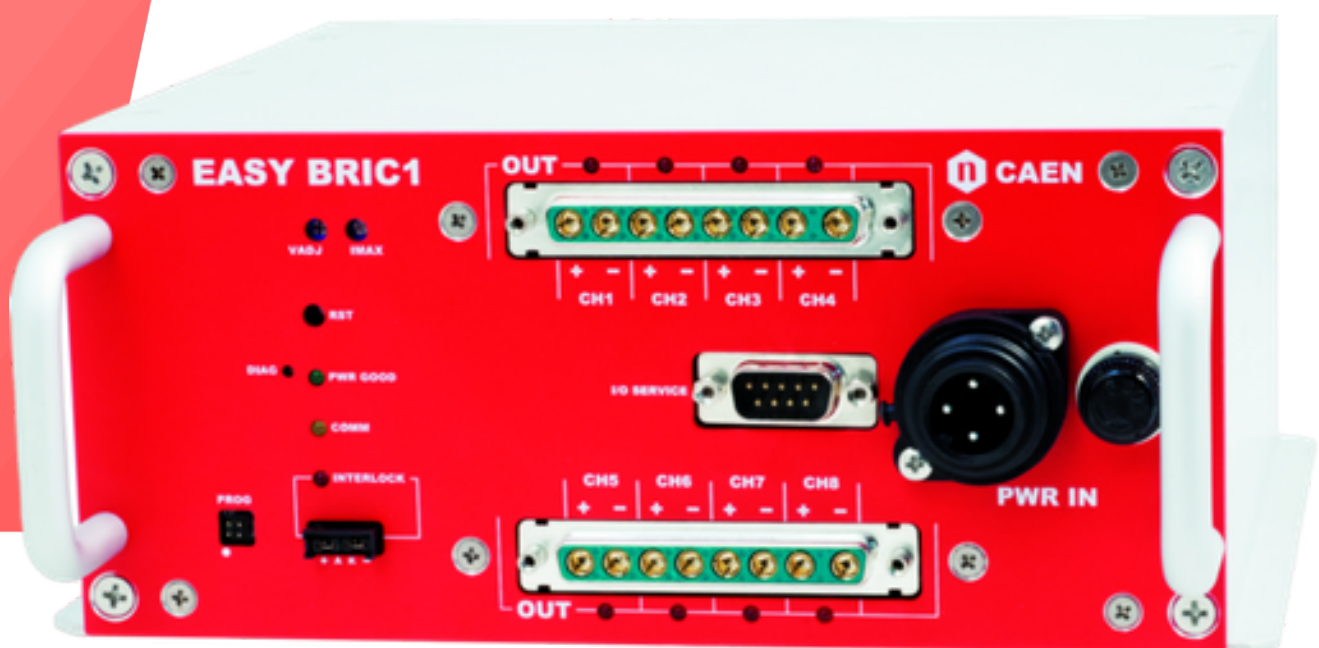


# EASY BRIC

## B and Rad tolerant Intermediate Converter



## Features



- EASY6000 DC/DC Power Supply
- Magnetic field and radiation tolerant
  - Ionizing Radiation (Total Dose) 200 Gy
  - Displacement Damage  $5.8 \cdot 10^{12}$  1-MeV Eq. n/cm<sup>2</sup>
  - Single Event Fluence  $1.0 \cdot 10^{12}$  p/cm<sup>2</sup> (E > 20 MeV)
  - Magnetic Field 0.5 T
- 8 positive 10 ÷ 12 V / 16 A channels
- 300 V DC Input Voltage
- Vset by trimmer
- On/Off for each channel
- Channels individually monitored and protected
- Interlock capability
- 48 V Service local and remote on/off
- **Individual floating return**
- Liquid Cooling

## Description

The **EASY BRIC System** is the new CAEN low voltage power supply system conceived for powering DC-DC converter stages in hostile environments. The system is made by a water-cooled crate which can host up to four EASY BRIC modules.

The new EASY BRIC module provides eight positive 10 ÷ 12 V / 16 A channels that can be set locally via trimmer and then monitored remotely through the **A1660** branch controller. The **A1660** operates in safe area inserted in a **CAEN SYx527** mainframe, and can manage up to two EASY BRIC crates / 64 power supply channels.

### D-SUB 8W8 socket

Power Connector 8W8 Socket

Consult our **connectors reference page** for technical information.

The remote control, based on the robust RS-485 communication bus, is performed with a simple command-based protocol which allows the monitoring of output voltages and currents as well as the remote ON/OFF of each channel. An INTERLOCK port is also available to shut down the device in case of any safety issue in the experimental area occurs.

The EASY BRIC system has been designed to accept 270 ÷ 300 VDC input power, allowing for a reduced voltage drop / reduced cable diameter over long input power lines in case of AC/DC sources placed in safe area. The EASY BRIC system has been extensively tested for radiation tolerant and magnetic field tolerant operations up to:

- Ionizing Radiation (Total Dose): 200 Gy
- Displacement Damage:  $5.8 \times 10^{12}$  1-MeV Eq. n/cm<sup>2</sup>
- Single Event Fluence:  $1.0 \times 10^{12}$  p/cm<sup>2</sup> (E > 20 MeV)
- Magnetic Field: 0.5 T

Thanks to the integration of the system in the SYx527, the EASY BRIC can be controlled with all SYx527 software and libraries (**GECO2020**, **HiVoCS**, **OPC Server**, **EPICS** and **CAEN HV Wrapper**).

## Technical Specifications

### N. of channels

8

### Input Voltage

270 ÷ 300 VDC

### Output Voltage

10 ÷ 12 VDC, programmable with trimmer

### Output Voltage accuracy

1% FS

### Maximum Output Current

16 A DC

### Abs. Max. Output Current

17 A DC

### Vmon Resolution

10 mV

### Imon resolution

10 mA

### Output Voltage hardware limit (Vmax)

12.1 VDC

### Trip time

~1 s for overcurrent, <0.1 s for overvoltage

### Ripple (Differential and Common mode)

< 20 mVpp (0 ÷ 30 MHz)

### Redundancy

Parallel connection of channels possible

### Controls

Remote ON/OFF for each channel

### Conversion efficiency

≥ 80% above 50% full load

### Maximum output power

190 W per channel (1.5 kW total)



## Ordering Options

Code	Description	
WE6001XNSWAA	EASY BRIC - 300Vdc to 12Vdc (8ch x 200W) Converter - No internal cooling	
WEASY6000NSW	EASY BRIC - Water Cooled Box for EASY BRIC Power Supply System - NSW version	RoHS

## Related Products

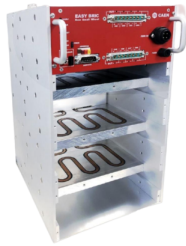
**A1660**



EASY BRIC Branch Controller

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# Gallery



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