AEG

POWER
SOLUTIONS

4.5MW-TRU

Datacenter



EN

The Complete DC Power Solution for Next-Generation 800VDC Data Centers:

High Power Density

4.5MW delivered within a single 40ft High Cube container:

- Compact, all-in-one architecture
- Optimized footprint for modern data center deployment
- Maximized power output per square meter

Proven & Bankable Technology

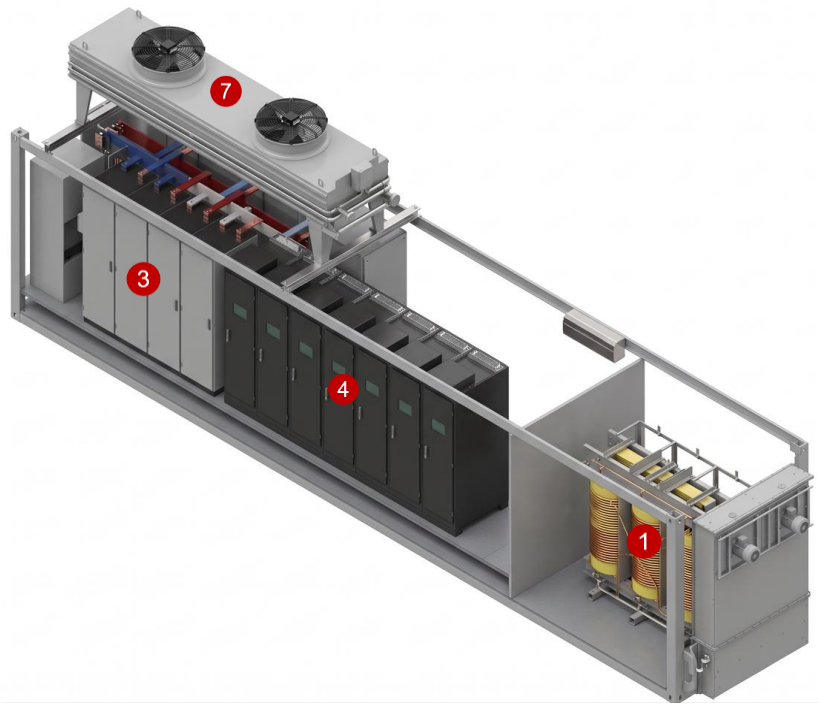
Built on technology already deployed at scale

- More than 350MW installed worldwide
- Leveraging the same proven architecture used in large-scale hydrogen projects
- Low-frequency transformer design combined with highly reliable power semiconductors
- 10+ years of field-proven operational experience

Plug & Play Deployment

From delivery to operation in record time

- Factory-tested turnkey solution
- Fast installation and commissioning
- Modular design for simplified expansion
- Reduced project risk and accelerated time-to-service



1. 4.5MW dry type transformer (HPS)
10-36kVac / 480Vac Dd0 AF

2. 3x DC4-LV highly efficient IGBT rectifier
+/-400VDC or 800VDC at 2000ADC

3. Isolated bidirectional DC/DC converter

4. Batteries
8x 600kW 5min back-up time

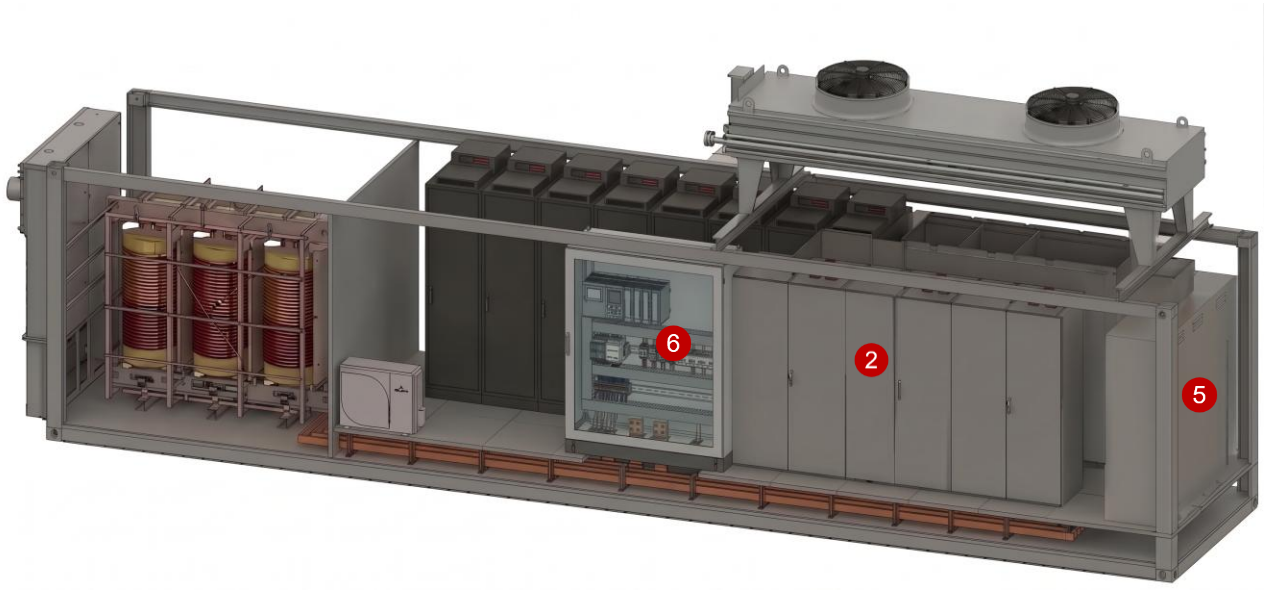
5. 800VDC DC distribution
Different feeder configuration available (e.g. SSCB)

6. Aux cabinet
480Vac AUX distribution and system control

7. Cooling unit
100kWtherm dry cooler

TECHNICAL SPECIFICATIONS

Input	
Main voltage	10-36kVac
Auxiliaries	480Vac, 3ph
THDi & Power Factor	< 3% & ~1
Output	
Voltage	+/- 400 VDC or 800VDC rated depending on midpoint grounding
Current	Up to 6000 ADC
Efficiency	~98% at peak,
Configuration	
Dimensions (L x D x H)	40 feet container
Fieldbus protocol	PROFINET, Modbus TCP/IP
Cooling	Air-water chiller or dry cooler
Operating temperature	-20 +40°C
Grid code / Harmonics	EMC : EN 61000-6-2:2019, EN 61000-6-4:2019
Standards	UL 2877 & CE
MV / LV Transformer	
Apparent Power	4.5 MVA
Vector group and Voltages	Dd0 13.5kV / 480Vac
Batteries	
Maximum discharging power	4,5 MW
Backup-time	5min
Aux cabinet	
Control	PLC based
Normal Aux	480Vac, 3ph, 40kVA
UPS Aux	240Vac, 1ph, 3kVA



LIQUID-COOLED INDUSTRIAL IGBT RECTIFIERS

High-power density power electronic engineered for demanding continuous industrial duty





Input	
Main voltage	480VAC +/-10%
Auxiliaries	120VAC ~2kW (configurable)
THDi & Power Factor	< 3% & ~1
Output	
Voltage	+/- 400 VDC or 800VDC rated depending on midpoint grounding
Current	Up to 2000 ADC
Efficiency	99% peak, 98.5% typ.
Configuration	
Dimensions (L x D x H)	1200mm (47 in) x 800mm (31,5 in) x 2200mm (86 in)
Fieldbus protocol	PROFINET, Modbus TCP-IP, EtherCAT, CAN…
Liquid cooled	minimum 30L/min (8 GPM), 45°C (113°F) inlet temperature
Operating temperature	Outdoor: -20…… 50° C (-4° F…122° F) ambient air temperature (no frost), Indoor: 5….40° C (41° F…104° F) ambient air temperature
Grid code / Harmonics	IEEE 1547 / IEEE 519 / reactive power support
Standards	Safety : UL1741 ; UL840 EMC : EN 61000-6-2:2019, EN 61000-6-4:2019