

## Product Brief

# ModSTACK™ HD

High-density IGBT stack with PrimePACK™ based on the well-known ModSTACK™ platform

With the introduction of ModSTACK™ HD, we extend the established ModSTACK™ platform to increase power range and modularity.

Our high power IGBT stacks have been implemented by leading manufacturers and are used in countless applications all over the world. Under constant load every day in rough, demanding environments such as wind mills, pumps, industrial applications and auxiliary drive applications, our ModSTACK™ platform impressive levels of reliability and robustness.

### General features ModSTACK™ HD

- > Modular stack system designed for industry-approved cabinets
- > Optimized high-efficiency heat sinks
- > Low-inductance DC link with polypropylene or electrolytic capacitors
- > Integrated IGBT EiceDRIVER™
- > Voltage signals for control and monitoring (currents, voltages, short circuit, heat sink temperature, failure signals)
- > Up to 4 units can be operated in parallel
- > Electrical or optical interface for digital control signals available

With years of experience, a steady stream of innovations and the latest, optimized chip generations, we always provide the optimal high-power solution.

### Key features

- > Highest power density by using PrimePACK™ modules
- > Wide product range for all applications
- > For standardized cabinet frame size
- > High reliability and robust design

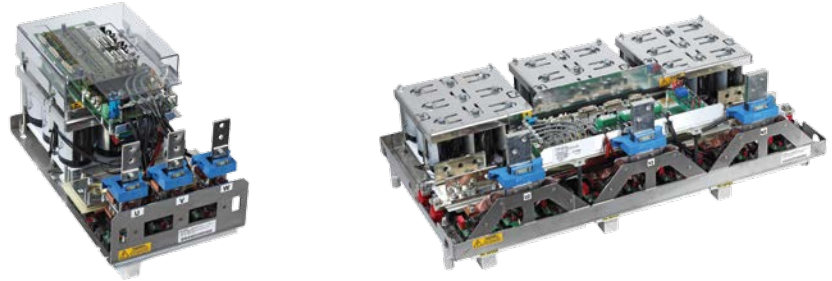
### Applications

- > Renewable energy systems
- > Variable speed drives
- > Heavy duty drives
- > Galvanic plating and electroplating
- > Inductive heating and welding
- > Trolleybuses, trams, suburban trains
- > Auxiliary inverters
- > Asynchronous power links



# ModSTACK™ HD

Wide power range with modular design



	ModSTACK™ HD1	ModSTACK™ HD3
Width x depth x height [mm]	338 x 590 x 375	1090 x 596 x 366
Cooling	liquid	liquid
Topology	B6I	B6I
Max. current <sup>1)</sup> [A <sub>RMS</sub> ]	3 x 700	3 x 1800
Approximate maximum power <sup>2)</sup> With cos(φ) = 0.85	813 kVA 691 kW	2438 kVA 2072 kW

<sup>1)</sup> simulated at 3 kHz, all other parameters refer to datasheet conditions  
<sup>2)</sup> typical output current at V<sub>DC</sub>=1100 V, f<sub>sw</sub>=3 kHz, V<sub>AC</sub>=690 V, f<sub>0</sub> = 50 Hz, cos (φ) = 0.85, T<sub>A</sub>=40° C, T<sub>j</sub> ≤ 150° C

The PrimePACK™ IGBT module presents a specially optimized concept for integration in modern converters. The most important benefits are improved thermal properties, low stray inductance and a wide range of operating temperatures. A convenient interface to both driver board and load circuitry rounds off this powerful, compact and modular converter concept.

### General features PrimePACK™

- > High power density
- > Increased operation temperature T<sub>vjop</sub> = 150 °C
- > Low stray inductance
- > Improved power cycling and thermal cycling capability
- > Enlarged clearance and creepage distances
- > Internal NTC sensor

### Available Configurations

Acronym	Topology
B6I	

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