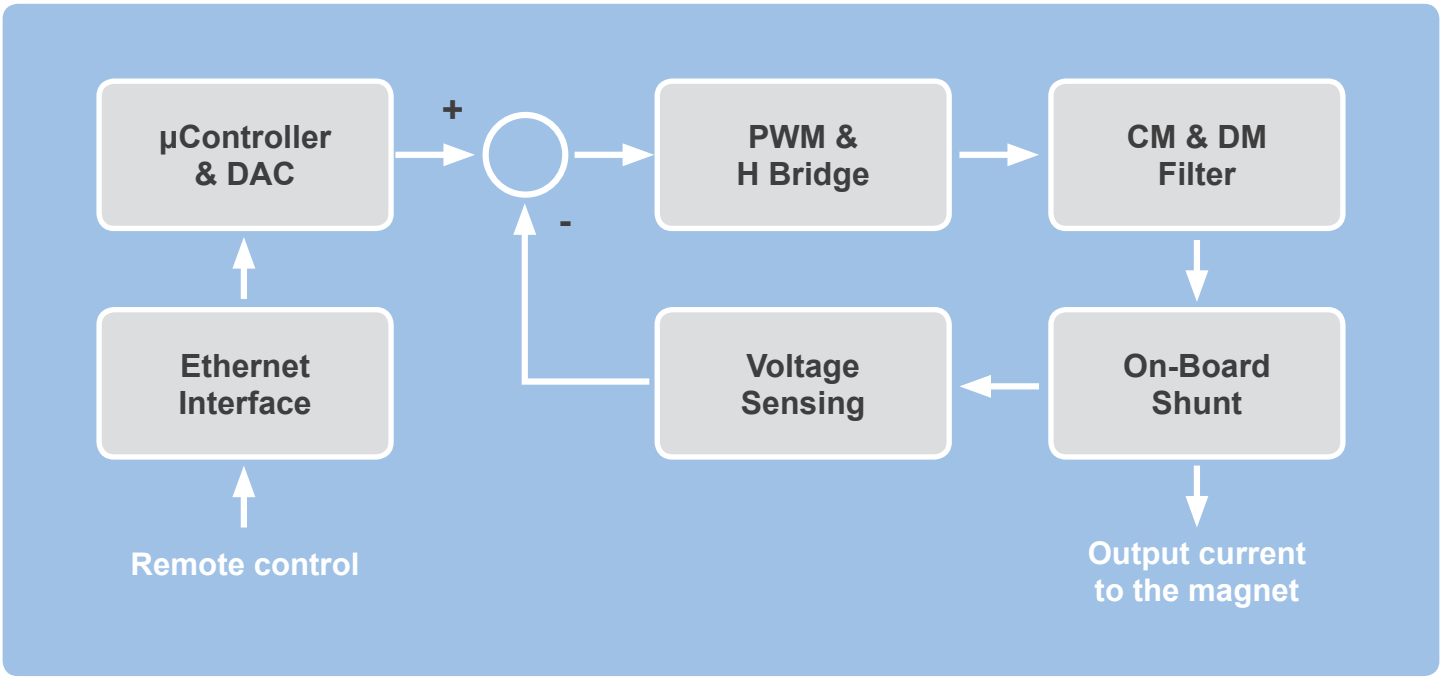
# A2630BS

High stability 30 A 20 V Bipolar Current Power Supply




## HIGHLIGHTS

| FEATURE | BENEFIT |
|---|---|
| Especially designed for particle accelerator facilities | |
| Completely digital controlled feedback loop | Extremely configurable and adaptable to any load condition<br>Up to 95% DC/DC power conversion efficiency |
| High precision shunt resistor | Extreme reliability and extreme stability for 24-hour, 365-days a year operation |
| Each power supply channel has Ethernet 10/100 link | Remote and fast communication |
| Graphic colour display OLED and an encoder per channel | Straightforward troubleshooting |
| Modular architecture | User can substitute only a faulty board |
| Storage of configuration and calibration parameters in non-volatile memory on the Power Board | Extremely quick and simple, even for inexperienced users, to replace a faulty module with a functional equivalent |

## APPLICATIONS

- Particle accelerator facilities
- Medical equipment (resonance imaging)
- Systems with high resolution current or voltage source requirements

## HOW DOES IT WORK?

The highly stable and reliable power supply system can house up to four independent bipolar modules in a standard 19-inch 3U crate. This true-bipolar system has a modular architecture and comprises a bulk AC/DC converter (A2607), an auxiliary power supply (A2606) and the DC/DC modules (A2630BS).

The A2606 auxiliary power module provides auxiliary voltage to the DC/DC converter boards installed in the crates in order to supply the control electronics while the A2607 bulk unit feeds the power part for energy conversion.

The system comprises up to four EuroCard standard boards.

The A2630BS modules are controlled by Digital Signal Processors and the FPGA board supervises all processes including the remote control of the power supply via an Ethernet connection (TCP-IP or UDP). Each power supply is equipped with a graphic colour display OLED for troubleshooting and an Ethernet 100-100 auto-sensing socket for communication.

Cooling is performed by forced air convection. The fan unit is placed directly under the system rack.

## SPECIFICATIONS

| | |
|---|---|
| **Output Current Range** | ± 30 A |
| **Output Current Resolution** | 950 µA |
| **Output Voltage Range** | ± 20 V |
| **DC/DC efficiency (at full load)** | > 95 % |
| **Input Voltage** | 90/260 V AC (47/63 Hz) and 12 to 24 V DC |
| **External Interlocks** | 8 user-configurable "dry" contacts (inp); 2 magn. and 1 solid-state relay type (out) |
| **Internal Interlocks** | Under voltage (inp); over temp. (inp); over current (inp); over voltage (out); Earth fault; Regulation fault/excess; Current ripple |
| **Bandwidth-3dB(@2Ωload)** | 1.5 KHz |
| **Accuracy** | 0.05% |
| **Long Term Stability** | ± 25 ppm /FS ( > 8 hrs) |
| **Max Ripple** | 30 ppm (on resistive load) |
| **Ethernet 10/100** | TCP-IP or UDP Protocol |
| **Data transfer** | Up to 1 Mbit/s |
| **Drivers** | EPICS, TANGO |
| **Dimensions** | 19" wide, 3U rack |

## DELIVERABLES

- Power supply unit: up to 4 independent current modules housed in a standard 19-inch 3U crate
- A2607 bulk AC/DC
- External fan unit for air convection cooling
- Software and drivers are available for different operating systems like MS Windows, Linux, Mac OS X
- EPICS and TANGO drivers

## Contact us!

**Industrial Liaison Office**
Elettra - Sincrotrone Trieste S.C.p.A.
S.S. 14 - km. 163.5 in Area Science Park, 34149 Basovizza - Trieste, Italy
Tel. +39 040 3758303 - Fax +39 040 3758623
ilo@elettra.eu - http://ilo.elettra.eu

Elettra Sincrotrone Trieste