



200 A, 420 A and 630 A
Polarity Inverters



Polarity Inverters

Your **DIGITAL**
POWER ELECTRONICS
Partner.

- This series is composed by different models capable of inverting continuous currents up to 200 A, 400 A or 600 A
- Direct connection to the **NGPS** power supplies for automatic operation (connection cable included)
- 19" - 6U unit with front visual indicators of AC mains presence and output status (direct/reverse)

FEATURES

- 19" - 6U stand-alone crate
- Models rated at 200 A, 420 A and 630 A
- Motorized switch
- Maximum voltage of 250 V
- Control cable for **NGPS** power converters included
- Visual indications for:
 - MAINS presence
 - DIRECT/INVERSE polarity
- Extended AC input range (100-240 V_{AC}) for auxiliary power
- Screw terminal connection (200-A model) or nickel-plated busbars (400-A and 600-A models)

APPLICATIONS

- Polarity reversal of power supplies
- Industrial Automation

POLARITY INVERTERS. The polarity inverter series is composed by three different models, differing by their output current capability, rated at 200 A, 420 A and 630 A respectively.

These polarity inverters are able to reverse currents up to 630 A and so they represent the perfect fit for the CAEN ELS' **NGPS** unipolar power supplies, both in single or paralleled configurations.

Each polarity inverter fits in a single 19" - 6U crate and it can be controlled via dry contacts while providing to the user information about the correct operation of the system and the selected polarity.

Polarity inversion is achieved with a linear motor acting as commutator, this avoiding any possible problem even in case of

power shortage (which represents an issue if inversion is obtained via relay-based commutators).

All these polarity inverters are already supplied with the signal cable that allows connecting them directly to an **NGPS** power supply. An interlock signal and a status signal are available in order to implement the correct logic for the device operation.

The auxiliary AC power input is rated at maximum 350 W and it has an extended range (AC voltage and frequency) that makes it suitable for applications worldwide.

The front panel lamp indicators signal the AC mains presence and the status of the output polarity (direct-reverse).

The 200-A version has screw terminal connectors while the 400-A and 600-A output is inverted using nickel-plated busbars.

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.

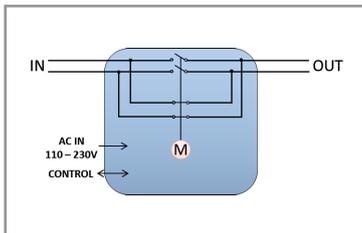
-  Power Supply Systems
-  Precision Current Measurements
-  Beamline Electronics Instrumentation
-  FMC and MicroTCA

CAEN ELS s.r.l.

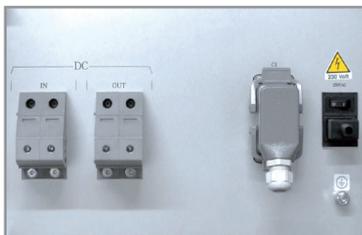
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Basic Schematic



Rear Connectors

Technical Specifications

POLARITY INVERTERS

	Model "200 A"	Model "400 A"	Model "600 A"
Rated Current	200 A	420 A	630 A
Rated Voltage	250 V		
Auxiliary Input Voltage	100 - 240 VAC @ 50 - 60 Hz		
Auxiliary Input Power	< 350 W		
DC Input/Output Connections	Phoenix Contact HDFKW-95+-F/7	Nickel-plated Bus-Bars	
Interlock Maximum Ratings	240 V - 16 A		
Enable Maximum Ratings	240 V - 10 A		
Total Weight	28 kg	35 kg	
Dimensions (w/out connectors)	19" × 6U × 550 mm		
Input Mains Fuses 230 V	2 x IW 1421002 [2 A - 500 V] - 38 x 10.3 mm		
Input Mains Fuses 24 V	2 x IW 1421010 [10 A - 500 V] - 38 x 10.3 mm		
Operating Temperature	0 ... 45 °C		



Installation of the Polarity Inverter with an NCPS unit

Ordering Code	Acronym	Description
WPOLINV200XA	Polarity Inverter 200 A	Polarity Inverter 200 A with Control Cable
WPOLINV400XA	Polarity Inverter 400 A	Polarity Inverter 420 A with Control Cable
WPOLINV2600XA	Polarity Inverter 600 A	Polarity Inverter 630 A with Control Cable