ASCEND

High Frequency Charger

SINGLE PHASE INPUT MODEL: 20 - 100 AMP OUTPUT
THREE PHASE INPUT MODEL: 20 - 280 AMP OUTPUT

AMETEK®
SOLIDSTATE CONTROLS
PROVIDING CONTINUITY OF ELECTRICAL POWER

ASCEND

High Frequency Charger

OUTPUT VOLTAGE: 110, 120 VDC

SINGLE PHASE MODEL:
208/240 VAC INPUT
20 - 100 AMP OUTPUT

THREE PHASE MODEL:
480 VAC INPUT
20 - 280 AMP OUTPUT

Elevate your charging with the efficient and easy-to-use Ascend.

The modular Ascend High Frequency Charger from AMETEK Solidstate Controls is a digital signal processor (DSP) controlled, high frequency Switchmode Rectifier system designed for high-efficiency conversion of incoming AC power to clean current-limited DC power. Ascend can be used for charging batteries while supplying power to continuous DC loads, such as inverters or as a stand-alone device for battery-charging only applications.

Modular Advantage

As a modular charger, Ascend has many advantages. Ascend's internal modules utilize load sharing to achieve built-in redundancy, so even if one module stops working, the output will continue running. The modules are easily accessible so replacement is quick and simple, making for a low mean time to repair (MTTR) of ten minutes for a single module. The system can also be configured for expansion, giving you the option to increase capacity.

Many applications are located in remote areas where it takes time to access them. For Ascend, this is not an issue. If a problem arises, an alarm notification is sent out and, while someone comes out to assess the situation, it keeps running by utilizing its other modules.

Portability

Ascend's streamlined and portable design allows for effortless installation and mobility across different sites. It can easily be transported to different locations, facilitating rapid deployment in various environments and allowing users to carry out tasks or operations wherever they are needed. This versatility enables greater flexibility in usage, reducing the need for multiple stationary units and potentially saving both time and resources.

FEATURES AND BENEFITS

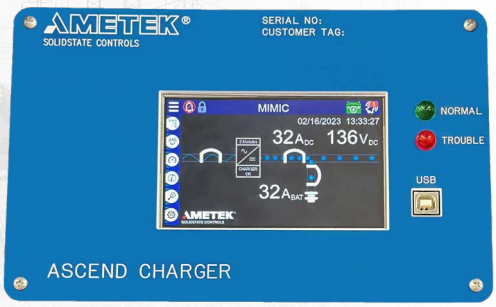
1	Modular design for redundancy, reliability, simplicity and efficiency
2	Advanced switching and power electronics technology
3	Up to 94% efficient, reducing power consumption
4	Input Power Factor Correction better than 0.95, input THD <5%
5	Reliable industrial design; MTBF >205,000 hours
6	Low input harmonic distortion
7	Simultaneous voltage and current readings
8	User definable control and alarm set-points
9	Meets IEEE-519 requirements
10	UL1012 (UL) approved

Animated LCD Touch Screen Display

Ascend is even easier to use with our new graphical user interface display: the Animated LCD Touch Screen. Easily navigate between screens utilizing the touch screen menu options. You can quickly determine the status of your system with the increased screen size, additional colors and animations. We have animated the process flow, voltage and alarm readings so you can spot an issue instantly.

New display features allow:

- Support for Network Time Protocol (NTP)
- Access to the data log from the LCD
- Ability to disable the USB port
- Optional USB enabled alarm for added security
- Ability to customize alarm relay configuration



General Specifications - Standard Features	
Design Features	
High frequency rectifier with electronic control, current limiting & voltage regulation	
Floating ground output	
Detailed alarm data logging for the last 10,000 events	
Detailed battery logging for last 100 events	
Long life LED indicators	
50/60 Hz operation	
Electrical Specifications	
AC Input	1-phase model: 208/240 (187-264 V) 3-phase model: 480 (408-528 V) Frequency: 50/60 Hz (± 5%)
DC Output	Nominal voltages: 110, 120, VDC (± 0.25% Regulation)
Output Ripple (RMS)	< 0.5%, 100mV with Battery
Input Power Factor	0.98
Input Distortion	< 5%
Standard Protection Devices	
AC Input Breaker (10 kAIC Minimum)	DC Output Breaker
Standard Metering	
DC Output Voltage	DC Output Current
Cabinet Temperature	Percent Loading
AC Input Voltage & Current (3-phase only)	AC Input Frequency (3-phase only)
Standard Relays	
Fault (Common)	
Loss of Communication	
Up to 6 Total Configurable Alarm Relays	
Standard Indications	
'Normal' Green LED	
"Trouble" Alarm Red LED	
Each module has AC ON, DC ON and Fault indications	
Default Alarms	
Low DC Voltage	Pos/Neg DC Ground Detect
High DC Voltage	AC Input Failure
Battery Near Exhaustion	Module Overload
DC Output Breaker Open	Equalize - Relay Only
Module Failure	Module Over Temperature
Module Over Temperature Shutdown	Phase Loss (3-phase only)
Communications Failures	AC Input Low Voltage (3-phase only)
System Over Temperature - No Relay	AC Input High Voltage (3-phase only)
Hi DC Shutdown	Module Voltage Input Failure (3-phase only)
Charger Fuse Blown	
Standard Features	
Alarm Relay Test	Audible Alarm
Lamp Test	Latching Alarms - Configurable On/Off
Charger Auto-Equalize - Configurable	
Mechanical Specifications	
Enclosure	NEMA2 (IP21), 16 GA (1.66 mm) steel with hinged front access door FS5 cabinet is IP20 NEMA1 with optional drip shield to achieve IP21
Cable Entry	Top or right side (FS5 Cab: top or bottom)
Finish	Standard powder coat, black FS5 cabinet is ANSI 61 gray
Cooling	Fan assisted cooling
Environmental	
Audible Noise	62-65 dB(A) at 3 feet (1 meter)
Operating Temp	32°F to 122°F (0°C to +50°C)
Storage Temp	-4°F to 158°F (-20°C to 70°C)
Operating Humidity	Up to 95% (Non-condensing)
Altitude	10,000 feet (3,048 meters) without derate

General Specifications - Optional Features		
Optional Circuit Breakers		**(Option #)**
AC Input Breaker High kAIC (60-280 A)		(82)
DC Output Breaker High kAIC (60-280 A)		(183)
Battery Breaker		(143)
Optional Alarms		**(Option #)**
High DC Disconnect (Trip AC Input Breaker)		(2)
AC Input Circuit Breaker Open		(101)
Battery Circuit Breaker Open		(57)
Low DC Disconnect (Trip Battery Breaker)		(107)
Additional Options	**(Option #)**	**Notes**
Equalize Inhibit	(155)	External 120 VAC input will prevent the charger from going into equalize mode
Dual Charger Current Limit Control	(186)	Optional 120 VAC external input for control
Battery Temperature Compensation	(108)	DC battery float voltage is adjusted based on room ambient temperature over a range of 32°F and 104°F (0°C to +40°C)
Communications Package	(187)	MODBUS RTU MODBUS TCP/IP SNMP NTP Ethernet Web-Page DNP3 RS-485 DNP3 TCP/IP DNP3 UDP/IP Consult us for additional communications options
Battery I & V Metering Battery Current Limit Battery Discharging Alarm	(210)	
Optional Mechanical Features		**(Option #)**
Padlock Breakers		(93)
Key-Lockable Enclosure		(159)
DC Rated Contacts		(72)
Labeling in Other Languages		(158) (133)
Heatshrink Wire Markers (Power Only)		(71A)
Heatshrink Wire Markers (Power & Control)		(71B)
20% Spare Terminals		(96)
Certifications		
UL listed		

UL LISTED

Specifications subject to change. Contact us for lead times, optional packages and additional information.

Additional Single Phase Model Specifications										
Model Number	Output Amps	DC Volts (Range)	AC/DC Efficiency %	AC Input Amps / Phase	Cabinet Style	Heat Loss (BTU / hr)	Circuit Breaker Ampacity		Weight	
							AC Input	DC Output	lb	kg
ASC-120-0020-240-1	20	110 - 147	94	15	FS1	616	20	25	69	31
ASC-120-0040-240-1	40	110 - 147	94	30	FS1	1233	40	50	86	39
ASC-120-0060-240-1	60	110 - 147	94	44	FS2	1849	80	80	137	62
ASC-120-0080-240-1	80	110 - 147	94	59	FS2	2465	100	100	152	69
ASC-120-0100-240-1	100	110 - 147	94	74	FS2	3082	125	125	167	76

Additional Three Phase Model Specifications										
Model Number	Output Amps	DC Volts (Range)	AC/DC Efficiency %	AC Input Amps / Phase	Cabinet Style	Heat Loss (BTU / hr)	Circuit Breaker Ampacity		Weight	
							AC Input	DC Output	lb	kg
ASC-120-20-480-3	20	110 - 147	94	3.7	FS3	616	5	25	108	49
ASC-120-40-480-3	40	110 - 147	94	7.5	FS3	1233	10	50	125	57
ASC-120-60-480-3	60	110 - 147	94	11.1	FS4	1849	15	80	194	88
ASC-120-80-480-3	80	110 - 147	94	14.8	FS4	2465	20	100	211	96
ASC-120-100-480-3	100	110 - 147	94	18.5	FS4	3082	25	125	228	103
ASC-120-120-480-3	120	110 - 147	94	22.2	FS4	3698	30	150	246	112
ASC-120-140-480-3	140	110 - 147	94	25.9	FS4	4315	35	175	263	119
ASC-120-160-480-3	160	110 - 147	94	29.6	FS4	4931	40	200	280	127
ASC-120-180-480-3	180	110 - 147	94	33.3	FS5	5547	45	225	726	329
ASC-120-200-480-3	200	110 - 147	94	37.0	FS5	6164	50	250	743	337
ASC-120-220-480-3	220	110 - 147	94	40.7	FS5	6780	60	300	760	3445
ASC-120-240-480-3	240	110 - 147	94	44.4	FS5	7396	60	300	777	352
ASC-120-260-480-3	260	110-147	94	48.1	FS5	2348	70	400	794	360
ASC-120-280-480-3	280	110-147	94	51.8	FS5	3529	70	400	811	368

Dimensions			
Cabinet Type	Dimensions	Inches	Millimeters
FS1 - wall mount[1]	(H x W x D)	22.75 x 18 x 18	578 x 457 x 457
FS2 - floor mount	(H x W x D)	40.5 x 18 x 18	1029 x 457 x 457
FS3 - wall mount[1]	(H x W x D)	22.75 x 18 x 21	578 x 457 x 535
FS4 - floor mount	(H x W x D)	54.5 x 18 x 21	1384 x 457 x 535
FS5 - floor mount	(H x W x D)	79 x 32 x 36	2007 x 813 x 914

[1] Optional stand available for 20 A and 40 A

Model Number Designation System

ASC	—	120	—	0100	—	240	—	1	—	B
A		B		C		D		E		F

A – Indicates Base Model Number - ASC single phase input
B – Indicates DC Output Voltage – 120 = 120 VDC,
C – Indicates DC Output Current – 0040 = 40 A, 0100 = 100 A
D – Indicates AC Input Voltage – 240 = 208 / 240 VAC, 480 = 480 VAC
E – Indicates number of Input Phases – 1 = Single Phase
F – Indicates Customization – B = Base, C = Custom

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AMETEK®
SOLIDSTATE CONTROLS

THE PURPOSE OF OUR BUSINESS IS TO PROVIDE CONTINUITY OF ELECTRICAL POWER TO KEEP BUSINESSES IN BUSINESS.

WE DO THIS BY HELPING CLIENTS SOLVE THEIR POWER PROBLEMS AND BY CREATING THE MOST ECONOMICAL LONG-TERM RESULTS.

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