

Energy 3000 Primary Switched Power Supply 3000W

VE3P 72.42/OP1 adjustable V/I/P

Not for new
projects !



Ordering Informations

Type customized	Output	Input Voltage	Installation Dimensions	Article No.* ¹
VE3P 72.42/OP1	V = 60 - 70V* - 72V I = 24 - 42A* P = 1.8 - 3kW*	3 x 400Vac	84HP / 2U	580-003-12

* Delivery condition

*¹ Full rack with anodized front panel

Accessories

			Article No.
Mains connection	X1	Main plug STAK 3 screwable connection 1.5mm ²	400-064-00
DC-output connection	X2	Load plug REVOS 6H/6S crimp connection 6mm ² crimp connection 1mm ²	400-065-00
I/O-Signal connection	X3	Connector D-SUB 25P/ST/L solderable connection	400-066-00

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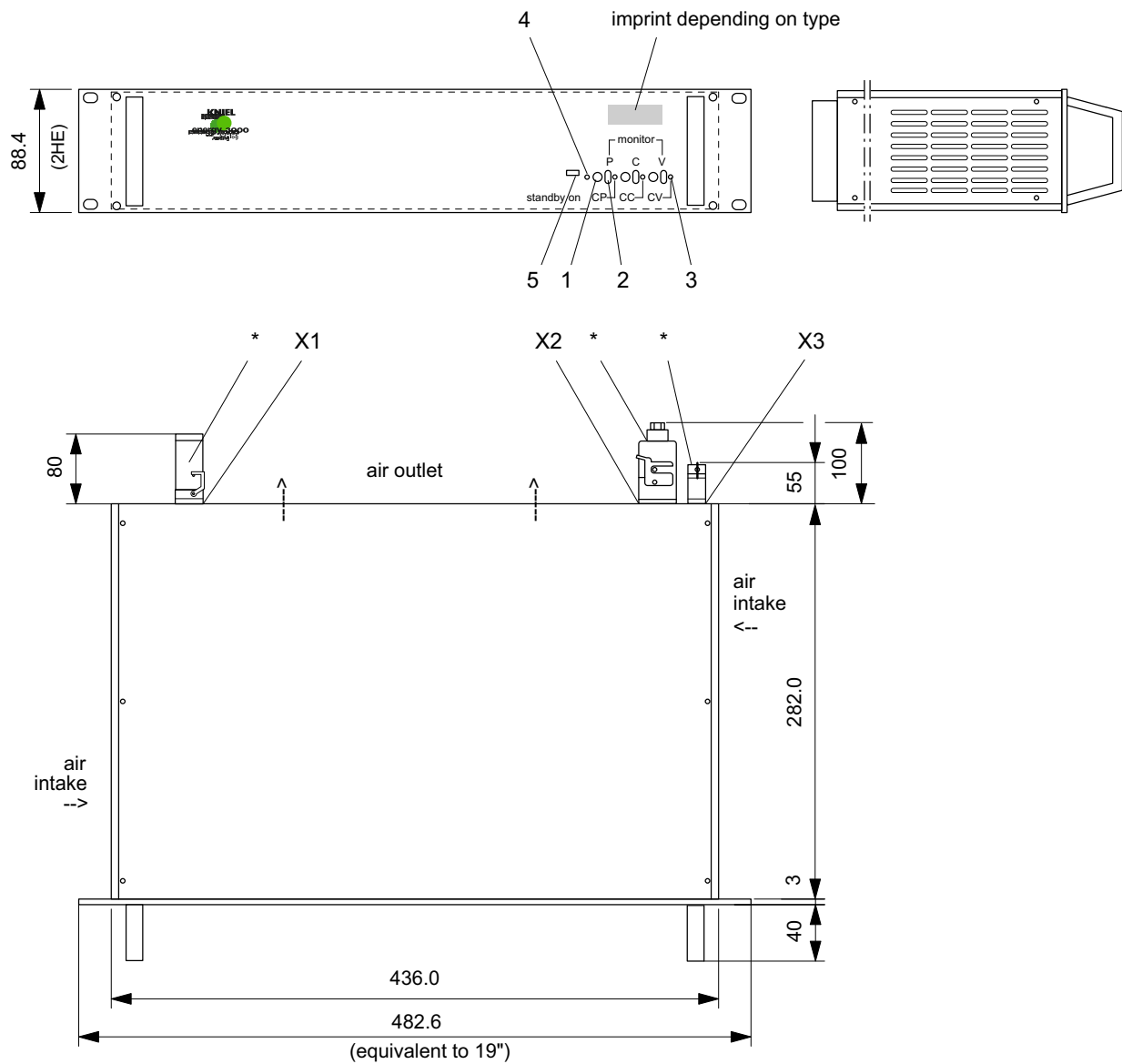
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Dimensions in mm

- | | |
|-----------------------------|-----------------------------|
| 1 = Set value potentiometer | X1 = Mains connection |
| 2 = Test socket | X2 = DC- Output connection |
| 3 = Control LED | X3 = I/O- Signal connection |
| 4 = Remote LED | |
| 5 = Standby/on-switch | |

Front view without display



* = Accessories, see ordering information

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Technical Data

Guaranteed values after a warm-up period of approx. 15 min. at nominal load, measured at the unit's output

Type		70.42	
Output Voltage	nominal value	[Vdc]	70
Setting Range		[Vdc]	60 - 72
Output Current	nominal value	[A]	42
Setting Range		[A]	24 - 42
Output Power	nominal value	[kW]	3
Setting Range		[kW]	1.8 - 3
Monitor Output	1V is equivalent to	[V]	18
0...5V	1V is equivalent to	[A]	8.4
	1V is equivalent to	[W]	600
Function	primary switched		
Efficiency at V_{Omax}		[%]	≥ 93
Static Voltage Regulation			
Load Change 0... 100%		[mV]	≤ 15
Input Voltage Change (342-457V)		[mV]	≤ 15
Current Regulation			
Load Change 0... 100% R_{NOM}		[mA]	≤ 50
Input Voltage Change (342-457V)		[mA]	≤ 30
Power Regulation			
Load Change within V_{max} and I_{max}		[W]	10
Input Voltage Change (342-457V)		[W]	10
Dynamic Voltage Regulation			
Control Deviation * for			
$\Delta I_o = 65... 100\% I_{NOM}$		[mV]	≤ 500
Load Current Change dI_o/dt		[A/ μs]	0.1
Control Time * for			
$\Delta I_o = 65... 100\% I_{NOM}$		[ms]	≤ 1
Quality Voltage Regulation			
Residual Ripple (300 Hz)		[mV _{pp}]	≤ 50
Operating Frequency Ripple* (200 kHz)		[mV _{pp}]	≤ 80
Superimposed Switching Spikes*		[mV _{pp}]	≤ 150
Start-up Time after Mains On		[s]	1
Power-up Time after Standby/on		[ms]	≤ 75
Overvoltage Protection (OVP)			
Factory Setting (tol. +1V)		[V]	77
Residual Voltage after Tripping		[V]	0
Sense Lead Operation (load line compensation)		[V]	max. 1.5 per load line

For definitions, informations about electrical safety, EMC and mechanical stressability see description.

* measured at the unit's output without sense connection.

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Technical Data

Guaranteed values after a warm-up period of approx. 15 min. at nominal load, measured at the unit's output

Type			70.42
Input Voltage	[Vac]	3 x 400	(342 - 457)
Frequency (up to 440 Hz on request)	[Hz]	50 - 60 ±10%	(45 - 66)
in the Event of Mains Failure			
at Nominal Load: Buffertime	t _{buff}	[ms]	≥ 5
Bridging Time	t _B	[ms]	≥ 3
Prewarning Time	t _p	[ms]	≥ 2
Starting Inrush Current			
Unit cold	$\int i^2 dt ; I_p$	[A ² _s] ; [A]	≤ 6,25 ; ≤ 25
Unit hot	$\int i^2 dt ; I_p$	[A ² _s] ; [A]	≤ 12 ; ≤ 60
Unit Fuse (internal)	[A]	3 x T 8	
Temperature Coefficient	[ppm/K]	150	
Air Inlet Temperature	[°C]	-20...+50, without derating; internal temperature-regulated fan	
Storage Temperature Range	[°C]	-25...+70	
Overload Protection		continuous short-circuit-proof; thermally disconnection	
Weight approx.	[kg]	9.5	

For definitions, informations about electrical safety, EMC and mechanical stressability see description.

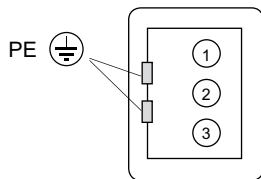
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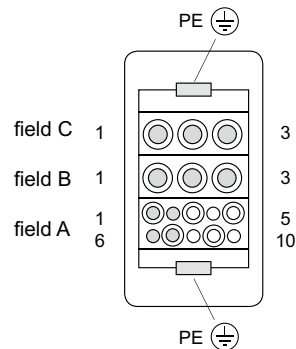
Pin Configuration

Mains Connection X1 (unit plug)



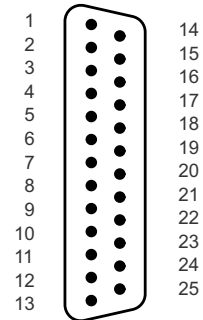
name of signal		pin
live	L1	1
live	L2	2
live	L3	3
earth	PE	

DC- Output Connection X2 (unit socket)



name of signal		pin
+ output 1		C1
+ output 1		C2
+ output 1		C3
– output 1		B1
– output 1		B2
– output 1		B3
+ sense lead 1		A1
+ when operating without sense leads, bridge with A1		A2
– sense lead 1		A6
– when operating without sense leads, bridge with A6		A7
earth	PE	

I/O- Signal Connection X3 (D-Sub socket 25-pole)



name of signal		pin
15 V		1
GND		2
standby/on	A	14
standby/on	K	15
PFS C		10
PFS E		23
FS C		11
FS E		24
GND		12
LS		25
nc*		3-9
nc*		13
nc*		16-22

Three-phase supply network
400Vac L1, L2, L3 + PE

(Neutral is not required for operation)

cross section required: 1.5mm² Cu

Please note!

When operating without sense leads the contacts A1, A2 and contacts A6, A7 have to be bridged in the DC output unit plug (accessory).

Power supplies with an adjustable output voltage higher than 60Vdc and a connection to earth, has to use the PE of the output connector X2.

* Pins marked „nc“ may not be connected external.

Explanations see description.

Advice

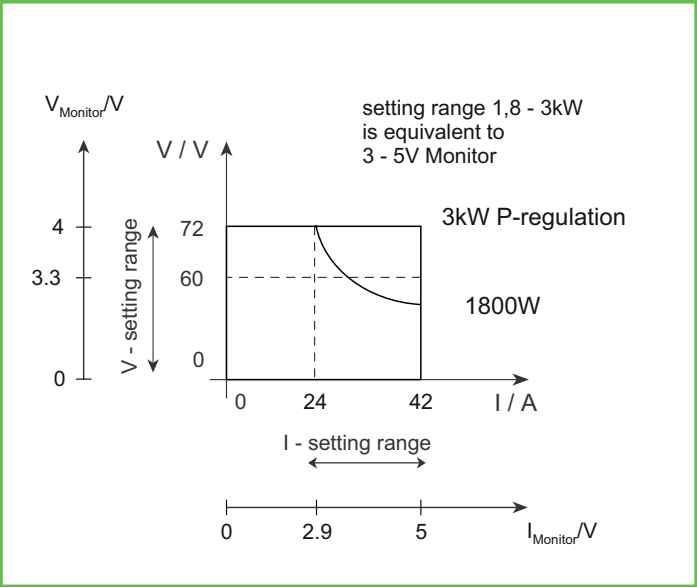
All metallic connector housings are related to protective earth.

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Output Characteristics

V/I/P - Setting Ranges



Notes

The unit's output is equipped with anti-interference capacitors than refer to earth with 22nF:

Tolerances of the monitor:

V	0.5% ; 150 mV
I	0.7% ; 200 mA
P	2.0% ; 60W

The impedance on the measurement sockets is 10Ω at max. 5mA.