

ADVANCED MICRO INSTRUMENTS
An ENPRO Company

PORTABLE SAMPLE PUMP

FOR ATMOSPHERIC PRESSURE OR VACUUM SAMPLES

AMI has developed a Portable Sample Pump Module designed to meet requirements for Class 1, Div 2 Group C,D suitable for a wide range of previously impossible applications.

- Hazardous area sample pump
- Low diffusion diaphragm for trace O_2 measurement
- Designed to meet requirements for Class 1 Division 2 Group CD
- Withdraws sample from low pressure or vacuum gas lines
- Works with AMI Watchdog, 2010BX Analyzers, and 1000BX Portable O_2 Analyzers

Our high quality pump uses a unique diaphragm that diffuses less than 0.5 ppm of oxygen while drawing from pressures as low as 14” Hg. It pushes the sample gas through the trace oxygen analyzer allowing the sensor to operate at atmospheric pressure. Electrochemical oxygen sensors must operate at or very close to atmospheric pressure for accurate operation. Prior sample pump technologies used various types of diaphragm materials, which either allowed too much oxygen to diffuse, or alternatively developed small leaks allowing air to be drawn into the system. In either case, the measured oxygen values would become misleadingly high. The alternative – locating the pump downstream of the analyzer so that it could draw the sample gas through the analyzer - would cause the sensor to operate at varying levels of vacuum determined by the pressure at which the pipeline or application operated, causing erroneously low readings, drift, and sensor damage.

The AMI Sample Pump Module incorporates a 12 VDC long life brushless motor and pump designed to last for over 20,000 continuous hours. It uses special electronics that allow operation of this pump from rechargeable batteries while the batteries are being recharged, as well as independently of the charger. The pump is capable of handling a wide range of inlet pressures from 14” Hg. to 10 psig while maintaining a constant 10 psig output pressure.

SPECIFICATIONS

Area Classification:	Designed to meet requirements for Class 1, Div.2, Group C,D
Connections:	1/4” SS compression fittings
Power:	12 VDC @700 ma.
Pressure range:	14” Hg. to 10 psig.

Dimensions:	9.5"W x 11.0”H x 6.0"D
Weight:	10 lbs.
Mounting:	Portable

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