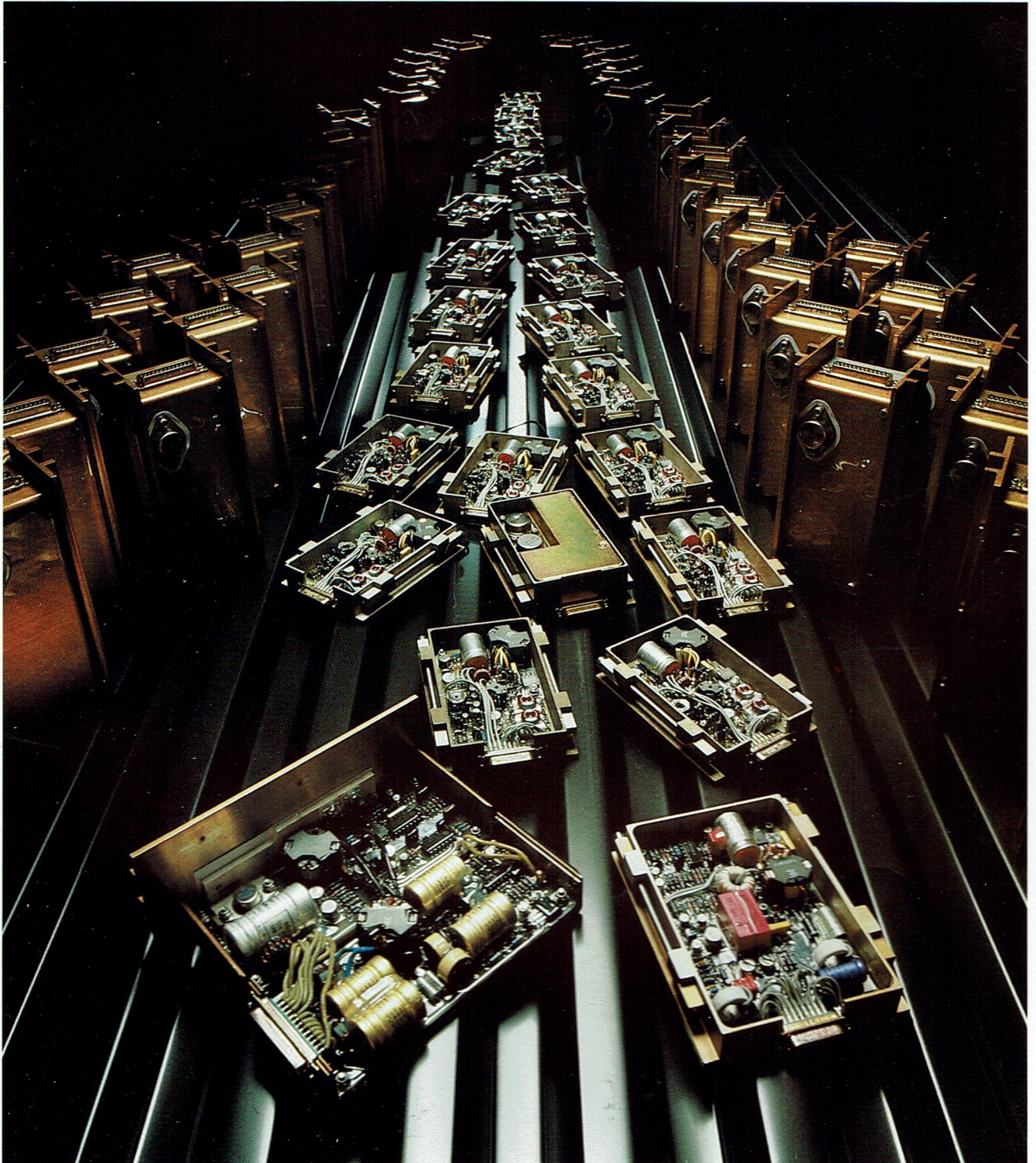




Christian Rovsing A/S

Custom Design Power Supply

Christian Rovsing A/S has many years experience in aerospace and defence electronics, with specialised know-how in the field of power supply. Our capabilities include design, prototype development and follow-up production for both custom designs and large volume orders.



Custom Design

Christian Rovsing A/S has an extensive experience in the design, development and manufacture of aerospace and defence electronics. Starting from the design and production of switching power supplies for the European Space Programme, we have developed an advanced technology and a sophisticated design philosophy. This has later been applied to the solution of complex power supply problems in avionics and computer applications.

Production facilities are available at various quality levels:

Satellites:

European Communication Satellites

Military Avionics:

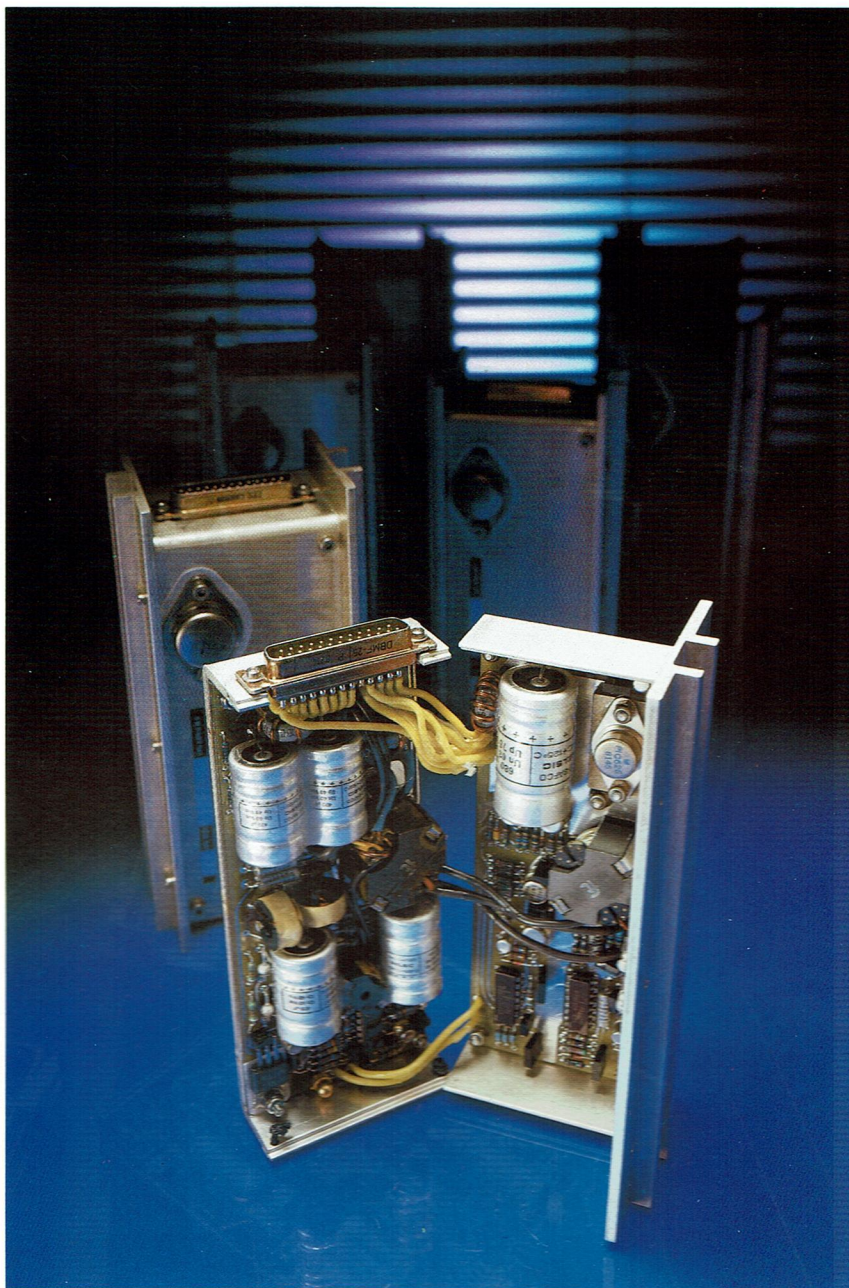
F-16 Fire Control Computer

Civil Avionics:

Airbus autopilot power supplies

Computers:

CR80 Computer for defence and civil applications

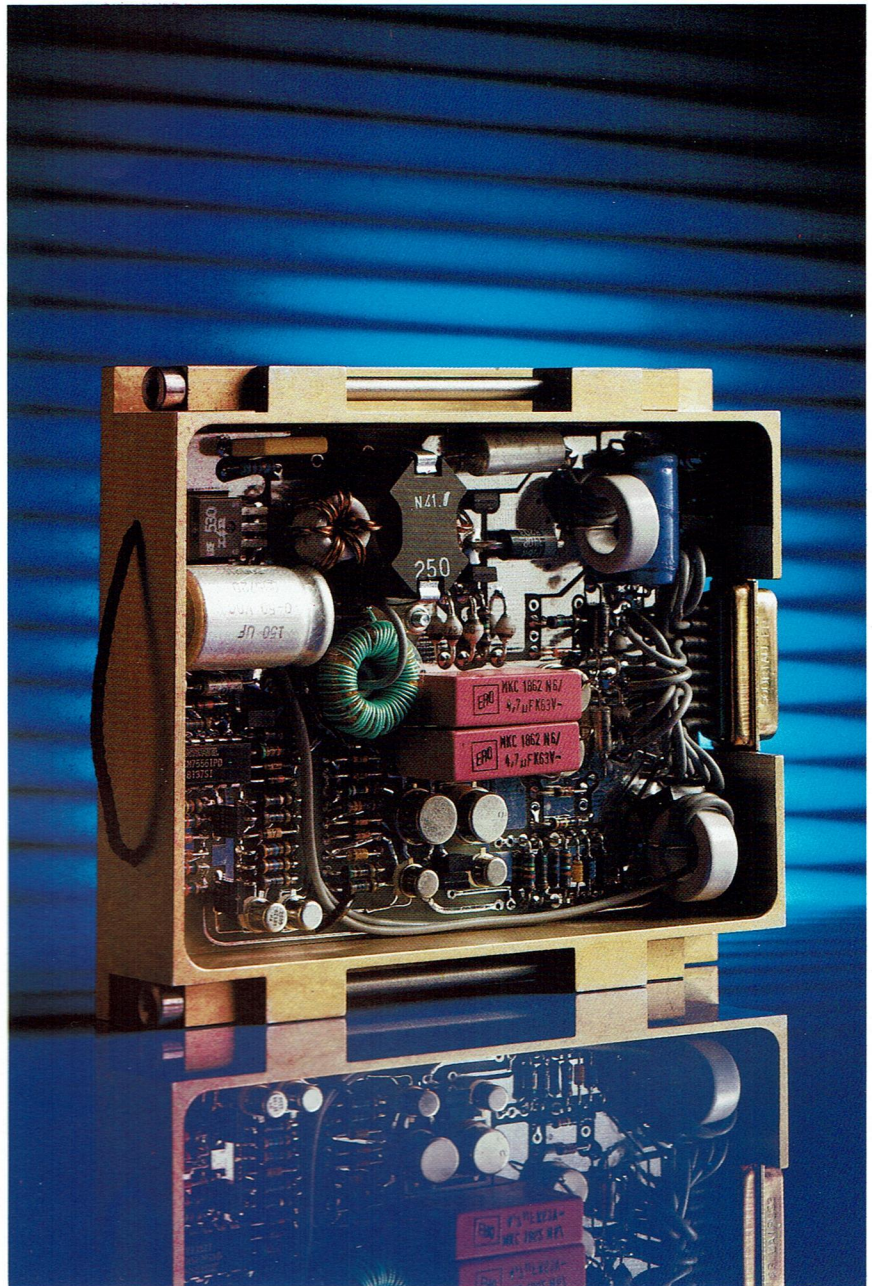


Airbus

Christian Rovsing A/S has developed a family of regulating DC/DC converters for the French company SFENA. The converters are used in the autopilots and other computers produced by SFENA for the Airbus programme.

Unique features include:

- Operating temperature range
-55°C to +100°C
- High efficiency
- Inherent power limitation in each
switching cycle
- Low volume and mass



Airbus DC/DC Converters

Input voltage range
19V – 50V (28V nominal,
no-break)

Operating temperature range
–55°C to +100°C

Galvanic isolation
input-output-chassis
500VDC

Protection:
Overvoltage protection on all
outputs. Inherent power limitation
in each switching cycle

Temperature coefficient
50 ppm/°C

Line regulation
0,1%

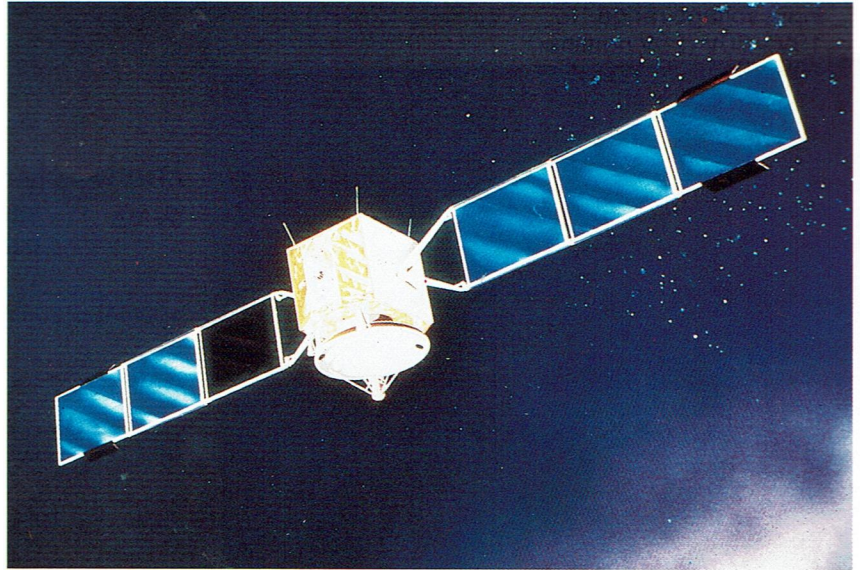
Environmental and EMC specifica-
tion
Eurocae ED14A/RTCA DO 160 A

TYPE	CR4510	CR4520	CR4530	CR4550	CR4560
Output	5V/5A	±15V/ ±0.5A	15V/1A	5V/7A ±15V/ 0.8A	5V/1.5A ±8V/ 0.15A
Input feed- back ripple	100mApp	20mApp	20mApp	150mApp	30mApp
Load regulation	0.5%	0.1%	0.1%	0.1%	5V:0.1% ±8V:0.5%
Short circuit protection	6A	±0.7A	1.3A	5V:11A ±15V:3A	5V:2.5A ±8V:0.8A
Efficiency at $V_{in} = 28V$	74%	79%	79%	72%	74%
Output ripple RMS	3mV	10mV	10mV	5V:4mV ±15V:5mV	5V:15mV ±8V:5mV
Output ripple PP	30mV	80mV	80mV	5V:120mV ±15V: 180mV	5V:50mV ±8V: 50mV
MTBF	> 50.000 hours				
Dimensions	30 mm 60 mm 115 mm	20 mm 60 mm 110 mm	20 mm 60 mm 110 mm	60 mm 60 mm 155 mm	20 mm 80 mm 120 mm
Mass	400 g	250 g	250 g	800 g	275 g
Power:	25 W	15 W	15 W	59 W	9.9 W

Satellites and Computers

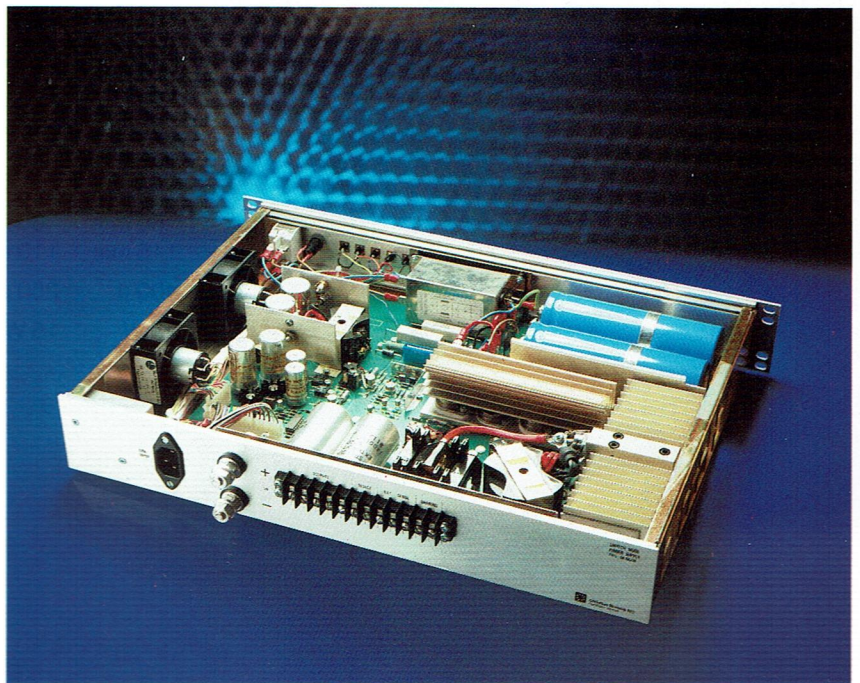
Christian Rovsing A/S has been actively involved in a number of major space activities. We have developed high-efficiency, multiple out-put regulating DC/DC Converters for the telemetry, tracking and command subsystem of communication satellites. Features include:

- Modular design with inherent power sharing
- High efficiency
- Hot redundancy, n+1 for n redundancy of power stages
- Triple redundant majority voting clock and regulator circuits



We have also developed line operated power supplies for computer applications including the following unique features:

- Transient load performance
- Low volume and mass
- Inherent power limitation in each switching cycle for high reliability
- Meet stringent EMC requirements



For many years, Christian Rovsing A/S has demonstrated high professional talent in the field of computer related power distribution. Efforts have been dedicated to the design and production of Switching Power Supplies to meet specific customer requirements from space and military standards to high-volume office automation. State of the art technology and detailed understanding of systems requirements ensure products with a long technological lifetime. The exceptionally low component count makes the products highly reliable and price competitive. Several patents relating to power circuit design are held by the company.



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