



**DBX5000H48-B-HV**



## Dantherm Battery eXtender – DBX5000

### TECHNOLOGY

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

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

### WHERE TO USE BATTERY EXTENDER BACKUP POWER SOLUTIONS?

The Dantherm Battery eXtender (DBX) is installed in parallel with batteries. The DBX is ideal in environments with an unstable mains (grid) where equipment must be protected from power outages and 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 or when a timer set point is reached.

### 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
- Easy to increase Backup time to 8, 12, 24, 48 or even 168 hours or more
- Compact, modular and scalable systems for network growth
- Programmable Self-test ensures system readiness
- Floating GND – can work in both -48VDC and +48VDC
- Very high power density in relation to weight as well as volume
- Fuel storage in up to three strings for hot-swap and easy monitoring

### CONFIGURATIONS

- Mounts in 19" and 23" 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

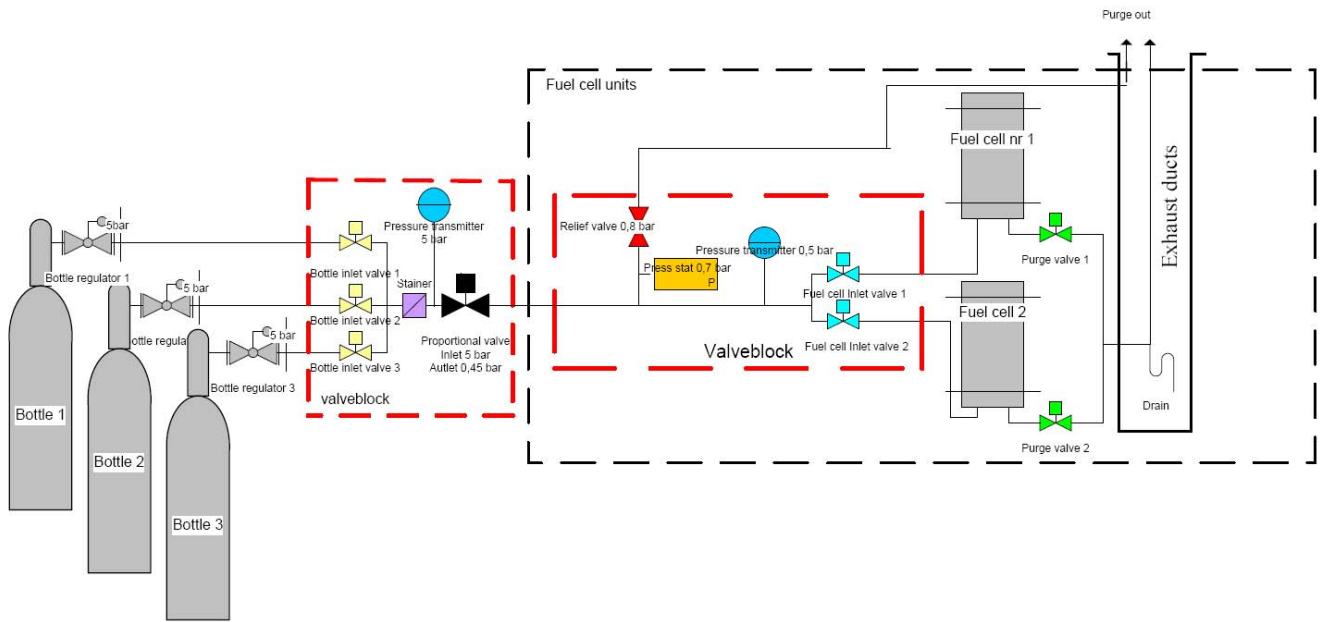
### PRODUCT CODE – DBX5000H48-B-HH

- DBX: Dantherm Battery eXtender
- 5000: Nominal stack output power – End of Life
- H: Hydrogen fuelled
- 48: 48 VDC range (fixed voltage within (47 - 57 VDC))
- AC-input voltage: (Please clarify on order)
  - A: 110 VAC
  - B: 230 VAC
- Air-flow: (Please clarify on order)
  - HH: Horizontal in – Horizontal out
  - HV: Horizontal in – Vertical out

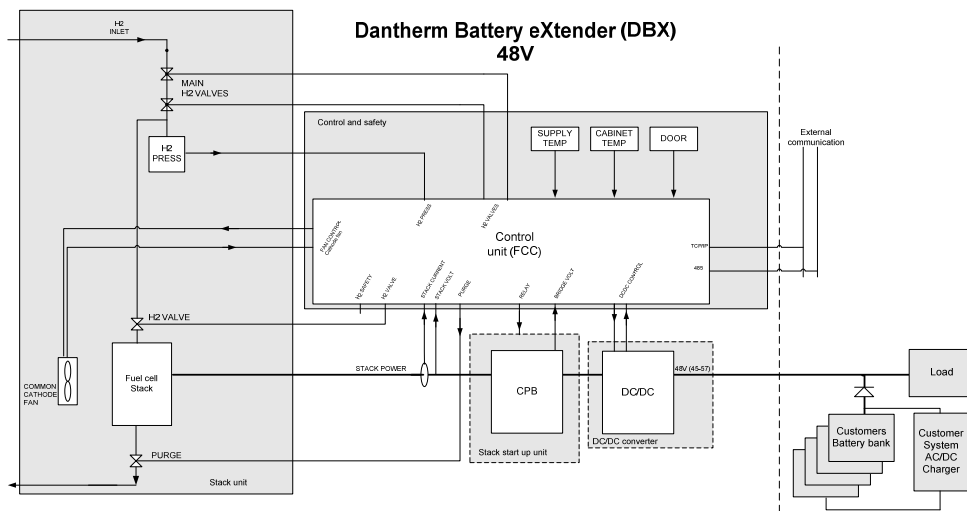
### OPTIONS

- 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
- Cold climate kit (for operation below -20°C and/or low load)

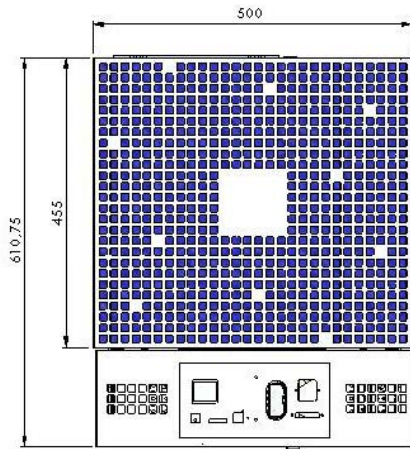
**BLOCK DIAGRAM:**



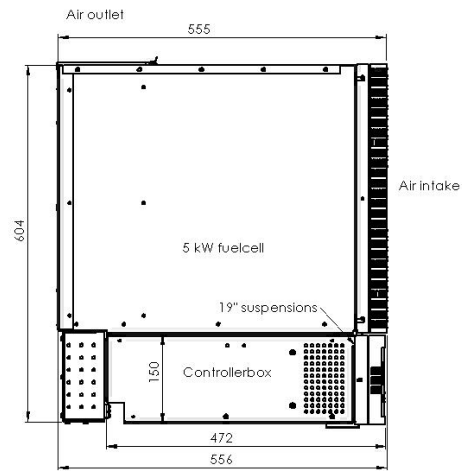
**ELECTRICAL DIAGRAM:**



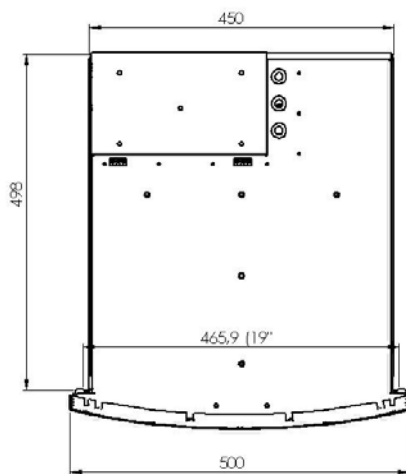
### DIMENSIONS DBX5000:



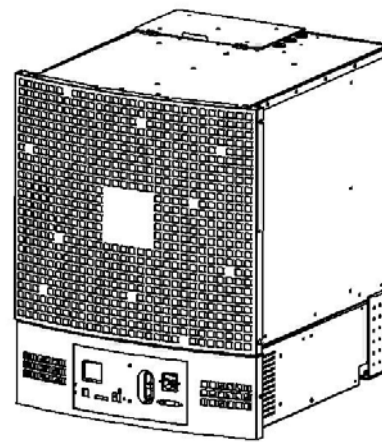
Front view



Side view



Top view



Iso view

### CONTROLLER INTERFACE:



Front panel – Valve Block, Alarm, CAN, TCP/IP & LED's - AC-input, DC-out & current sharing

**TECHNICAL DATA:**

<b>DBX5000</b>			
<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	We	Continuous	5000
Voltage output	VDC	Fixed within	-47 to -57
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	Average at max. load	0,95
<b>Physical</b>			
Ambient Temperature	°C	Operational (optional)	-20 (-40) to +40 (-55)
Integration cabinet Temperature	°C	Operational	0 to +60
Storage Temperature	°C	Weather protected	-45 - +70
Cabinet dimensions	mm	H x W x D	611 x 500 (450) x 555
Weight	Kg	Stand alone module	75 Kg
Ingress Protection	IP-class	External to internal	55
Air flow	m <sup>3</sup> /h	Exhaust to outside	200-1600
<b>Backup start up time</b>	sec.	Depends on batteries	Installation dependent
<b>Communication</b>			
Interface/system monitoring	-	Standard configuration	RJ45 TCP/IP – CAN Bus Display panel
<b>Alarms</b>			
Voltage free outputs	-	Goes open on fault	DB15 with 4 channels
Visual indication	-	Display	1
<b>Interface</b>			
DC	-	On front panel	175 Amp Anderson type
AC (only DIB version)	-	On front panel	IEC 320 C14
Hydrogen	Fitting	-	8 mm Tube