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USER MANUAL

711HS Series



DC-DC Converters

Applies to Models:

711HS

711HSBK

Aug 15, 2018

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I Introduction

After removing the unit from its packaging and ensuring that it has suffered no damage in shipment, it is important to read this manual and follow its instructions to ensure proper connection and mounting.

711HS Series models are fully isolated dc-dc converters capable of delivering up to 720 Watts in extreme ambient temperatures and adverse operating conditions. See specification sheets at the end of this manual for the ratings of a particular model.

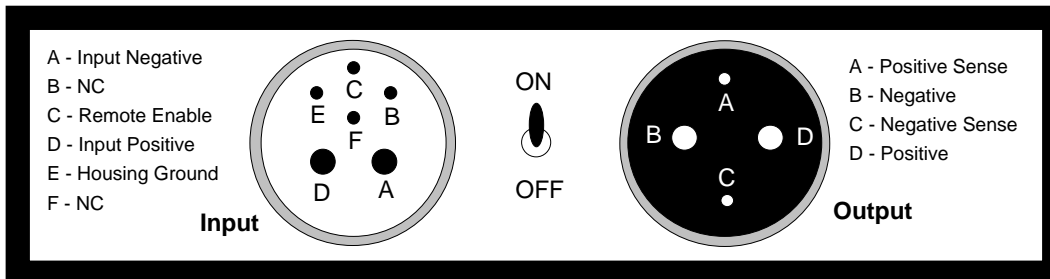
II Installation

2.1 Mounting

The converters are designed to be mounted to flat metal surfaces offering optimum heat transfer from the converter base in environments where air flow may be restricted. For best results, thermal transfer compound is a recommended interface between the converter and mounting surface. The [4] mounting slots in the flanges will accommodate mounting hardware up to 1/4 inch diameter. (See figure #2 for mounting centers)

2.2 Connections

The Input/Output connectors on the converter is shown in Figure 1/1A with designated pin functions.



ON-OFF switch feature on BK Model



Input side mating connector
Canon P/N 3106E20-8SB

Figure 1

PIN	Max. Wire Gauge
A, D	#8
C, E	#12



Output side mating connector
Canon P/N 3106E20-24PB

Figure 1A

PIN	Max. Wire Gauge
B, D	#8
A, C	#12

An option for users who wish to purchase a manufactured cable assembly is P/N 68-0711-8 which is of 8 feet length and is a standard SEC part.

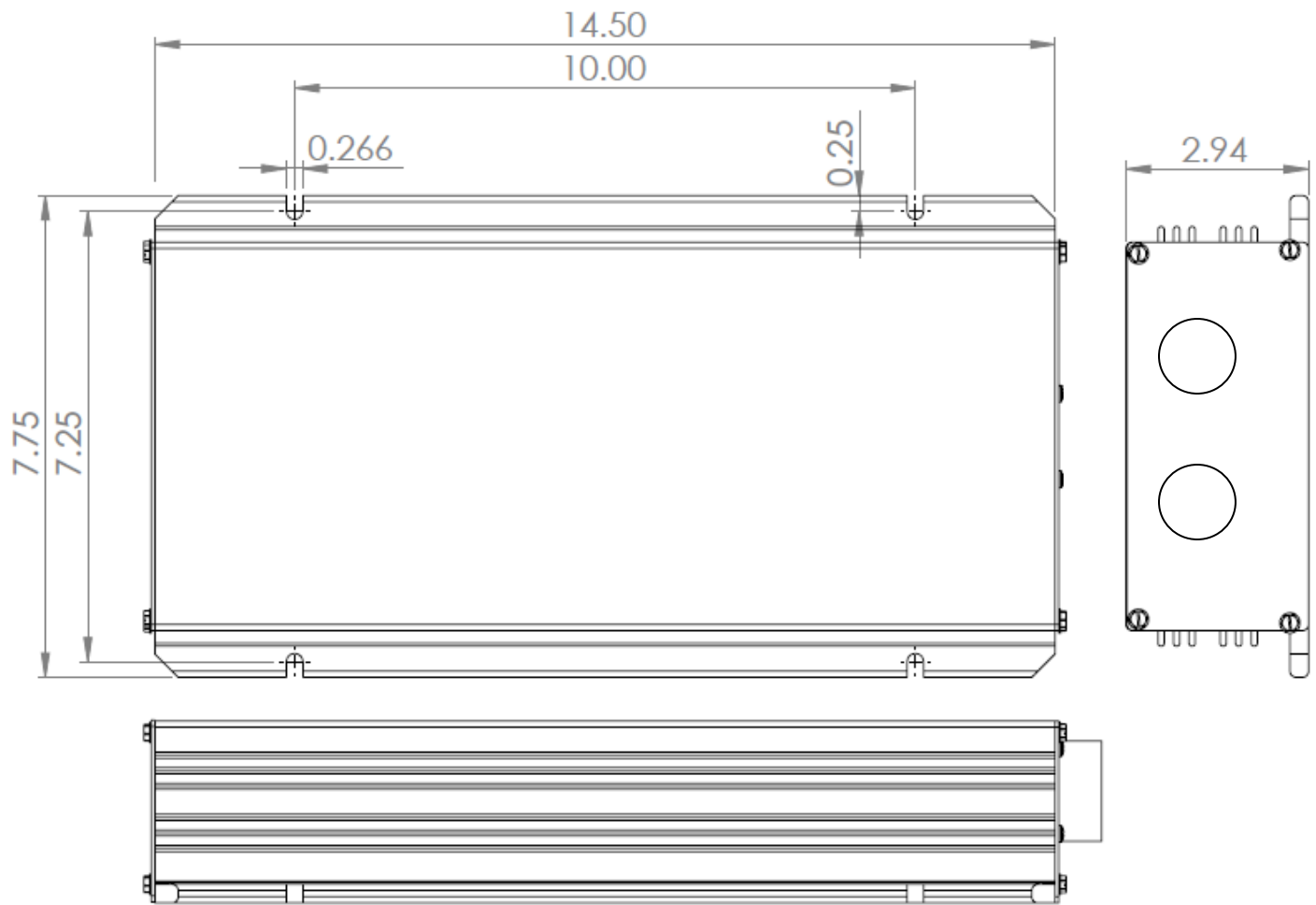


Figure 2

All dimensions are in inches

III Regulation With Remote Sense

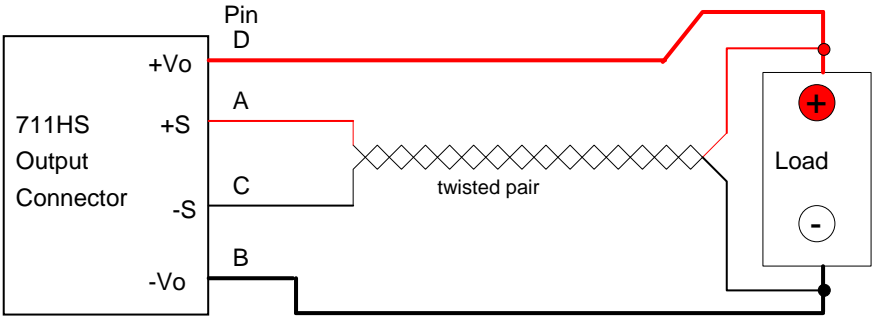


Figure 3

The HS Series provides regulated outputs at the output terminals. When there is a large current and/or the output cable is of some length, the voltage at the end of the cable may be noticeably lower than at the terminals. The converter can compensate up to 0.75V of voltage drop through remote sense terminals. To ensure accurate regulation, users should run two separate wires (twisted from the desired regulation points to the remote sense terminals). Even if the load current is low, users should still connect +Vo to +S and -Vo to -S.

IV User Adjustments

711HS Series units are gasket-sealed. Changes or adjustments to the operating modes of any unit are accomplished internally:

- 1) To gain access, remove the 4 corner screws retaining the front connector plate as shown in Figure #4.



Figure 4

- 2) Proceed to raise the front plate by pulling the edge, next to the mounting surface, upwards until the view in Figure #5 can be attained.

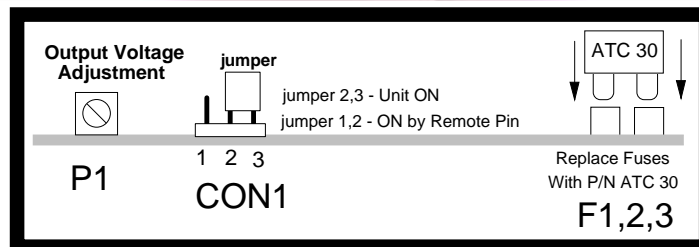


Figure 5

Accessible Adjustments:

- A) **Output voltage** is trimmed by adjusting the potentiometer P1. (711HS, 711HSBK)
- B) **Remote "Turn On" Disabled:** Units are shipped from factory with pins 2 and 3 of the connector [CON1] jumpered as shown. This programs the unit to be "ON" when source power is applied. (711HS Only)

- C) **Remote “Turn On” Enabled:** To program the unit for remote enable, shift the jumper from pin positions 2 and 3 of [CON1] to positions 1 and 2. In this mode the unit will energize when pin C is connected to the negative input line pin A. **(711HS Only)**
- D) **Fuse Replacement:** In the unlikely event that fuses F1,2,3 will open, disabling the unit, **DO NOT CHANGE FUSES WITH THE POWER APPLIED.** In order to restore normal operation, the user will need to ensure that the cause of the failure has been removed. Then the blown fuses need to be removed by gently prying them out of their clips and replacing them with ones of identical ratings. Notwithstanding the above the user should take every precaution to ensure that a reversed polarity input is avoided. Any polarity reversals may result in permanent damage.
- 3) Restore the front plate to its original position by replacing the securing screws and making sure the gasket is compressed.

IV Warranty and Repair

Should your investigations indicate that your product is defective or damaged and the unit is still under warranty, contact your dealer (purchase point of origin) and obtain a return merchandise authorization (RMA number) for corrective action.

If the warranty period has expired or if the warranty has been violated due to operator error or misuse call: SEC America Corp, 802-865-8388 to receive an authorization for return for an assessment and possible repair.

Warranty

700HS Series models come with a 2 year factory warranty covering parts and labor per the following:

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 year 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 one year 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 to factory, send only to the following address:

SEC America Corp
78 Ethan Allen Drive
South Burlington, Vermont 05403 Tel: 802-865-8388

**PLEASE RETAIN YOUR ORIGINAL BILL OF SALE. IT MUST
BE SUBMITTED WHEN MAKING ANY WARRANTY CLAIM**

720W



DC-DC Converter
HS Sealed Series

Model
711 HS

Design Features

- Wide Range Input Voltage
- High Efficiency Design
- Hi Ingress Rating, IP 676
- Adjustable Output Voltage
- Optional Remote Output Voltage Sensing
- Optional Remote On/Off Switching
- Low Input Voltage Cutout
- High Input Voltage Cutout
- Electronically Current Limited
- Thermally Protected
- Low No Load Power Consumption
- I/O Bayonet Quick Connection

		MODEL NO.	711 HS
INPUT	NOMINAL INPUT VOLTAGE RANGE		12 VDC to 28 VDC
	INPUT VOLTAGE RANGE		10.5 to 32.0 (+, - 0.5) VDC
	INPUT CURRENT AT 40A OUTPUT CURRENT		58A @ 12.0 Vin; 13.0 Vout
	INPUT CURRENT AT NO LOAD		0.48 A to 0.95 A, over entire input voltage range
OUTPUT	OUTPUT VOLTAGE NOMINAL		13.0 VDC (factory adjusted)
	OUTPUT VOLTAGE ADJUSTMENT RANGE		9.5 VDC to 18V VDC (internally accessible to customer)
	OUTPUT LOAD REGULATION		250 mV (without remote sensing) 50 mV (with remote sensing)
	OUTPUT VOLTAGE REGULATION		<2%
	OUTPUT RIPPLE		50 mV RMS at maximum load (measured at 25C)
	MAXIMUM CONTINUOUS OUTPUT POWER		700 W
	POWER SURGE		800 W
	MAXIMUM LOAD CURRENT		42 ADC, for output voltage setting 9.5 VDC - 18.0 VDC
EFFICIENCY		82% @ 50% max. power, 75% @ max. power	
PROTECTION	LOW INPUT VOLTAGE SHUTDOWN		< 10.5 +/-0.3 VDC
	HIGH INPUT VOLTAGE SHUTDOWN		> 32.0 +/- 1.0 VDC
	OVERLOAD SHUTDOWN		Set to shut off at 110% of maximum current with continuous automatic retry
	OVER TEMPERATURE SHUTDOWN		Via internal thermostat, self resetting
	COOLING		By conduction through base plate and convection cooling
FUSING		Customer accessible	
CONNECTIONS	INPUT CONNECTION		Via 6 pin Male Bayonet Connector
	OUTPUT CONNECTION		Via 4 pin Female Bayonet Connector
	REMOTE TURN ON		Via pin to -ve on input connector, may be disabled via internal jumper
	REMOTE SENSE		Via 2 pins on the output connector usage is optional
GENERAL	OPERATING TEMPERATURE RANGE		-40C to 70C, 100% loading
	OPERATING HUMIDITY		100%
	INGRESS RATING		IP 676
	MOUNTING SLOT CENTERS (in./cm.)		10.0 x 7.3 / 25.4 x 18.5
	DIMENSIONS, (in./cm.) (L x W x H)		15.5 x 8.0 x 2.9 / 39.4 x 20.3 x 7.4
	HOUSING MATERIAL		All Aluminum
WEIGHT, (lb./kg.)		18 / 8.2	

NOTE: Specifications are subject to change without notice.

Rev 7/15/2015

720W



**DC-DC Converter
HS Sealed Series**

**Model
711 HSBK**

Design Features

- Wide Range Input Voltage
- High Efficiency Design
- Hi Ingress Rating, IP 676
- Adjustable Output Voltage
- Optional Remote Output Voltage Sensing
- Manual On/Off Switching Via Panel Switch
- Low Input Voltage Cutout
- High Input Voltage Cutout
- Electronically Current Limited
- Thermally Protected
- Low No Load Power Consumption
- I/O Bayonet Quick Connection

	MODEL NO.	711 HSBK
INPUT	NOMINAL INPUT VOLTAGE RANGE	12 VDC to 28 VDC
	INPUT VOLTAGE RANGE	10.5 to 32.0 (+, - 0.5) VDC
	INPUT CURRENT AT 40A OUTPUT CURRENT	58A @ 12.0 Vin; 13.0 Vout
	INPUT CURRENT AT NO LOAD	0.48 A to 0.95 A, over entire input voltage range
OUTPUT	OUTPUT VOLTAGE NOMINAL	14.0 VDC (factory adjusted)
	OUTPUT VOLTAGE ADJUSTMENT RANGE	9.5 VDC to 18V VDC (internally accessible to customer)
	OUTPUT LOAD REGULATION	250 mV (without remote sensing) 50 mV (with remote sensing)
	OUTPUT VOLTAGE REGULATION	<2%
	OUTPUT RIPPLE	50 mV RMS at maximum load (measured at 25C)
	MAXIMUM CONTINUOUS OUTPUT POWER	700 W
	POWER SURGE	800 W
	MAXIMUM LOAD CURRENT	42 ADC, for output voltage setting 9.5 VDC - 18.0 VDC
PROTECTION	EFFICIENCY	82% @ 50% max. power, 75% @ max. power
	LOW INPUT VOLTAGE SHUTDOWN	< 10.5 +/-0.3 VDC
	HIGH INPUT VOLTAGE SHUTDOWN	> 32.0 +/- 1.0 VDC
	OVERLOAD SHUTDOWN	Set to shut off at 110% of maximum current with continuous automatic retry
	OVER TEMPERATURE SHUTDOWN	Via internal thermostat, self resetting
	COOLING	By conduction through base plate and convection cooling
CONNECTIONS	FUSING	Customer accessible
	INPUT CONNECTION	Via 6 pin Male Bayonet Connector
	OUTPUT CONNECTION	Via 4 pin Female Bayonet Connector
	REMOTE TURN ON	Via pin to -ve on input connector, may be disabled via internal jumper
	REMOTE SENSE	Via 2 pins on the output connector usage is optional
GENERAL	OPERATING TEMPERATURE RANGE	-40C to 70C, 100% loading
	OPERATING HUMIDITY	100%
	INGRESS RATING	IP 676
	MOUNTING SLOT CENTERS (in./cm.)	10.0 x 7.3 / 25.4 x 18.5
	DIMENSIONS, (in./cm.) (L x W x H)	15.5 x 8.0 x 2.9 / 39.4 x 20.3 x 7.4
	HOUSING MATERIAL	All Aluminum
WEIGHT, (lb./kg.)	18 / 8.2	

NOTE: Specifications are subject to change without notice.

Rev 8/15/2015



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