

## Ground Power Unit Electric Frequency Converter

GP90E GP180E

### ● Features & Benefits

- No-break power transfer
- Over/under voltage protection (input/output)
- Over/under frequency protection
- Overload protection
- Overheating protection
- Short-circuit protection
- Neutral verification
- Asymmetric load verification
- Lockable doors with interlock functionality
- Tropical package for high humidity environments (10–100%)



### WHY AVRO

- ▶ 36-month warranty, effective from the date of delivery.
- ▶ Customized business relationship
- ▶ AAA maintenance program
- ▶ Stock locations in the United States and Canada

AIRCRAFT GROUND SUPPORT EQUIPMENT

**Electric Frequency Converter**

GP90E

Output Parameters		Input Parameters	
Rated output power (at PF=1)	90 kVA	Supply main rated voltage	3×400 V, PE
Qty of output	1	Supply main voltage permitted deviation	± 15% or according to customers spec
Rated output voltage line/phase	3 x 115/200 V	Supply nominal frequency	50/60 Hz
Output voltage adjustment range	15%	Supply main rated frequency	± 8 Hz
Output voltage frequency	400 Hz	Overall Efficiency at 30-100 % load	≥ 0.95
Frequency stabilization accuracy	± 0.001 Hz	Power factor	> 0.97
Output voltage regulation accuracy for balanced load	± 0.5%	Line Current Distortion at nominal load THDI	≤ 5%
Output voltage regulation accuracy for 40% unbalanced load	± 0.5%		
Total harmonic content THDU line-to-line (neutral) for linear load	≤ 2%	Power interruption	Up to 50 ms
line-to-line (neutral) for non-linear load	≤ 2%		
Maximum single harmonic distortion linear load	≤ 1.5	<b>Miscellaneous</b>	
non-linear load	≤ 2	Ingress protection (converter module)	IP55
Voltage modulation	≤ 0.5%	Maximum/ Minimal ambient temperature	plus 50°C/ minus 50°C
Phase symmetry, electrical degree for balanced load	120 ± 1%	Audible noise	55dB at 1 meter Typically, 50 dB
for 30% unbalanced load	120 ± 2%	Relative humidity	0 to 100%
Power factor	From 0.8 to 0.95 leading	Operational useful life	Minimum 25 years
Range of load change	0 – 100%	Mean Time To Repair (MTTR)	Maximum 20 minutes
Voltage setting time at 100 % load connection at output voltage deviation not more than 8%	≤ 2 ms	Performance	Mobile
Crest factor	1.414 ± 0.04	Control panel/Display	TFT with touchpad
Permissible overload, %		Cable IN	10 m or as per customer request
within 600 s	125	Cable OUT	10 m or as per customer request
within 60 s	150		
within 30 s	200		
within 10 s	300		
within 2 s	400		

**Electric Frequency Converter**

GP180E

Output Parameters	
Rated output power (at PF=1)	180 kVA
Qty of output	2
Rated output voltage line/phase	3 x 115/200 V
Output voltage adjustment range	15%
Output voltage frequency	400 Hz
Frequency stabilization accuracy	± 0.001 Hz
Output voltage regulation accuracy for balanced load	± 0.5%
for 40% unbalanced load	± 0.5%
Total harmonic content THDU line-to-line (neutral) for linear load	≤ 2%
line-to-line (neutral) for non-linear load	≤ 2%
Maximum single harmonic distortion linear load	≤ 1.5
non-linear load	≤ 2
Voltage modulation	≤ 0.5%
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