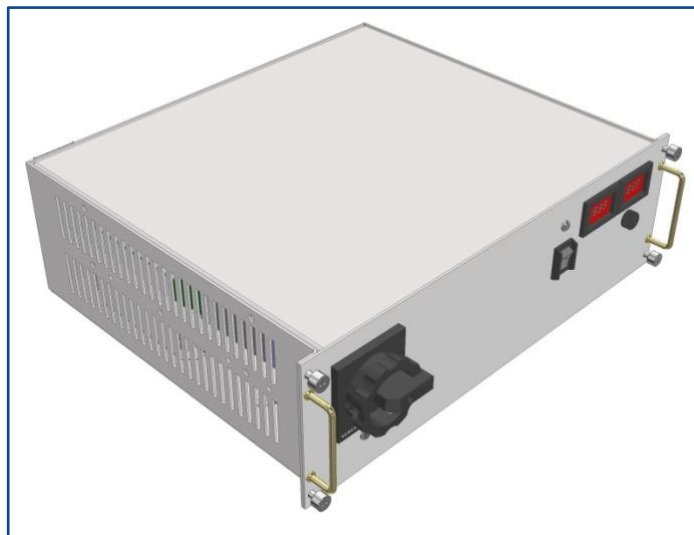


Features

- Output power up to 7000 W
- Operating air temperature -40 ... +65 °C
- Dimensions
400 W x 350 D x 133 H (mm)
- Input range:
"415" - (352-477 VAC, 3ph., 47-63 Hz)
- Internal forced air cooling
- Active parallel operation
- "OK" indication
- Remote turn on via RON pins
- Front panel "power on" and "unit on" switches
- Max output capacitance - unlimited
- Steel enclosure



Description

JETNAB-MIL-7000 is a 3-phase AC/DC isolated power supply block meant for operation in harsh environmental conditions. The block provides minimized dimensions with high level electro-technical performance and mechanics parameters utilizing internal forced air cooling. The block may be connected with other blocks to be used in parallel for increased power output.

1 channel AC/DC block					
Model part number	Input voltage	Output power	Output voltage	Output current	Typical efficiency at 70 % load
JETNAB-MIL-7000-415S200	(3 phase) 352-477 VAC or DC equivalent	7000 W	200 VDC	35.0 A	93 %
JETNAB-MIL-7000-415S300		7000 W	300 VDC	23.3 A	93 %

Important parameters

1.1 Input connection	Three phase with ground without neutral
1.2 EMC compliance	MIL-STD-461F CE101 & CE102 built-in filter
1.3 Output power	7 kW
1.4 Ripple and noise	300 mVpp max (or 0.1 %)

2.1 Ambient operating temp.	−40 to +65 °C
2.2 Air intake	COOL AIR must be provided from the sides of the block to be pulled in by internal fans. HOT AIR is then blown out of the back side.
2.3 Weight	20 kg max
2.4 Dimensions	W x H x D: 400 x 133 x 350
2.5 Mechanical mounting	The block is mounted into a rack onto telescopic slides. The block provides mounting holes for telescopic slides.
2.6 Output monitoring	Provided by digital displays on the front panel

3.1 Output trimming	Output voltage trimming is possible via external trimmer ADJ on the front panel.
3.2 Parallel operation	Active parallel operation is achieved by connection PAR and -OUT individual block outputs.
3.3 Protections	Over voltage, over current, over temperature

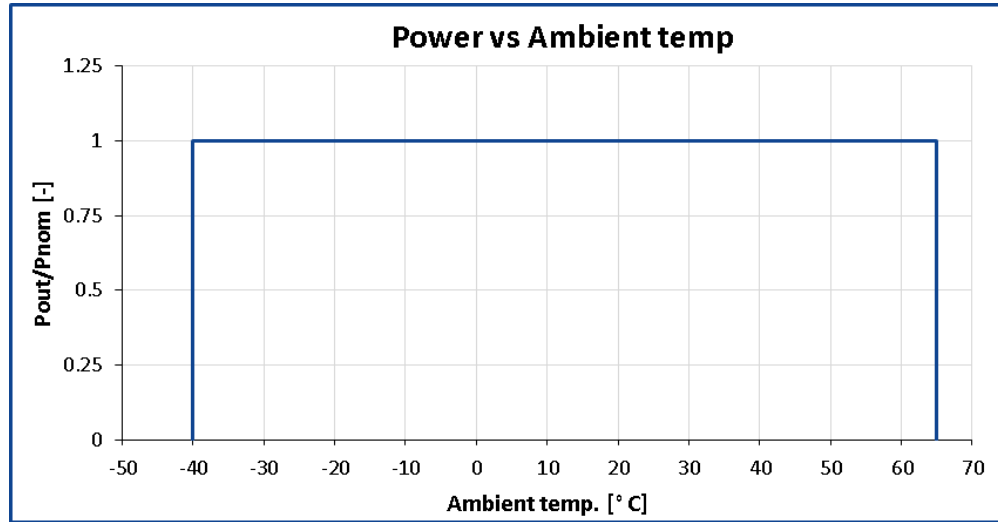
General characteristics ³		
Switching frequency		100 kHz typ. (PWM modulation)
Temperature ranges	air operating temperature	−40° C ... +65° C
	storage temperature	−60° C ... +85° C
Over-temperature protection		typ. +70° C of ambient temperature
Thermal mode and cooling method		internal forced air cooling, inlet air from sides, outlet air from back
Humidity (non-condensing)		5-95 % rel. H
Insulation	in/case	1500 VAC
	in/out, in/REM	3000 VAC
	out/case, out/REM, REM/case	500 VAC
	out/out	500 VDC
Isolating resistance @ 500 VDC		>20 MOhm
Thermal shock, mechanical shock & vibration		MIL-STD-810F
Safety standards		IEC/EN 60950-1
Typical MTBF	Pout = 0.7·Pout,max	30 000 hrs
Weight (max)		20 kg max
Input characteristics ³		
Input power on	For block to become operational, input power ON/OFF switch must be set to ON	
Input voltage range (with power derating)	"415" 3 ph. and ground	352-477 VAC, 415 VAC nom. (or DC equivalent) 47-63 Hz
Start-up input voltage		typ. 300 VAC
EMC standard compliance ¹	MIL-STD-461F CE101, CE102	
Power Factor typ.		0.94
Output characteristics ³		
Power derating based on input voltage	-	no derating
Output voltage adjustment	±10 % via external trimmer on front panel	
Output voltage regulation	input variance Uin,min to Uin,max	±0.5 % for load 10-100 %
	load variance 10 % to 100 %	±1 %
Ripple and noise (peak-to-peak)	20 MHz bandwidth	see table on page 2
Protection	over-current	current source behavior: current is limited at 110-125 % of Iout,nom
	over-voltage	<130 % Uout
Capacitive load (max)	-	unlimited
Remote ON	Unit is turned ON by shorting "+RON" to "-RON"	
Front panel ON/OFF	A switch on the front panel overrides "Remote ON" function (output On/Off).	
"OK" function	Open-collector. LOW resistance if Uout > 85% Uout,nom and block temperature not close to limit operating temperature. Otherwise HIGH resistance. Umax = 20 V, Imax = 10 mA	

1. -

2. -

3. All specifications are valid for normal climatic conditions, nominal output voltage and current, unless stated otherwise.

Application information



1. Cooling and thermal performance

The block is operational at maximum ambient temperature of 65° C. For safe stable long-term operation one shall maintain ambient temperature below 65° C. The user must ensure that air inlets and air outlet are both un-obstructed and cool air of proper pressure is available for the block at all times. The user must monitor "OK" status that signifies that inner block operational temperatures are not near thermal protection threshold.

2. Operation with shorted outputs

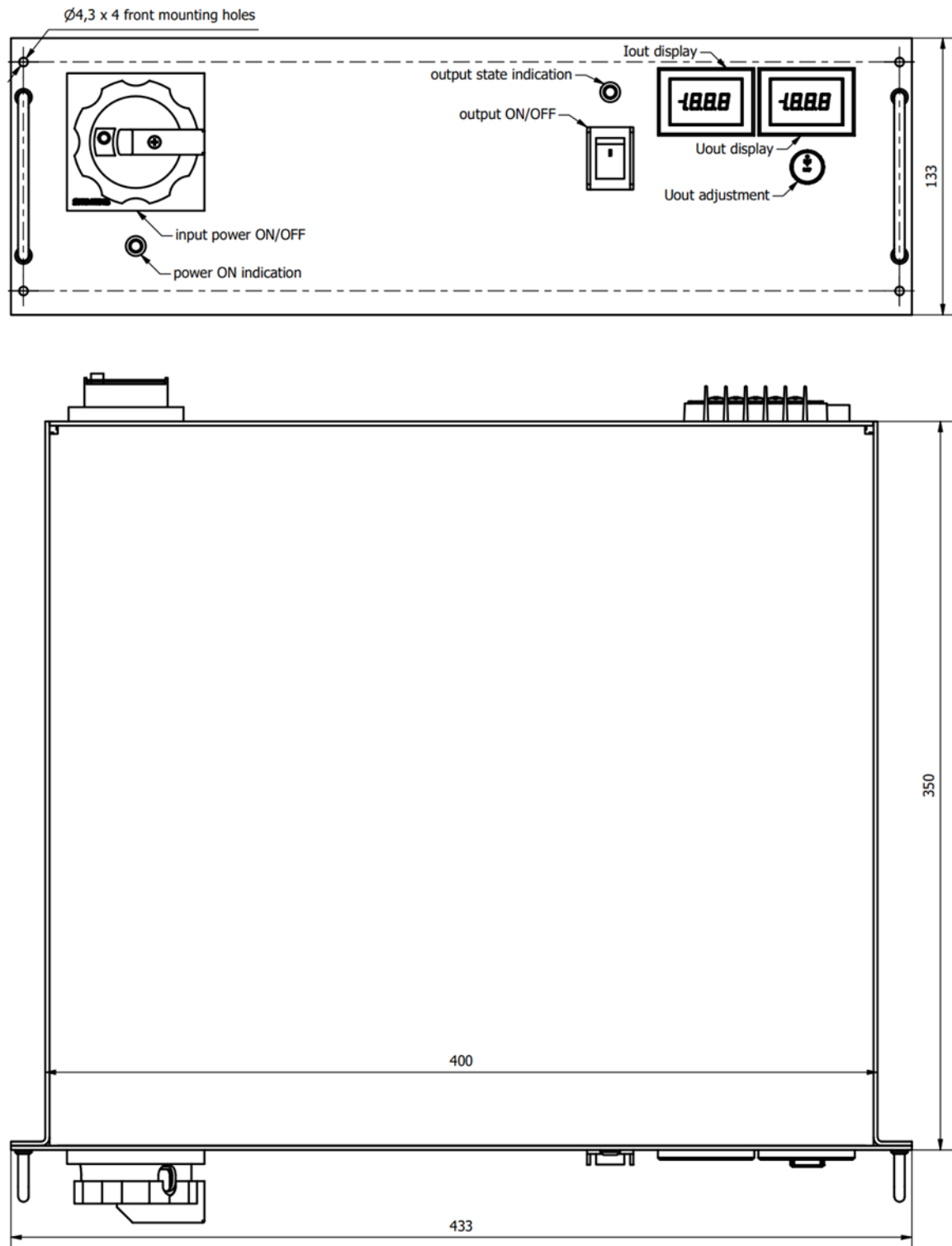
The units have a short-circuit output protection. **The protection is for emergency only, not for long-term operation. It's prohibited to use the units with shorted outputs (the units have the special detectors inside).**

3. Turn-on sequence

It's mandatory to follow the turn-on sequence:

- 1) before connecting the block to input mains and load make sure the input power switch is in the OFF position,
- 2) before connecting the block to input mains and load make sure the output switch is in the OFF position,
- 3) connect the input wires and ground the block via special grounding screw located on the back panel to the nearest grounding structure,
- 4) connect the load to block outputs,
- 5) activate input mains,
- 6) switch input power switch to ON,
- 7) switch output switch to ON,
- 8) monitor output current and voltage on the front panel,
- 9) adjust output voltage via rotating trimmer resistor on the front panel to the required voltage value.

Dimensions - Front and Top views



Dimensions - Side and Rear views

INPUT CONNECTOR, type 38729-1571(2) Molex			
X1.1	X1.2	X1.3	X1.4
GND	C	B	A

OUTPUT CONNECTOR, type 38720-3205 Molex				
X2.1	X2.2	X2.3	X2.4	X2.5
+OUT	+OUT	-OUT	-OUT	-OUT

SERVICE FUNCTIONS CONNECTOR, provided with mating part PC 4/ 8-ST-7,62 (1804962) Phoenix Contact							
X3.1	X3.2	X3.3	X3.4	X3.5	X3.6	X3.7	X3.8
PAR	+OK	-OK	+RON	-RON	<i>not used</i>	+UOUT	-UOUT

Notes:

1. It's recommended to use X2.5 for quality minus wire connection between blocks for parallel operation.
2. L-shaped profiles on each side of the rear block panel for cable management (not described on the drawing).
3. Use M6 ground bolt on the rear block panel for quality ground wire connection to the rack or other main grounded construction.
4. The block provides 3 telescoping mounting points per side (M4x15) and 4 mounting points on the front.

