

Avionics Cooling Fans

Increase Your Avionics Reliability

It is well known that reducing the temperature at which electronics components operate increases their life expectancy. The avionics you depend on for critical navigation and communication functions endure one of the harshest environments of any electronics...the avionics stack! Today's avionics are housed in smaller and smaller packages that retain heat. They are also subjected to chimney effect, where the heat from the bottom radios rise throughout the entire radio stack, increasing overall operating temperatures. Today, engineers are making greater use of surface mounted devices to reduce size and weight. And although these

devices use less power, they can be more sensitive to heat. Fortunately, removing heat from your avionics is easy and inexpensive, making a cooling fan one of the best investments you can make when installing new avionics. A cooling fan will save many times its cost in future maintenance bills. And it will give you the peace of mind knowing your avionics will continue to operate at peak performance. **SANDIA aerospace** fans are designed to give you superior performance and long life, up to 78,000 hours of continuous operation. You have selected the best avionics for your aircraft, now select the best cooling fan to protect them.

The ACF100 is a single port cooling fan designed specifically to protect your Nav/Comm or GPS system, although it can be used for any of your avionics cooling needs. The ACF100 operates on 12-32 Vdc and will supply up to 5 cubic feet of air per minute. The ACF100 can be ordered with your choice of specially designed mounting brackets for Honeywell KX-155/165 Nav/Comm, KNS80, and the KLN90.



ACF100 Specifications

Operating Voltage:	12-32 Vdc
Current Draw:	100mA
Size:	1.6" x 1.6" x 3.0"
Weight:	.33lb., including bracket
Certification:	PMA, DO160c

ACF 314/328 Specifications

Operating Voltage	ACF314-14 Vdc	ACF328-28 Vdc
Current Draw	ACF 314-960 mA (1.7 A startup)	ACF328-480 mA (.85 A startup)
Size:	5.18" x 5.18" x 2.1"	
Weight:	1.18 lbs	
Certification	FAA-PMA	



The ACF314 and ACF328 simultaneously cool up to three avionics units. Operating on 14 Vdc and 28 Vdc respectively the ACF314 and ACF328 can supply 20 cubic feet per minute, helping your avionics remain at a proper operating temperature, even in the most hostile environments. The **SANDIA aerospace's** three port fans use high quality brushless blower motors that are rated for 78,000 hours of continuous operation. The ACF314 and ACF328 are FAA-PMA'd and have passed stringent environmental tests to ensure that they will provide years of reliable service.

The ACF528 is an FAA-PMA'd five port avionics cooling fan that provides cooling air for one to five avionics units. Supplying up to 20 cubic feet of air per minute at 28 Vdc, the ACF528 can easily cool an entire stack of avionics. The ACF528 uses a brushless blower motor that is rated for 78,000 hours of continuous operation. And like all **SANDIA aerospace** products, the ACF528 is warranted for three years.



ACF 528 Specifications

Operating Voltage	28 Vdc
Current Draw	480mA nominal 850mA startup
Size:	5.13" x 6.77" x 2.1"
Weight:	1.18 lbs.
Certification	FAA-PMA, DO160c



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Fault Detection

The new generation of Primary Flight Displays (PDF's) are providing today's pilots with better situational awareness than ever before. More of the aircraft's navigation, engine and attitude information is now being displayed on two or three large easy to read displays. As these displays get larger, they invariably generate more heat. This heat needs to be removed to ensure reliability of the equipment and safety of flight. A loss of cooling air, can cause premature instrument failure which can occur during critical situations. Since cooling fans are

remote mounted and not part of a preflight inspection, a fan failure can easily go undetected. SANDIA aerospace's line of Fault Detection Cooling fans solves both problems. First, they provide all the cooling air necessary to cool these PFD's. Secondly, should a failure occur, a fault detection output on the fan alerts the pilot so that maintenance can be performed as soon as possible, minimizing the possibility that a heat related failure will occur.

SAFE 128 Specifications

Operating Voltage:	28 Vdc
Current Draw:	100 mA nominal <.250mA Start-up
Size:	2.36" x 2.87" x 1.44"
Weight:	.25 lb
Certification:	PMA, DO160D

The SAFE128 is an axial fan that is designed to attach directly to an avionics unit's cooling port. Providing a nominal 20 CFM (no load) of cooling air, the SAFE128 will provide an alert to the pilot should the fan RPM drop below a preset level.



The SAFE328 is a three port blower that can effectively cool a complete avionics suite. Providing a nominal 20 CFM of cooling air, the SAFE328 will provide an alert to the pilot should the blower RPM drop below a preset level.

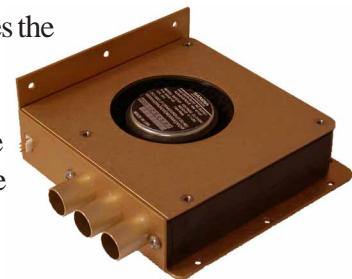
SAFE 328 Specifications

Operating Voltage:	22-31 Vdc
Current Draw:	400 mA nominal 550mA Start-up
Size:	5.58" x 4.75" x 1.25"
Weight:	.70 lb
Certification:	PMA, DO160D

ACF 328F Specifications

Operating Voltage	28 Vdc
Current Draw	480 mA nominal .85 A startup
Size:	5.18" x 5.18" x 2.1"
Weight:	1.18 lbs
Certification	PMA, DO160D

The ACF328F combines the fault detections capabilities and features of the SAFE328 with the mounting options of the ACF328.



Should you ever lose your cool you will be glad to know your SANDIA aerospace Cooling Fans are backed by a three-year warranty.