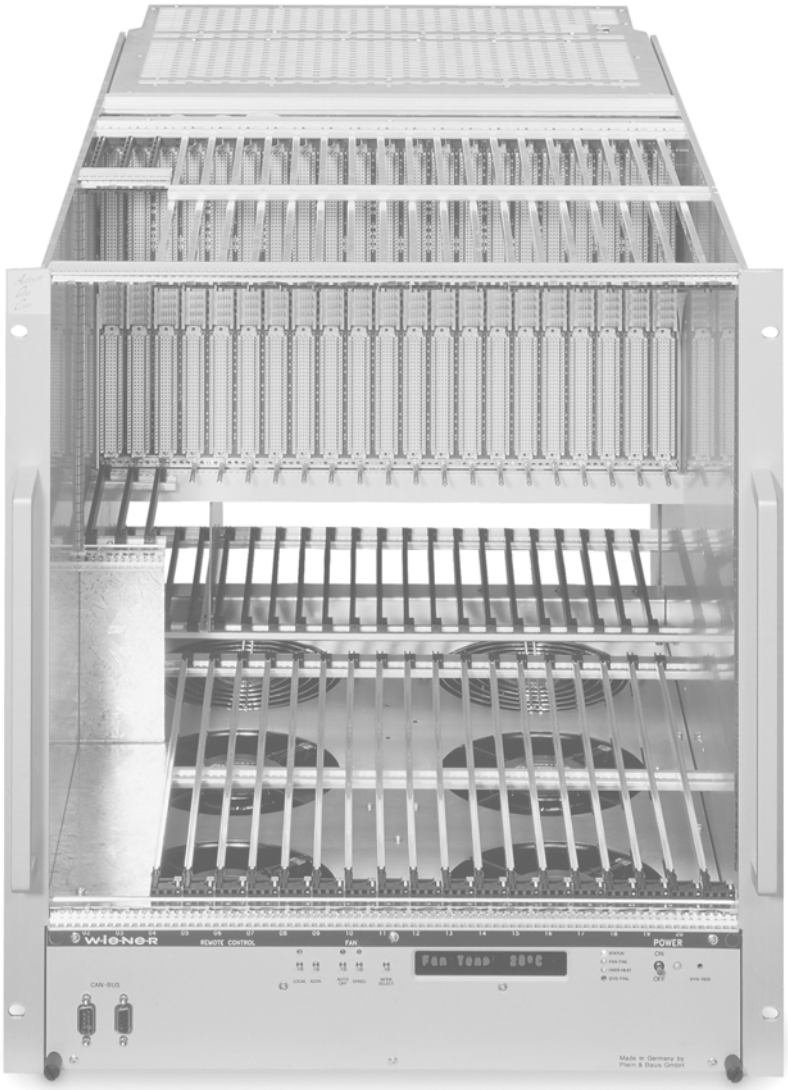

Series 6000 LHC

VME64x-Crate

User Manual

*00647.A1

General Remarks

The only purpose of this manual is a description of the product. It must not be interpreted as a declaration of conformity for this product including the product and software.

W-Ie-Ne-R revises this product and manual without notice. Differences of the description in manual and product are possible.

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Detailed Information

This User Manual contains only rudimentary information to operate the device. To perform installation and maintainance tasks it is necessary to read the "Series 6000 LHC VME64x-Crate Technical Manual" (order no. *00571)

Control Cabinet

In the context of this user manual, the control cabinet must fulfill the requirements on fire-protective enclosures according to EN 60950 / IEC 60950 / UL 60950.

The device is intended for operation in control cabinets or in closed areas. If operated outside of a control cabinet, the front and back of the crate must be closed by the front pannels of the inserted VME-Modules/ Transition Modules or by a well fitted front plate. The LAN connection must be done via a shielded cable with conductive connector shells, which are fixed with screws.

Furthermore, an additional fire-protective enclosure is required which must not affect proper air circulation.

Mains Voltage and Connection

The Power supplies are equipped with a "World"- mains input (rated voltage range: 100-240 VAC, frequency: 50-60 Hz, rated current: 16 A). Before connecting to the mains please double-check correspondence.

Mains input connection at the power supply side is done with a 3-pin HIRSCHMANN connector or power terminals. There is no main fuse inside. A circuit breaker for overcurrent protection 16A, type B or C (EN / IEC 60898, VDE 0641), has to be installed externally.

Before disconnection the HIRSCHMANN connector, the power supply should be switched into standby state. (Use the ON/OFF-Switch of the fan tray or the rocker switch beside the HIRSCHMANN connector to switch into standby)

Hirschmann.	Signal	Description	Color of the Wire
Pin 1	L	Phase	black or brown
Pin 2	N	Return, Neutral	blue
Pin 3		not connected	
Earth	PE	Protective Earth	green/yellow

Content

1 Operation, Function and Connections

1.1 Power Supply Main Switch

A rocker switch for AC on / off is situated at the rear side of the power supply.

Please note that this connector do not disconnect the power supply from mains completely! Many internal components remains under high voltage (about 400VDC).

When this switch is in OFF Position (O) all other functions are disabled, including any remote control action (remote monitoring is possible). Also the Main Switch at fan tray front panel doesn't work until the rear rocker switch is in "ON" (|) position again.

1.2 Liquid cooled Power Supplies

Liquid (water) cooled power supplies wit item numbers 0P07.xxxx and 0P17.xxxx should be always operated with an adequate water flow (see 02.3). 0P07.xxxx is still equipped with aluminum heat exchanger, 0P17.xxxx with stainless steel pipes.

Two water taps (input / output) with integrated valves are installed at the rear side of the power supply. The tap-valves are closed when the mating parts have been removed. An overpressure valve prevents damages of the cooling circuit by overpressure.

ATTENTION: Do not readjust the brass-screw of the valve.

1.3 Fan Tray Operation and Control

All monitoring and control operations are performed by a micro-processor based alarm and control circuit placed inside the UEP 6021 power supply monitored by UEL 6020 fan trays. The reasons of a trip off will be displayed on the alphanumerical display and monitored via network (CANbus).

Voltages, currents, cooling air temperatures, fan speed, power dissipation of inserted modules, operation time of power supply and fan tray and net parameters can be shown on the fan-tray display.

1.3.1 Hot Swapping of LX Fan Tray

If the "hot swap" function is activated (AUTO OFF), the crate can be full powered during withdrawal of the fan tray.

The power supply will trip off to prevent damage of inserted modules

1. if the operating time with removed fan tray is too long (30 seconds)
2. when the programmed second limit of slot 1 temperature sensor (or of optional installed ones) exceed.

SYS Reset Switch (protected)

Power On LED
Main Switch **ON / OFF**; Trip off Rest

Status LEDs:

Green	Status
Yellow	Fan Fail
Yellow	Over Heat
Red	SYS Fail

Alphanumeric Display

MODE SELECT Switch

Fan **SPEED** Switch and LED

AUTO OFF Switch and LED

Network **ADDR**ess Switch

LOCAL Switch and LED

CANbus connector 1 female

CANbus connector 2 male

1.3.2 LX fan-tray UEL 6020
Front panel with CANbus Connectors

2 Technical Details

Rated Input Voltage: 106 – 230 V AC, +/- 15% variation allowed
Rated Input Current: 16 A

Sinusoidal: **CE** EN 60555, IEC 555 pow. fact. 0,98 (230VAC),
Inrush current: 16 A, cold unit

Output Insulation (SELF) **CE** EN 60950 , ISO 380, VDE 0805, UL 1950, C22.2.950

DC Output power with different input voltages at the rated current (16A), calculated with typical efficiency of 75%

115VAC / 1.380Wnom, 1580Wpeak **230VAC / 2.760W, 3170Wpeak**

(modules selected for 64x application, 5V- 3,3V-+/-12V- 48V)

Available modules	min. to max. range	max. output, peak	nominal output
Type MEH	2... 7,0V	115A / 630W	100A / 550W
Type MEH	7... 16V	46A / 630W	40A / 550W
Type MEH	30... 60V	13,5A / 650W	12A / 580W
Type MDL (+/-)	7... 24V	11,5A / 2x276W	10A / 2x240W
Type MDH (+/-)	7... 14V	23A / 2x276W	20A / 2x280W

Regulation

static:	MEH 550W/650W	<15mV(+/-100% load, +/- full mains range)	
	MDL/MDH :	<0,05%	(+/-100% load, +/- full mains range)
dyn.:	MEH	<100mV	(50% ⇔ 75% load, 1A/µs)
	MDL/MDH	<0,7%	(+/-25% load, 1A/µs)
Recovery time +/-25% load:		within +-1%	within +-0,1%
	Modules 550W	< 0,2ms	< 0,5ms
	Modules 650W	< 0,5ms	< 1,0ms
	MDL/MDH	0,0ms	< 1,0ms

Sense compensation range: full difference between min. and max. output voltage (OVP has to be adjusted accordingly)

Noise and Ripple

at Backplane side: <20mVpp, (0-20MHz) <3mVrms (0-2MHz)

at Power Supply output: <40mVpp, (0-20MHz) <3mVrms (0-2MHz)

Efficiency: 68% ... 85%, depends on used modules

M T B F

Power Supply air cooled	40°C ambient >65 000 h	25°C ambient >100 000h
Power supply water cooled	20-40°C water, 40°C ambient	>100.000h

2.1 EMI

RF-emission: **CE** EN 61000-6-3:2001
EMC immunity: **CE** EN 61000-6-2:2001

Operation temperature: 0....50°C without derating, Storage:-30°C ... +85°C

Temp.-coefficient:	< 0,2% / 10K
Stability (conditions const.):	10mV or 0,1% / 24 hours, 25mV or 0,3% / 6 month
Current limits:	adjustable to any lower level
Voltage rise characteristics:	monotonic 50ms, processor controlled.

2.2 Protection Provisions

Overvoltage crow bar protection:	trip off adjusted to 125% of nominal voltage each output
DC Off (trip off)	within 5ms if >+5 /-2,5% (≥ 5V output) deviation from nominal values, adjustable, after overload, overheat, overvoltage, undervoltage (bad status) and fan fail
Overtemperature:	DC Off (trip off)
Air cooled	if temperatures exceed 110°C heat sink, 70°C ambient
Water cooled	if heat exchanger temperature exceed 80°C

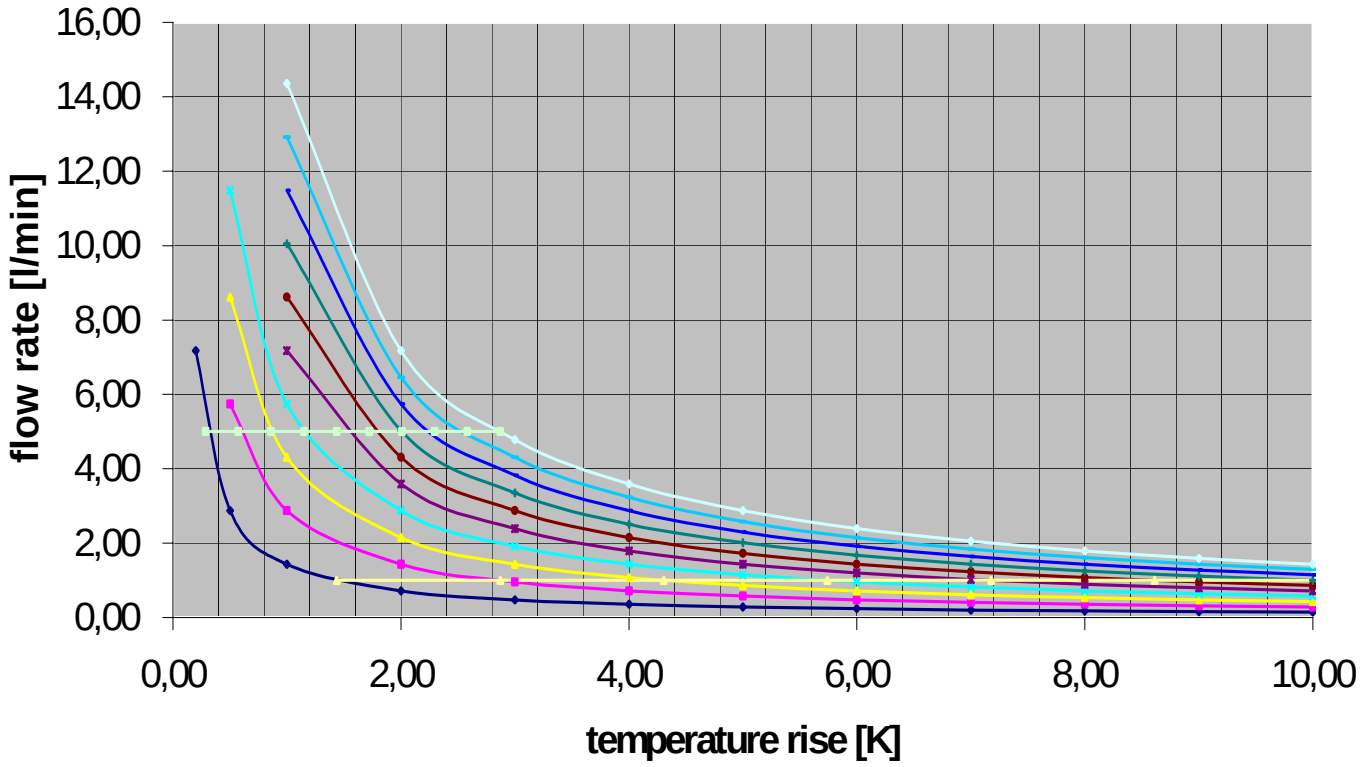
Trip off points adjustable, processor controlled. Output capacitors will be discharged by the crow bars

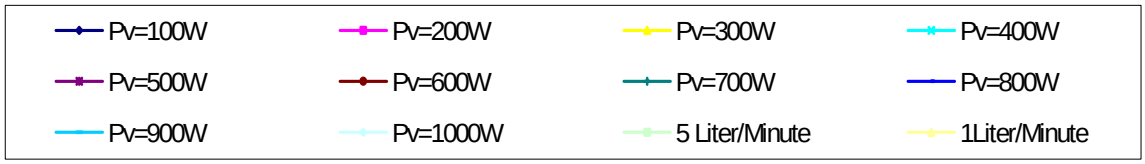
Overpressure Water cooled versions: 16-18 bar adjusted relief valve

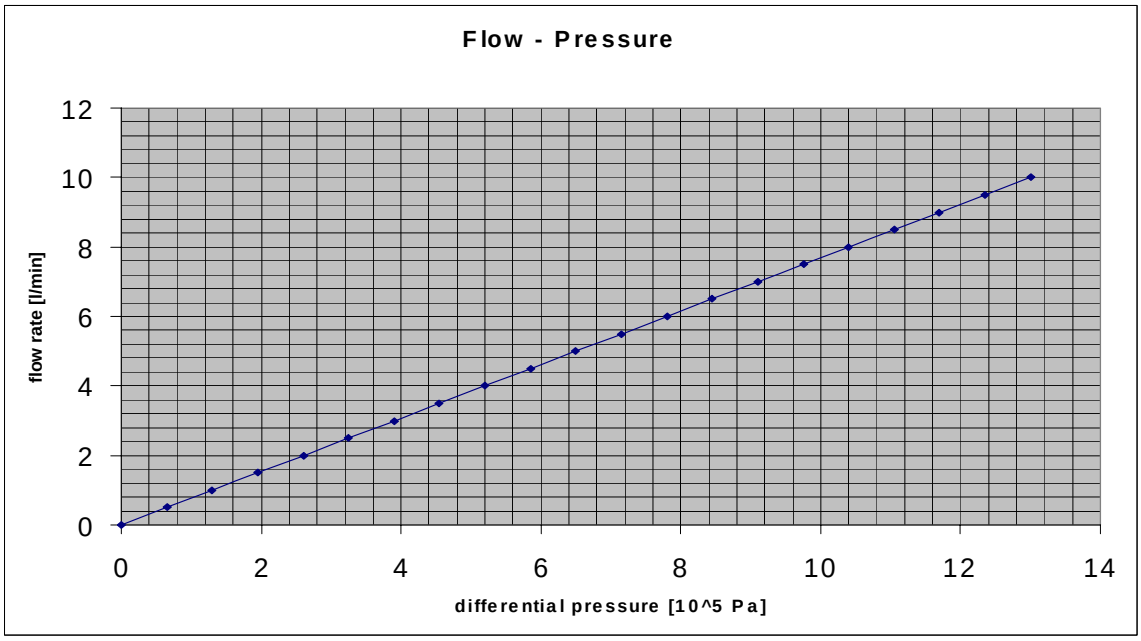
2.3 Water cooled Versions, Flow Rates

Measured graphs of a typical power supply (5 modules):

Water temperature rise at different flow rates (power dissipation as parameter)







3 Conformity Certificate

CERTIFICATE

TÜV

of Conformity
Low Voltage Directive 73/23/EEC
as last amended by EEC Directive 93/68/EEC

Registration No.: AN 60005031 0001

Report No.: 21106169 001

Holder:
Plein & Baus GmbH
Wiener Elektronik
Müllersbaum 20
51399 Burscheid
Deutschland

Product:
Schaltnetzteil
(Switching Power Supply)

Identification:

Type designation	: UEP 6021 - LHC9U				
Input voltage	: 100-240 V AC 50-60 Hz				
Output voltages	: +5 V	+3.3 V	+12 V	-12 V	48 V
Output current	: 300 A	100 A	10 A	10 A	12 A
Protection class	: I				
Serial No.	: Engin. sample				

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all revision of Annex I of Council Directive 73/23/EEC, in its latest amended version, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex III of the Directive.

Certification Body

TÜV Rheinland Product Safety GmbH - Zertifizierungsstelle - TÜV Rheinland

Cologne, 22.05.2003

Dipl.-Ing. H.-P. Pape

TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln

CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE

EG-Konformitätserklärung nach Artikel 10.1 der Richtlinie 89/336/EWG (EMV-Richtlinie)
EC-Declaration of Conformity acc. to Article 10.1 of the Directive 89/336/EEC (EMC-Directive)
Déclaration de conformité CEE selon l'article 10.1 de la directive 89/336/CEE (Directive EMC)

Wir, **W-IE-NE-R Plein & Baus GmbH**
We, Müllersbaum 20
Nous, 51399 Burscheid-Hilgen

Name und Anschrift des Herstellers oder des in der EU niedergelassenen Inverkehrbringers
Name and address of the manufacturer or of the introducer of the product who is established in the EU
Nom et adresse du fabricant ou le la personne résidant dans la CEE qui introduit le sous-dit produit de la CEE

erklären in alleiniger Verantwortung, daß das Produkt
herewith take the sole responsibility to confirm that the product
soussignés déclarons de notre seule responsabilité que ce produit

Series 6000 LHC VME64x-Crate

Typenbezeichnung und ggf. Artikel-Nummer
Type designation and, if applicable, article no.
Type, nom et - si nécessaire - n° d'article du produit

mit den folgenden Normen bzw. normativen Dokumenten übereinstimmt
is in accordance with the following standards or standardized documents
est conforme aux normes ou spécifications Européennes suivantes

1.	**EN 61 000-6-3:2001**	**Störaussendung EMA [RF emission]**
	EN 55 022:1998 + Corr:2001 + A1:2000 Kl. B	Störspannung [conducted noise]
	EN 55 022:1998 + Corr:2001 + A1:2000 Kl. B	Störfeldstärke [radiated noise]
	EN 61 000-3-2:2001	Oberschwingungen [harmonics]
	EN 61 000-3-3:1995 +Corr:1997 +A1:2001	Spannungsschwankungen [flicker]
2.	**EN 61 000-6-2:2001**	**Störfestigkeit EMB [immunity]**
	EN 61 000-4-6:1996 + A1:2001	HF-Einströmung [injected HF currents]
	EN 61 000-4-3:1996 + A1:1998 + A2:2001	HF-Felder [radiated HF fields] incl. "900MHz"
	EN 61 000-4-4:1995 + A1:2001	Burst
	EN 61 000-4-5:1995 + A1:2001	Surge
	EN 61 000-4-11:1994 + A1:2000	Spannungs-Variationen [voltage variations]
	EN 61 000-4-2:1995 + A1:1998 + A2:2001	ESD

Folgende Betriebsbedingungen und Einsatzumgebungen sind vorauszusetzen
The following operating conditions and installation arrangements have to be presumed
Les conditions d'opération et d'installation suivantes sont à respecter

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Dieser Erklärung liegt zugrunde der Prüfbericht
This confirmation is based on testreport
Cette confirmation est basée sur report de test

21106924_001 TÜV Rheinland Product Safety GmbH, 51101 Köln, Allemagne

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Jürgen Baus, Techn. Director

Name, Anschrift, Datum und Unterschrift des rechtsverbindlich Verantwortlichen
Name, address, date and legally binding signature of the person being responsible
Nom, adresse, date et signature de la personne responsable