

## Dantherm Battery eXtender – DBX5000



### TECHNOLOGY

Dantherm Power systems are power generating solutions designed and configured to be installed in both in- or out- door hybrid applications for telecom and related networks. The solutions can be configured as both integrated and stand-alone.

The Battery extender uses hydrogen fuel cell technologies with fully integrated power management and various configurations possible.

### WHERE TO USE BATTERY EXTENDER SOLUTIONS?

The Dantherm Battery eXtender (DBX) is installed in hybrid parallel with batteries. The DBX is ideal in environments with unstable mains (grid), where equipment must be protected from power outages and where business continuity demands reliable backup power. In case of mains power outage the batteries will provide Backup instantly and the DBX-module provides support when the DC bus voltage drops.

### FEATURES

- ✦ Very low maintenance cost (site visits only required every 5 years)
- ✦ Prevents batteries from deep discharge, thereby extending life
- ✦ Very low noise, can be installed almost anywhere
- ✦ No lead pollution and no harmful substances or emissions
- ✦ Backup duration related to hydrogen availability
- ✦ Compact, modular and scalable systems for network growth
- ✦ Programmable Self-test ensures system readiness
- ✦ Floating GND – can work in both -48VDC and +48VDC
- ✦ Light weight. One module weighs less than one battery
- ✦ Fuel storage in up to three strings for hot-swap and easy monitoring

### CONFIGURATIONS

- ✦ Mounts in 19" racks, 2 or 4 post cabinets/racks
- ✦ Parallel with batteries and other modules for redundancy and higher capacity
- ✦ Can be mounted in outdoor cabinets, shelters or similar
- ✦ Easy to install on existing shelter sites

### PRODUCT CODE – DBX5000-H-48-HH-F7A

- ✦ DBX: Dantherm Battery eXtender
- ✦ 5000: Nominal stack output power – End of Life
- ✦ H: Hydrogen fuelled
- ✦ 48: 48 VDC range (fixed voltage within (47 - 53 VDC))
  - ✦ 48 VDC DC input for standby operation
- ✦ Air-flow: Can be selected on-site
  - ✦ HH: Horizontal in – Horizontal out
  - ✦ HV: Horizontal in – Vertical out
- ✦ Inlet filter
  - ✦ F7A

### OPTIONS

- ✦ Dantherm Instant Backup (DIB) Upgrade kit with battery-free bridge power
- ✦ Fuel Regulators with fittings for local thread types
- ✦ Hoses and tubing, fuel manifolds
- ✦ Hydrogen storage cabinets in various sizes



# DATA SHEET: DBX5000



## TECHNICAL DATA:

DBX5000			
<b>Important Note</b>	DBX requires fresh air supply and ducting of exhaust air to outside ambient. DBX can only work when equipped with Dantherm Power Valve Block and a fuel regulator supplied by or approved by Dantherm Power		
<b>System capacity</b>			
Power output	$W_e$	Continuous	5000
Voltage output	VDC	Fixed within	47 – 53
Voltage input	VAC	For Standby operation	90 – 264 / 50-60 Hz
<b>Fuel</b>			
Hydrogen purity (H <sub>2</sub> )	%	Commercial grade 3.5	Min. 99,95
Inlet Pressure	Barg	Nominal to Valve Block	5
Consumption	Nm <sup>3</sup> /kWh	Consider average at 4kW	0,95
<b>Physical</b>			
Ambient Temp.	°C	Operational	-20 - +40
Integration cabinet temp.	°C	Operational	0 - +60
Storage Temp.	°C	Weather protected	-45 - +70
Unit dimensions	mm	H x W x D	614 x 500 x 567 (14RU)
Weight	kg	Each module	79 (without controller)
Ingress Protection	IP-class	External to internal	55
Air flow direction		Horizontal or vertical (In-Out)	HH – HV
Air flow	m <sup>3</sup> /h	Exhaust to outside	400-1200
<b>Backup start up time</b>	Sec.	Depends on batteries	Customer dependent
<b>Communication</b>			
Interface/System Monitoring	- -	Standard	RJ45 with TCP/IP RJ45 with CAN-bus
<b>Alarms</b>			
Voltage free outputs	-	Open on fault	DB15 with 4 channels
Visual indication	-	Display	
<b>Interface</b>			
DC	Plug	On front Panel	Anderson SB 175 blue
AC	Plug	On front panel	IEC EN 60320 (with 6A fuse)
Hydrogen	Fitting	Backside or under	¼" compression fitting (tube size: 8mm)