



Product Brochure

Poly-Si Reactor Power Supply 1.2-5 MW AC Power Output

ABB Poly-Si Power Supply

Reliable power source for all STC and CVD Reactors

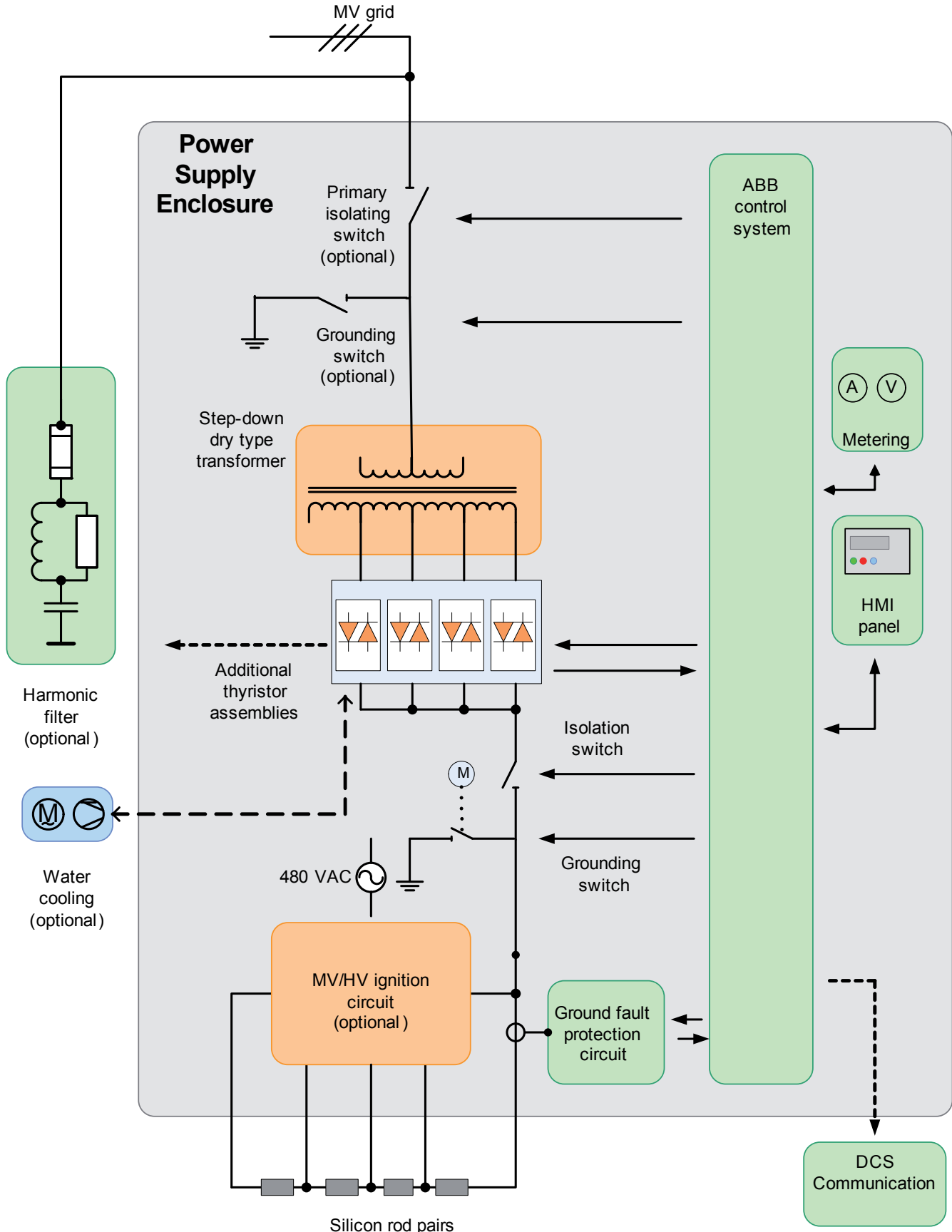


Figure 1. Poly-Si CVD reactor power supply single-line diagram.

Scalable and standardized power supplies based on proven ABB technology

ABB's reliable polysilicon reactor power supply provides a precise, efficient and cost effective solution for all your polysilicon production needs.

The Poly-Si Power Supply offers an entirely automated control process that allows users to safely begin the process in START mode with ABB's optional integrated MV/HV ignition circuit. Once the pre-heating START process is complete, ABB's state-of-the-art controller provides a quick and seamless switch over to the customized RUN mode.

ABB's fully customizable power supply allows our partners to designate their specifications based on their production needs and reactor characteristics. This innovative design is based on ABB's industry proven building blocks, such as the DCS 800 thyristor modules and AC 500 PLC controllers.

Custom start-up ignition circuits allows customers the choice between full control of each individual rod pair or one or more groups of rods, enabling group control and monitoring. The start-up ignition circuits can be external to, or integrated into, the main power supply enclosure.

24/7 Support

All Poly-Si Power Supplies are supported through ABB's global service centers and our 24/7 support line, giving our customers direct access to service engineers.

Design Capabilities

Primary Voltage	Up to 24 kV
Power Rating	1.2 to 5 MW
Number of Output Steps	From 2 to 5
Output Phase Current	5 kA and more
Output Phase Voltage	2.8 kA and more
Start-up Circuits	MV / HV ignition

User Benefits

- Simple user interface
- Fully automated process
- Reliable modular design
- Isolated control cabinet
- Reduced equipment footprint
- Global service support

Features

- Integrated transformer design
- Air cooled or water cooled thyristor assemblies
- Industry proven ABB building blocks
- Variable 3x1 phase power
- Integrated MV or HV ignition circuit(s)
- Motorized output ground switch

Options

- Primary disconnect and/or grounding switch
- Outdoor oil filled or dry type transformers
- Harmonic and power factor compensation equipment
- Transformers and reactor bus systems with electrode clamps and jumpers
- Fire breaks, floor seals and reactor base plate connectors

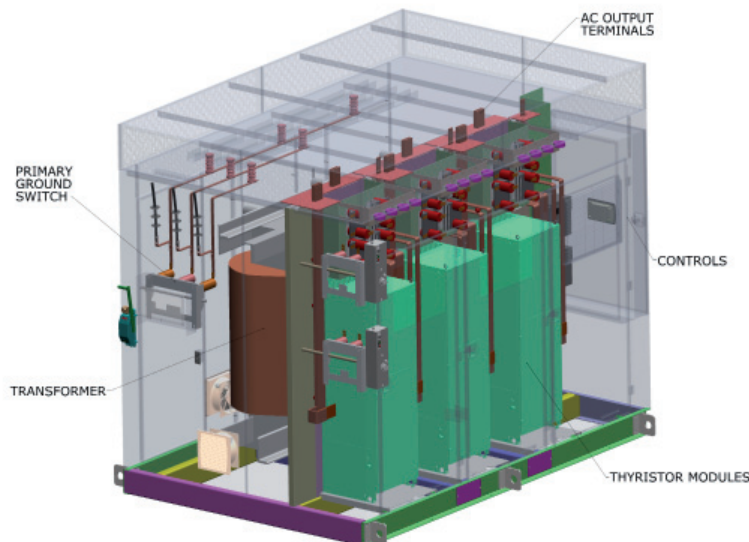


Figure 2. A power supply cabinet with interior components.

Other Power Supply Options

ABB has the capability of providing custom power supplies for any application in the polysilicon production industry.

Some options include:

- Indoor or outdoor locations
- Liquid-filled or dry-type transformers
- Transformer bus ducts (for separate transformers)
- Low, medium or high voltage primary
- Environmental conditions including temperature, altitude, seismic, etc.
- AC or DC output power to reactors
- Primary protection, metering, grounding, etc.

In addition to the CVD and STC power supply equipment, ABB can assist in the overall electrical plant design and coordination. Our vast product lines provide additional equipment, including power transformers, primary switchgear, filter networks, transformer bus ducts (if needed) and reactor bus ducts (electrical connection between power supplies and reactors).

Contact us today to learn more about how ABB can meet your particular needs for a complete electrical equipment package.

Contact us

ABB Inc.
Power Electronics
16250 West Glendale Drive
New Berlin, WI 53151
USA
Phone: 262-780-8904
Fax: 514-635-6200
E-Mail: pes@us.abb.com
Support line: 1-800-665-8222
www.abb.com/powerelectronics

ABB Inc.
Power Electronics
7th Floor, Raffels City (Office Tower)
268 XiZang Zhong Lu, Shanghai 200001
P.R. China
Phone: 86 (21) 2328-7939
Fax: 514-635-6200
E-Mail: pes@ca.abb.com
Support line: 1-800-665-8222
www.abb.com/powerelectronics

ABB Inc.
Power Electronics
10300 Henri Bourassa West
St-Laurent, Quebec H4S 1N6
CANADA
Phone: 514-332-5350
Fax: 514-635-6200
E-Mail: pes@ca.abb.com
Support line: 1-800-665-8222
www.abb.com/powerelectronics