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### Show products

**Dolch** highlighted its MilPAC, a sealed, ruggedized, dustproof and dirtproof, indoor/outdoor portable computer. It's built to survive military and industrial lethal zones and situations in remote field service, on-site maintenance, flight line systems analysis, geophysical exploration, shipboard exposure, factory floor environments, and military deployment.

Invensys demonstrated its new Coriolis mass flow meter that continues to operate during two-phase flow. The CFT50, winner of the Best of Show Award at ISA 2002's New Product Showcase, controls all aspects of the Coriolis meter for precise measurement in difficult to measure applications. It overcomes a limitation of conventional Coriolis meters, minimizing the impact of entrained air by using a patented dual digital processing system that improves meter control throughout all stages of void fraction operation. One processing system controls the meter drive sequence to provide uninterrupted flow tube operation. The second system processes the measurement data from the Coriolis meter, which ensures precise fluid measurements.

**Krohn** presented its Inviromag family of magnetic flow meters, targeted at the water and wastewater industries. These products offer high accuracy, rapid response time, no obstructions, simple installation and commissioning, and low maintenance. The design incorporates as standard a high-quality polyurethane liner with field replaceable HC4 Hastelloy electrodes. They also offer a 2,000:1 turndown with specified measuring accuracy.

Fluke displayed its 789 Process Meter, a combination of a digital multimeter and a loop calibrator in a single handheld tool. Building on the functionality of the 787 ProcessMeter, the 789 adds a 24-V loop power supply, display that's 200% larger and enhanced backlighting with two brightness settings. Other improvements include a HART mode setting with a built-in 250-ohm resistor, increased battery performance with four AA batteries, 0% to 100% mA span check buttons to toggle from 4-20 mA, and an infrared I/O serial port.

The Foxboro Measurement & Instrument division of Invensys Production Management demonstrated its family of pH sensors, designed to improve operation in traditional problem areas within harsh process applications. The DolpHin sensor line incorporates patent-pending measurement and reference technology that performs more than twice as long as traditional pH sensors in harsh application. The pH glass formulation provides measurement stability and accuracy and longer service life in high-temperature applications up to 250°F (121°C).

**Cirronet, Inc.**, a provider of wireless transceivers and broadband Internet access products, announced an addition to its SEM product family of wireless Ethernet bridges used to interconnect Ethernet-based devices in factory floor and industrial applications. The SEM5811 and SEM5811X operate in the unlicensed 5.8-GHz band, avoiding interference issues in the 2.4-GHz or 900-MHz band due to other license-free devices. They feature an over-the-air data rate of up to 1.23 Mbps and operate over an industrial temperature range. SEMs operate in point-to-point and point-to-multipoint configurations.

**Key Instruments** featured the Series 8400 Optalarm, a hi/low optical flow sensing alarm system that permits the local setting of the upper and lower alarm flow limits. It combines noncontact optical sensors and electromechanical features to set, monitor, and control flow. These units are designed for liquids and gases. Local or remote flow range parameters can be present with either the panel controls or with an included, fully functional PC remote interface.



Ametek celebrated its B/W Controls DataStik level sensor with a demonstration at ISA 2002 of the battery-powered, wireless continuous tank level gauging system for high-resolution inventory monitoring applications. Designed to replace manual measurement, the Series 7243 DataStik is ideal for supply chain management, vendor- managed inventory systems, and inventory monitoring applications. The system combines the reliability of Ametek's magnetostrictive position sensing technology with Innovative Sensor Solution Ltd.'s patented wireless telemetry technology.

**ASCO** introduced its RedHat Next Generation line of solenoid valves, which integrate a power management circuit into the solenoid. The series uses only 2 W of power and provides the same performance as a 17-W AC solenoid valve. The series improves performance by 200% to 500% so it's equivalent to AC pressure and flow levels. Its lower current draw extends the life of the current power supply by decreasing the load for any given number of valves.

Fourier's new MicroLog Plus is a wireless data logger with automated download. Cen tralized data logging collation from multiple data loggers happens with the MicroLog cradle technology. It is connected to a single unit and receives data from up to 200 smaller data loggers, transmitting from distances of 100-300 m. The transmission is time division multiple access, which means every cradle has its own ID and transmission time slot. Man agers then find daily reports for auditing and historical analysis waiting on their desktops. Soft ware also provides online monitoring with multiple meters running continuously.

MTS Systems Corp. announced that HART Scien tific offers a device driver designed to communicate with its M Series analog liquid level gauges. HART, a maker of measurement and calibration equipment, has recognized the analog level sensor by adding it to its manufacturer device descriptions library. Now its analog magnetostrictive level sensors, the MR Series, may output multiple float, temperature, and calibration data simultaneously with the use of handheld, PC-based, or PLC-based Hart systems.

**FieldServer Technologies** introduced its Model FS-B4010 bridge, a multichannel protocol trans lator gateway with 10 serial ports, two Ethernet ports, and an ISA card slot for additional fieldbus network cards such as ControlNet, DH+, Lon Works, and Profibus. This single bridge accepts input from many devices and combines this data into a single data stream over Ethernet or other networks. Thus the plant operator can bring data in from a variety of devices and provide a single Ethernet output.

FCI Fluid Components International presented the thermal mass FlexMASSter ST98 flowmeter series. It supports applications in chemical refining, electric power generation, steel production, and other high-temperature processes. In coal-fired power plants, the ST98 can monitor blower airflow that feeds pulverized coal to the furnace boiler units that drive steam-powered, electricity generating turbines. It monitors airflow to cement mixers in paper industry plants. In the steel industry, it measures dry gas from ovens. This flowmeter's advanced thermal mass sensing element delivers precision measurement with an accuracy of  $\pm 1\%$  of reading plus  $\pm 0.5\%$  of full scale.

Raytek revealed enhanced versions of the FR1 and FA1/FA2 model IR fiber optic thermo meters, designed to meet manufacturers' needs in high-temperature industries such as steel, coke production, and glass. The thermometers feature higher-temperature fiber optic cables and compatible Windows-based software, making it easy to acquire, display, and store temperature data. The FR1 simultaneously measures carbon anode bake oven flue temperature and monitors combustion conditions with a patented attenuation measurement. It also provides solutions for continuous casting and molten aluminum for casting and foundries.

Weidmuller introduced its WaveAnalog Pro Bride signal conditioner for measuring bridge signals used to power and convert inputs bridge transducers. Bridges or strain gauges are commonly used to measure weights or forces. The Pro Bridge eliminates the need for an expensive PLC or DCS module by providing the bridge excitation voltage and also converting the millivolt bridge output to a standard voltage or current signal that can be easily used by the control system. It uses screw or tension clamp connection technology. Plug gable connectors allow easy, quick installation and maintenance, while its slim design (17.5 mm) allows higher density in panel construction.



Iconics divulged the features of its Genesis BizVis suite of manufacturing intelligence products. The suite includes ReportWorX for Microsoft .NET, which integrates data into reports from different data sources using advanced data mining techniques. Microsoft .NET technology allows the data mining of almost any industrial or corporate database. ReportWorX for .NET integrates information from different data sources into one report. Data sources, such as Microsoft SQL Server, Oracle, SAP, OPC Historical Data Access, OPC Alarm and Events, and OPC real-time information can be accessed and combined to create customer reports.

Phoenix Contact introduced an enhancement to its point-to-point, one-way wireless device: the MCR-RAD for analog and digital signals. The MCR-RT-I/O-Plus is an integrated radio and I/O mod ule with expandable I/O options. It eliminates cable and conduit for analog and digital signals in harsh environments and uses spread spectrum frequency hopping for a license-free, interference-free link between remote devices and the control room.

Intergraph announced availability of its ISO standards and industrial addition library for its Smart Plant P&ID 3.0. Featuring over 920 components, the library saves time, eliminates reference database customization, reduces standards variations, and enforces consistency. The new library includes ISO symbols compatible with the SmartPlant data dictionary, rules, filters, and formats.

**Acromag** revealed its BusWorks 900PB series I/O modules, featuring the ability to interface analog and discrete I/O signals to a Profibus-DP network. The 12-channel I/O modules do not require a separate bus coupler and are cost effective for applications requiring fewer I/O channels. Each module is 1 in wide with the highest density footprint for compact mounting on DIN rails.

MOXA Networking, Inc. revealed its serial-to-Ethernet product series, the Nport server family. These products, which provide Ethernet connectivity to RS-232/485 serial devices, come with a range of options. The Nport Express DE-211 has a wide power input range that accepts 24 VDC, terminal block accessories, a built-in terminator, enhanced two- and four-wire RS-485 for long distance transmission (up to 1.5 km), and optional power over serial. The DE-211 is a universal serial device server that can network enable industrial serial devices, such as information display boards, PLCs, flowmeters, and biometric ID card readers.

MSA Instrument Division released its Ultima X gas monitor series. Based on the Ultima gas monitor, the XA and XE provide continuous monitoring of combustible and toxic gases and oxygen deficiency, using catalytic and electrochemical technologies. The XA monitors have all-purpose plastic enclosures designed for NEMA-4X rating, while the XE offers explosionproof monitoring with a 316 stainless steel enclosure. They're suitable for indoor and outdoor applications in industries including refineries, chemical and petrochemical facilities, and steel mills.

**Sierra Monitor** exhibited its Sentry gas detection systems offering alarm logic, even response, and critical data retention to meet safety requirements and documenting due diligence. It's a stand-alone hazardous gas monitoring system but can also be part of a more extensive system with Modbus interface to DCSs, connecting multiple controllers to host networks. Gas sensor modules are available for most hazardous gases, including combustible gas, oxygen deficiency, and toxic gases.

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