

High Voltage Power Supplies

for industry

**for Magnetrons, Laser, X Ray, Tube-PS, Ion-Implantation,
Ion-pumps, Capacitor Load, E-beam-systems, Electrostatics,
electron beam processing etc.**

for Labs

for PMTs, APDs, channeltrons, Ion traps, SI Strips, SI Pixel etc.



a new supplier for High Voltage Power Supplies

founded in 1995

in Rossendorf / Dresden

Germany

History:

1995 until 1997: Standard Laboratory Product Family

in

- NIM,
- CAMAC,
- VME,
- 3 U /
- 6 U Euroformat

**the most comprehensive
High Voltage Modular
Power Supply Family for**

Lab.applications in Physics

A total redesign of popular and well known units

**in SMT,
all remote controllable, with**

- RS 232,
- CAN,
- CAMAC-BUS,
- VME- BUS,
- IEE 488.2

Milestones:

- 1995:** the first
HV-System for 180 PMTs for
Crystall Ball in MPI Heidelberg
- 1996:** the first
8 channel floating module dedicated to SI-Counter
for the HERA B Vertex Detector
- 1997:** the first
16 channel module dedicated to the use of
APD Arrays
- 1997:** the first High Voltage integrated Base for PMTs with
CAN – interface
- 1996 until 1999:** Industrial - Products:
- 1999:** DC to DC Converters for industrial applications
From small ‘bricks’ for low power 600mW up to 19“
units for medium power 3KW, voltage 0...30KV.
New Developments for Physics based on CAN
Control and cost effective costs per channel.
- 2000:** PMT AMANDA prototyping and series start
32 channel system for Calorimeter in ATLAS
2*8 channel module for APD applications in CMS
and ALICE
16 channel for SI applications in ATLAS.
- 2001:** PMT HESS prototyping and series
PMT industrial customised products, e.g. Perkin
Elmer,
PMT ANTARES prototyping and series
- 2002:** Mobile cable testing equipment
- 2003:** prototyping for another CERN LHC experiment

Customer Reference List:

MPI Heidelberg	INFN Frascati	CERN ATLAS
DESY	INFN Milano	CERN CMS
KVI Groningen		CERN ROSE
ETH Zürich		CERN
ISOLDE		
DESY Zeuthen	Telettra Trieste	PSI Villigen
BESSY II	INFN Torino	ESRF Grenoble
MPI München		
HASYLAB	Univ. Brussels	LAPP Annecy
Max Born Inst.		CEN
Hahn Meitner Inst.		ILL
FZ Jülich		Orsay
FZ Karlsruhe		Saclay
IPP Garching		etc.
FZ Rossendorf		
FHI Fraunhofer Inst.		
GSF		
ZAE Bayern		
EMBL HH Outstation		
etc.		
	Argonne APS	TRIUMF
	BNL	
	Michigan State Univ.	
	FERMILAB	
	NIST etc.	KEK Japan
Techn. Univ. and Univ.		
Dresden	SRRC Taiwan	
München	etc.	
Münster	Dubna	
Freiburg	Protvina	
Frankfurt		
Bonn		
Hamburg		
Berlin		
etc.		

Remarks:

NIM: NHQxxx: still very popular.

There are several different product lines in NIM

The Precision The High Precision Low Cost

RS 232 100pA Resolution
CAN !!!!!
1 channel or
2 channels

CAMAC: CHQxxx: people like it in a running system

All types in NIM are also available in CAMAC

VME: VHQxxx: the solution for pure VME environments

3 U: EHQxxx: if one channel is enough, 3 U is system compatible

6 U: 8 channels
16 channels
32 channels
Modules dedicated to the customer's specifications!
customized , optimized.

MHQxxx: small 'bricks' made for industrial applications and research

PHQxxx: High Voltage integrated on the PMT Base,
a small , but complete system
with CAN interface optional

SHQxx: a Bench Top PS and an Instrument.

We match a standard version to your needs

and it is also a High Precision Test Instrument.

APS to XPS: beginning from very small boxes
to 19 " medium power,

the new generation of better High Voltage

The Members of our High Voltage Family

Integrated High Voltage Power Supplies

and

Active Voltage Dividers

for

Photo Multiplier Tubes

PHQxxx:

The advantages:

Power Consumption:	10 to 20 times less power consumption than a conventional resistance divider.
Ripple & Noise:	Ripple and noise 5 to 10 times less compared to a Standard Cockroft Walton
Signal to Noise Ratio SNR:	Signal to Noise Ratio about 2 to 3 times better
CAN:	CAN Interface. Complete control, i.e. full system capabilities
Electro Magnetic Interference EMI:	proofed high and low Frequency Interference
Power Dissipation:	less Power dissipation, i.e. Temperature balance after switch on much faster

Cabling: HV - cabling and HV- connector – Cost are dropped, because the handling and mounting of cabling assemblies is much more easier

Linearity: Proofed dynamic linearity:

1.) Prototyping

2.) Final customer approval

Distortion: Sinus Generator Patent leads to results of low harmonic distortion

Result: cost effective
Easy to upgrade
System capabilities

! Thank you ! L. Christians