Technical Data Sheet

Elite Series 120

Sifam Tinsley Elite Series 120XX 1Phase,Universal Input Range 90-280 VAC, 127-396 VDC, High efficiency ≥ 86% & extremely compact (w-h-d) 55X110X105mm & DIN Rail Mountable with protections

Special Features

- Switch Mode Technology
- Automatic 3 Stage Charge Profile
- Boost Charge Function
- Reverse Polarity Protection with Fuse
- LED indicator for Power ON, Charging, Boost Mode, Float Mode, Battery Reverse/ Fuse Blown Connection
- Cooling by free air convection
- DIN Rail Mounting
- Compact size, 3 Year warranty

Input

- Universal single-phase Input
- Efficiency up to 86%

Protections

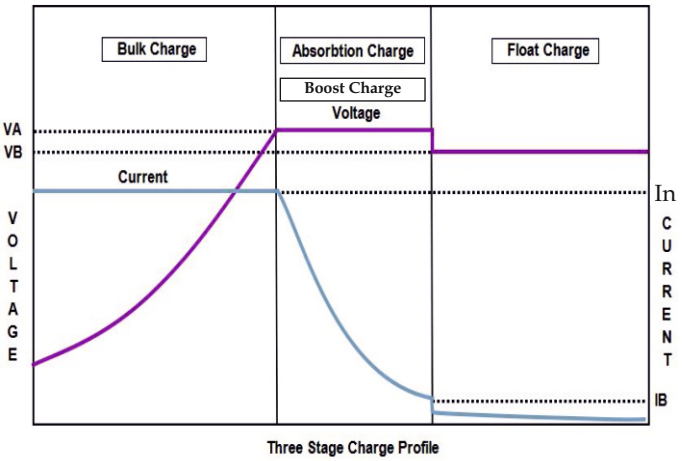
- Short circuit, Overload, Over voltage, Reverse Polarity Connection, Over Temperature.

Technical Specifications

Input Data	
Nominal Input Voltage	115/230 Vac
Input Voltage range	90 – 280 Vac 127 – 396 Vdc
Inrush Current (Vn and In Load) I^2t	≤ 40 A ≤ 5 msec.
Frequency	45 – 65 Hz ±6%
Input Current (115 – 230 Vac)	2.8 – 1.5 A
AC Input Fuse	4 A
Recommended DC Output Fuse	See Table
Output	
Absorption Voltage (VA)	See Table
Boost Voltage (VA)	See Table
Float Voltage (VB)	See Table
Max. Charging Current (IA) at < 40°C	See Table (In)
Max. Charging Current (IA) at 50°C	80% of In (permanent)
Max. Charging Current (IA) at 60°C	60% of In (permanent)
End of charging current (IB)	In X 0.32A ±20 %
Turn-On delay after applying mains voltage	2.5 sec. (max)
Line regulation	< ±0.5 %
Residual Ripple	≤ 120 mV_{pp}
Efficiency	≥ 86 %
Short-circuit Protection	Constant Current
Short-circuit current	Max 1.2 X In ±10%
Dissipation power load max (W)	20.5 W
Over Load protection	Constant Current
Over Voltage Output protection	Yes
Over Temperature Protection	Yes
Parallel connection	No
Recommended Battery Capacity Range (Ah)	See Table
Charge Fail Contact rating (EN60947-4-1) Max. 30 VDC 1A Max. 120 VAC 1A	Resistive load
Min. 1mA at 5 VDC	Min permissive load

Climatic Data	
Ambient Temperature operation	-20°C to +70 °C (>60°C Derating 2.5%/°C)
Ambient Temperature Storage	-40°C up to +85 °C
Humidity at 25 °C, no condensation	95 %
Cooling	Convection
General Data	
Isolation Voltage (In / Out)	3000 Vac
Isolation Voltage (In / PE)	1605 Vac
Isolation Voltage (Out / PE)	500 Vac
Protection Class (EN/IEC 60529)	IP 20
Reliability: MTBF IEC 61709	> 5,00,000 h
Pollution Degree Environment	2
Connection Terminal Blocks Screw Type	2.5 mm^2 (24 – 14 AWG)
Vibration (operation)	10 to 500Hz, 2G, 20min/sweep, period - 1Hr, Each along X,Y,Z axes.
Shock	30g in all direction in acc. with IEC 60068-2-27.
Protection class	1 with PE connected

Charging Characteristics



Three Stage Charge Profile

Technical Specifications

Applicable Standards

Norms and certifications

The CE mark in According to EMC 2004/108/EC and Low voltage directive 2006/95/EC.

Electrical Safety

According to IEC/EN 60950 (VDE 0805) EN 50178 (VDE 0160) for assembling device. The unit must be installed according to IEC/EN 60950. Input / Output separation: SELV EN60950-1 and PELV EN 60204-1. Double or reinforced insulation.

EMC Immunity

EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN61000-6-2

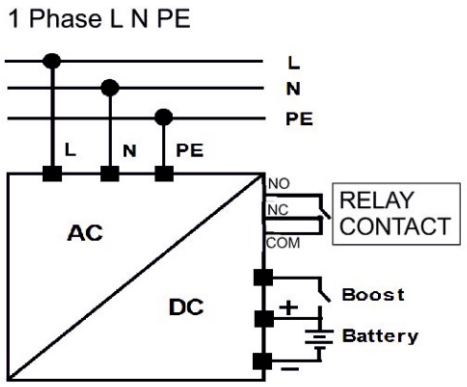
EMC Emission

EN61000-6-4, EN 61000-3-2

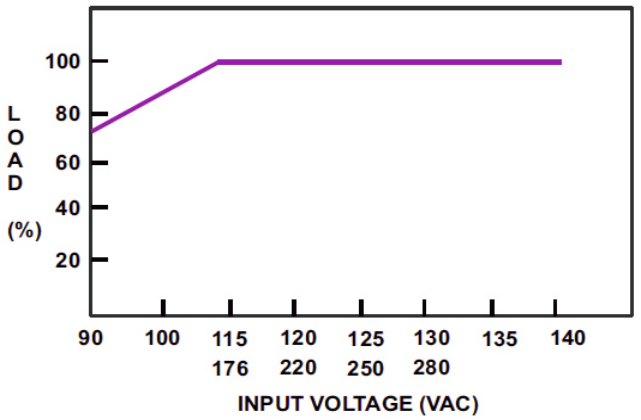
Standards Conformity

EN 60204-1 Safety of Electrical Equipment Machines.

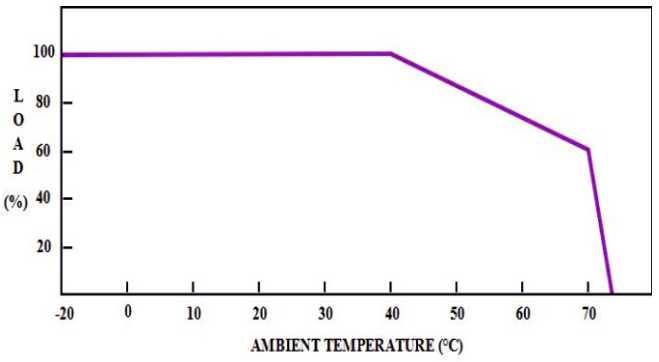
Electrical Connection



Static Characteristics



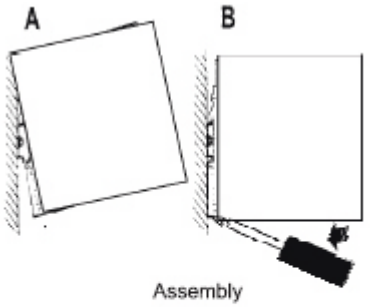
Derating Curve



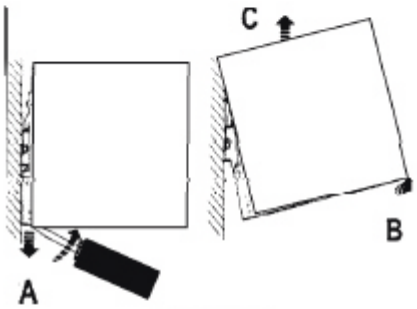
Note :

*Refer Battery manufacturers data sheet for their suggestions on acceptance of higher charge rates since charging Battery beyond recommended capacity will increase the charging time and below speci ed capacity will increase charge rate causing dehydration and grid corrosion on the positive plate which will result in loss of battery capacity

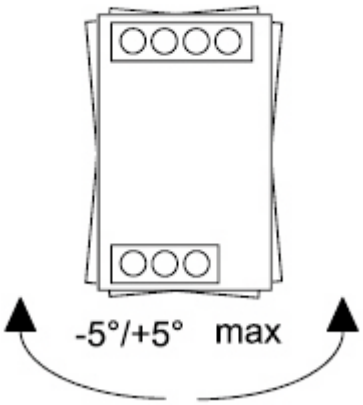
Installation



Assembly



Disassembly



Maximum angle of Asslembly

Dimensions Details

w x h x d

55 x 110 x 105

All Dimensions are in mm

Model	Constant Current	V Boost (TYP)	V Absorption (TYP)	V Float (TYP)	Nominal O/p Current (In)	Recommended Battery Capacity Range (Ah)*
Elite 12012	9.6 A	14.4 V	14.2 V	13.5 V	8.5 A	30 - 100 Ah
Elite 12024	4.8 A	28.8 V	28.4 V	27 V	4.25 A	15 - 50 Ah

Ordering information

Product Code	Bc03-	X	X	X	0	0	0	0	0	0	0	0ST
System type of Bc03	1P	1										
Battery Charger model of Bc03	12012A (120W,12V) 12024A (120W, 24V) 3612A (36W, 12V) 12030A (120W, 30V) 7212A (72W, 12V) 7224A (72W, 24V)		A B D E F G									
Relay Output for Bc03	With Relay			0								
Reserved					0	0	0	0	0	0	0	0ST

Technical Data Sheet

Elite Series 120

Sifam Tinsley Elite Series 12030 1Phase,Universal Input Range 90-280 VAC, 127-396 VDC, High efficiency ≥ 86% & extremely compact (w-h-d) 55X110X105mm & DIN Rail Mountable with protections

Special Features

- Switch Mode Technology
- Automatic 3 Stage Charge Profile
- Boost Charge Function
- Reverse Polarity Protection with Fuse
- LED indicator for Power ON, Charging, Boost Mode, Float Mode, Battery Reverse/ Fuse Blown Connection
- Cooling by free air convection
- DIN Rail Mounting
- Compact size, 3 Year warranty

Input

- Universal single-phase Input
- Efficiency up to 86%

Protections

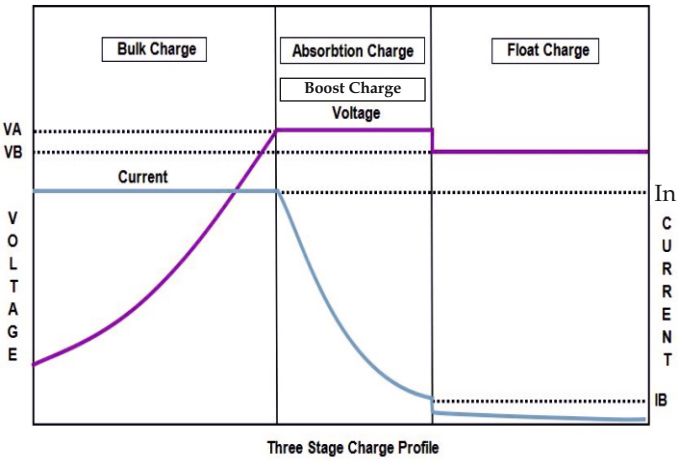
- Short circuit, Overload, Over voltage, Reverse Polarity Connection, Over Temperature.

Technical Specifications

Input Data	
Nominal Input Voltage	115/230 Vac
Input Voltage range	90 – 280 Vac 127 – 396 Vdc
Inrush Current (Vn and In Load) I^2t	≤ 40 A ≤ 5 msec.
Frequency	45 – 65 Hz ±6%
Input Current (115 – 230 Vac)	2.8 – 1.5 A
AC Input Fuse	4 A
Output	
Absorption Voltage (VA)	35.52 V (TYP)
Boost Voltage (VA)	36.0 V (TYP)
Float Voltage (VB)	33.75 V (TYP)
Max. Charging Current (IA) at < 40°C	3.4 A (In)
Max. Charging Current (IA) at 50°C	80% of In (permanent)
Max. Charging Current (IA) at 60°C	60% of In (permanent)
End of charging current (IB)	In X 0.32A ±20 %
Turn-On delay after applying mains voltage	2.5 sec. (max)
Line regulation	< ±0.5 %
Residual Ripple	≤ 120 mV_{pp}
Efficiency	≥ 86 %
Short-circuit Protection	Constant Current
Short-circuit current	Max 1.2 X In ±10%
Dissipation power load max (W)	20.5 W
Over Load protection	Constant Current
Over Voltage Output protection	Yes
Over Temperature Protection	Yes
Parallel connection	No
Recommended Battery Capacity Range (Ah)	12 - 40 Ah
Charge Fail Contact rating (EN60947-4-1) Max. 30 VDC 1A Max. 120 VAC 1A	Resistive load
Min. 1mA at 5 VDC	Min permissive load

Climatic Data	
Ambient Temperature operation	-20°C to +70 °C (>60°C Derating 2.5%/°C)
Ambient Temperature Storage	-40°C up to +85 °C
Humidity at 25 °C, no condensation	95 %
Cooling	Convection
General Data	
Isolation Voltage (In / Out)	3000 Vac
Isolation Voltage (In / PE)	1605 Vac
Isolation Voltage (Out / PE)	500 Vac
Protection Class (EN/IEC 60529)	IP 20
Reliability: MTBF IEC 61709	> 5,00,000 h
Pollution Degree Environment	2
Connection Terminal Blocks Screw Type	2.5 mm^2 (24 – 14 AWG)
Vibration (operation)	10 to 500Hz, 2G, 20min/sweep, period - 1Hr, Each along X,Y,Z axes.
Shock	30g in all direction in acc. with IEC 60068-2-27.
Protection class	1 with PE connected

Charging Characteristics



Three Stage Charge Profile

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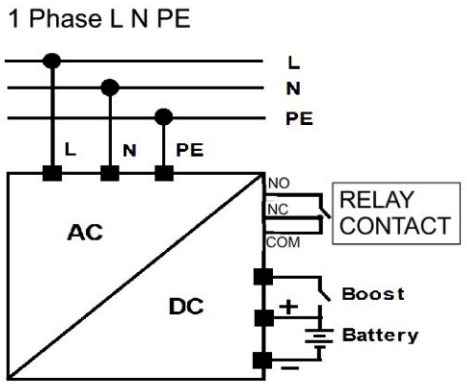
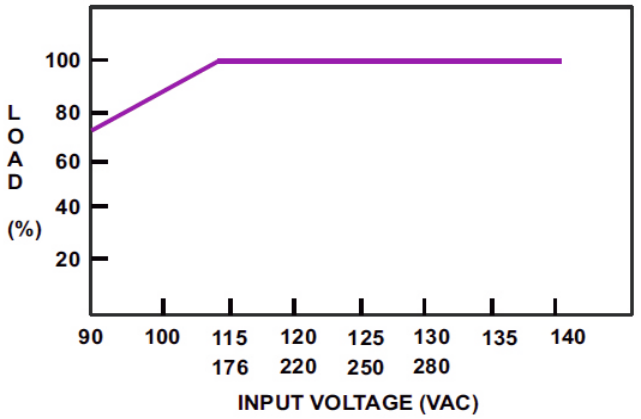
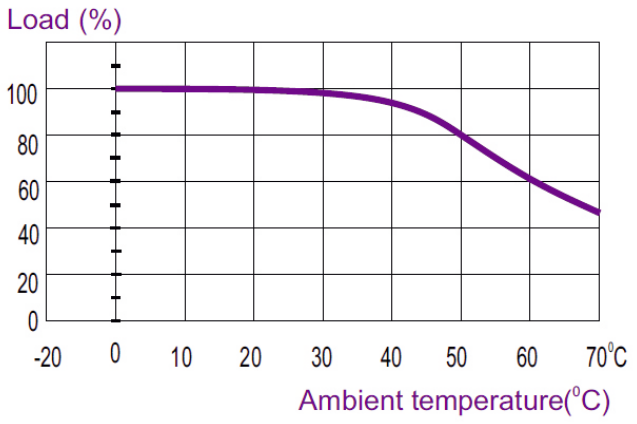


Static Characteristics



Derating Curve



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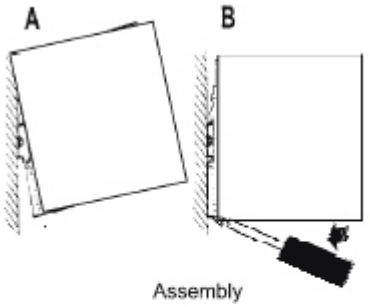
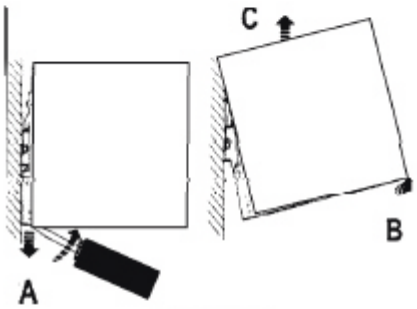
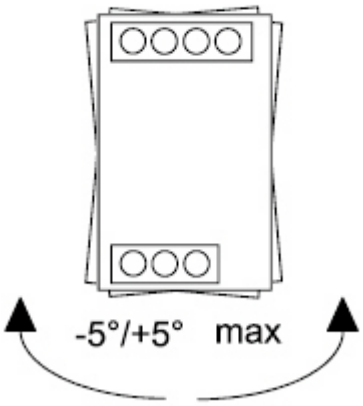
Installation



Assembly



Disassembly



Maximum angle of Asslembly

Dimensions Details

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All Dimensions are in mm

Ordering information

Product Code	Bc03-	X	X	X	0	0	0	0	0	0	0	0ST
System type of Bc03	1P	1										
Battery Charger model of Bc03	12012A (120W,12V) 12024A (120W, 24V) 3612A (36W, 12V) 12030A (120W, 30V) 7212A (72W, 12V) 7224A (72W, 24V)		A B D E F G									
Relay Output for Bc03	With Relay			0								
Reserved					0	0	0	0	0	0	0	0ST

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