



# HI-REL INDUSTRIAL DC-DC CONVERTERS



**SELECTOR GUIDE**  
**2021 EDITION**

# Dependable Operation in Industrial Applications

**SEC America's line of high power, chassis-mount DC-DC converters has been specifically designed for the most challenging industrial applications**

Each unit includes features that contribute to overall performance and durability resulting in high reliability and long life. Among the characteristics of these high power units are:

- Wide operating temperature range
- Shock and vibration resistance
- Internal component protection through encapsulation
- Electronic protection against overloads
- Quick Mounting
- Easy Connection
- Cool operation
- High MTBF

Unlike competitive power conversion products, SEC America's DC-DC converters are engineered and manufactured in the United States. From our facility in Burlington, VT, we innovate and develop new products while offering support and application guidance for customers sourcing for both established and future projects. We can stand behind each and every product that goes out our doors, because of our engineering and manufacturing teams' traceable interaction during the build process. The result is proven, fully-tested units at the end of the production line.

Through years of experience, we have developed an industry-leading reputation for providing power converter products that meet a wide range of requirements. But as technology continues to grow, new applications continue to arise. At SEC America, we are constantly innovating and improving.

Our years of expertise have enhanced our abilities to build to custom mechanical and electrical demands. Various mechanical options and circuit building blocks have become standardized at SEC, leading to fast turnarounds for new custom models. Our highly qualified engineering staff is ready to match a unit design to your exact requirements.

## LIMITED WARRANTY

We warrant each instrument, sold by us, or our authorized agents, to be free from defects in material and workmanship and that it will perform within applicable specifications for a period of two years after original shipment. Our obligation under this guarantee is limited to repairing or replacing any instrument or any part thereof, except fuses and pilot lights, which shall within two years after delivery to the original purchaser, be returned to us with transportation charges prepaid, prove after our examination to be thus defective.

The above limited warranties take the place of all other warranties, expressed or implied, and correction of such defects by replacement or repair shall constitute a fulfillment of all obligations under the terms of the warranties. The warranties do not cover any unit that has been damaged either in transit or by misuse, accident, or negligence. No warranty or representation by anyone other than this Company shall be binding on us.

### TO RETURN A UNIT, SEND TO THE FOLLOWING ADDRESS:

SEC America Corp. / 78 Ethan Allen Drive, Suite #3 / South Burlington, VT 05403

---

## CONTACT INFORMATION



P.O. Box 2266 / South Burlington, VT 05407

TEL (802) 865-8388 / FAX (802) 865-8389

sales@secamerica.com / **secamerica.com**

If you cannot find a model in this guide that suits your requirements, if you have questions, or would like engineering assistance, please contact us.

**CONTACT US**

secamerica.com / (802) 865-8388



sales@secamerica.com

# Index

MODEL	VDC In	VDC Out	Output Amps	Technical Specifications	Mechanical Drawing
STEP UP (NON-ISOLATED)					
Model 620	11-16	24	10	<b>PG. 6</b>	<b>PG. 7</b>
Model 640CE	11-16	24	20	<b>PG. 8</b>	<b>PG. 9</b>
Model 680CE	11-16	36	40	<b>PG. 10</b>	<b>PG. 11</b>
Model 695CE	11-16	36	55	<b>PG. 12</b>	<b>PG. 13</b>
Model 679CE	10-14	15.6	80	<b>PG. 14</b>	<b>PG. 15</b>
Model 636-10	11-16	36.2	10	<b>PG. 16</b>	<b>PG. 17</b>
Model 648-8TB	11-16	48.2	8	<b>PG. 18</b>	<b>PG. 19</b>
Model 6948	11-16	52.4	25	<b>PG. 20</b>	<b>PG. 21</b>
Model 7948	21-32	52.4	35	<b>PG. 22</b>	<b>PG. 23</b>
STEP DOWN (NON-ISOLATED)					
Model 359	21-30	13.6	15	<b>PG. 24</b>	<b>PG. 25</b>
Model 362	21-30	13.6	30	<b>PG. 26</b>	<b>PG. 27</b>
Model 382	22-60	13.6	30	<b>PG. 28</b>	<b>PG. 29</b>
Model 384	22-60	13.6	60	<b>PG. 30</b>	<b>PG. 31</b>

**SEC AMERICA, LLC**



**300W**

**MODEL 620**

**DC-DC BOOST CONVERTER**

**12V to 24V**

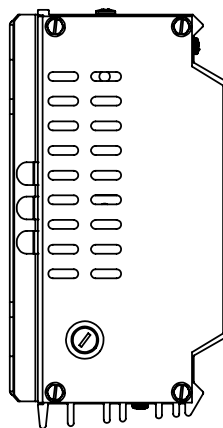
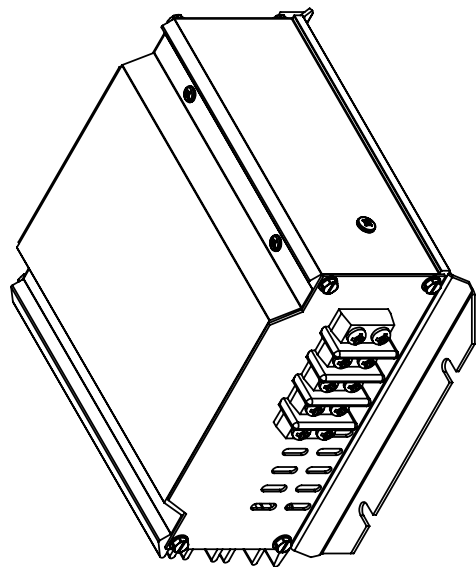
**Design Features**

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

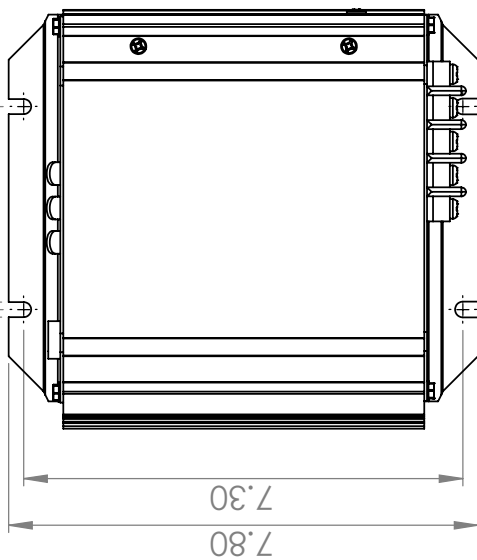
**SPECIFICATIONS**

INPUT	SYSTEM BATTERY VOLTAGE	12 VDC
	NOMINAL INPUT VOLTAGE	12.75 VDC
	INPUT VOLTAGE RANGE	11 to 16 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	21.5 A
	INPUT CURRENT AT NO LOAD	0.21 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	<b>25.5 - 25.7 VDC (factory set, internally adjustable)</b>
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>10 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	300 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT	92%
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	10.5 -10.8 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 17.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Replaceable Input Fuse Externally Accesible
CONNECTIONS	INPUT CONNECTION	Screw Terminal Block, Magum 602-3
	OUTPUT CONNECTION	Screw Terminal Block, Magum 602-3
	REMOTE CONTROL PORT	No
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	7.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES (L x W x H)	7.30 x 3.38
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	6.0 / 2.75

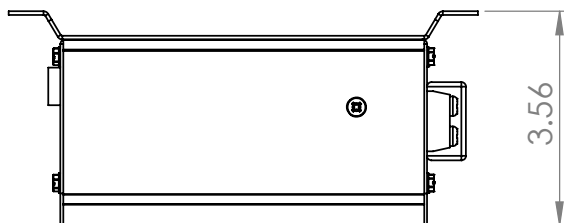
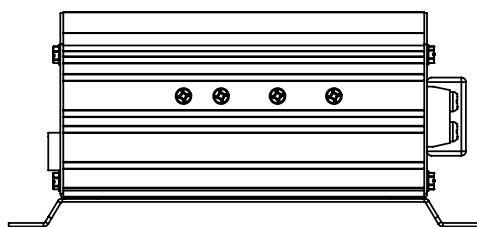
NOTE: Specifications are subject to change without notice.



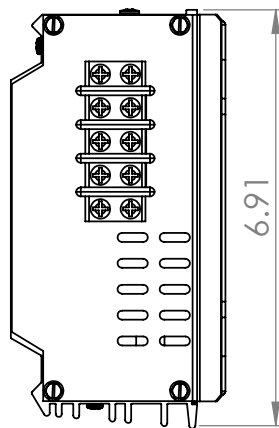
0.25  
3.375



7.80  
7.30



3.56



6.91

TITLE:  
620/3602/362/382 Line Drawing

**SEC AMERICA LLC**  
05407

SIZE **A** DWG. NO. 17-0620 REV 1

SCALE: 1:3 WEIGHT: SHEET 2 OF 2

5

4

3

2

1



**MODEL 640CE**

**DC-DC BOOST CONVERTER**

**12V to 24V**

**Design Features**

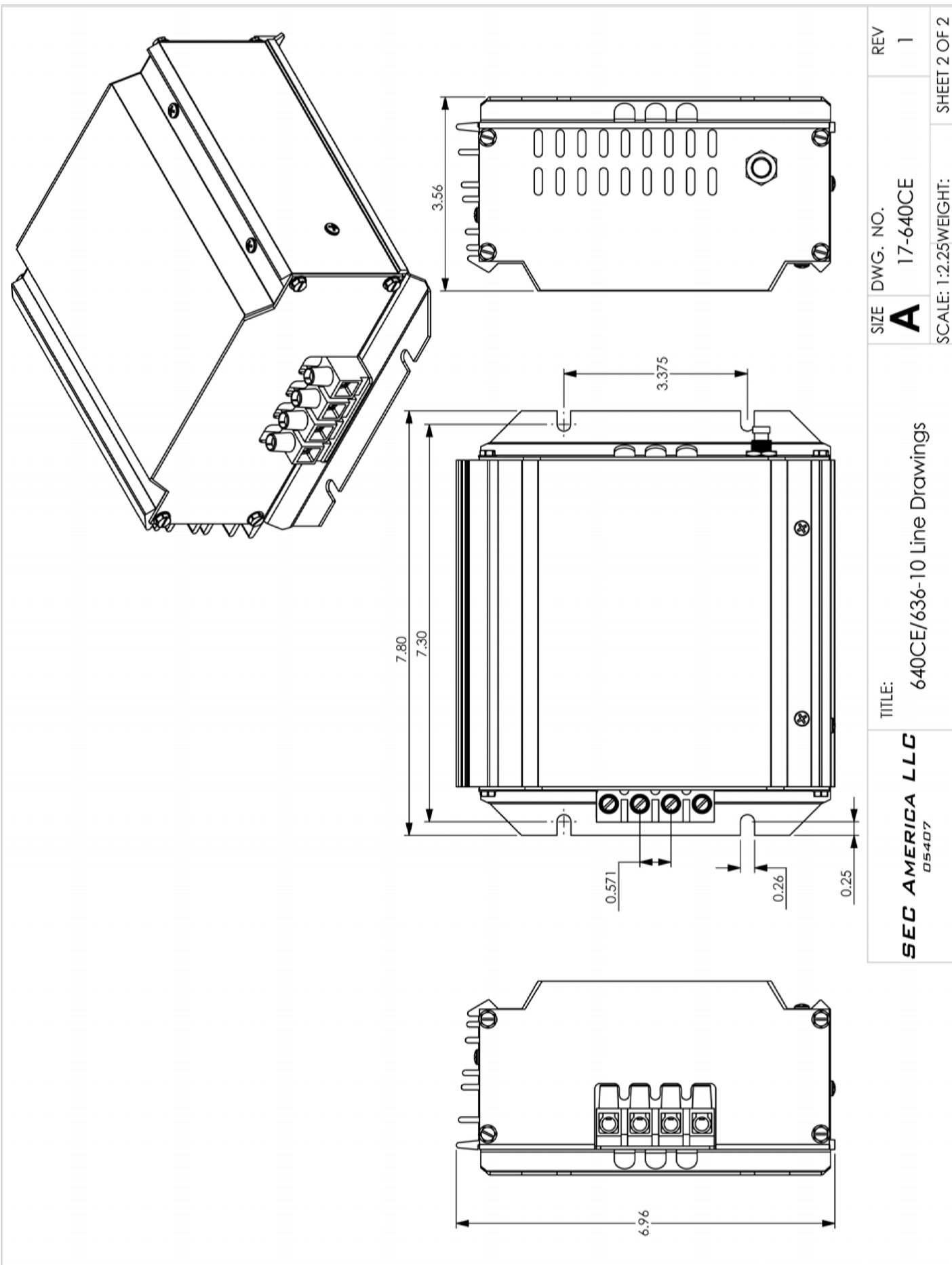
- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

**SPECIFICATIONS**

INPUT	SYSTEM BATTERY VOLTAGE	12 VDC
	NOMINAL INPUT VOLTAGE	12.75 VDC
	INPUT VOLTAGE RANGE	11 to 16 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	43 A
	INPUT CURRENT AT NO LOAD	0.28 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	<b>25.5 - 25.7 VDC (factory set, internally adjustable)</b>
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>20 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	500 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT (20A)	92%
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	10.5 -10.8 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 17.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Circuit Breaker
CONNECTIONS	INPUT CONNECTION	DIN Terminal Block
	OUTPUT CONNECTION	DIN Terminal Block
	REMOTE CONTROL PORT	No
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	7.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES (L x W x H)	7.30 x 3.38
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	7.0 / 3.25

NOTE: Specifications are subject to change without notice.







**SEC AMERICA, LLC**

**1000W**

**MODEL 680CE**

**DC-DC BOOST CONVERTER**

**12V to 24V; 40A**

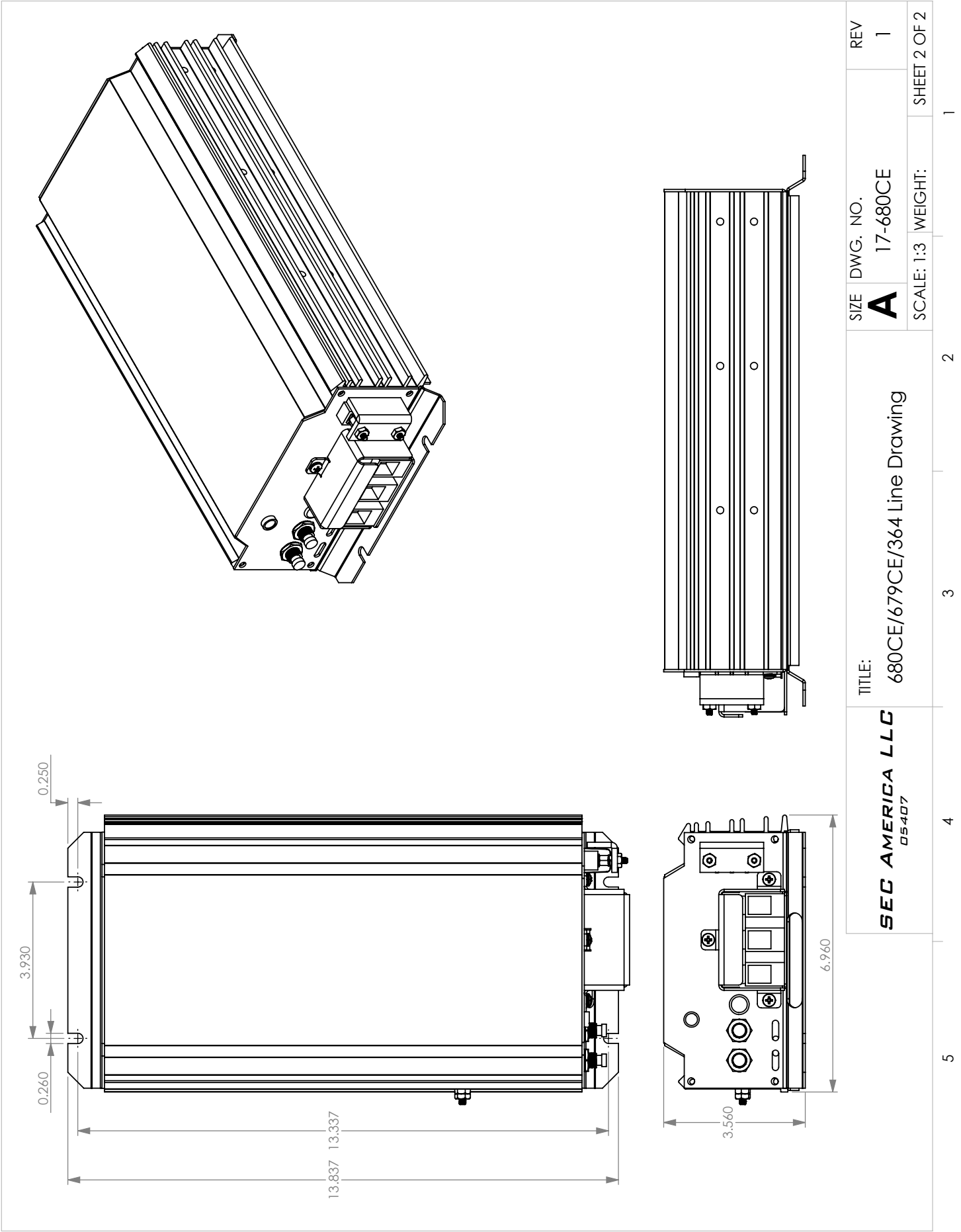
**Design Features**

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

**SPECIFICATIONS**

INPUT	SYSTEM BATTERY VOLTAGE	12 VDC
	NOMINAL INPUT VOLTAGE	12.75 VDC
	INPUT VOLTAGE RANGE	11 to 16 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	89 A
	INPUT CURRENT AT NO LOAD	0.28 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	<b>26.3-26.5 VDC (factory set, internally adjustable)</b>
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>40 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	1000 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT	90% with output set to 24V
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	factory set at 10.5V, internally adj. from 10.5 - 13.0 VDC cutout hysteresis is 1.2VDC@13.0VDC / 0.9VDC@10.5 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 17.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	COOLING	By convection and thermostat controlled fan
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Circuit Breaker
CONNECTIONS	INPUT CONNECTION	DIN Terminal Block
	OUTPUT CONNECTION	DIN Terminal Block
	REMOTE CONTROL PORT	YES
	When deactivated by the remote control port, the input voltage remains connected through a diode drop to the output terminal	
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	13.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES	13.30 x 3.93
	VIBRATION & SHOCK RESISTANCE	Internally Encapsulated
	WEIGHT (LB/KG)	12.0 / 5.5

NOTE: Specifications are subject to change without notice.



# SEC AMERICA, LLC

## 1500W

### MODEL 695CE

DC-DC BOOST CONVERTER

12V to 24V; 55A



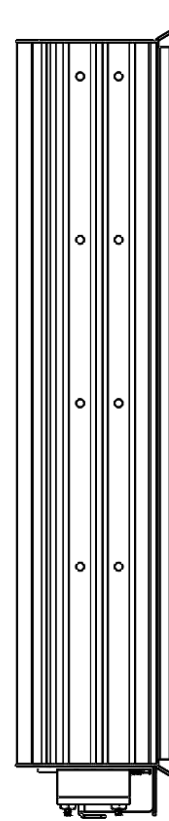
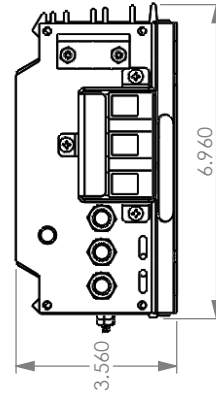
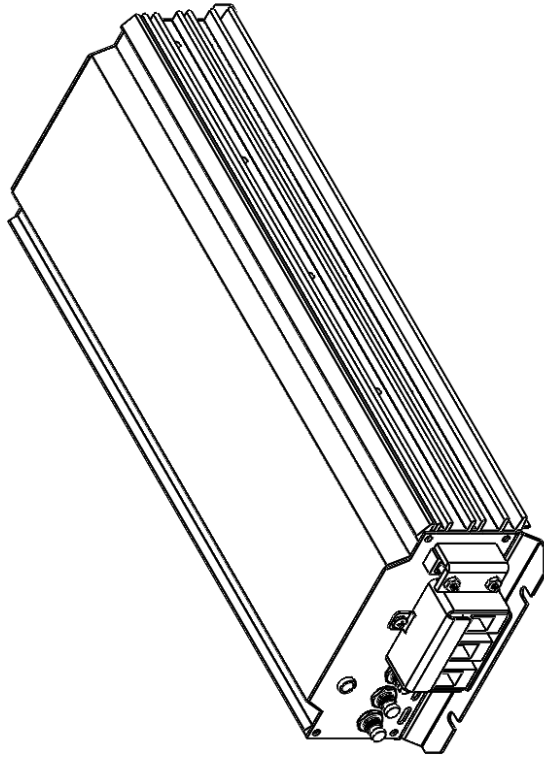
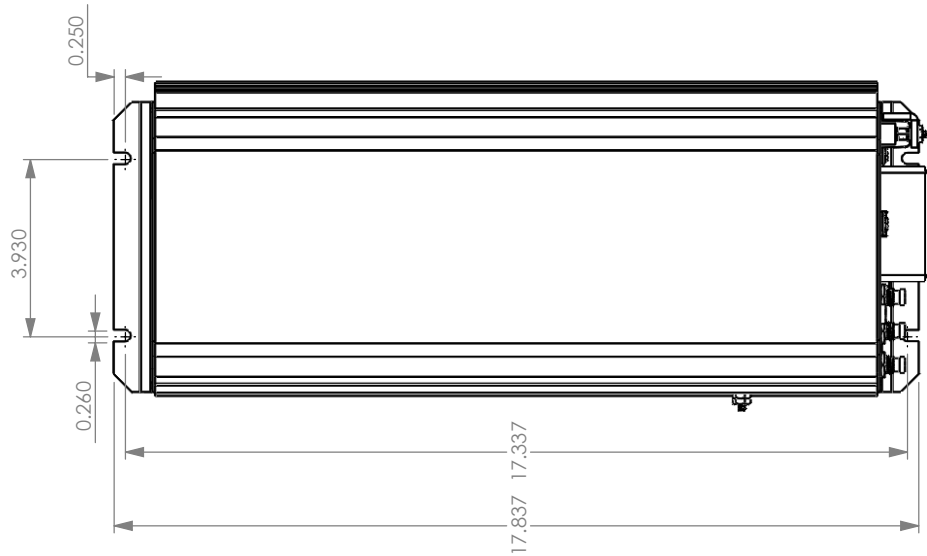
#### Design Features

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

#### SPECIFICATIONS

INPUT	SYSTEM BATTERY VOLTAGE	12 VDC
	NOMINAL INPUT VOLTAGE	12.75 VDC
	INPUT VOLTAGE RANGE	11 to 16 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	122 A
	INPUT CURRENT AT NO LOAD	0.36 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	<b>26.3-26.5 VDC (factory set, internally adjustable)</b>
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>55 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	1500 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT (10A)	92%
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	factory set at 10.5V, internally adj. from 10.5 - 13.0 VDC cutout hysteresis is 1.2VDC@13.0VDC / 0.9VDC@10.5 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 17.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	COOLING	By convection and thermostat controlled fan
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Circuit Breaker
CONNECTIONS	INPUT CONNECTION	DIN Terminal Block
	OUTPUT CONNECTION	DIN Terminal Block
	REMOTE CONTROL PORT	YES
	When deactivated by the remote control port, input voltage remains connected through a diode drop to the output terminal	
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	17.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES	17.30 x 3.93
	VIBRATION & SHOCK RESISTANCE	Internally Encapsulated
	WEIGHT (LB/KG)	18.0 / 8.5

NOTE: Specifications are subject to change without notice.



<b>SEC AMERICA LLC</b> <small>05407</small>	TITLE: 695CE/6948 Line Drawing	SIZE <b>A</b>	DWG. NO. 17-695CE	REV 2
		SCALE: 1:4	WEIGHT:	SHEET 2 OF 2
5	4	3	2	1



# SEC AMERICA, LLC

## 1200W

### MODEL 679CE

DC-DC BOOST CONVERTER

12V to 16V; 80A

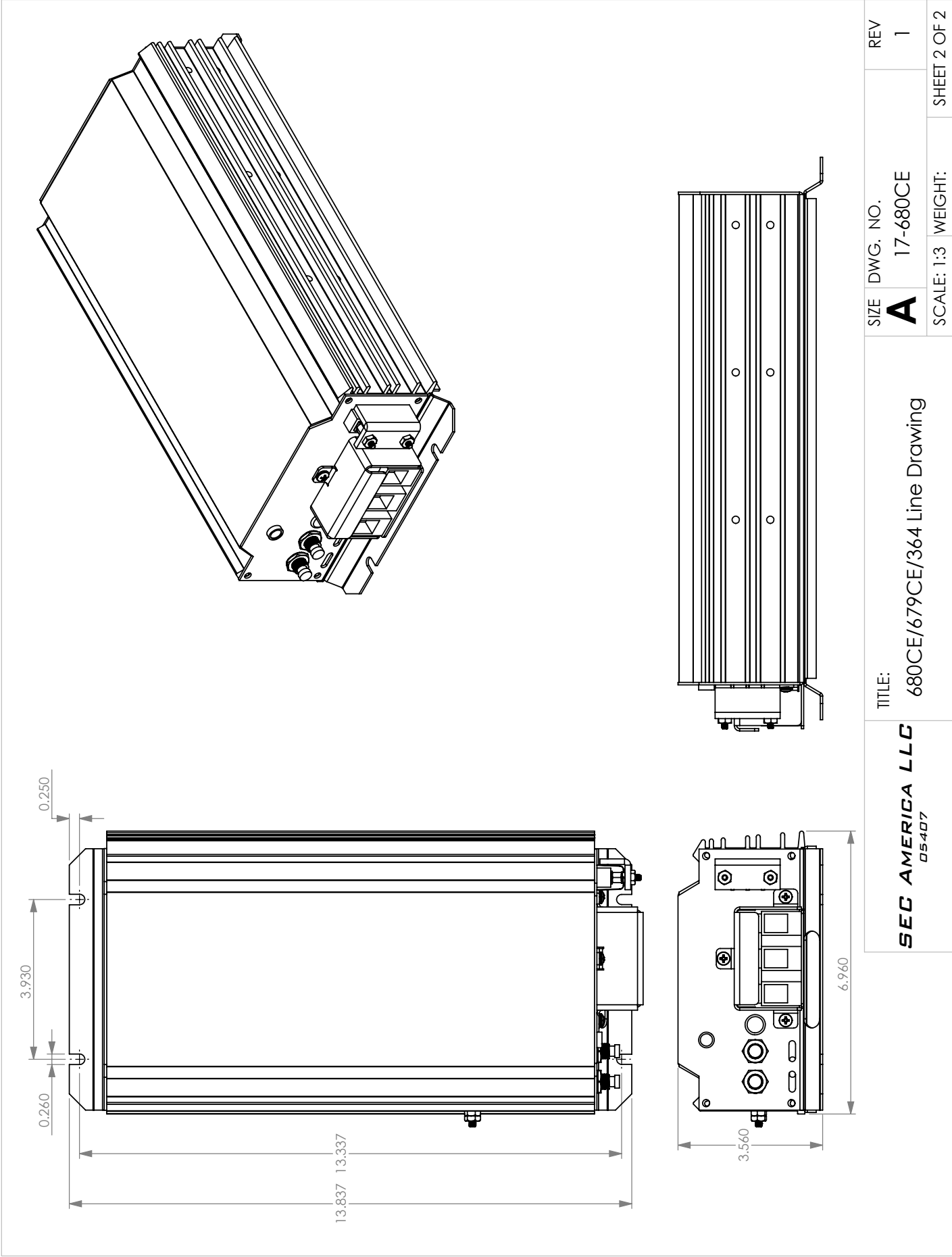
#### Design Features

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

### SPECIFICATIONS

INPUT	SYSTEM BATTERY VOLTAGE	12 VDC
	NOMINAL INPUT VOLTAGE	12.75 VDC
	INPUT VOLTAGE RANGE	11 to 14 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	105 A
	INPUT CURRENT AT NO LOAD	0.28 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	15.5-15.7 VDC (factory set, internally adjustable)
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	80 A
	MAXIMUM 10 MSEC PULSED CURRENT	250A
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	1200 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
PROTECTIONS	EFFICIENCY AT MAX CURRENT (10A)	92%
	LOW INPUT VOLTAGE SHUTDOWN	factory set at 10.5V, internally adj. from 10.5 - 13.0 VDC cutout hysteresis is 1.2VDC@13.0VDC / 0.9VDC@10.5 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 17.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	COOLING	By convection and thermostat controlled fan
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
CONNECTIONS	INPUT REVERSE POLARITY PROTECTION	Circuit Breaker
	INPUT CONNECTION	DIN Terminal Block
	OUTPUT CONNECTION	DIN Terminal Block
	REMOTE CONTROL PORT	YES
ENVIRONMENT	When deactivated by the remote control port, the input voltage remains connected through a diode drop to the output terminal	
	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	13.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES	13.30 x 3.93
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	12.0 / 5.5

NOTE: Specifications are subject to change without notice.







## MODEL 636-10

DC-DC BOOST CONVERTER

12V to 36V; 10A

### Design Features

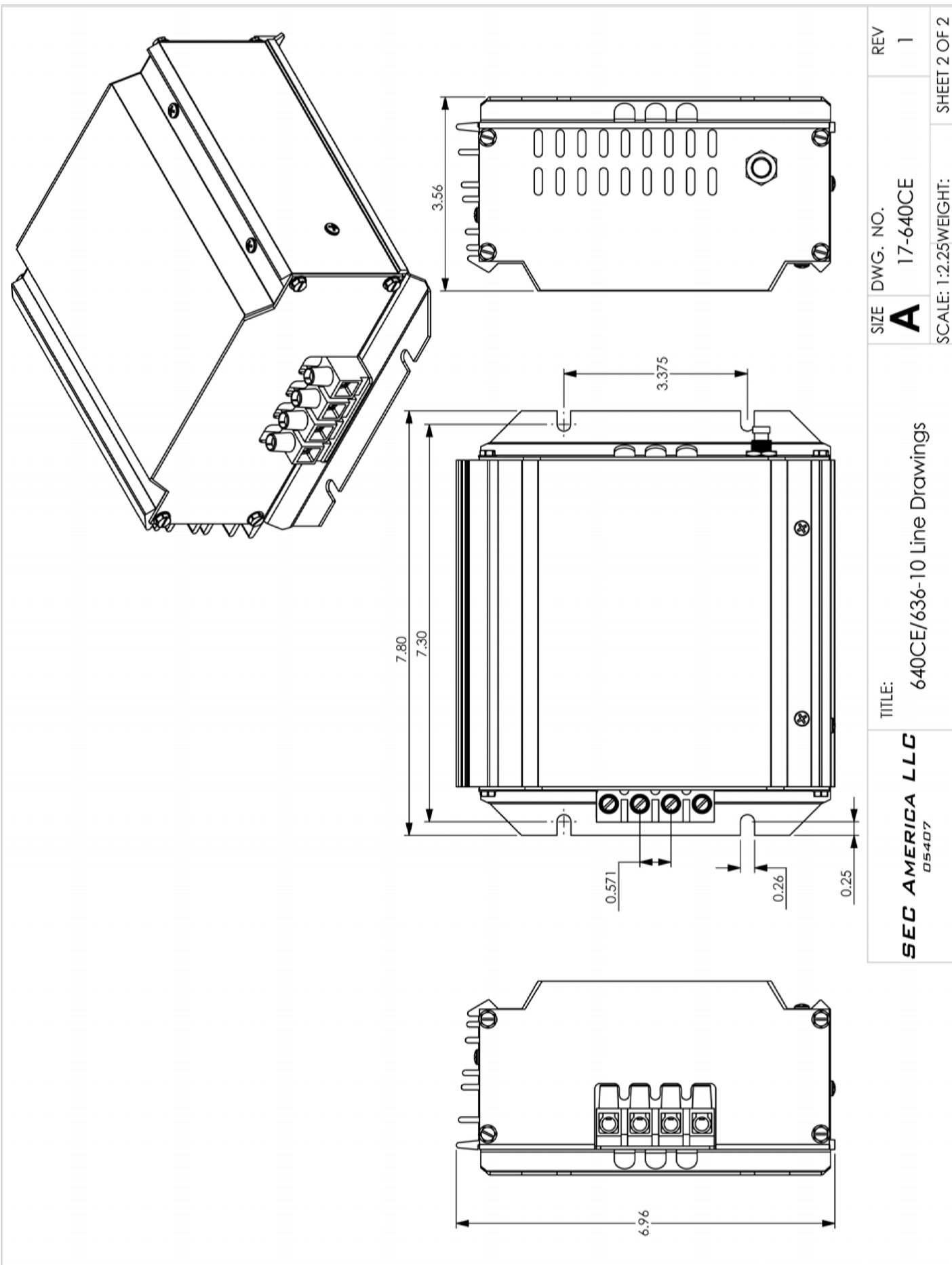
- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

### SPECIFICATIONS

INPUT	SYSTEM BATTERY VOLTAGE	12 VDC
	NOMINAL INPUT VOLTAGE	12.75 VDC
	INPUT VOLTAGE RANGE	11 to 16 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	31.5 A
	INPUT CURRENT AT NO LOAD	0.28 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	<b>36.0 - 36.5 VDC (factory set, internally adjustable)</b>
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>10 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	400 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT (10A)	92%
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	10.5 -10.8 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 17.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Circuit Breaker
CONNECTIONS	INPUT CONNECTION	DIN Terminal Block
	OUTPUT CONNECTION	DIN Terminal Block
	REMOTE CONTROL PORT	No
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	7.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES (L x W x H)	7.30 x 3.38
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	7.0 / 3.25

NOTE: Specifications are subject to change without notice.







**MODEL 648-8TB**

**DC-DC BOOST CONVERTER**

**12V to 48V; 8A**

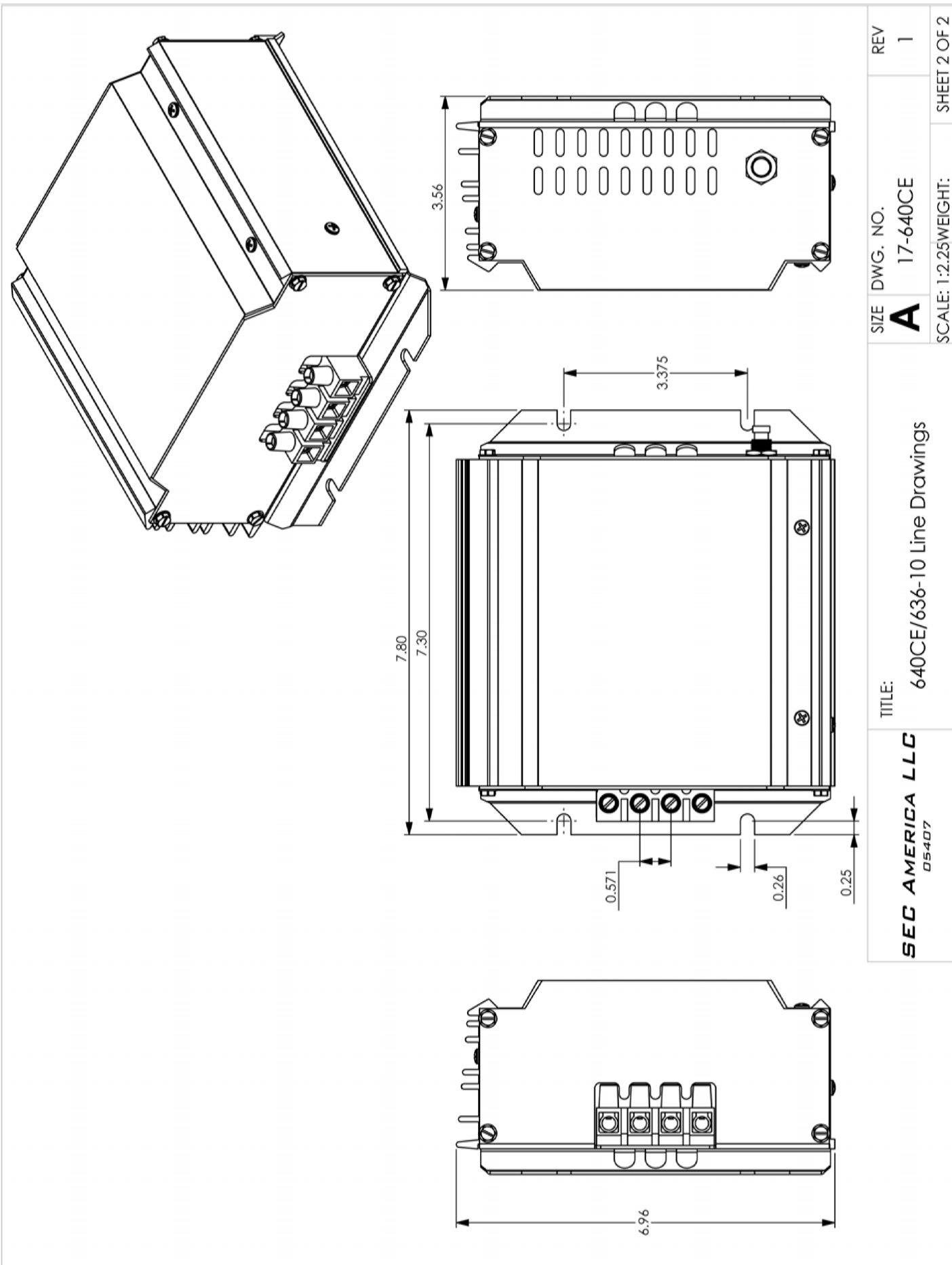
**Design Features**

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

**SPECIFICATIONS**

INPUT	SYSTEM BATTERY VOLTAGE	12 VDC
	NOMINAL INPUT VOLTAGE	12.75 VDC
	INPUT VOLTAGE RANGE	11 to 16 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	34 A
	INPUT CURRENT AT NO LOAD	0.21 A when converter is in "ON" state
OUTPUT	OUTPUT VOLTAGE	<b>48.2 VDC (factory set, internally adjustable)</b>
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>8 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	400 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
PROTECTIONS	EFFICIENCY AT MAX CURRENT	92%
	LOW INPUT VOLTAGE SHUTDOWN	10.5 -10.8 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 17.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
CONNECTIONS	INPUT REVERSE POLARITY PROTECTION	Circuit Breaker/ON-OFF Switch
	INPUT CONNECTION	DIN Terminal Block
	OUTPUT CONNECTION	DIN Terminal Block
ENVIRONMENT	REMOTE CONTROL PORT	No
	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating
		Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
MECHANICAL	ALTITUDE	6000 meters
	DIMENSIONS, INCHES (L x W x H)	7.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES (L x W x H)	7.30 x 3.38
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	7.0 / 3.25

NOTE: Specifications are subject to change without notice.





# 1250W

## MODEL 6948

DC-DC BOOST CONVERTER

12V to 48V; 25A

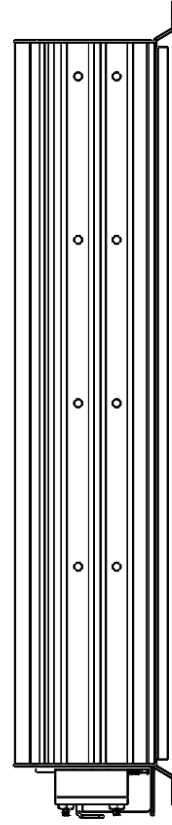
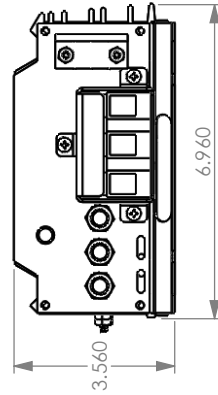
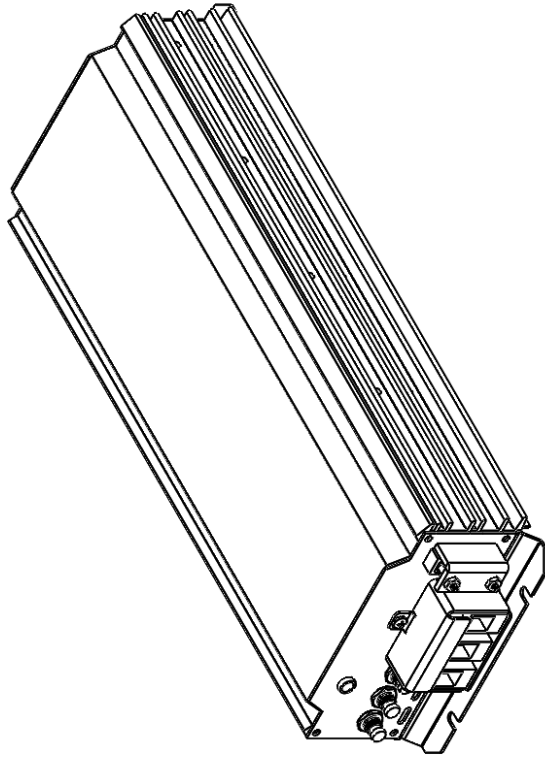
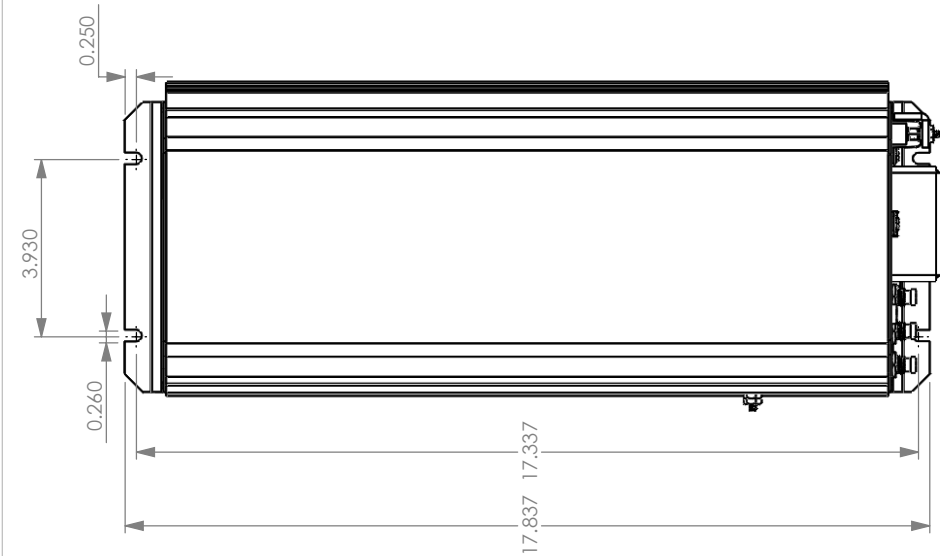
### Design Features

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

### SPECIFICATIONS

INPUT	SYSTEM BATTERY VOLTAGE	12 VDC
	NOMINAL INPUT VOLTAGE	12.75 VDC
	INPUT VOLTAGE RANGE	11 to 16 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	107 A
	INPUT CURRENT AT NO LOAD	0.36 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	<b>52.4-52.8 VDC</b> (factory set, internally adjustable)
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>25 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	1250 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT	92%
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	factory set at 10.5V, internally adj. from 10.5V - 13.0 V cutout hysteresis is 1.2VDC@13.0VDC / 0.9VDC@10.5 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 17.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Circuit Breaker
CONNECTIONS	INPUT CONNECTION	DIN Terminal Block
	OUTPUT CONNECTION	DIN Terminal Block
	REMOTE CONTROL PORT	YES
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	17.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES	17.30 x 3.93
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	18.0 / 8.5

NOTE: Specifications are subject to change without notice.



<b>SEC AMERICA LLC</b> <small>05407</small>	TITLE: 695CE/6948 Line Drawing		SIZE <b>A</b>	DWG. NO. 17-695CE	REV 2
	5	4	3	2	1
SCALE: 1:4			WEIGHT:	SHEET 2 OF 2	



# 1400W

## MODEL 7048

DC-DC BOOST CONVERTER

24V to 48V; 35A

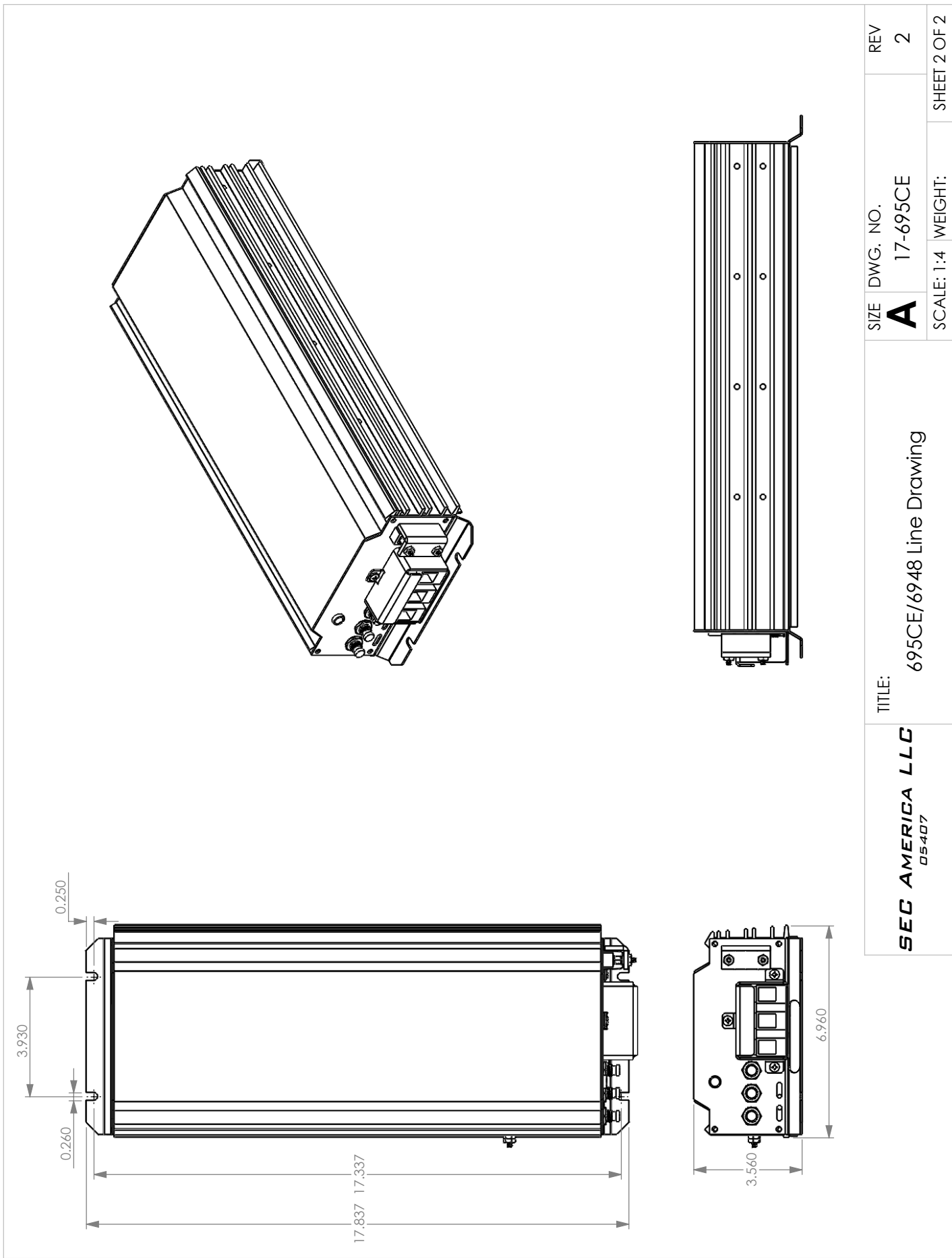
### Design Features

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

### SPECIFICATIONS

INPUT	SYSTEM BATTERY VOLTAGE	24 VDC
	NOMINAL INPUT VOLTAGE	26.5 VDC
	INPUT VOLTAGE RANGE	21 to 30 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	71 A
	INPUT CURRENT AT NO LOAD	0.36 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	48.3-48.7 (factory set, internally adjustable)
	OUTPUT VOLTAGE REGULATION	< 60 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	35A @ 40C, 25A @ 60C
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	1400 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT	92%
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	factory set at 21.0V, internally adj. cutout hysteresis is 2.5V@21.0 V cutout
	HIGH INPUT VOLTAGE SHUTDOWN	> 34.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Auto reset
	INPUT REVERSE POLARITY PROTECTION	Circuit Breaker
CONNECTIONS	INPUT CONNECTION	DIN Terminal Block
	OUTPUT CONNECTION	DIN Terminal Block
	REMOTE CONTROL PORT	YES
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	17.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES	17.30 x 3.93
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	18.0 / 8.5

NOTE: Specifications are subject to change without notice.





**SEC AMERICA CORP.**

**200W**



**MODEL 359**

**DC-DC BUCK CONVERTER**

**24V to 12V**

**Design Features**

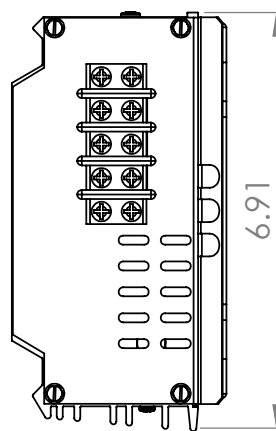
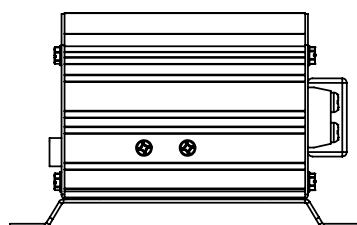
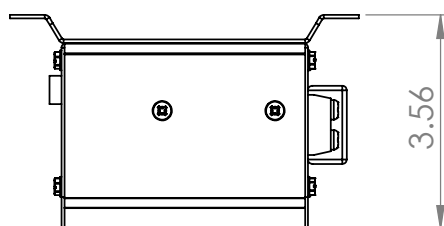
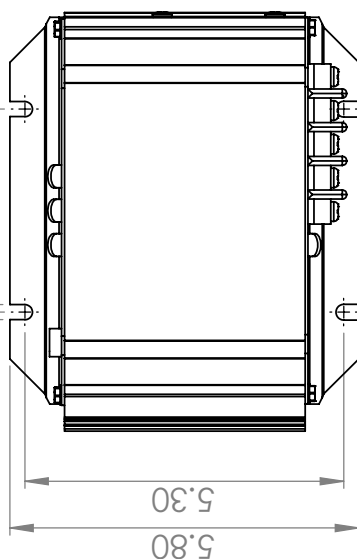
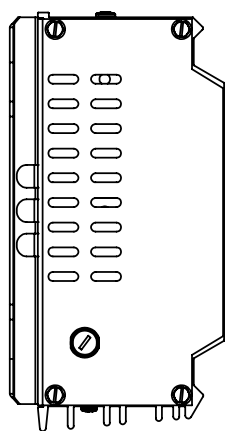
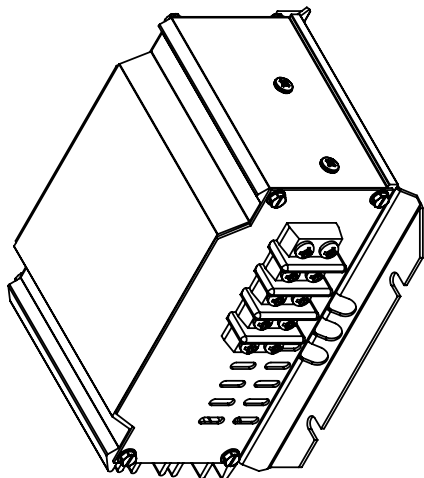
- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

**SPECIFICATIONS**

INPUT	SYSTEM BATTERY VOLTAGE	24 VDC
	NOMINAL INPUT VOLTAGE	25.5 VDC
	INPUT VOLTAGE RANGE	22 to 30 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	9.0 A
	INPUT CURRENT AT NO LOAD	0.18 A when converter is in "ON" state
OUTPUT	OUTPUT VOLTAGE	<b>13.6 - 13.8 VDC (factory set, internally adjustable)</b>
	OUTPUT VOLTAGE REGULATION	< 80 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>15 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	200 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT (30A)	92%
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	19.0 - 21.0 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 32.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Replaceable Input Fuse Externally Accessible
CONNECTIONS	INPUT CONNECTION	Terminal Block
	OUTPUT CONNECTION	Terminal Block
	REMOTE CONTROL PORT	No
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	5.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES (L x W x H)	5.38 x 3.38
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	4.0 / 1.8

NOTE: Specifications are subject to change without notice.





PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SEC. AMERICA CORP. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SEC. AMERICA CORP IS PROHIBITED.	TITLE: <b>359 Line Drawing</b>		SIZE <b>A</b>	DWG. NO. <b>17-0359</b>	REV <b>1</b>
	SCALE: 1:3		WEIGHT:		SHEET 2 OF 2

5	4	3	2	1
---	---	---	---	---



## MODEL 362

DC-DC BUCK CONVERTER

24V to 12V

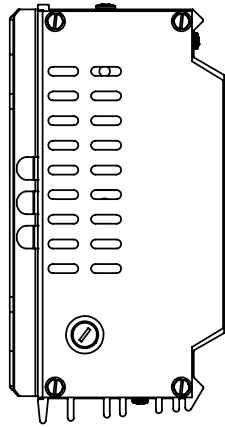
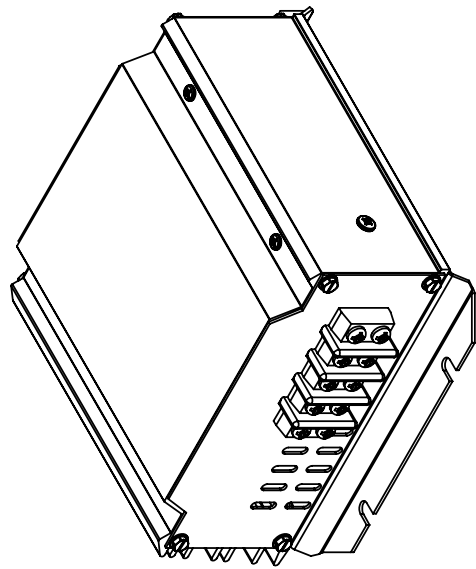
### Design Features

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- Electronic Current Limiting
- Common Input/Output Negative Terminal
- Soft start technology

### SPECIFICATIONS

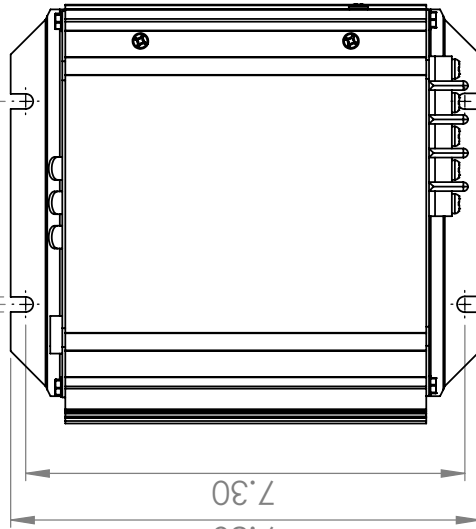
INPUT	SYSTEM BATTERY VOLTAGE	24 VDC
	NOMINAL INPUT VOLTAGE	25.5 VDC
	INPUT VOLTAGE RANGE	22 to 30 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	16.5 A
	INPUT CURRENT AT NO LOAD	0.30 A when converter is in "ON" state
	INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	<b>13.6 - 13.8 VDC (factory set, internally adjustable)</b>
	OUTPUT VOLTAGE REGULATION	< 80 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>30 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	400 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT (30A)	92%
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	19.0 - 21.0 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 32.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Replaceable Input Fuse Externally Accessible
RF TRANSPARENCY	High pass filters allow RF signals in the PLC4 spectrum to pass between input and output terminals with attenuation <3dB	
CONNECTIONS	INPUT CONNECTION	Screw Terminal Block, Magum 602-3
	OUTPUT CONNECTION	Screw Terminal Block, Magum 602-3
	REMOTE CONTROL PORT	No
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-40C to +40C no derating Derate 15% per 10C above 40C to a maximum of 60C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	7.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES (L x W x H)	7.30 x 3.38
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	6.0 / 2.75

NOTE: Specifications are subject to change without notice.



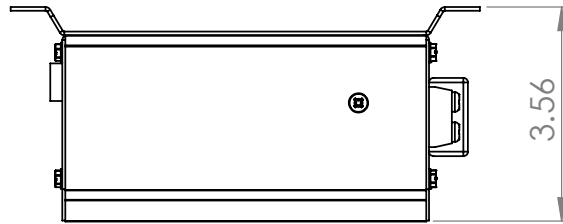
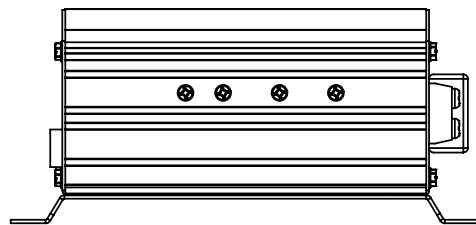
3.375

0.25

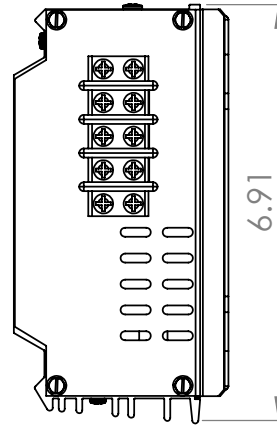


7.80

7.30



3.56



6.91

<b>SEC AMERICA LLC</b> <small>05407</small>	TITLE: 620/3602/362/382 Line Drawing		SIZE <b>A</b>	DWG. NO. 17-0620	REV 1
	5	4	3	2	1
SCALE: 1:3 WEIGHT:			SHEET 2 OF 2		

# SEC AMERICA CORP



## MODEL 382

**Wide Input Range Down Converter**  
**22 Vdc-60 Vdc to 13.6 Vdc**

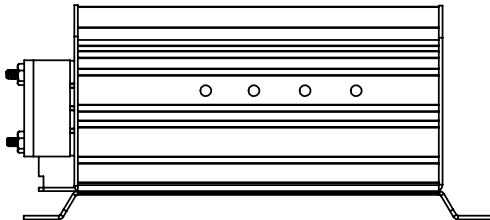
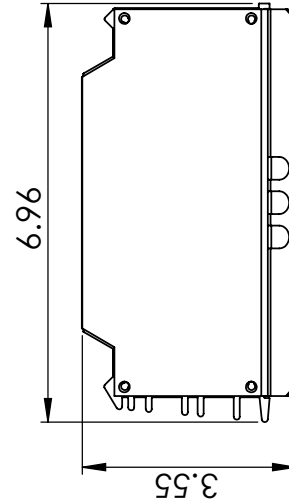
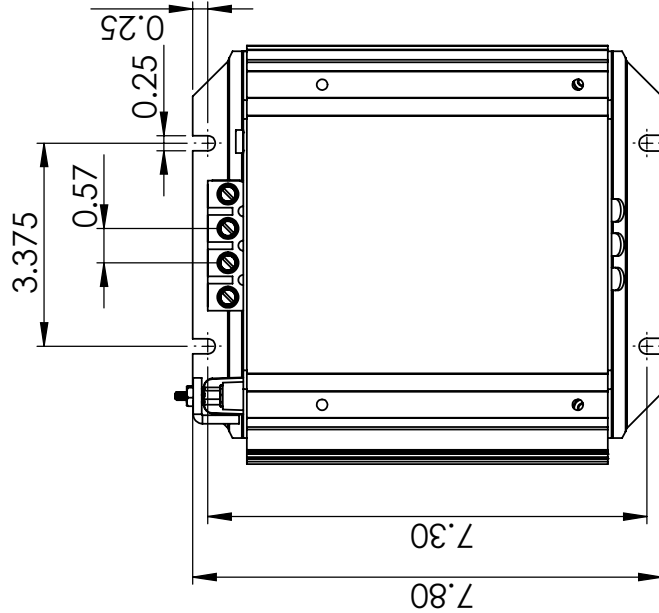
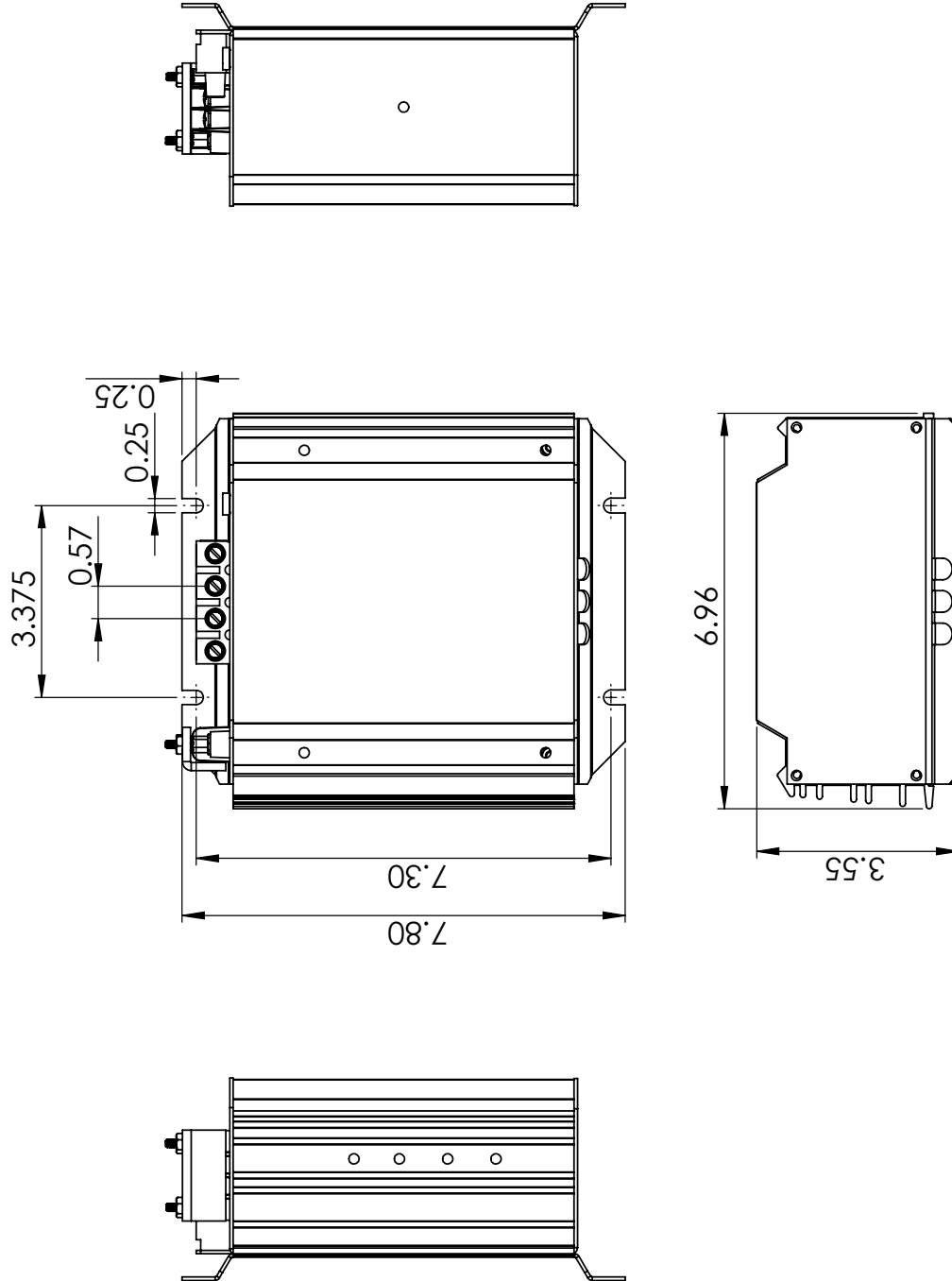
### Design Features

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- **High Efficiency- 96% minimum**
- Common Input/Output Negative Terminal
- Soft start technology

### SPECIFICATIONS

	<b>NOMINAL INPUT VOLTAGE</b>	48 VDC
	<b>INPUT VOLTAGE RANGE</b>	22 to 60 (+/- 0.5) VDC
	<b>INPUT CURRENT AT MAX CONTINUOUS POWER</b>	16.5 A / 8.2A @ 24 / 48 V <sub>in</sub>
	<b>MAX. INPUT CURRENT AT NO LOAD</b>	0.30 A when converter is in "ON" state
	<b>MIN. INPUT CURRENT AT NO LOAD</b>	<0.002 A when converter is in "OFF" state
OUTPUT	<b>OUTPUT VOLTAGE</b>	<b>13.6 - 13.8 VDC</b> (factory set, internally adjustable)
	<b>OUTPUT VOLTAGE REGULATION</b>	< 40 mV, NL to Full Load
	<b>RATED MAX OUTPUT CURRENT</b>	<b>30 A</b>
	<b>OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)</b>	400 W
	<b>OUTPUT RIPPLE &amp; NOISE</b>	<50 mV RMS
	<b>EFFICIENCY AT MAX CURRENT (30A)</b>	<b>96% minimum</b>
PROTECTIONS	<b>LOW INPUT VOLTAGE SHUTDOWN</b>	19.0 - 21.0 VDC
	<b>HIGH INPUT VOLTAGE SHUTDOWN</b>	> 64.0 VDC
	<b>OVERLOAD CURRENT LIMITING</b>	Electronic knee type at power limit
	<b>OVER TEMPERATURE SHUTDOWN</b>	Yes (Auto reset)
	<b>INPUT REVERSE POLARITY PROTECTION</b>	Resettable Integral Circuit Breaker
RF TRANSPARENCY	High pass filters allow RF signals in the PLC4 spectrum to pass between input and output terminals with attenuation <3dB	
CONNECTIONS	<b>INPUT CONNECTION</b>	WECO Screw Terminal Block
	<b>OUTPUT CONNECTION</b>	WECO Screw Terminal Block
	<b>REMOTE CONTROL PORT</b>	Yes
ENVIRONMENT	<b>AMBIENT AIR OPERATING TEMPERATURE RANGE</b>	-30C to +50C no derating Derate 15% per 10C above 50C to a maximum of 60C
	<b>OPERATING HUMIDITY</b>	<95%, non condensing
	<b>ALTITUDE</b>	6000 meters
MECHANICAL	<b>DIMENSIONS, INCHES (L x W x H)</b>	7.8 x 6.9 x 3.6
	<b>MOUNTING CENTERS, INCHES (L x W x H)</b>	7.30 x 3.38
	<b>VIBRATION &amp; SHOCK RESISTANT</b>	Internally Encapsulated
	<b>WEIGHT (LB/KG)</b>	6.0 / 2.75

NOTE: Specifications are subject to change without notice.



<b>PROPRIETARY AND CONFIDENTIAL</b> THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SEC AMERICA CORP. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SEC AMERICA CORP IS PROHIBITED.	<b>SEC AMERICA CORP</b> 05407	TITLE: 382 DC-DC Converter	SIZE <b>A</b> DWG. NO. 17-0382 SCALE: 1:3 WEIGHT: SHEET 2 OF 2	REV 1 1
---	----------------------------------	----------------------------	---	------------

# SEC AMERICA CORP



## MODEL 384

**Wide Input Range Down Converter**  
**22 Vdc-60 Vdc to 13.6 Vdc / 60A**

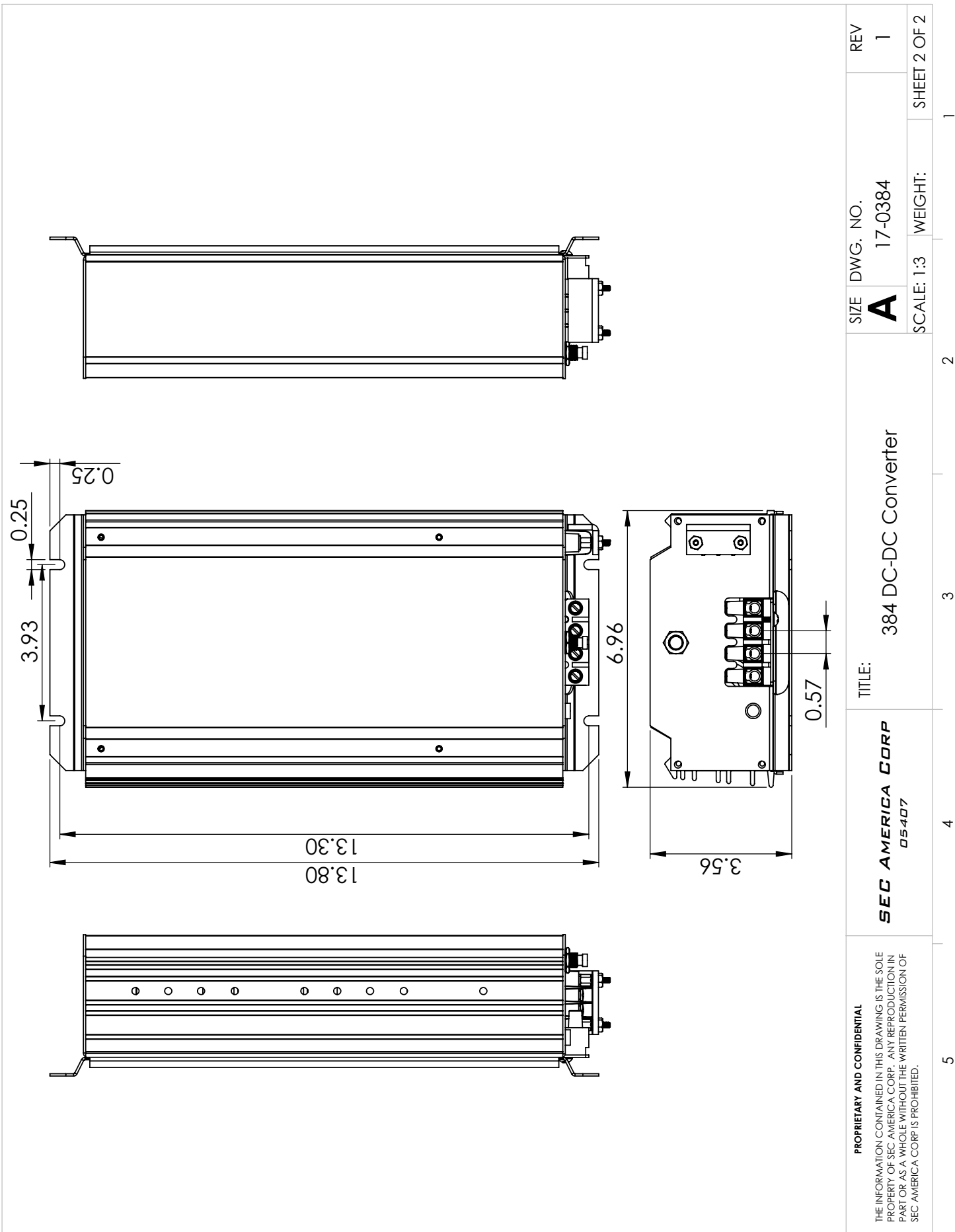
### Design Features

- Low Input Voltage Cutout
- Compact design
- Convection Cooled
- **High Efficiency- 96% minimum**
- Common Input-Output Negative Terminal
- Soft start technology

## SPECIFICATIONS

	INPUT VOLTAGE RANGE	22 to 60 (+/- 0.5) VDC
	INPUT CURRENT AT MAX CONTINUOUS POWER	31.0 A / 15.5 A @ 24 / 48 V <sub>in</sub>
	MAX. INPUT CURRENT AT NO LOAD	0.30 A when converter is in "ON" state
	MIN. INPUT CURRENT AT NO LOAD	<0.002 A when converter is in "OFF" state
OUTPUT	OUTPUT VOLTAGE	<b>13.6 - 13.8 VDC</b> (factory set, internally adjustable)
	OUTPUT VOLTAGE REGULATION	< 40 mV, NL to Full Load
	RATED MAX OUTPUT CURRENT	<b>60 A</b>
	OUTPUT POWER, CONTINUOUS (RESISTIVE LOAD)	850 W
	OUTPUT RIPPLE & NOISE	<50 mV RMS
	EFFICIENCY AT MAX CURRENT (55A)	<b>96% minimum</b>
PROTECTIONS	LOW INPUT VOLTAGE SHUTDOWN	19.0 - 21.0 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 61.0 VDC
	OVERLOAD CURRENT LIMITING	Electronic knee type at power limit
	OVER TEMPERATURE SHUTDOWN	Yes (Auto reset)
	INPUT REVERSE POLARITY PROTECTION	Resettable Integral Circuit Breaker
RF TRANSPARENCY	High pass filters allow RF signals in the PLC4 spectrum to pass between input and output terminals with attenuation <3dB	
CONNECTIONS	INPUT CONNECTION	WECO Screw Terminal Block
	OUTPUT CONNECTION	WECO Screw Terminal Block
	REMOTE CONTROL PORT	Yes
ENVIRONMENT	AMBIENT AIR OPERATING TEMPERATURE RANGE	-30C to +50C no derating Derate 15% per 10C above 50C to a maximum of 70C
	OPERATING HUMIDITY	<95%, non condensing
	ALTITUDE	6000 meters
MECHANICAL	DIMENSIONS, INCHES (L x W x H)	13.8 x 6.9 x 3.6
	MOUNTING CENTERS, INCHES (L x W x H)	13.30 x 3.38
	VIBRATION & SHOCK RESISTANT	Internally Encapsulated
	WEIGHT (LB/KG)	12 / 5.5

NOTE: Specifications are subject to change without notice.





P.O. Box 2266      78 Ethan Allen Drive  
South Burlington      VT 05403  
Tel: 802-865-8388      Fax: 802-865-8389

**cage code 07KU1**

**[www.secamerica.com](http://www.secamerica.com)**