



Compact Digital Bipolar
Power Supply Series



Easy-Driver

Your **DIGITAL**
POWER ELECTRONICS
Partner.

- The **EASY-DRIVER** series is a family of current-controlled bipolar power supplies with Ethernet communication
- The digital current control loop makes the connection and configuration of the power supply to any load quick and simple
- Stand-alone unit with local display, extended input range and embedded air-cooling

FEATURES

- 19"-1U stand-alone crate
- Models up to ± 10 A and up to ± 20 V
- Configurable digital control loop
- True Bipolar Zero-crossing operation
- Low noise
- Internal protections and auxiliary readbacks
- External Interlock and Status Signal
- Low Temperature dependence
- Excellent long-term stability
- Extended input range (90-260VAC)
- Local display for monitoring
- 10/100 Mbit Ethernet
- "VISUAL" Free Software available

APPLICATIONS

- Particle Accelerators
- Laboratory Test Equipment
- Current Control
- Magnetic Field Generation

EASY-DRIVER. The EASY-DRIVER series is composed by different digital bipolar power supply models rated at ± 1 A / ± 12 V, ± 2 A / ± 20 V, ± 5 A / ± 20 V and ± 10 A / ± 20 V.

The **10/100 Mbit Ethernet** connection allows controlling the power converter in a very simple and reliable way, especially when used in large installations. (either TCP-IP or UDP can be used).

The **current control loop**, as for most of CAEN ELS power supplies, is completely **digital** in order to obtain the maximum flexibility and easiness of configuration to any connected load.

The EASY-DRIVER models present a great performance-to-price ratio, having excellent characteristics while keeping the price at low values.

Low noise and AC bandwidth are only two of the main features of these power

units, based on a **dual-DSP** (Digital Signal Processing) architecture.





Internal protections - e.g. over-voltage, over-temperature - are implemented as well as an **external interlock** signal is present. A circuit to discharge the energy stored in an inductive load - i.e. crowbar circuit - is also embedded in each unit thus protecting the load and the power unit itself. A **status relay** is also present on the rear side of the unit to signal the output status - e.g. enabled/disabled.

The EASY-DRIVER units also have a **local display** in order to locally monitor the output current and output voltage of the unit. LED indicators summarize the status of the power supply in real-time.

A dedicated software, called "Visual EASY-DRIVER" is freely available in order to control and monitor the connected units.

About Us

CAEN ELS is a leading company in the design of power supplies and state-of-the-art complete electronic systems for the Physics research world, having its main focus on dedicated solutions for the particle accelerator community and high-end industrial applications.

-  Power Supply Systems
-  Precision Current Measurements
-  Beamline Electronics Instrumentation
-  FMC and MicroTCA

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EASY-DRIVER Units in a 19" Cabinet

Technical Specifications

EASY-DRIVER

	Model "0112"	Model "0220"	Model "0520"	Model "1020"
Output Current Range	±1 A	±2 A	±5 A	±10 A
Output Voltage Range	±12 V	±20 V	±20 V	±20 V
Rated Output Power	12 W	40 W	100 W	200 W
Output Topology	Bipolar			
Regulation Type	Constant Current (CC)			
Output Current Setting Resolution	16 bit			
Output Current Readback Resolution	20 bit			
Output Voltage Readback Resolution	20 bit			
Switching Frequency	104 kHz			
CC Closed Loop Bandwidth (-3 dB)	1 kHz			
Output Accuracy in CC	< 0.05 %			
Output Current Ripple	0.004 %/FS - resistive load			
Temperature Stability	< 0.004 %/K in CC mode			
Long-Term Stability (8 h)	< 0.004 %/FS - typical			
Cooling	Forced air convection			
Input Ratings	90 - 260 V _{AC} - 47/63 Hz			
Communication Interfaces	Ethernet 10/100/1000 Mbit TCP-IP and UDP			
External Signals	1 x External Interlock 1 x Status Output			
Internal Interlocks	DC-Link Undervoltage MOSFET Over-Temperature Shunt Over-Temperature			
Hardware Protections	Input Fuses Crowbar (Over-Voltage)			
Auxiliary Readbacks (12-bit)	DC-Link Voltage MOSFET Temperature Shunt Temperature			
Operating Ambient Temperature	0 ... 50 °C			
Mechanical Dimensions	19" x 1U x 295 mm (including connectors)			
Weight	4 kg			

Ordering Code	Acronym	Description
EASYDRV0112A	EASY-DRIVER 0112	Digital Bipolar Current Power Supply (±1 A@±12 V - 12 W)
EASYDRV0220A	EASY-DRIVER 0220	Digital Bipolar Current Power Supply (±2 A@±20 V - 40 W)
EASYDRV0520A	EASY-DRIVER 0520	Digital Bipolar Current Power Supply (±5 A@±20 V - 100 W)
EASYDRV1020A	EASY-DRIVER 1020	Digital Bipolar Current Power Supply (±10 A@±20 V - 200 W)
EDRV1020C001	EASY-DRIVER 1020 C001	Digital Bipolar Current Power Supply (±10 A@±20 V - 200 W) with 24 VDC Interlock Input