

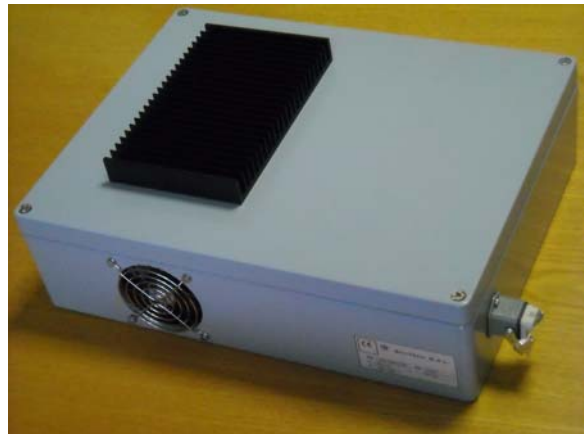
## HIGH EFFICIENCY DC/DC CONVERTERS

### HDC-A000

### HDC-A100

#### Features

- +28V Output Isolated
- High Efficiency, exceeds 90%
- High power, up to 4KW
- Wide ranges of Input and Output voltage
- Softstart and input precharge features
- Full input and output Diagnostics
- Industrial rugged construction
- USB, CAN, Ethernet remote control options



#### Applications

- High Efficiency applications
- Automotive
- Industrial

The DCDC Converters of the HDC Family, designed and developed by SkyTech, are intended for demanding applications in which the efficiency is the primary requirement. All models are capable of delivering 4kW with an efficiency equal, or exceeding, 90%.

The HDC models deliver +28Vdc, 140A and are available in two input voltage ranges: from 200V to 350V (models A-0xx) and 350V to 650V (model A-1xx). In any case, different output voltages or input ranges can be supplied to fulfill Customer's specific requirements, starting from the base architectures described herein. Contact SkyTech for information about customization of base models.

The Block Diagram of the HDC Family is shown in Fig. 1. The input voltage is connected to the internal circuitry through a fuse and a varistor. Under proper conditions, when the Unit receives the Power ON command (either hardware or via optional communication link) the logic circuit executes the precharge of input capacitors and, subsequently, the output voltage softstart.

The following alarms are supplied:

- Input overvoltage
- Input undervoltage
- Input fuse blown
- Output overload
- Output undervoltage

- Output fuse blown
- Overtemperature

The analog monitors include:

- Input voltage and current
- output voltage and current

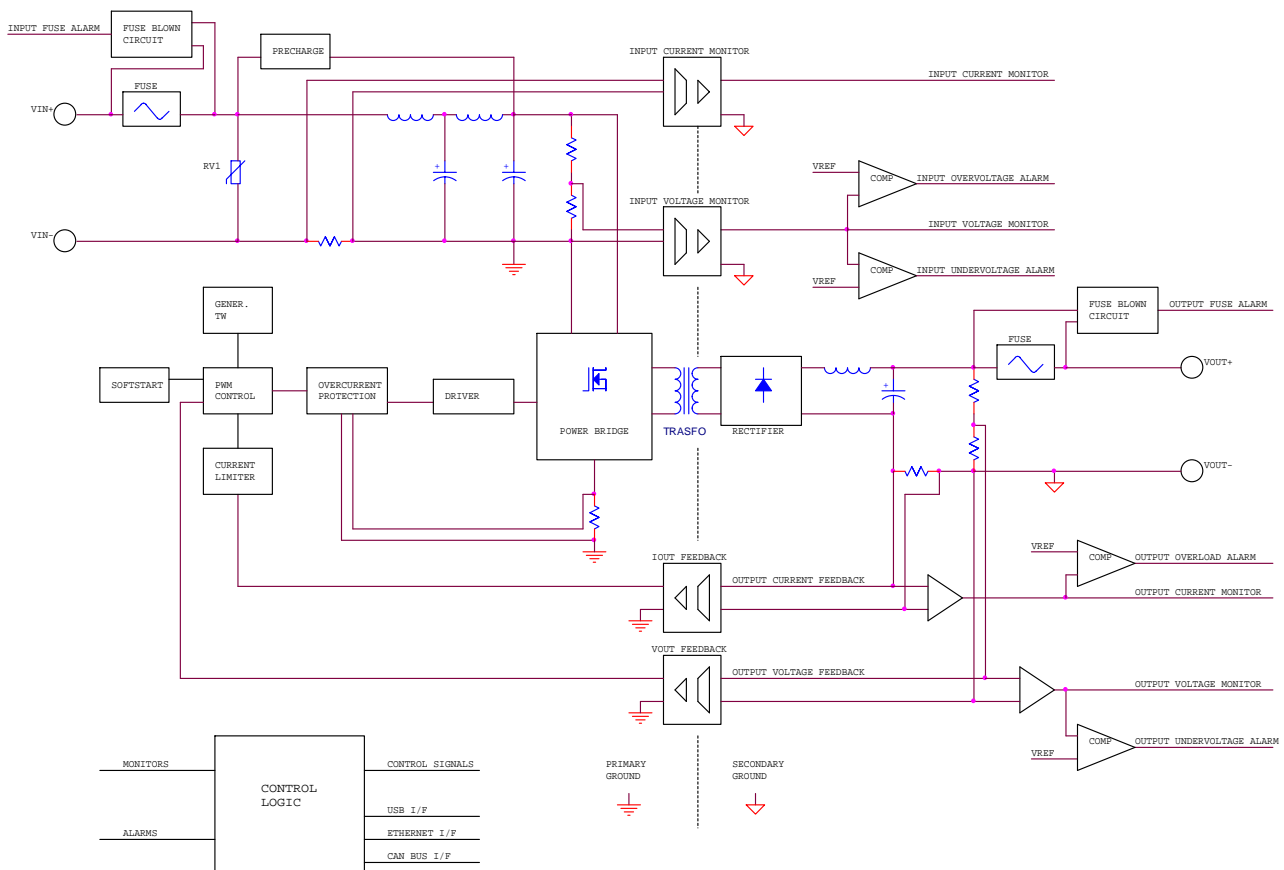
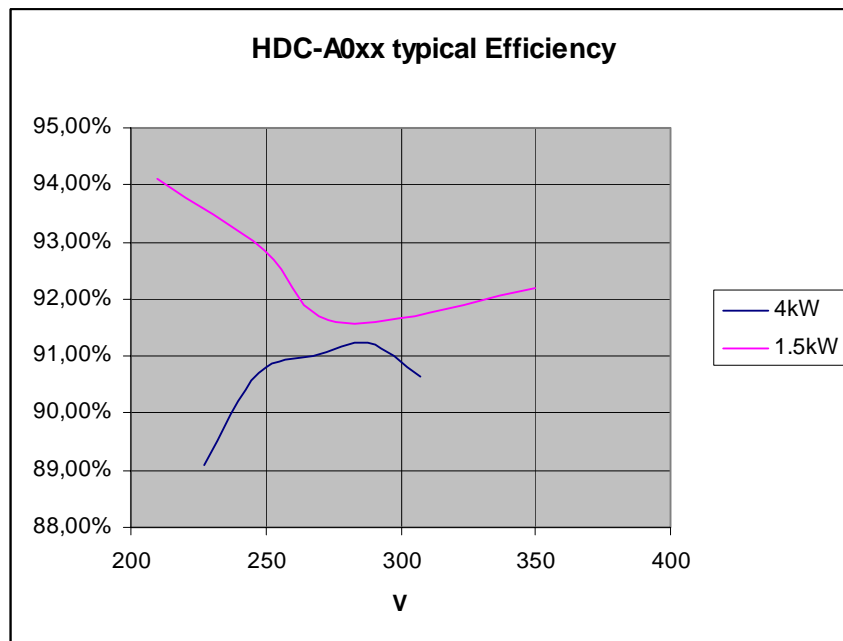


Fig. 1 - Block Diagram of the HDC converter

## Technical Characteristics

Item	Value			Units	Tol	Notes
	min	typ	max			
<b>Input</b>						
Range	200 350	280 500	350 650	V		Model A-0xx Model A-1xx
Input fuse		32 25		A A		Model A-0xx Model A-1xx
Input fuse alarm		present				
Inrush current limiter		present				
Reverse voltage protection		Polarized connector				
Overvoltage protection		hardware configurable				
Undervoltage protection		hardware configurable				
Current monitor	0		4	V		4V at max current
Voltage monitor	0		4	V		4V at max voltage
<b>Output</b>						
Voltage		28		V	1%	hardware configurable
Current			140 80	A A		Model A-0xx Model A-1xx
Efficiency		90		%		
Output fuse		150 100		A A		Model A-0xx Model A-1xx
Output fuse alarm		present				
Reverse voltage protection		Polarized connector				
Overload alarm		present				
Undervoltage alarm		present				
Current monitor	0		4	V		4V at max current
Voltage monitor	0		4	V		4V at max voltage
Remote interface						
<b>General</b>						
Temperature Range						
- Operating	-20		+60	°C		Not condensing (tropicalized version available)
- Storage	-40		+85			
EMI and EMC		TBD				configurable
Safety		TBD				configurable
Isolation	2500			Vac		configurable
Heat dissipation		Forced air				
Temperature alarm		present				
Tropicalized version		available				optional
Service voltage	18		32	V		
Service current			350	mA		
<b>I/O Interfaces</b>						
Remote control		Hardware				
USB		available				optional
CANBus		available				optional
Ethernet		available				optional



### Ordering information

P/N	Description
HDC-A000_0.00	HDC Converter, 4KW, 200-350V input voltage range
HDC-A010_0.00	same as above, USB Interface
HDC-A020_0.00	same as above, CANbus Interface
HDC-A030_0.00	same as above, Ethernet Interface
HDC-A100_0.00	HDC Converter, 4KW, 350-650V input voltage range
HDC-A110_0.00	same as above, USB Interface
HDC-A120_0.00	same as above, CANbus Interface
HDC-A130_0.00	same as above, Ethernet Interface