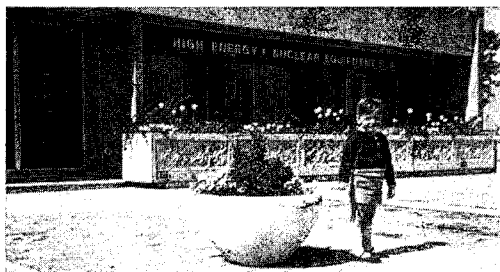


High Energy & Nuclear Equipment S.A.



NEW SERVICES

COMPONENTS — ex stock!

We can now supply a vast range of electronic devices, components and connectors etc. of well known proprietary types to anyone in Europe.

COMPUTERS & PERIPHERALS

Some in stock and many others available soon — any power and capacity. Telephone or Telex details of your requirements and we shall tell you if we can help (note new telephone numbers).

PRINCIPALS

Nuclear Enterprises Ltd
Laben and Ote-Galileo
C.S. Italia
20th Century Electronics Ltd
Lan-Electronics Ltd
Scientifica & Cook Electronics Ltd
Computer Instrumentation Ltd
D.A. Pitman Ltd

Simtec Industries Ltd
Johnston Laboratories Inc
Scientific Research Instruments Corp
Electronics & Alloys Inc
The Cyclotron Corporation
Selo
American Process Equipment Corp
TEM Ltd

NOTE

The equipment manufactured by our Principals is well known at leading Research Centres, Universities, Hospitals and Industrial Establishments throughout the world. Nuclear Health & Medical Physics, Nuclear Medicine, Life Sciences and Industrial Nuclear Laboratories can be furnished completely and you can call on the vast knowledge and resources of our Principals to do all your system and equipment planning free of charge. We can put you in touch with Physicists, Chemists, Medical Specialists, Engineers and Administrators who recently have completed the type of equipment survey with which you may now, or soon will be, faced — save your time and your organizations' money by contacting HENESA.

A great deal of the equipment supplied by our Principals can now be offered on credit terms of payment over a period of years.

ADDRESSES

2, chemin de Tavernay,
1218 Geneva, Switzerland
Alcalá 115 (S-res Vega Penichet),
Madrid 9, Spain

TELEPHONE NO'S

022 98 25 83
022 98 25 82
2 25 75 00
2 25 75 06

All telex messages to 23429 (answer back 'stiff ch')

there will be 45 amplifiers, based on a large klystron, operating at a peak power of 1.25 MW (LAMPF will use about 40 MW of power when in operation). The power systems are being tested to give a 12 % duty factor.

LAMPF will incorporate computer control into machine operation to an exceptionally high degree (see CERN COURIER vol. 9, page 169) and a great deal of development work on the computer program and the maze of interface units has been necessary. By now about 80 % of the hardware has been ordered and the computer itself has arrived.

LAMPF will be a nationally available facility, and a Users Group, involving about 300 scientists from over 100 universities and other research centres, is already participating in the project particularly concerning the planning of experimental areas and the experimental programme. The first of three areas, Area A, is under construction and is intended for physics with pion and muon beams. Area B is intended for physics with proton and neutron beams and Area C will have a high resolution spectrometer for experiments with protons. Areas B and C will also receive polarized proton beams.

As reported elsewhere in this issue, construction funds in the present fiscal year were held back to \$ 5 million and \$ 10.5 million has been deferred to fiscal year 1971. This has meant delays in con-

struction and, with rising construction costs, the total cost of LAMPF will climb by \$ 1 million to \$ 56 million. The completion of the experimental areas and the start of a full experimental programme will be delayed until 1973. Nevertheless the date for the first full energy proton beam remains as 4 July 1972.

A fuller account of the present state of the project can be found in the journal 'The Atom', March 1970, published by Los Alamos.

Conference Proceedings

The Proceedings of the Electron/Photon Symposium held at Liverpool in September 1969 (see CERN COURIER vol. 9 page 389) have been distributed to participants and are now available for sale.

The contents of the Proceedings are as follows: Status of Quantum Electrodynamics — S.J. Brodsky; Single Pion Photoproduction in the Resonance Region — R.L. Walker; Pseudoscalar Meson Photoproduction — K. Lübelmeyer; Vector-Meson Photoproduction — A. Silvermann; Vector-Meson Dominance (Present status and future prospects) — J.J. Sakurai; Photoproduction Mechanisms — H. Harari; N* Electroproduction (Experimental results) — A.B. Clegg; Electropro-

duction of Baryon Resonances (Theory) — F. Gutbrod; Nucleon Form Factors — J.G. Rutherglen; High Energy Electroproduction — F. Gilman; Muon Physics — W.T. Toner; Experiments with the Orsay Storage Ring ACO — J. Perez-y-Jorba; Storage Rings (Novosibirsk) — V.A. Sidorenko; e⁺e⁻ Annihilation into Hadrons (Sum Rules and Asymptotic Behaviour) — R. Gatto; Application of Current Algebras to Electroproduction — G. Furlan; Inelastic Electron Proton Scattering in the Deep Continuum Region — R.E. Taylor; The Phases of Vector Meson Photoproduction Amplitudes and Rho-Omega Interference — G.R. Allcock.

The proceedings, published by the Daresbury Laboratory, contain all invited talks and full discussions, abstracts of contributions received, author index to abstracts and list of participants. Copies may be obtained (price £6 sterling) from the Librarian, Daresbury Nuclear Physics Laboratory, Daresbury, Nr. Warrington, Lancashire, England.

The Proceedings of the Boulder Conference on High Energy Physics are now available and can be ordered from:

Mrs. Marion Higa, Department of Physics, University of Colorado, Boulder, Colorado 80302 with checks made payable to the University of Colorado. The cost of the Proceedings is \$15.00 per copy.

Articles techniques en caoutchouc et matières plastiques

Voilà l'adresse qu'il vous faut:

Gummi Maag
8051 Zurich
Tél. (051) 40 11 00

Envoyez-nous ce coupon et vous recevrez gratuitement la documentation suivante:

- ☐ catalogue de tuyaux
- ☐ catalogue de tuyaux pour l'hydraulique
- ☐ catalogue de tuyaux de ventilation
- ☐ catalogue de joints toriques et bagues d'étanchéité
- ☐ collection d'échantillons de laminés en caoutchouc
- ☐ profils en caoutchouc et en plastique
- ☐ gants de protection en caoutchouc
- ☐ notre périodique MAAGinform
- ☐ matériaux diélectriques

Nom _____

Département _____

Téléphone interne No _____

Spécialement intéressé _____

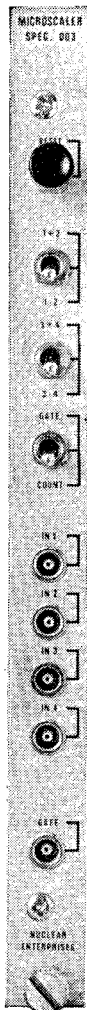
Signature _____

Date _____

Nous avons des mélanges de caoutchouc spécialement résistants aux radiations donnant pleinement satisfaction - contactez-nous s.v.pl. pour tout ce qui concerne les tuyaux, les profils, les plaques, les joints, les câbles etc. en caoutchouc et matières plastiques.

CAMAC

Scalers, Controllers and Display



Scalers

9003 Microscaler

Four 16 bit 25MHz scalers
Can be connected as two 32 bit scalers

9008 Miniscaler

Two 16 bit 30MHz scalers,
with indication of overflow
and least significant bits

7070 Counting Register

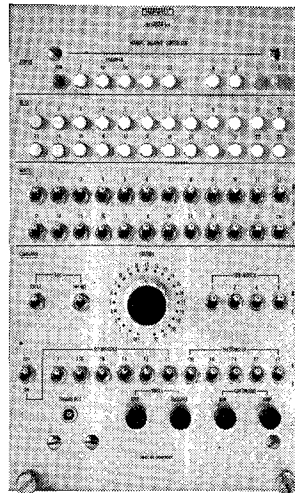
Single 24 bit 15Hz scaler

7039 Preset Counting Register

Preset countdown 16 bit
10MHz scaler

Microscaler 9003

Controllers



Manual Dataway Controller 7024

7024 Manual Dataway Controller

Enables modules to be tested
and systems to be evaluated

7022 Dataway Controller

Controller for Honeywell DDP
514 and 416 computers

7048 Data Controller

Controller for PDP8 computer

7025 Dataway Controller

Programmed controller for
non-computer controlled system

Display

7011 Display Driver

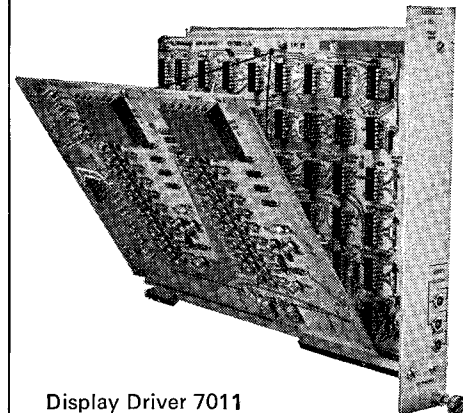
Designed to control oscilloscope
display

9006 Display Controller

Decimal display system
incorporating binary to BCD
conversion

9007 Decimal Display

Display for scalers addressed by
9006



Display Driver 7011



**NUCLEAR
ENTERPRISES
LIMITED**

CAMAC the new modular data handling system for computer-aided measurement and control is being rapidly expanded. It conforms with ESONE Standard EUR 4100, can operate with all computers and is compatible with NIMS modules such as the Nuclear Enterprises International Series. Full details of the units listed above and complete range are available on request. (Bulletin No. 44)

Bath Road, Beenham, Reading, England Telephone: 07-3521 2121 Cables: Devisotopes, Woolhampton Telex: 84475
Sighthill, Edinburgh EH 11 4 EY, Scotland Telephone: 031-443 4060 Cables: Nuclear, Edinburgh Telex: 72333

Associate Companies: Nuclear Enterprises GmbH, Karlstrasse 45, 8 Munich 2, Western Germany. Tel. 55 30 03. Telex 529938
Nuclear Enterprises Inc., 935 Terminal Way, San Carlos, California 94 070. Tel. 415-593 1455. Telex 348 371

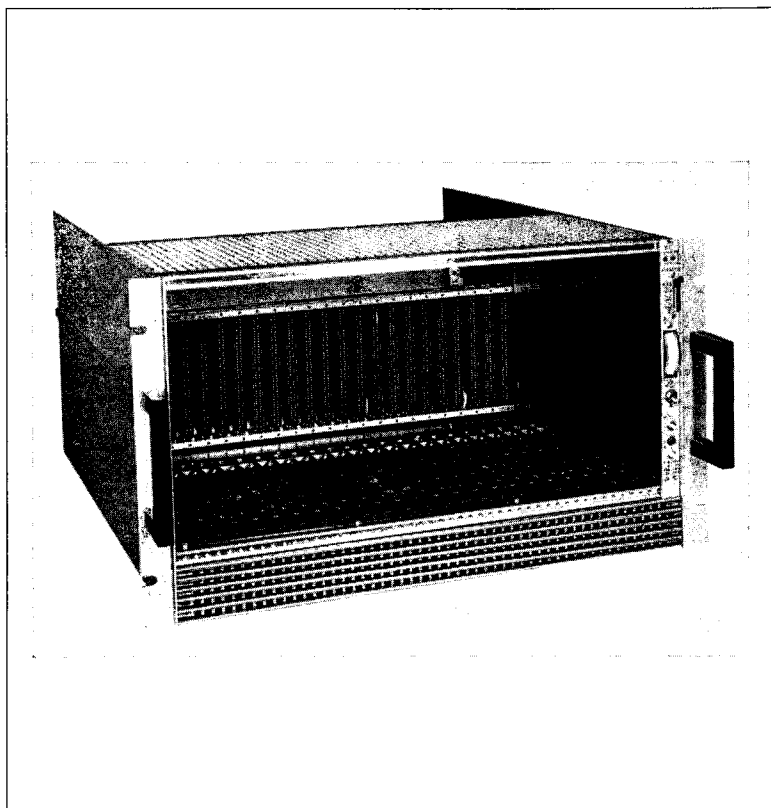
Swiss Agents: *HIGH ENERGY AND NUCLEAR EQUIPMENT S.A.*

— 2, chemin de Tavernay - GRAND-SACONNEX - 1218 GENEVA - Tél. (022) 34 17 07/34 17 05

C7 ALJ 13

CHASSIS ALIMENTATION CAMAC

- Ce châssis pour tiroirs 5 unités est destiné à l'alimentation des éléments fonctionnels normalisés CAMAC EUR 4100.
- Permet le montage de 24 tiroirs et leur polarisation.
- Utilise l'alimentation type P 7 ALJ 10 délivrant:
 - + & — 24 V 3 A
 - + & — 12 V 3 A
 - + 6 V 25 A
 - 6 V 10 A
 - +200 V 0,1 A
 - 117 V 50 Hz 0,5 A
 - Puissance utile 200 watts
- Trois ventilateurs.
- Visualisation d'une surcharge par voyant sur chaque tension.



CARACTÉRISTIQUES PROVISOIRES

Tension de sortie	± 24 V	± 12 V	+6 V	—6 V	+200 V
Plage de réglage	± 2 ‰	± 2 ‰	+ 5 à —15 ‰	+ 5 à —15 ‰	± 10 ‰
Précision du réglage	± 5.10 ⁻⁴	± 5.10 ⁻⁴	± 10 ⁻³	± 10 ⁻³	
Taux de régulation en fonction du réseau (+10 ‰ à —12 ‰)	± 5.10 ⁻⁴				
Régulation pour 100 ‰ de variation de charge et des variations du réseau (+10 ‰ à —12 ‰)	± 10 ⁻³				
Stabilité globale (réseau-charge-température)	± 5.10 ⁻³	± 10 ⁻²	+2,5.10 ⁻²	± 10 ⁻²	± 10 ⁻²
Coefficient de température de +10 °C à +45 °C	5.10 ⁻⁵ /°C	2.10 ⁻⁴ /°C			3.10 ⁻⁴ /°C
Dérive en fonction du temps 8 h 24 h. 6 mois	10 ⁻³ ± 3.10 ⁻³ ± 5.10 ⁻³				
Fluctuations en sortie crête à crête	≤ 2 mV	≤ 2 mV	≤ 5 mV	≤ 5 mV	5 mV
Réponse transitoire (overshoot et undershoot ≤ 10 ‰)	≤ 20 μs				
Stabilisation thermique	≤ 30 mn				
Plage de température	0 °C à +55 °C				
Impédance dynamique de sortie jusqu'à 100 kHz	≤ 0,3 Ω				
Sécurité électronique en courant	individuelle par limitation de courant				fusible
Disjonction de l'alimentation provoquée par des surtensions de:	+ 15 ‰	+ 15 ‰	+25 ‰	+ 15 ‰	
Protection thermique	2 vigithermes: 0 max. —20 °C: voyant blanc 0 max.: coupure de l'alimentation				
Réseau	220 V 50 Hz (possibilité 117 V)				

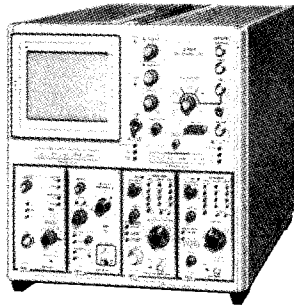


SAPHYMO-SRAT
DÉPARTEMENT ALIMENTATIONS

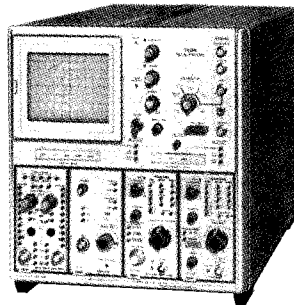
SERVICES COMMERCIAUX

51, RUE DE L'AMIRAL-MOUCHEZ
75-PARIS XIII^e
Tél. 588 45 39 - 588 16 39

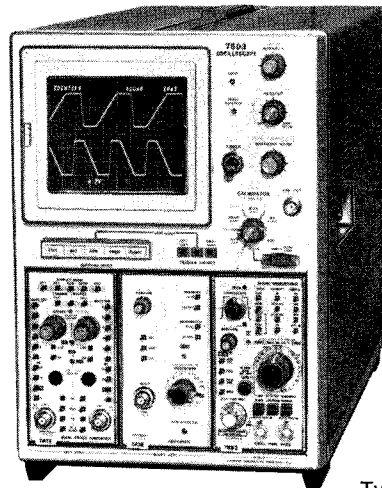
State of the Art 7000-Series Oscilloscopes



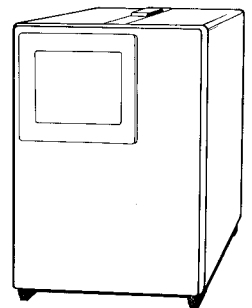
Type 7704



Type 7504



Type 7503



More to come

Auto Scalefactor Readout

means faster measurements with fewer errors

- Shows the effective scalefactors on the screen, considering also Magnifier and attenuating probes
- Bandwidth to 150 MHz at 5 mV/cm
- 1 M Ω input resistance
- Extremely good writing rate
- Oscilloscopes with 3 and 4 plug-in capability allow for unmatched display versatility
- 14 plug-ins are initially available, more than in many oscilloscopes even years after introduction
- Sampling to 14 GHz
- More mainframes and plug-ins to come

For more information or demonstration call



TEKTRONIX INTERNATIONAL AG

Tel. 042/219192

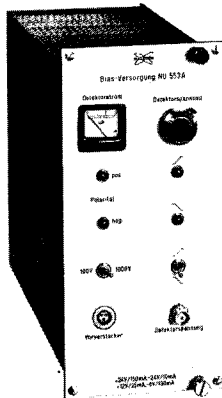
6301 ZUG



supplies:

AEC/NIM-Nuclear-Electronic

H.V.-Power-Supply



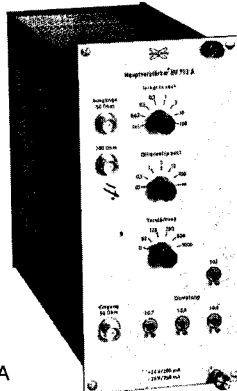
NU-553A

Cal.-Pulse-Generator



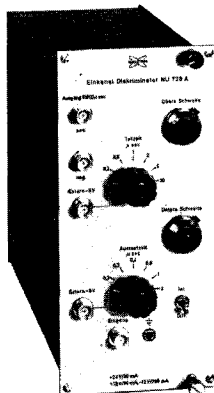
NU-554A

Linear-Amplifier



NU-713A

A-Channel-Discriminator



NU-728A

Biased Amplifier

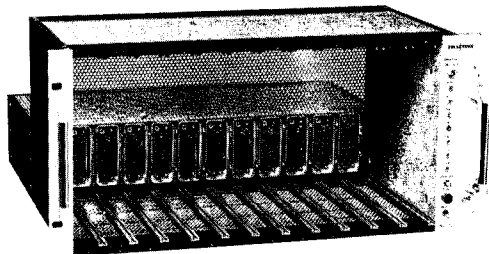


NU-722A

Rate-Meter



NU-716A



AEC/NIM - Frame with Power-Supply



GESELLSCHAFT FÜR NUCLEONIC
UND ELECTRONIC MBH
8 MÜNCHEN 54 • GARTNERSTRASSE 60
TELEFON SA.-NR. (0811) 54 60 81 • TELEX 05-24208



**vide
élevé
GALILEO**

*

V7 bx



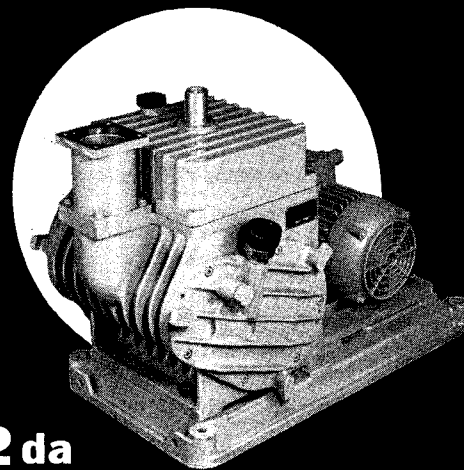
Jauge à cathode froide
Echelle: de 1.10^{-2} à 1.10^{-6} Torr
Prédisposé pour connexion
à un enregistreur

*

**OFFICINE
GALILEO**

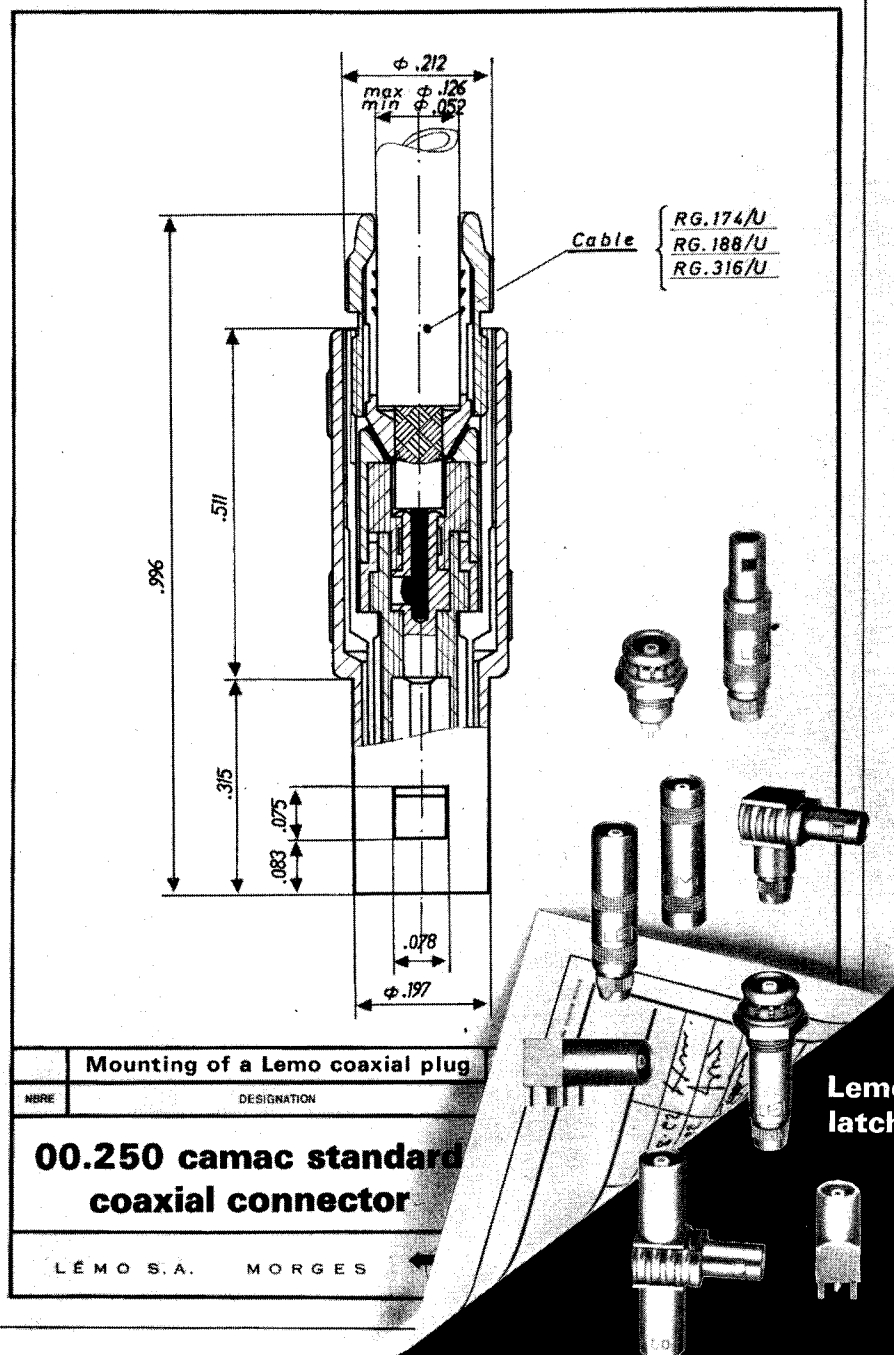
50100 FLORENCE - ITALIE
VIA CARLO BINI, 44 TELEX 57126

*



V2 da

Pompe rotative à deux étages
Débit: 60 m³/h
Pression limite partielle:
 2.10^{-4} Torr



General specifications

Composition

Shell : brass 59 A
Insulator : teflon PTFE
Contact : brass 59 A

Finish

Shell : nickel + chrome
RP + RPL types gold plated 3 microns
Contacts : nickel and 3 microns gold plated
Operating temperature range : -55°C $+150^{\circ}\text{C}$

Electrical specifications

Characteristic impedance : $50\ \Omega \pm 2\%$
Frequency range : 0-10 GHz
Max VSWR 0-10 GHz : 1:12
Contact resistance : $< 8\text{ m}\Omega$
Insulator resistance : $> 10^{12}\ \Omega$ under 500 V. DC
Test voltage (mated F + RA) : 3 KV. DC
Operating voltage (mated F + RA) : 1 KV. DC

Normal maximum cable diameter : $\phi 126$
Special arrangement : $\phi 157$

LEMO S.A.

Tél. (021) 71 13 41 Télex 24 683 1110 MORGES (Switzerland)

our **FE**ast **FE**lectronic family is constantly growing...

- Modules available with BNC or LEMO connectors
- NIM chassis SEN 350/N
- Ask for Data Sheets

- FE 250 Shaper, Cable Timed : Low cost trigger module, rate 100 MHz
- FE 251 Dual Limiter : Trigger module, rate 125 MHz
- FE 252 Discriminator : Threshold -100 mV to -3 V , rate 200 MHz
- FE 260 Coincidence 5 In – 7 Out : Overlap and standardized outputs, rate 180 MHz
- FE 261 Coincidence Triple, Two Fold : Output width fixed, rate 50 MHz
- FE 262 Coincidence 5 In – Strobed : Output width fixed, rate 50 MHz
- FE 270 OR, 6 Inputs : High fan-out, rate 150 MHz
- FE 280 Shaping Amplifier : Short pulses are shaped and made suitable for an ADC
- FE 281 Linear Gate : Selects and transmits linearly pulses and DC levels
- FE 290 Delay Unit : Cable delay, range 2.5 to 66 ns
- (CERN designed)

- FE 275 Logic Box : Patch board with MECL II gates
- FE 291 Quad Delay : Four delay sections in a 19" chassis

SEN
ELECTRONIQUE

Representatives throughout Europe and The United States

31 Av. Ernest-Pictet - 1211 GENEVA 13 / Switzerland - Tel. (022) 44 29 40

les chambres à fils en régime proportionnel ouvrent des horizons nouveaux

CARACTÉRISTIQUES

Temps mort inférieur
à 10^{-6} seconde par fil.
Auto-déclenchement.
Sorties logiques fil par fil.
Possibilité de coïncidences
avec une autre chambre
ou un détecteur.

APPLICATIONS

Détection sélective des particules
en fonction de leur pouvoir d'ionisation.

Basses énergies :
Plan focal de spectromètre.
Localisation spatiale
de rayons X et de neutrons.
Chromatographie β .

Hautes énergies :
Localisation de traces.
Hodoscope à faible pouvoir d'absorption.

Electronique :

Résolution : 40 ns
Temps mort total : 200 ns
Vitesse de lecture : 4 MHz en code parallèle.

new possibilities with multiwire proportional chamber

CHARACTERISTICS

Dead time below 10^{-6} second per wire.
No triggering DC high voltage.
Logical output for each wire.
Possibility of use in coincidence
with other chamber or detector.

APPLICATIONS

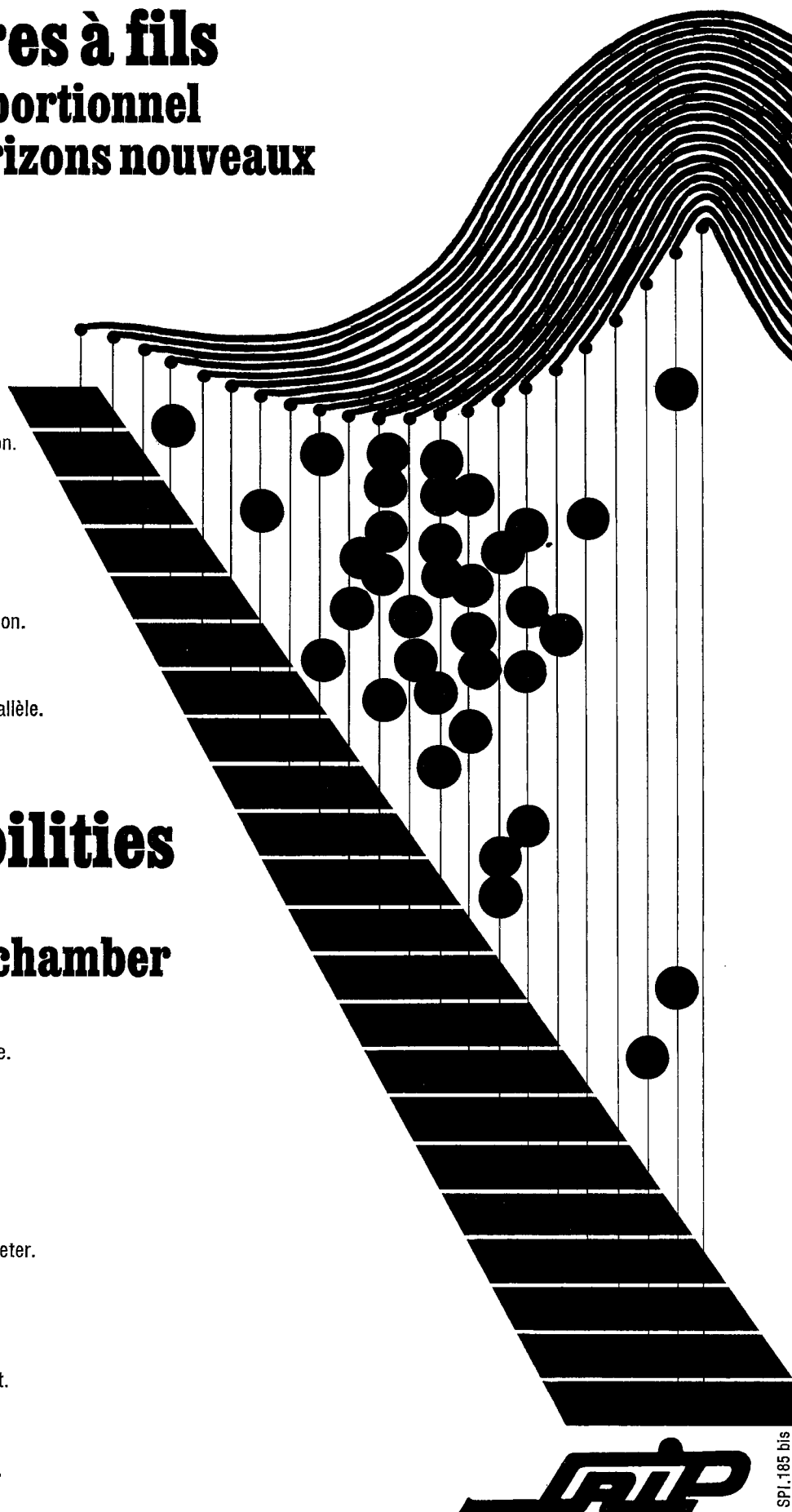
Detection selectivity for particles
of different ionizing power.

Low energy physics :
Localisation in focal plan of spectrometer.
Mapping in spatial distribution
of X-rays and neutrons.
 β chromatography.

High energy physics :
Localisation of particle trajectories.
Hodoscope with low superficial weight.

Electronics :

Resolution : 40 ns
Total dead time : 200 ns
Reading speed : 4 MHz in parallel code.

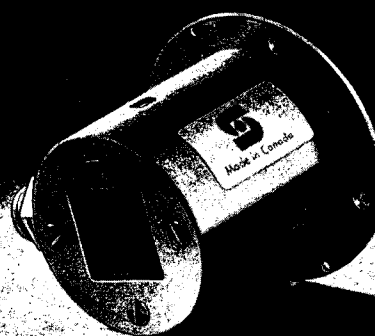


SAIP

SPI.185 bis

SOCIETE D'APPLICATIONS INDUSTRIELLES DE LA PHYSIQUE
38, rue Gabriel Cr  , 92, Malakoff, France, t  l  phone 253 87 20 +, adresse t  l  graphique : Saiphy Malakoff

We've done some deep thinking on detectors



— **25 mm deep, in fact.** We call it the Transverse Field Silicon Detector. It sweeps out in 16nS with 700 volts bias. It has a sub-micron window and is available with areas up to 200 mm². It gives resolutions to 5 Kev FWHM for 970 Kev electrons. It can stop 80 MeV protons. 200 MeV alphas or 10 MeV electrons. The Transverse Field Silicon Detector is in regular production at Simtec Ltd. Write or call for a demonstration and buy yourself some deep satisfaction.



**simtec
industries ltd.**

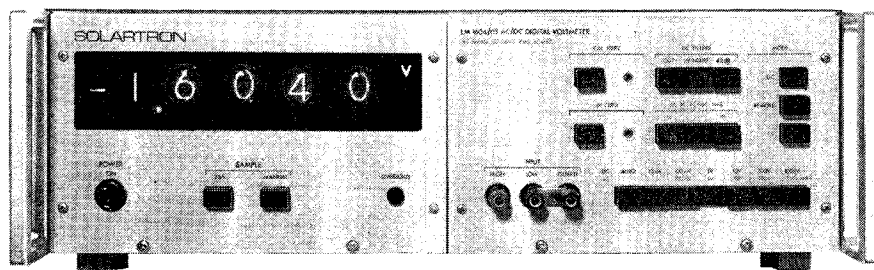
High Energy and Nuclear Equipment S.A.

3400 Metropolitan Blvd. East, Montreal 38, Canada
Telephone (505) 728-4527

2, chemin de Tavernay, Grand-Saconnex
1218 Geneva, Switzerland - Tel. (022) 34 17 07/5
& Castellana Hilton, Madrid - Tel. 257.22.00

*Wouldn't it be great
if a D.V.M. had...*

SOLARTRON
A Schlumberger Company



We've launched a great new D.W.M. The LM 1604. It's a special as anything we've ever done. But it's special in a different way. It's been designed to cover a wide, wide range of applications - including yours. Our twelve page data sheet defines the 1604's capability. Write for it.

- 1 μ V sensitivity
- 19999 full scale
- remote programming
- infinite noise rejection
- 0,005 % accuracy at 25 readings/sec.
- ac or dc readings
- mains locked integration period
- auto-ranging

Schlumberger

1211 Genève 6
15, Jeu-de-l'Arc, tél. (022) 35 99 50
8040 Zurich
Badenerstr. 333, tél. (051) 52 88 80

Angst+Pfister

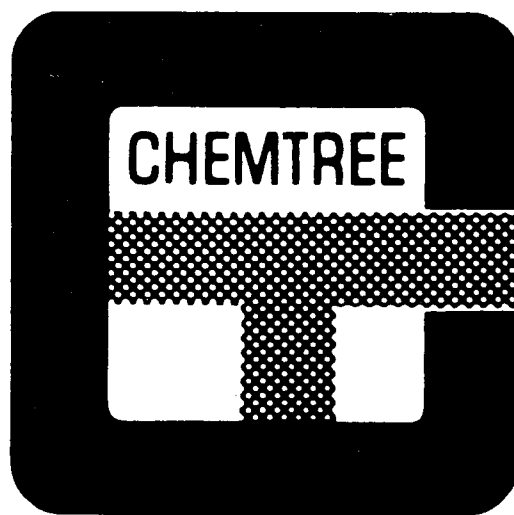
- Synthetic and Natural Rubber
- Engineering Plastics
- GACO Sealing Products
- Power Transmission Elements

52-54, route du Bois-des-Frères
1211 LE LIGNON-GENÈVE
Tel. (022) 45 14 00

ZURICH

MILAN

PARIS



**SPECIAL
NUCLEAR
SHIELDING**

CHEMTREE CORPORATION
Central Valley, N.Y. 914-928-2293

The do-it-yourself logic module

With the new EG&G KL110/N Logic Module you can build your own special arrays of ANDs, ORs, NANDs, and NORs to make latches, gates, scalars, memories and other complex logic functions.

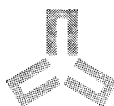
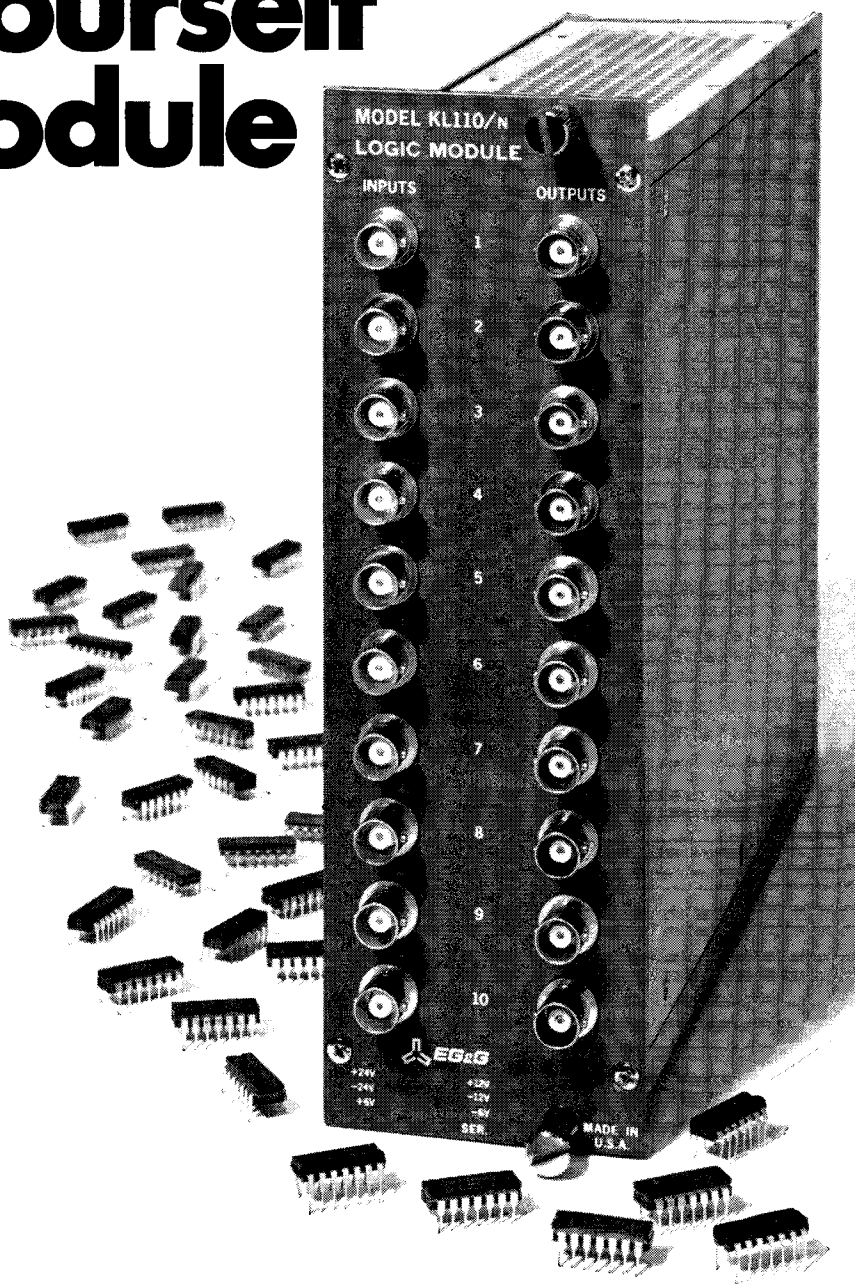
You can build them when there's no standard module available. And you can avoid obsolescence by reconfiguring them again and again.

The KL110/N lets you use MECL II in a NIM system. Each module contains 10 NIM to MECL II translators, 10 MECL II to NIM translators and a field of 15 IC sockets. Power is prewired to all sockets for convenience, while patch pins and patch cords on all sockets allow virtually unlimited flexibility.

Check-it-yourself...

with a new EG&G KL110/N Indicator Module.

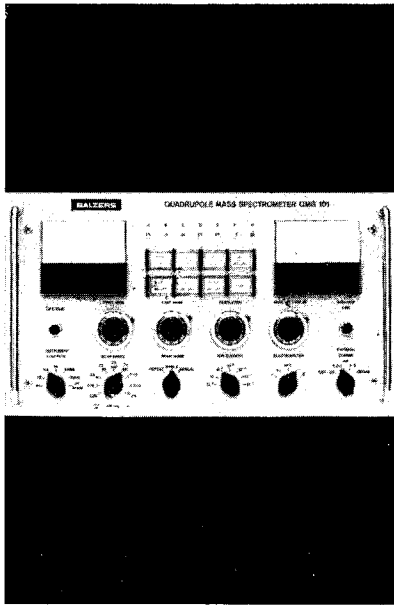
This module indicates presence of NIM standard fast logic signals. A light flashes whenever such a pulse is sent through the bridging input. KL110/N Indicator Module supplied ready to run. Write for all the facts.



EG&G

NUCLEAR INSTRUMENTATION DIVISION

For complete details on how this can save you money, write EG&G, Inc., Nuclear Instrumentation Division, 36 Congress Street, Salem, Massachusetts 01970. Phone: (617) 745-5200. Cables: EGGINC-SALEM. TWX: 710-347-6741. TELEX: 949469.



- Accurate and rapid residual gas analysis in high and ultra-high vacuum systems;
- Measurements in space simulation chambers and particle accelerators;
- Residual gas measurements in work processes;
- Leak detection in high and ultra-high vacuum systems.

... a few typical fields of application where partial pressure measurement is particularly useful.

For many requirements of research, and to an increasing extent in industrial production, accurate and rapid information on the gas composition in high and ultra-high vacuum equipment is essential. A high standard of efficiency is required of the measuring instruments. In view of the very wide field of application, greater reliability in operation, more compact construction and simplicity of operation and maintenance are expected.

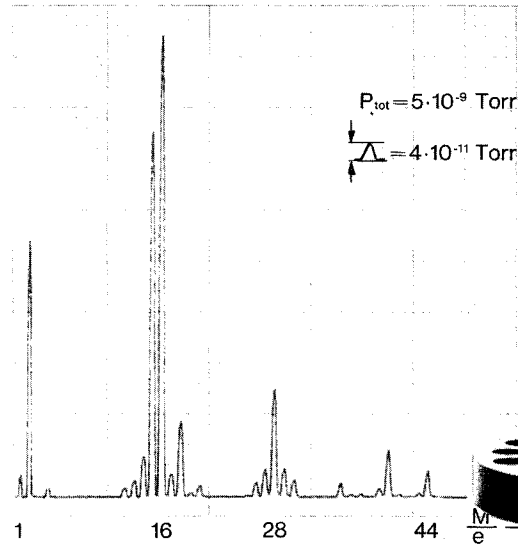
BALZERS partial pressure measuring instrument QMG 101, which symbolises our many years of experience, satisfies these requirements to a large extent. With this instrument residual gases can be analysed rapidly, reliably and with high sensitivity; as a quadrupole mass spectrometer, it works on the principle of mass separation in the high frequency, electrical quadrupole field.

Major features of the QMG 101

- Two mass ranges can be selected: 1 to 100, 10 to 400.
- Choice of mass setting.

Partial Pressure Measuring Instrument QMG 101

Sensitivity $10^{-13} - 10^{-14}$ Torr
Mass range 1-400



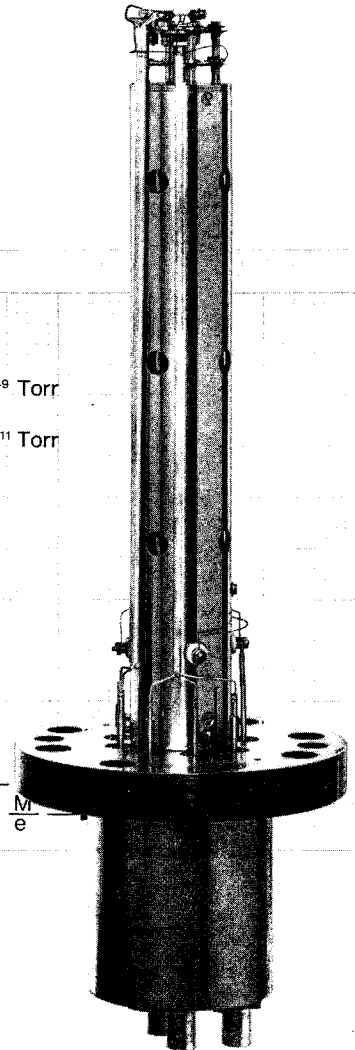
- Any mass number can be selected, linear throughout the whole range or partial range in fully staged scanning speeds.
- Partial or total pressure measurement.
- Sensitivity to 1000 A/Torr (with multiplier).
- Secondary electron multiplier (multiplier) for improving the sensitivity and oscillographical recording of rapidly changing processes.

- Good resolution ($\frac{M}{\Delta M} 10\% = 100$)

The resolution can be readily adjusted to suit particular problems and reproducible setting.

- The analyser can be baked-out up to 400°C . The high precision rod system provides perfect and reproducible mass separation, and can be very easily dismantled and re-assembled if necessary.
- Open, immersion ion source, which can be effectively out-gassed by ion bombardment. The hot cathode is protected against excessive pressure rise, and can be changed without additional adjustment.
- Very compact construction; the complete supply and control instrument is contained in only one 19" rack unit.
- Indicating instruments and controls are clearly visible for simplicity of operation.
- The instrument is non-magnetic and therefore free from stray magnetic fields.

BALZERS will be pleased to supply full details.



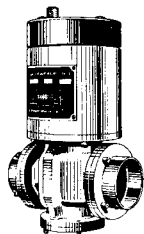
BALZERS®

HIGH VACUUM TECHNIQUE

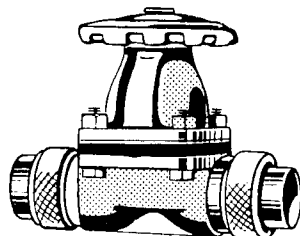
BALZERS AKTIENGESELLSCHAFT
für Hochvakuumtechnik und Dünne Schichten
FL-9496 Balzers · Fürstentum Liechtenstein

EDWARDS — FOR ALL THOSE VITAL BITS AND PIECES FOR VACUUM PLANT

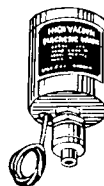
VALVES



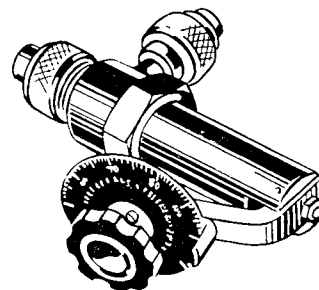
SOLENOID



MANUAL



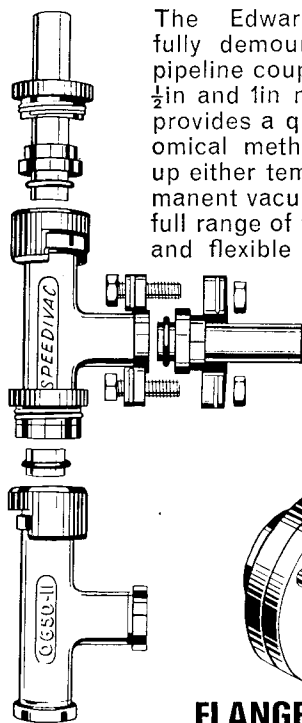
**SOLENOID
AIR ADMITTANCE**



NEEDLE

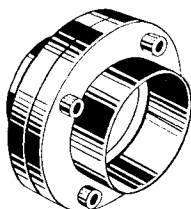
Edwards manufacture and supply every type of valve required for in-line or panel mounting and for manual or automatic operation — from the famous 'Speedivalve' to vacuum needle valves for extra fine control.

VACUUM CONNEXIONS



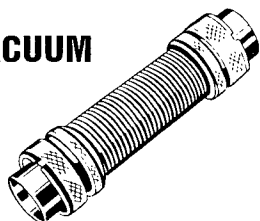
The Edwards solderless fully demountable vacuum pipeline coupling system in $\frac{1}{2}$ in and 1in nominal ranges provides a quick and economical method of building up either temporary or permanent vacuum systems. A full range of vacuum unions and flexible connexions is also available.

**PIPELINE
COUPLING
SYSTEM**



**FLANGED VACUUM
UNION**

**FLEXIBLE VACUUM
CONNEXION**

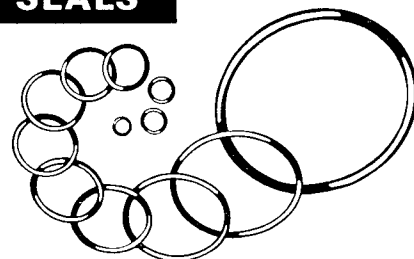


VACUUM SEALS

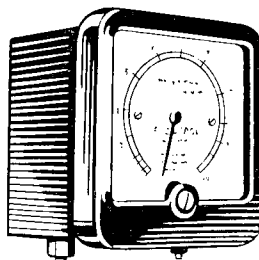
'O' RINGS

EXTRUDED CORD

SHEET

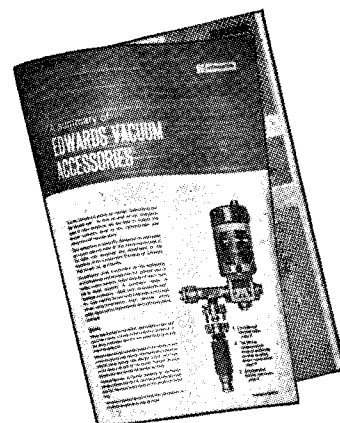


FLOW SWITCHES SUCTION and PRESSURE CONTROLLERS



'FLOWTROL' FLOW SWITCH

Available either with or without flow rate indicating dial, the 'Flowtrol' is operated by pressure differential across an adjustable orifice. A typical use is the protection of water-cooled and liquid flow equipment against damage resulting from inadequate or excessive flow.



*For fuller descriptions
send for
Publication 08643—
"A Summary of
Edwards Vacuum
Accessories"*

Edwards

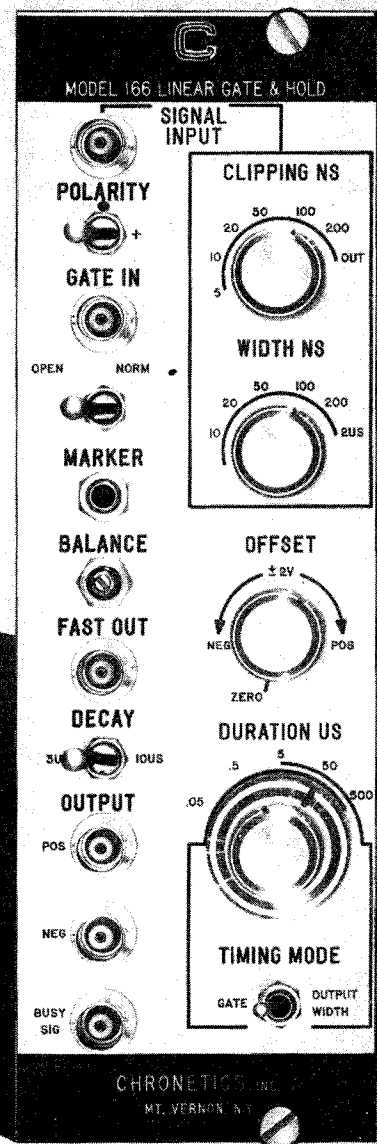
Edwards Vacuum Components Limited A member of the BOC group

Manor Royal, Crawley, Sussex, England

Telephone Crawley 28844 Telex 87123 Edhivac Crawley



some of our best friends are computers



We designed our Nanologic Model 166 Linear Gate & Hold for direct compatibility with computers and computer ADC's. Now, **that's** friendly.

We gave it a long hold time and an internal gate. The long "hold" permits direct compatibility with analog to digital converters and also allows enough time to multiplex several linear channels with a single ADC. The internal gate permits application of an external trigger to the gate circuit - with front panel control of gate time.

Input signals from 2 ns to DC. Internal gate 5 ns to 500 us. "Hold" output is flat within 0.5% at .5 ms (Model 166-1 "holds" flat to 50 ms). "Busy" signal for pulse pile up prevention. Pedestal adjustable through zero. And four outputs: Fast Out (2 ns risetime), Hold Outputs (Positive and Negative, risetime approximately 300 ns, amplitude linear with input signal amplitude, selectable width, falltime and mode), Busy Out.

The internal gate generator can be used to control either the width of the "flat topped" output or the gate "open" time. Stability is better than 0.1%/°C; gate transients less than 15 mv, 2 ns wide.

Overall quality? Nanologic.

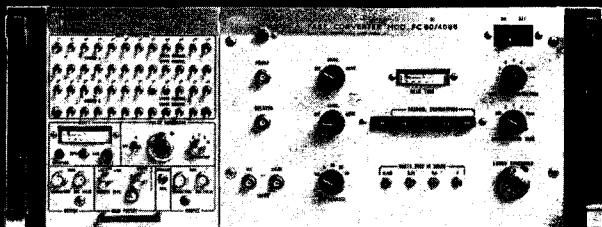
Model 166. Its best friends are computers, ADC's and PHA's. Make one happy this week—buy it a Model 166.

CHRONETICS • U.S.A.: 500 Nuber Avenue, Mt. Vernon, New York (914) 699-4400; in Europe: 39 Rue Rothschild, Geneva, Switzerland (022) 31 81 80.



convert with LABEN to convert best

the ADC that opened a new era
in data conversion techniques
LABEN FC 60/4096



Patents: Laben 745348
Cise 699271

utilizes the sliding scale method to achieve a unique combination of high speed conversion and excellent differential linearity for any type of input signal

- 12 μ sec fixed conversion time
- 0.1 % differential linearity
- 0.04 % integral linearity
- 3 input modes: AC or DC coupled, DC restorer
- used everywhere with any computer or pulse height analyzer
- equipped with all solid state Spectrum Stabilizer Mod. SS 60

the newest



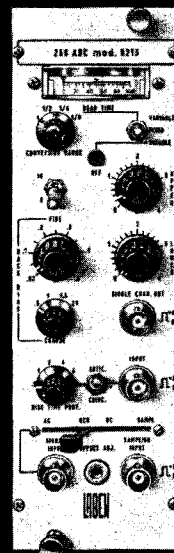
**LABEN SERIES 8000
WILKINSON TYPE ADC's**
now available

in a **DOUBLE-WIDTH NIM MODULE**
with good differential linearity at a
100 MHz CLOCK RATE

- 0.7 % differential linearity
- 0.04 % integral linearity
- 4 input modes: AC or DC coupled, DC restorer, sampling
- easily used with any computer or pulse height analyzer

Mod.	Mod.	Mod.
8210	8211	8212
8192	4096	1024
	channels	

the
cheapest



If you need several
and cost is a problem
Mod. 8213
256-channel ADC
is ideal for your multipara-
meter experiments

- highly versatile
- low-priced

LABEN
Laboratori Elettrotecnica e Nucleare

divisione della **MONTEDIEL** Montecatini Edison Elettronica S.p.A.
Milano - via Edoardo Bassini, 15 - telefono, 2365551 - telex, 33451

