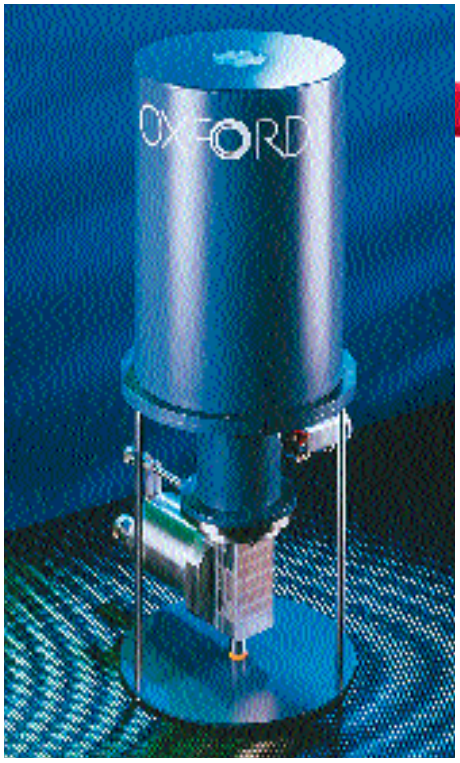


Cryogen-free magnets

Oxford is offering what it believes to be the world's first cryogen-free superconducting magnets for industrial applications. The system consists of a 5-tesla niobium titanium superconducting magnet combined with a 1-T high-temperature superconductor coil. By flipping a switch, the HTS coil leads supply power to the magnet. When an enhanced cryocooler reduces the magnet's temperature to about 5 K, the magnet is energized. This system produces field strengths up to 6 T and includes a room-temperature cylindrical access area 80 millimeters in diameter. Oxford claims that this magnet system can be used in research and industry.

Oxford Instruments, Inc
130A Baker Ave.
Concord, MA 01742
Circle no. 180 on Reader Service Card

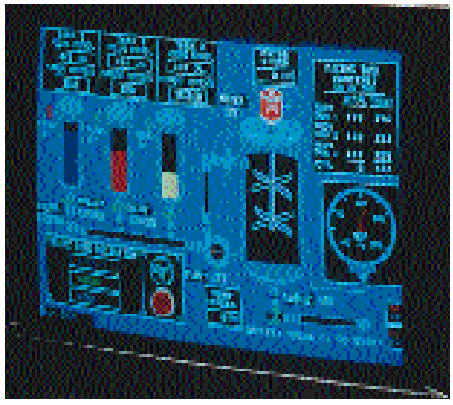
Tunable laser

The Surelite OPO (optical parametric oscillator) is promoted as a very compact, low-cost laser that can be tuned from 410 to 2,200 nanometers. This laser includes a beta-barium borate crystal, and it is pumped by 355-nanometer light from the Surelite Nd:YAG laser. Continuum claims that this laser provides better beam quality than other laser systems, because the optics in the OPO are coated for the idle beam rather than the signal beam. This laser is being advertised for many applications, including solid- and liquid-state spectroscopy, semiconductor bandgap measurements and diode-laser simulation for communication testing.

Continuum
3150 Central Expressway
Santa Clara, CA 95051
Circle no. 181 on Reader Service Card

Tough touch monitor

Nortech claims that its CM1510, a touch video monitor, meets rugged industrial requirements. The monitor consists of a 15-inch ultra-high-resolution cathode-ray tube display and one of three touch-sensitive screens: resistive, capacitative or surface acoustic wave. The display provides a resolution of 1,280 × 1,024, 0.28 dot pitch and a flat viewing surface, which allows the image to cover the entire screen. Nortech says that the CM1510 is compatible with all IBM and VESA standards, the Apple II family and Sun workstation standards. The monitor's front panel is sealed to

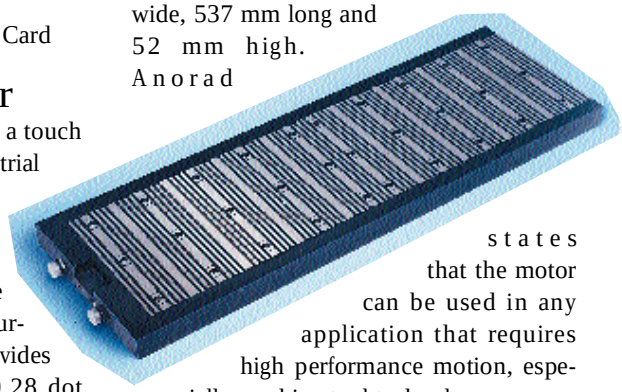


NEMA 4 ratings. Nortech recommends this monitor for all high-resolution applications that require easy mounting and sealed front panels, such as factory floors and test areas.

Nortech Engineering, Inc
19 Whichita Rd.
Medfield, MA 02052
Circle no. 182 on Reader Service Card

Linear motor

Anorad's new LFC-S is a three-phase linear servomotor. The company indicates that a combination of motor performance and improved magnetic technology allow this motor to provide peak forces as large as 15,000 newtons and continuous forces up to 7000 N. The motor is 260 millimeters wide, 537 mm long and 52 mm high. Anorad states that the motor can be used in any application that requires high performance motion, especially machine tool technology.



Anorad Corp
110 Oser Ave.
Hauppauge, NY 11788
Circle no. 183 on Reader Service Card

Sealed joysticks

The 44 series joysticks from Switches Plus come in 2-, 4- and 8-position models. All models are self-centering, operate through 1 normally open/1 normally closed (1NO/1NC) contacts, mount in standard 22.5-millimeter panel holes and are rated at 6 amps and 250 volts ac. In addition, the joysticks are sealed to NEMA 4 and 13 and IP 64 standards. According to Switches Plus, these joysticks can be used in many industrial applications, including controlling cranes, overhead hoists and robotics.

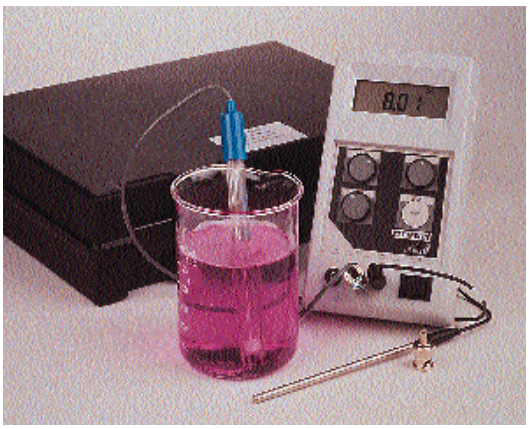
Switches Plus
192 Pepe's Farm Rd.
Milford, CT 06460
Circle no. 184 on Reader Service Card

Digital storage oscilloscopes

According to Tektronix, the new TDS 600B series of digital storage oscilloscopes (DSOs) provides industry-leading perfor-

mance. The series includes two DSOs with 1-gigahertz bandwidth and a sample rate of 5 gigasamples/s: a four-channel model with a color display (684B) and a two-channel model with a monochrome display (680B). The series also includes two DSOs with 500-MHz bandwidth and a sample rate of 2.5 gigasamples/s: a four-channel model with a color display (644B) and a two-channel model with a monochrome display (620B). All 600B DSOs use Tektronix's digital real-time sampling technology, and they include an icon-based interface for operation and a floppy drive for collecting data. Tektronix states that these DSOs can be used for all applications that demand high levels of accuracy, especially in the fields of computing, communications and research on physical phenomena, including lasers and high-energy physics.

Tektronix, Inc
P.O. Box 500
Beaverton, OR 97077
Circle no. 185 on Reader Service Card



Portable pH and voltmeter

The PHH-253-KIT measures pH and voltage. The meter measures pH to an accuracy of ±0.02 and voltage to 0.01 millivolts. The results are displayed on a 0.5-inch liquid crystal display screen. The kit includes the meter, an epoxy-bodied pH electrode, a temperature probe and a carrying case. Omega emphasizes the quick and accurate

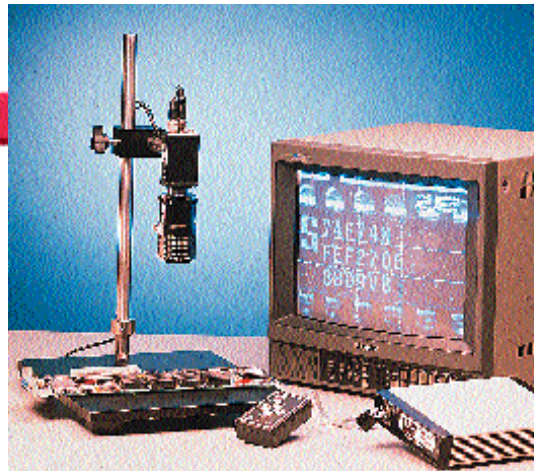
measurements that this compact and portable device can make in the laboratory or field.

Omega Engineering, Inc
One Omega Dr.
P.O. Box 4047
Stamford, CT 06907
Circle no. 186 on Reader Service Card

Minimicropositioners

Supper X-Y micro-slide assemblies are micropositioners that include aluminum sledges and hardened stainless steel drive screws, which are permanently lubricated. Venmark offers these micropositioners in three sizes that range from a 0.5-inch square, which offers 0.125 inches of X-Y travel, to a 1.49-inch circle, which provides 0.75 inches of travel. Z-axis travel can be added as an option. The X-Y micropositioners can be locked in both planes with a 6-spline drive key. Venmark states that the micropositioners permit fine manual positioning of sensitive instruments, including lasers and mirrors.

Venmark International
148 Linden St., Ste. 105
Wellesley, MA 02181
Circle no. 187 on Reader Service Card



Video measuring system

The direct measurement video system from Edmund Scientific consists of a Sony XC-75 high-resolution monochrome camera, a telecentric lens that does not change magnafication or measurement accuracy with depth of field, a Sony 13-inch Trinitron monitor and a multicalibrating video micrometer. The micrometer is controlled by a toggle device that includes readouts from on-screen measurements. Edmund claims that this system produces accurate measurements throughout the entire field of view. In addition, Edmund claims that these systems

can be customized for individual applications on a factory floor or in a laboratory.

Edmund Scientific Co
Dept. 15B1, N999 Edscorp Bldg.
Barrington, NJ 08007
Circle no. 188 on Reader Service Card

Nitrogen generating system

The new monobed nitrogen generator is said to produce 99.9-percent pure compressed nitrogen from any supply of compressed air. The generator employs a combination of filtration and pressure swing absorption technologies to produce up to 850 standard cubic feet/hour of compressed nitrogen at a dewpoint of less than -40° F. The manufacturer claims that this system continuously transforms compressed air into nitrogen at safe, regulated pressures and does not require an attending operator. In addition, the system includes an oxygen analyzer that triggers an audible alarm if the compressed nitrogen contains too high or too low of a concentration of oxygen.

Whatman Inc
260 Neck Rd., Box 8223
Haverhill, MA 01835
Circle no. 189 on Reader Service Card

New Literature

Nanoscale news flier

The nanoscale and microelectronics topics covered in the Journal of Vacuum Science and Technology B are described in a new flier produced by the American Vacuum Society. The journal contains contributed and peer-reviewed papers on processing, measurement and phenomena associated with microelectronics and nanoscale structures. It also includes several regular features, including rapid communications, reviews and shop notes. The Journal comes in either conventional paper or CD-ROM formats.

American Vacuum Society
120 Wall St., 32nd Fl.
New York, NY 10005
Circle no. 190 on Reader Service Card

Layered imaging information

TopoMetrix recently published "Layered Imaging Applications in Scanning Probe Microscopy." This technical note describes the technique of layered imaging, which can be used to acquire information about surface adhesion, surface compliance and force fields above a surface. The note also describes some real-world applications of layered imaging, including mapping the compression and adhesion in a gum sample and recording the magnetic force above a thin-film hard disk.

TopoMetrix Corp
5403 Betsy Ross Dr.
Santa Clara, CA 95054
Circle no. 191 on Reader Service Card

New Software

Mathematica Signals and Systems

Wolfram Research announces the newest addition to its Applications Library, the Mathematica Signals and Systems Pack. The pack consists of a set of software tools, such as symbolic functions, that are designed for signal processing. The software also includes numerical and graphical capabilities, which the developer claims are used increasingly by signal processing engineers..

Wolfram Research, Inc
100 Trade Center Dr.
Champaign, IL 61820
Circle no. 192 on Reader Service Card

The descriptions of new products listed in this section are based on information supplied by the manufacturers, and in some cases by independent sources. The Industrial Physicist can assume no responsibility for their accuracy. To facilitate inquiries about a particular product, a Reader Service Card is attached between pages 38 and 39.