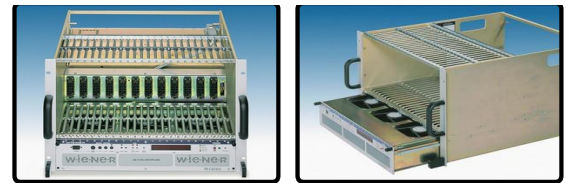


# NIM CERN-CE 300W with fan tray

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*NIM CERN-CE 300W with fan tray*



The CERN spec./CE NIM crate series represents modular designed NIM crates with linear regulated power supplies in excellent and proven W-IE-NE-R quality, conforming to EUR4100 and CERN specifications. These NIM crates are outfitted with 300W linear regulated, a fan tray and 300W low noise plug-in power supplies for standard applications.

The modular concept of the CERN NIM and CAMAC standard allows to easily insert / remove and exchange fan trays (if outfitted with) and power supplies. All CERN spec. parts as bins, fan trays and power supplies are interchangeable between different NIM and even CAMAC crates.

All power supplies support the features defined by the CERN standard including the monitoring connector and provide protection against short circuit, over / under voltage and over temperature.

The "CE" versions provide improved AC wiring.

## Main Features

- 5U high bin UEN 03 with 12 NIM slots
- CERN compatible bin mechanics and wiring, extreme solid / heavy construction, prepared for rear-side plug-in power supply

- Intelligent fan tray with 3 controlled DC-fans (variable fan speed)
- 3 status LED´s and high visibility alpha-numeric display / diagnostic system
- CERN spec. high precision linear regulated NIM power supplies for 300W power output, all 6 DC voltages +/-6V, +/-12V +/-24V provided, lowest noise (<3mVpp) technology, special version with increased +/-12V current available (no +/-6V)
- Power supplies to be plugged-in to the rear of the NIM bin for easy exchange
- CE conform versions provides improved AC wiring.

## UEN 01 / CEN 03 NIM Bins

- 7U bin UEN 01 for 12 NIM slots with 2 U fan tray space
- Extremely solid construction, prepared for rear-side plug-in power supply
- 12 wired NIM connectors with long life - high quality massive, gold plated contacts
- CERN compatible bin mechanics and wiring
- UEN 01 dimensions: 19" (483mm) x 7U (311.2mm) x 530mm [whd], weight: ca. 5 – 6 Kg

## UEL/CEL 03M Fan Tray

- Intelligent fan tray with 3 controlled DC-fans (variable fan speed)
- 3 status LED´s and high visibility alpha-numeric display / diagnostic system
- Optional CAN-bus interface for crate remote control
- CE version with separated AC wiring to power supply
- Dimensions: 19" (483mm) x 2U (86mm) x 260mm [whd], weight: ca. 5 Kg

## UEP/CEP 22M 300W Power Supplies

- CERN spec. high precision linear regulated NIM power supplies for 300W power output,
- All 6 DC voltages +/-6V, +/-12V +/-24V provided, lowest noise (<3mVpp) technology, special version with increased +/-12V current available (no +/-6V)
- Power supplies are plugged-in to the rear of the NIM bin for easy tool free exchange
- All power supplies are protected against short circuit, over / under voltage and over temperature
- Equipped with status control and CERN-spec. monitoring output (PG28)
- 100V, 110V, 220V or 240V 50Hz/60Hz AC input (to be selected / changeable)
- CE conform versions provide improved AC wiring.
- Dimensions: 429mm x 131mm x 215mm [whd], weight: 16.5kg

### Standard Crate configurations (other possible on request)

Type	Height	Fan	P.S.	+6V/-6V	+12V/-12V	+24V/-24V	115VAC	Power
NIM 300LCE_x	7U	CEL03M	CEP 22M	17A/17A	3.4A/3.4A	3.4A/3.4A	0.5A	300W
NIM 300LSCE_x	7U	CEL03M	CEP 22MS	-	15A/15A	1A/1A	0.5A	300W
NIM 300L_x	7U	UEL03M	UEP 22M	17A/17A	3.4A/3.4A	3.4A/3.4A	0.5A	300W
NIM 300LS_x	7U	UEL03M	UEP 22MS	-	15A/15A	1A/1A	0.5A	300W

**Note:** \_x = defines the AC input voltage, factory default is 220V AC (without index)

x = B: 110V AC

x = J: 100V AC

x = E: 240V AC

(\* usable slots)

## UEN 01 NIM Bin 7U

7U NIM-Bin for 12 high powered NIM-Modules, rugged heavy-duty construction with 6mm side panels depth 525mm. Power supply is plugged in and locked from rear side. The bin provides 2U space for a fan tray unit. The power-bus-system is equipped with 12 high-quality long-life NIM connectors parallel wired. Connector pins made of massive brass, gold plated.

Current rail system for +/-6V and Ground. Spliced wiring and additional power-connector pins have been used to allow currents of 25A for +/-12V lines now. CERN specifications are fulfilled entirely. The wiring across the NIM connectors is achieved under a screening cover.

When used according to CERN specifications the bin wiring carries mains voltage. All this mains cable are arranged as screened lines to prevent effects of mains distortions to secondary circuits. Due to not fulfilling the restrictions of EN 60950, UL 1950, etc., power supply and fan tray are not CE-marked. When used in combination with CE conform power supplies (CEP) and fan tray (CEL) mains voltage will be conducted through a separated power cord to the fan tray. This power cord is fixed at fan tray side and has to be plugged to the power supply. The bin is free of mains voltage then.

### Current maximum ratings:

Voltage Line	Current / slot	Current / bin	Comment
+/-6V	13A	65A	sensed
+/-12V	13A	26A	sensed
+/-24V	13A	13A	sensed
GND	13		
115V AC		0.5A	Secondary

All NIM bins have clean earth wired with 0,25mm<sup>2</sup>

## Intelligent NIM / CAMAC Fan Tray UEL03 / CEL03

- CERN spec. conform fan tray unit equipped with alphanumeric monitoring and three long life DC axial fans, either with frontal or bottom air entry (400m<sup>3</sup>/h or >540m<sup>3</sup>/h airflow).
- Static pressure up to 8 mm H<sub>2</sub>O column.
- Fan speed is variable from 1200 to 3000 rpm
- MFOT (Maintenance Free Operation Time) > 65 000h / 40°C.
- Display: voltages, currents, fan speed, air inlet temperature, total power dissipation by inserted modules, network address (if installed). In case of malfunction the type of error will be displayed.
- LED's for Status, Fan-Fail, Over-Heat
- The fan tray monitoring can be set to Programming Mode when used with PS/Cs236 or 336 power supply.
- Optionally available with CAN-bus interface for remote monitoring and control.

## CE conform Crate versions / CE conform mains connection

CERN spec. wired bins allow to switch crates on and off via the mains switch at the fan tray. Current rules as CE60950

and UL1950 claim for primary to secondary isolations, which are not considered in the appropriate CERN specifications. Therefore WIENER formed a compromise to fulfill CE and UL safety restriction as well as CERN specifications by separating the mains wiring.

## NIM / CAMAC Power Supply UEP 22M

Linear regulated low noise power supply with 300W DC output, cut-off-protection for "overload", "over voltage", and "over temperature"-failures. Outfitted with same monitoring and control facilities as UEP 10M88, the UEP 22M can be used to power NIM- or CAMAC-Crates. After cut off, caused by invalid operation, reset of »M« power supplies is possible by toggling the mains switch off and on again or feeding a 24VDC signal to the "rearming" input at the monitor connector. Standard mains voltage range is 230 / 115VAC, selectable internally.

UEP 22M is foreseen for convection cooling at full output performance. Forced air-cooling can increase the total power availability up to 400W.

Power supply DC-Outputs:			max. power	regulation			application
<b>UEP22M</b>			300W	linear			NIM /CAMAC
<b>UEP22MS</b>			300W	linear			NIM
	<b>+6V</b>	<b>-6V</b>	<b>+12V</b>	<b>-12V</b>	<b>+24</b>	<b>-24V</b>	<b>115VAC</b>
<b>UEP22M</b>	17A	17A	3.4A	3.4A	3.4A	3.4A	0.5A
<b>UEP22MS</b>	-	-	15A	15A	1A	1A	0.5A

### UEP/CEP22M

Input voltage, 47-63Hz	100V(+/-10%) , 115V or 230V
Soft start	yes
Output: Noise and Ripple: Full load / 80% rated output	<3mVpp / 1mVpp, <0,6mV <sub>RMS</sub>
Regulation static: Change of output voltage versus load change 10-100%	<0,05%
Regulation static: change of output voltage versus line change +/-10%	<0,02%
Recovery time versus load change 10-100%	<0,15ms
Output impedance: Static / Dynamic(at 100kHz)	0,2mOhm / 0,5 Ohm
Temperature Error	<0,005%/K
Thermal Protection (No. of thermal switches)	(3x)
Output Current Characteristics (Ishort <3A in foldback regulators), reverse bias diodes!	Foldback and trip off
Dual tracking for complementary outputs	yes
Calibration ranges Voltage / Currents	+/-5% / 20%
Sense compensation ranges, all DC voltages	0,5V

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Status Control for all voltages (Over- Under-Voltage Comparator, defaults +/-0,3%)	bad/good, Status LED-signal
Overvoltage Protection, trip off thresholds (defaults)	Crow bars 7,3V, 14,5V, 24,5V
Derating	>40°C with 2% up to 60°C max.

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**Optional CAN-bus interface for DC voltage monitoring and remote on/off via rear 9 pin sub D connector**

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## Product Data Sheet

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NIM CERN-CE 300W with fan tray: [Print Product Data Sheet](#)

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## Documentation

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Manual and Tech-Notes : [Manual NIM-CAMAC](#)

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Introduction: [WIENER NIM CAMAC introduction](#)

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