[0	to	17	bar]
0	to	500	psia	[0	to	35	bar]
0	to	1,000	psia	[0	to	69	bar]
0	to	2,000	psia	[0	to	138	bar]

Transducer Accuracy

Combined non-linearity, hysteresis and repeatability: +/- 0.1% of full scale.

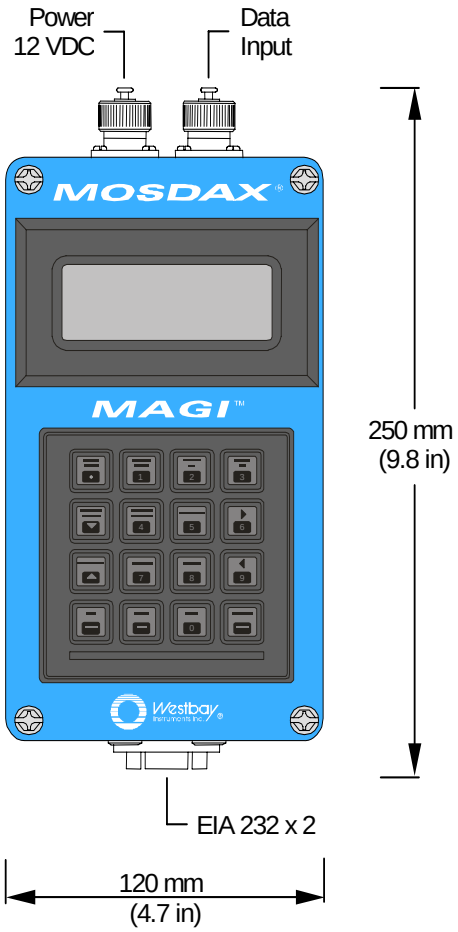
Calibration data traceable to U.S. NIST provided with each probe.

Technical Specifications

Power Input:	12 VDC at up to 1 Amp to MAGI
Power Output:	48 VDC at up to 200 mA, supplied to probes from MAGI
Data transfer rate:	38,400 bps maximum
Interface:	Westbay proprietary digital format
Maximum Operating Depth:	4,400 ft [1350 m], depending on transducer range[2]

Notes:
1. Specifications subject to change without notice.
2. At depths > 3,280 ft [1000 m] the standard cable (Part No. 9201) must be supplemented by larger diameter cables and/or power booster units.

Westbay MOSDAX System
MAGI
Model No. 2536/2546



General Description

The MAGI (MOSDAX* Automated Groundwater Interface) is used to power and control a "string" of up to 31 MOSDAX Pressure Probes in Westbay* System monitoring wells. It can be configured to operate in four modes:

Single Probe Mode (Model 2536):
Allows the operator to use the keypad and LCD display to control a single probe in a manner similar to the hand held controller and discontinued MOSDAX PCI.

Data Logger Mode (Model 2546):
For data logging activities. A portable computer running MLog software can be used to control the probes when they are being installed, to configure the logger for "stand alone" data logging operation and to download stored data. A MOSDAX transducer module inside the logger measures barometric pressure.

Legacy Mode (Model 2536):
Replaces the discontinued MPCI by allowing the operator to use a hand held controller and MProfile software.

Environmental

Enclosure:
The case is made of water-resistant, die cast aluminum and the unit has water-resistant connectors with connector caps.

Storage Temperature:	-30°C	to +80°C
Operating Temperature:	-20°C	to +70°C
	+3°C	to +50°C (atmospheric module)

Dimensions & Weight

Case Size:	8.7 in x 4.7 in x 3.5 in	[220 mm x 120 mm x 90 mm]
Weight:	4.4 lb	[2.0 kg]

Product Specification

Technical Specifications

Power Requirement:	12 VDC (11 VDC min., 16 VDC max.)
Current Consumption:	50 mA continuous operation, 1A motor operation
Standby Current:	< 700 μA
Interface:	EIA 232 to a portable computer running Westbay software
Data Rate:	38,400 bps max.
Power Output:	48 VDC (nominal) current limited @ 200 mA
Data Storage:	1 Mb battery-backed RAM (63,000 readings)
Data Collection Rate:	Programmable from 7 per second to 2 per day
Atmospheric Transducer: (Model 2546)	0 - 30 psi [0 - 2 bar] calibrated from 5 - 30 psi [0.3 - 2.0 bar]
Optional 12 V Relay:	Programmable 12 VDC relay-switched output (3 A max.) (additional 0.2 lb [100 g] weight)

Notes: 1. Specifications subject to change without notice.

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Westbay MOSDAX System Pressure Probe Model 2523

General Description

The MOSDAX* Pressure Probe is designed to be compatible with measurement port couplings in Westbay* System installations and measure pressure in the monitoring zones. The probe incorporates a retractable location arm, controlled from the surface, which positions the face seal of the probe at the measurement port valve. A shoe on the probe, which is also controlled from the surface, is then extended so that the probe opens the measurement port valve isolating the pressure transducer from the fluid in the casing interior and providing a direct hydraulic connection between the fluid outside the port valve and the transducer inside the probe.

A MOSDAX pressure probe can be used as a single unit or in a "string" of up to 31 probes in series on a single-conductor armored control/data cable. For transducer ranges and other technical specifications consult the MOSDAX System Product Specification.

Materials

316 SS, Delrin, Nylon, Buna N

Dimensions & Weight

Length	18.4	in	466	mm
Maximum Width (shoe & arm retracted)	1.3	in	32.5	mm
(shoe extended)	1.6	in	40.7	mm
Dry Weight	3.1	lb	1.4	kg
Submerged Weight	2.9	lb	1.3	kg

Environmental

Storage & Operating Temperatures	+5°C to 80°C

Notes: 1. Specifications subject to change without notice.

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Westbay MOSDAX System Sampler Probe Model 2531

General Description

The Model 2531 Sampler Probe is designed to be compatible with measurement ports in Westbay* System installations to measure pressure and retrieve samples from the monitoring zones. The probe incorporates a retractable location arm, controlled from the surface, which positions the face seal of the probe at the measurement port valve. A shoe on the probe, which is also controlled from the surface, is then extended so that the probe opens the measurement port valve and seals around the valve, isolating it from the fluid in the casing interior and providing a direct hydraulic connection between the fluid outside the port valve and the transducer inside the probe. The hydraulic connection continues through the sampling valve to a detachable sampling container. The pressure transducer allows pressures to be measured before, during and after sampling, which provides important QA data to verify the sampling procedures.

For available transducer ranges and other technical specifications consult the MOSDAX System Product Specification.

Materials

316 SS, Delrin, Nylon, Teflon, Viton, Buna N, PVC

Dimensions & Weight

Length	23.7	in	602	mm
Maximum Width (shoe & arm retracted)	1.3	in	32.5	mm
(shoe extended)	1.6	in	40.7	mm
Dry Weight	4.2	lb	1.9	kg
Submerged Weight	3.9	lb	1.8	kg

Environmental

Storage & Operating Temperatures	+5°C to 80°C

Notes: 1. Specifications subject to change without notice.

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Westbay MOSDAX System Sampler Probe Model 2532

General Description

The Model 2532 Sampler Probe is designed to be compatible with measurement ports in Westbay* System installations to measure pressure and retrieve samples from the monitoring zones. When fitted with alternate face plates, the 2532 Sampler Probe is also designed to open and close hydraulic pumping ports. The probe incorporates a retractable location arm, controlled from the surface, which positions the face seal of the probe at the measurement port valve. A shoe on the probe, which is also controlled from the surface, is then extended so that the probe face seal opens the measurement port valve and seals around the valve, isolating it from the fluid in the casing interior and providing a direct hydraulic connection between the fluid outside the port valve and the transducer inside the probe. The hydraulic connection continues through the sampling valve to a detachable sampling container. The pressure transducer allows pressures to be measured before, during and after sampling, which provides important QA data to verify the sampling procedures.

For available transducer ranges and other technical specifications consult the MOSDAX System Product Specification.

Materials

316 SS, Delrin, Nylon, Teflon, Viton, Buna N, PVC

Dimensions & Weight

Length	23.7	in	602	mm
Maximum Width (shoe & arm retracted)	1.3	in	32.5	mm
(shoe extended)	1.6	in	40.7	mm
Dry Weight	4.2	lb	1.9	kg
Submerged Weight	3.9	lb	1.8	kg

Environmental

Storage & Operating Temperatures	+5°C to 80°C

Notes: 1. Specifications subject to change without notice.

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Westbay System
Non-Vented Sample Container
250 ml Capacity
Model 2408

General Description

The Model 2408 Sample Container is used to collect fluid or gas samples up to 250 ml in volume in Westbay* System installations. The sample container is connected to a sampler probe by a flexible tube. The container has two shut-off valves, one at each end, to permit the sample to be extracted without venting of pressure. Both valved ends can be removed for cleaning and decontamination after use.

For collection of larger-volume samples, up to four (4) 250 ml containers can be attached in series, resulting in a total volume of one (1) litre per trip into the well.

Connections

¼ inch 37º JIC Fitting (7/16-20 UNS thread)

Materials

316 SS, Teflon, Viton

Dimensions & Weight

Length	24.5	in	622	mm
Maximum Diameter	1.12	in	28.5	mm
Dry Weight	1.9	lb	0.85	kg
Submerged Weight	1.0	lb	0.45	kg

Pressure Rating

Internal Pressure	2000	psi	138	bar
External Pressure	2000	psi	138	bar

Notes: 1. Specifications subject to change without notice.

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Westbay System
Non-Vented Sample Container
1000 ml Capacity
Model 2420

General Description

The Model 2420 Sample Container is used to collect fluid or gas samples up to one (1) litre in volume in Westbay* MP55 System installations. The sample container is connected to a sampler probe by a flexible tube. The container has two shut-off valves, one at each end, to permit the sample to be extracted without venting of pressure. Both valved ends can be removed for cleaning and decontamination after use.

For collection of larger-volume samples, two (2) 1000 ml containers can be attached in series, resulting is a total volume of two (2) litres per trip into the well.

Connections

¼ inch 37º JIC Fitting (7/16-20 UNS thread)

Materials

316 SS, Teflon, Viton

Dimensions & Weight

Length	33.4	in	850	mm
Maximum Diameter	1.93	in	49	mm
Dry Weight	6.4	lb	2.9	kg
Submerged Weight	3.2	lb	1.5	kg

Pressure Rating

Internal Pressure	2000	psi	138	bar
External Pressure	2000	psi	138	bar

Notes: 1. Specifications subject to change without notice.

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