

AZN-180Kva/23Kw 飞机地面电源机组（交流/直流）
AZN-180kVA/23Kw Ground power unit-AC/DC

技术参数

Technical parameter

序号	系统配置 System configuration features	交流（AC）	直流（DC）
1	容量 Capacity	180KVA（三相四线3-phase 4-wire）；	23KW
2	额定电压Rated Voltage	115V/200V	28.5V
3	输出接线方式Utput Connection	A、B、C、N	二线制 2-line
4	输出模式Output Mode	2路输出 2-channel output	1路输出 1 output cable
5	电压调节范围 Voltage Regulation Range	100V~130V	20~32V
6	稳压电压范围 Stable Voltage Range	113V~118V	26~30V
7	额定频率 Rated Frequency	400Hz	/
8	额定电流 Rated Current	522A	800A
9	额定功率因素(cosΦ)Rated Power Factor	0.8(lag)	/
10	瞬态电压范围Transitent-state Voltage	90V~140V	17~35V
11	电压反应时间Voltage Response Time	<0.1s	<0.1s
12	稳态频率范围Steady-statw Frequency	400Hz±1%	/
13	瞬态频率范围ransitent-state Frequency	370Hz~420Hz	/
14	频率稳定时间Frequency Response Time	≤1s	/
15	电压调制量Voltage Modulation	≤3V	/
16	频率调制量 Frequency Modulation	≤2Hz	/
17	峰值系数 Crest Factor	1.31~1.51	/
18	总谐波含量 Total Harmonic Content	≤4%	/
19	脉动幅值 Fluctuating Amplitude	/	≤1.5V
20	纹波电压 Ripple Voltage	/	≤1%(rms)
21	畸变系数 Distortion Coefficient	≤0.04	≤0.035
22	三相电压波形相位差Waveform Phase	120° ±2°	/
23	相电压不平衡Phase Voltage Imbalance	≤3V	/
24	过载性能 Overload Rating	125% 5min; 150% 18s; 200% 5s	1200~2000A (2s)
25	连续工作时间 Continuous Working Time	≥8h (Fuel tank 320L)	
26	线压降补偿 Line voltage drop compensation	输出电缆线压降自动补偿 Output cable voltage drop automatic compensation function	
27	平均无故障时间 Mean Time BetweenFailure	MTBF≥1000h	

28	平均修复时间 Mean Time To Repair	MTTR≤30min
29	使用寿命 Service Life	≥10年 (Year)
30	环境温度 Environment Temperature	-30℃~+55℃
	相对湿度 Relative Humidity	≤90% (+25℃)
	海拔高度Altitude	≤4000m
	面板和主体箱具有防雨功能 The panel and main box have rainproof function.	
31	保护功能 Protection Function	
	交流输出过压保护：当电压为125±1V时，延时2~4秒，自动切断电源与飞机系统的联系，故障指示灯亮，显示屏上显示过压故障信息； AC output overvoltage protection: When the voltage is 125 ± 1V, with a delay of 2-4 seconds, the connection between the power supply and the aircraft system is automatically cut off, the fault indicator light is on, and the overvoltage fault information is displayed on the screen.	
	交流输出欠压保护：当电压为100 ± 2V时，延时2秒，自动切断电源与飞机系统的联系，故障指示灯亮，显示屏上显示欠压故障信息； AC output undervoltage protection: When the voltage is 100 ± 2V, with a delay of 2 seconds, the connection between the power supply and the aircraft system is automatically cut off, the fault indicator light is on, and the undervoltage fault information is displayed on the screen.	
	交流输出过频保护：当电源频率高于430 Hz时，延时1~3秒，自动切断电源与飞机电气系统的联系，故障指示灯亮，显示屏上显示过频故障信息； AC output over frequency protection: When the power frequency is higher than 430 Hz, the delay is 1-3 seconds, and the connection between the power supply and the aircraft electrical system is automatically cut off. The fault indicator light is on, and the display screen shows the over frequency fault information.	
	交流输出欠频保护：当电源频率低于370Hz时，延时1秒，自动切断电源与飞机系统的联系，故障指示灯亮，显示屏上显示欠频故障信息； AC output under frequency protection: When the power frequency is below 370Hz, a delay of 1 second will automatically cut off the connection between the power supply and the aircraft system, the fault indicator light will be on, and the under frequency fault information will be displayed on the screen.	
	交流过载保护 AC Output Overload protection	
	直流输出过、欠压保护 DC Output Over-voltage or Under-voltage	
	直流过载保护 DC Output Overload protection	
	内部过热等保护 Internal Overheating And So On	
	水温高保护 Water Temperature Is High	
	柴油机机油压力低保护 Diesel Engine Oil Pressure Low	
	柴油机燃油位低保护 Diesel engine fuel level low protection	
	柴油机超转速保护 Diesel engine overspeed protection	
	紧急停止按钮：设置手动紧急停机按钮	

	Emergency stop button: set manual emergency stop button	
32	工作噪声 Working Noise	<85dB(A) 7m
33	显示 Display	OLED屏 (OLED screen)
34	显示精度 Display Accuracy	±1%FS (FS:满量程 FS:full range)
35	控制显示系统Control display system	OLED数字显示屏：显示发动机和发电机参数、输出电压、电流及输出控制、电气系统保护、故障信号显示、存储和故障历史查询。 OLED digital display screen: displays engine and generator parameters, output voltage, current and output control, electrical system protection, fault signal display, storage and fault history query.
36	额定转速 Rated Speed	1846(rpm)
37	冷却方式 Cooling	水冷+风冷 (Water+Air)
38	底盘 Chassis Choose	拖曳式 (Towed)
		两轴拖车，旋转牵引杆（前轴），驻车制动器。 Two axle trailer, rotating tow bar (front axle), parking brake.
39	柴油发动机Diesel Engine	康明斯 (Cummins)
	型号Model	6LTAA8.9-G2
	额定功率Rated power	235Kw/258Kw (315HP/346HP)
	转速The rated speed	1846r/min
	燃油料 Fuel oil	柴油 Diesel oil
	类型Style	6缸四冲程 6cylinders, array, four stroke
	进气方式Air inlet	涡轮增压，空空中冷turbocharged, Intercooled
	耗油率Specific fuel consumption	≤206g/kW·h
	排量Displacement	8.9L
	启动方式Starting way	24V电起动 24V electric start
	转速控制 Speed Control	电子自动调速Electronic automatic speed regulation
40	发电机Generator	中频无刷同步发电机 Medium frequency brushless synchronous generator
	中频无刷同步发电机输出115V/400Hz交流电；再通过降压整流模块输出一路28.5V直流电 Intermediate frequency brushless synchronous generator outputs 115V/400Hz AC power; Then output a 28.5V DC power through the step-down rectification module.	
	型号Model	TFZPW
	额定功率Rated power	180KVA 400Hz AC
	转速The rated speed	1846r/min

	输出形式Output form	三相四线Three-phase four-wire
	控制方式Control mode	无刷、自励同步 Brushless, Self-excited synchronization
	额定功率因素($\cos\Phi$) Rated Power Factor	0.8(lag)
41	外形尺寸(长×宽×高) (mm) Dimension (L×W×H)	$\leq 3100 \times 2000 \times 1900$
42	总质量 (kg) Total Mass	≤ 3500
43	最高车速 (Km/h) Max. speed	15~20km/h
44	输出电缆配置The output cable	
	1根28.5VDC输出电缆 (11m) , 电缆 $120\text{mm}^2 \times 2$, 插头型号PJ-500T; 2根115VAC输出电缆 (11m) , 电缆 $70\text{mm}^2 \times 4$, 插头型号PJ-500TB。 One 28.5VDC output cable (36 feet long), cable $120\text{mm}^2 \times 2$, plug model PJ-500T; Two 115VAC output cables (36 feet long), cable $70\text{mm}^2 \times 4$, plug model PJ-500TB.	
45	其他配置 Other configurations	
	柴油发动机进气加热、冬季燃油系统加热 Diesel engine intake heating, winter fuel system heating	
	电缆收纳箱Cable storage box	
	顶部旋转闪烁警示灯 (黄色) Top rotating flashing warning light (yellow)	
	4公斤灭火器及灭火器安装支架-1个。 4kg fire extinguisher and fire extinguisher installation bracket -1 piece.	
	备件: 保险丝-1套 , 按钮、指示灯-1套。 Spare parts: Fuses -1 set, Buttons and Indicator lights -1 set.	